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Contributors

Lieber, Francis, 1800-1872.
Wigglesworth, E. 1804-1876.
Bradford, T. G. 1802-1887.
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183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

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ENCYCLOPÆDIA AMERICANA.

A

POPULAR DICTIONARY

OF

ARTS, SCIENCES, LITERATURE, HISTORY, POLITICS AND BIOGRAPHY,

BROUGHT DOWN TO THE PRESENT TIME;

INCLUDING

A COPIOUS COLLECTION OF ORIGINAL ARTICLES

IN

AMERICAN BIOGRAPHY;

ON

THE BASIS OF THE SEVENTH EDITION OF THE GERMAN

CONVERSATIONS-LEXICON.

EDITED BY

FRANCIS LIEBER,

ASSISTED BY

E. WIGGLESWORTH.

VOL. II.

Philadelphia:

CAREY AND LEA.

SOLD IN PHILADELPHIA BY E. L. CAREY AND A. HART—IN NEW YORK BY G. & C. & H. CARVILL—IN BOSTON BY CARTER & HENDEE.

1830.

EASTERN DISTRICT OF PENNSYLVANIA, *to wit:*

BE IT REMEMBERED, that on the tenth day of August, in the fifty-fourth year of the Independence of the United States of America, A. D. 1829, Carey, Lea & Carey, of the said district, have deposited in this office the title of a book, the right whereof they claim as proprietors, in the words following, to wit:

"Encyclopædia Americana. A Popular Dictionary of Arts, Sciences, Literature, History, Politics and Biography, brought down to the present Time; including a copious Collection of Original Articles in American Biography; on the Basis of the seventh Edition of the German Conversations-Lexicon. Edited by Francis Lieber, assisted by E. Wigglesworth"

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D. CALDWELL,

Clerk of the Eastern District of Pennsylvania.

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ENCYCLOPÆDIA AMERICANA.

BATTLE-AXE; a weapon much used in the early part of the middle ages, particularly by the people who fought on foot. It was not uncommon, however, among the knights, who used also the mace, a species of iron club or hammer. Both are to be seen in the different collections of old arms in Europe. Both these weapons, and another kind, called, in German, *Morgenstern* (morning star), consisting of a staff, having an iron ball at the end, with cross iron spikes, served to give stunning blows, whose force was felt through the iron armor of the knights. Knights used chiefly the *Morgenstern* and the mace. The Greeks and Romans did not employ the battle-axe, though it was found among contemporary nations. In fact, the axe is one of the earliest weapons, its use, as an instrument of domestic industry, naturally suggesting its application for purposes of offence; but, at the same time, it will always be abandoned as soon as the art of fencing, attacking and guarding is the least cultivated; because the heavier the blow given with this instrument, the more will it expose the fighter. It is a weapon which affords hardly any guard, and it never would have remained so long in use in the middle ages, had it not been for the iron armor, which protected the body from every thing but heavy blows. In England, Ireland and Scotland, the battle-axe was much employed. At the battle of Bannockburn, king Robert Bruce clave an English champion down to the chine with one blow of his axe. A blow of equal force was given by a Suabian knight, in the Levant, in presence of the German emperor. The Lochaber axe remained a formidable implement of destruction in the hands of the Highlanders nearly to the present period, and is still used, by the city-guard of Edinburgh, in quelling riots, &c.

BATTLE-PIECE; a painting which represents a battle, exhibiting large masses of men in action. The armor of the ancients, and the whole array and action of their battles, afford subjects much more favorable to the artist than the straight lines, or condensed columns, and the fire-arms of the moderns. A painter of battle-pieces ought to have an accurate knowledge of the appearance of horses and men, and, if possible, to have seen a battle, as few persons are able to form from hearsay an accurate idea of such a scene. Some of the greatest pieces of this kind are, the battle of Constantine, of which the cartoons were drawn by Raphael, and which was executed by Giulio Romano; Lebrun's battles of Alexander, and the battles of the Amazons, by Rubens. From these may be distinguished the skirmishes, surprises, &c., which are represented with so much skill by Antonio Tempesta, John Snellink, Jos. van der Velde, John Asselyn, Peter Sneyers, Robert von Hoek, Fulcone, called *oracolo delle battaglie*, James Courtois, Francis van der Meulen, Philip Wouvermann, Charles Breydel, Henry Verschuuring and George Philip Rugendas.

BATTOGES, BATTACKS; two thin sticks, with which criminals in Russia were formerly beaten upon their naked backs. The criminal was laid upon the ground, and one of the executioners sat upon his head, another upon his feet. By the code of Catherine II, this punishment was abolished.

Battuecas, Las; two valleys, enclosed by high mountains, in the Spanish kingdom of Leon, 50 miles from Salamanca, about a Spanish mile long, and so inaccessible that the inhabitants are said to have been unknown to the Spaniards for several centuries. However, a convent of Carmelites was built in the Battuecas valleys as early as 1559. They are situated so low, that, in the longest days, the sun only shines there for four hours. The common account, that these valleys were discovered in the 16th century, by two lovers, who fled there to escape the pursuit of their families, has been declared by father Feyjoo to be unfounded. Madame de Genlis has founded upon this story her romance *Las Battuécas* (Paris, 1816, 2 vols.); but she labors under a mistake when she asserts that M. de Bourgoing, in his Travels through Spain, has quoted, as a historical fact, what she relates of the Battuecas.

Baucis; a Phrygian woman; the wife of Philemon. They received Jupiter and Mercury hospitably, after these gods had been denied hospitality in the whole country, while travelling in disguise. A deluge destroyed the remainder of the people, but Philemon and Baucis, with their cottage, were saved. They begged the gods to make their cottage a temple, in which they could officiate as priest and priestess, and that they might die together; which was granted. Philemon and Baucis are therefore names often used to indicate faithful and attached married people.

Bauman Islands; a cluster of islands in the South Pacific ocean, discovered, in 1722, by Bauman, in his voyage round the world with Roggewein. All the inhabitants, says a writer, are white; some of them burned by the sun: they are numerous, and armed with bows and arrows, but represented as of a gentle and humane disposition, and friendly to strangers. The largest island is about 21 or 22 miles in circumference, with good anchorage. Lon. 173° W.; lat. 12° S.

Baumann's Cavern (in German, *Baumannshöhle*); an interesting natural cavern in the Harz, in the principality of Blankenburg, on the left bank of the Bode, about five miles from Blankenburg, in a limestone mountain, consisting of six principal apartments, besides many smaller ones, every where covered with stalactites. The earthy ingredients of these petrifactions are held in solution by the water, which penetrates the rock, and deposits a calcarious stone. The name of this cavern is derived from a miner who entered it, in 1672, with the view of finding ore, but lost his way, and wandered about for two days before he could find the entrance. He soon after died.

Baumgarten, Alexander Gottlieb, born, in 1714, at Berlin, an acute and clear thinker, of the school of Wolf, studied at Halle, and was, for a time, professor extraordinary there. In 1740, he was made professor of philosophy at Frankfort on the Oder, and died there in 1762. He is the founder of æsthetics as a science, and the inventor of this name. He derived the rules of art from the works of art and their effects. Hereby he distinguished himself advantageously from the theorists of his time. (See *Æsthetics.*) His ideas of this science he first developed in his academical discussion, *De Nonnullis ad Poema pertinentibus* (Halle, 1735, 4to). George Fr. Meier's Principles of all Liberal Sciences (3 vols., Halle, 1748—50) originated from his suggestions. Eight years later, B. published his *Æsthetica* (Frankfort on the Oder, 1750—58, 2 vols.), a work which death prevented him from completing.

Bause, John Frederic, a distinguished German engraver, born at Halle, in 1738, died at Weimar, 1814. He resided chiefly at Leipsic, where he executed many highly esteemed engravings. He was a member of several academies of fine arts.

Bautzen, or Budessin; capital of Upper Lusatia, in the part belonging to the king of Saxony, upon a height defended on the west side by steep rocks, the foot of which is watered by the Spree. Among the 11,500 inhabitants, who are principally Lutherans, there are a great number of Wendes, or descendants of the Vandals, who worship in a Lutheran and in a Catholic church, in their own language. The German part of the population, both Catholic and Protestant, worship together in the cathedral: the former are in possession of the third part of it, including the high altar, sufficiently large for the small Catholic congregation; the nave serves the Lutheran community as their parish church, and the mutual spirit of toleration in both parties has, in recent times, prevented trouble from such an arrangement.—Here was fought, on the 20th and 21st of May, 1813, the second great battle in the campaign of the Prussians and Russians against the French. The allies had been compelled, after the battle of Lützen (May 2, 1813), to retreat to the right bank of the Elbe, and prepared themselves, near Bautzen on the Spree, for a new engagement. Although

the army of Napoleon was far superior in number, being strengthened by reën-forcements from France, Italy and the troops of the confederation of the Rhine, so as to amount to about 148,000 men, yet the allies determined to risk a battle, that Prussia might gain time for its levies in Silesia, and Napoleon be checked in his advance as much as possible. It was also desirable that the wavering cabinet of Austria should be convinced that the army was able to make a stand against the enemy, and that the courage of the new Prussian recruits should not be damped by continual retreat, but, on the contrary, their wish for battle gratified. On the morning of May 20, Napoleon disclosed his plan of attack. In the evening, the French had gained the city of Bautzen. On the 21st, the fight continued until 4 o'clock in the afternoon, when the allies resolved on a retreat, which was performed in such order, that Napoleon was not able to gain any immediate advantage from his victory. The field of battle was covered with the dead, and was lighted by 30 burning villages. The French loss was about 8000 men killed, and 18,000 wounded; that of the allies, between 8 and 12,000. Napoleon, to encourage his troops, assigned 25,000,000 francs for the erection of a monument upon mount Cenis, as a token of his gratitude towards the French and Italian troops. The rear of the allies repulsed two serious attacks, and, contrary to the expectations of Napoleon, they marched to the intrenched camp of Pülzen. But Lauriston occupied Breslau. The position of the allies, threatening the right wing of the French army, the great loss which the French had suffered, and the detached corps, which cut off Napoleon's communication with Saxony, induced him to accede to a suspension of arms on the 4th of June, near the city of Jauer. (See *War of* 1812—1815.)

Bavaria. At the time of the general migration of the barbarians, the regions formerly inhabited by the Boii, the Celts of the Danube, were taken possession of by some German tribes. This country, in the time of Cæsar, had been a waste, and, in the time of Augustus, a Roman province (Vindelicia and Noricum). At the end of the fifth century, these tribes—the Heruli, the Rugians, the Turcilingians and the Skyres—formed a confederacy, like those of the Franks and the Marcomanni, under the name *Baioarians*. They spread from Noricum westward to the Lech. Ratisbon was their chief seat. This country was then called *Noricum*, and, according to Mannert, was never subjected to the Ostrogoths. When the Franks took possession of Rhœtia, the Baioarians became subject to them. The people, however, still retained the liberty of choosing their own rulers. After the division of the empire of Charlemagne, this region was disturbed, like the rest of Europe, by the conflicting claims of rival dukes, till the time of Otho the Great, count palatine of Wittelsbach. Otho, the ancestor of the present dynasty, died in 1183. His successor, Louis I, enlarged the Bavarian territory, and acquired the palatinate of the Rhine. He was murdered in 1231, probably at the instigation of Henry, whose rebellion against his father, the emperor Frederic II, the duke had censured. He was succeeded by his son Otho, the Illustrious, palatine of the Rhine. Under his reign, the bishops made themselves independent. His dominions, however, were considerably increased. His attachment to the emperor involved him in the excommunication pronounced against that prince. He died in 1253. His sons, Louis and Henry, reigned for two years in conjunction. In 1255, they divided the territories, Louis receiving Upper and Henry Lower Bavaria. The line of the latter became extinct a few years afterwards. The inheritance of the unhappy Conradin of Hohenstaufen fell into the hands of these princes. One of the two sons of Louis was raised to the imperial dignity, in 1314, under the title of *Louis IV* (q. v.), called *the Bavarian*. He entered into an agreement with the sons of his brother (Pavia, 1329) for the division of the dominions of the family. In consequence of this agreement, king Maximilian Joseph united all the dominions of the Wittelsbach dynasty in 1799. After the extinction of the Lower Bavarian line, the emperor Louis, by the desire of his states, united Lower with Upper Bavaria. The emperor introduced a new code of laws for Upper Bavaria, a new organization of the courts for Lower Bavaria, conferred the privileges of a city on Munich, and reduced to order the internal administration. He died Oct. 11, 1347, leaving six sons by two marriages. His dominions included Bavaria, Brandenburg, the provinces of Holland and Zealand, Tyrol, &c. These provinces were soon lost by the divisions and dissensions of the different lines. Most of the lines founded by the six brothers early became extinct. In 1506, a diet of the states of Upper and Lower Bavaria was assembled by duke

Albert II, who, with the consent of his brother Wolfgang, and of the estates, published a pragmatic sanction, introducing the law of primogeniture, and fixing the allowance of the younger sons. Albert died in 1508. Of his three sons, William IV, Louis and Ernest, William ought, accordingly, to have been his sole heir. The authority was, however, divided, after much contest, between William IV and Louis, until the death of the latter, in 1534. These princes were both opposed to the reformation. Luther's most violent opponent, John Eck, lived at Ingolstadt, under their protection, which they also extended to the Jesuits. William died in 1550; his son Albert V, the Generous, succeeded him. He also favored the Jesuits, but was a liberal patron of the arts and sciences. The states received from him great privileges. He died in 1579. Of three sons, the eldest, William V, the Pious, succeeded him, and, in 1596, resigned the government to his eldest son, Maximilian I, and retired to a monastery. Maximilian, a prince of distinguished abilities, was the soul of the league formed against the Protestant union. In the course of the 30 years' war, which had just broken out, Maximilian was invested, by the emperor Ferdinand II (1623), with the dignity of elector palatine. The peace of Westphalia confirmed Maximilian in the electoral dignity and the possession of the upper palatinate, in return for the renunciation of Upper Austria, which had been pledged to him for 13,000,000 florins, expenses of war; and, on the other hand, a new electorate, the eighth, was established for the palatinate line, and its succession to the title and territory of the original electorate was settled, in case of the failure of the line of William. Maximilian died Sept. 27, 1651, after a reign of 55 years. He was succeeded by his son Ferdinand Maria, who was succeeded, in 1679, by his eldest son, Maximilian Emanuel. In the war of the Spanish succession, the elector declared for France. After the unfortunate battle at Blenheim, Bavaria was treated by the emperor as a conquered country. The elector was put under the ban of the empire in 1706, and was not reinstated in his government till the peace of Baden (1714). After his death, in 1726, Charles Albert succeeded him in the electoral dignity. Although he had signed the pragmatic sanction of the emperor Charles VI, yet, after the death of the emperor, and the beginning of the first Silesian war, so fortunate for the king of Prussia, he claimed the whole Austrian territory, subjected all Upper Austria, assumed the title of *archduke of Austria*, after the capture of Prague in the same year received homage as king of Bohemia, and was elected emperor of Germany, at Frankfort, 1742, under the title of *Charles VII.* But here his fortune began to decline. As he had received the homage of Austria and Bohemia, so, after the sudden change in the fortune of the war (1743), Maria Theresa obliged the states of Bavaria, and of the upper palatinate, to swear allegiance to her. Notwithstanding his alliance with the landgrave of Hesse-Cassel and Frederic II (1744), and the progress of the Prussian arms, Charles was compelled, by the superior talent of the Austrian general, Charles of Lorraine, to expose Bavaria. He did not live to see the end of the war, but died Jan. 20, 1745. His son and successor, Maximilian Joseph III, who also assumed, at first, the title of *archduke of Austria*, made peace with Austria soon after, at Fussen (April 22, 1745), became one of the guarantees of the pragmatic sanction, promised the archduke Francis his vote in the election of emperor, and received, in return, all the Bavarian territories which had been conquered by Austria. Maximilian Joseph devoted himself entirely to the good of his country. He encouraged agriculture, manufactures, mining; regulated the judicial establishments, the police, the finances, and institutions for instruction; the sciences were promoted by the foundation of the academy of sciences at Munich, in 1759, and the fine arts found in him a liberal protector. He, himself without children, confirmed all the contracts relating to the inheritance, which had been made with the electoral line of the palatinate since the treaty of Pavia (1329). In compliance with the treaties of the house of Wittelsbach, as well as with the terms of the peace of Westphalia, the right of succession in Bavaria reverted, undeniably, to the elector of the palatinate, since the Wittelsbach-Bavarian line became extinct on the death of Maximilian Joseph, 30th of Dec., 1777. Austria then laid claim to Lower Bavaria, and attempted to support her demands by arms, without any previous declaration of war. Charles Theodore, being without children, was persuaded to sign a treaty (Jan. 3 and 14, 1778), formally renouncing the Bavarian succession. But the duke of Deux-Ponts, uncle of the reigning king, the nearest

agnate and presumptive heir, encouraged by Frederic II, refused to acknowledge that renunciation. This was the origin of the war of the Bavarian succession, which was terminated, without bloodshed (owing chiefly to the Russian declaration of war against Austria), by the peace of Teschen, May 13, 1779. The possession of Bavaria, from which Austria obtained only the Innviertel, with Braunau (800 square miles), was secured to the elector palatine of Bavaria, according to the family compacts. By this union of the Bavarian dominions, the eighth electorate became extinct, according to the terms of the peace of Westphalia. In 1784, however, the possession of Bavaria again became an object of desire at Vienna, and an exchange was proposed, which had been already a subject of negotiation in the beginning of the century. The emperor Joseph II proposed to the elector to exchange Bavaria for the Austrian Netherlands (excluding Luxemburg and Namur), and the sum of 3,000,000 florins for himself and the duke of Deux-Ponts, with the title of *king of Burgundy*. This project, though favored by Russia, was disappointed by the firmness of the duke of Deux-Ponts, who, encouraged by the protection of Prussia, declared "that he would never consent to barter away the inheritance of his ancestors." The zeal with which Frederic II adopted the cause of Bavaria, induced the cabinet of Vienna to relinquish the plan, and to declare, at the same time, "that there never had been and never would be any intention of a forced exchange." (See *League of the Princes*.) The reign of Charles Theodore was remarkable for the rise of the *Illuminati* (q. v.) in Bavaria, for the processes against them, and the revival of Jesuitism. During these troubles, the liberty of the press was continually more and more restrained, and a period of intellectual darkness appeared to be about to commence. In the war of the French revolution, the elector sent his contingent to the army of the empire. The palatinate suffered much, and, in 1796, Bavaria itself became the theatre of war. At this crisis (Feb. 16, 1799), Charles Theodore died without issue, and the Sulzbach branch of the line of the palatinate became extinct with him. The duke Maximilian Joseph of Deux-Ponts came into possession of all the Bavarian territories. The peace of Luneville (Feb. 9, 1801) put an end to the renewed war, and its most important article—the cession of the left bank of the Rhine to France—essentially affected Bavaria. Whilst it lost all its possessions on the left bank of the Rhine, and also the lands of the palatinate on the right bank, it obtained, on the other hand, by an imperial edict, an indemnification, by which it gained, in addition to the amount lost, a surplus of 2109 square miles, and 216,000 inhabitants. The political importance of Bavaria, with respect to Austria as well as to France, was more fully displayed in the war of 1805. When Austria resumed hostilities against France, she required the elector of Bavaria to unite his troops with the Austrian army, and refused to allow him to remain neutral, "which (as the emperor Francis wrote to the elector, Sept. 3, 1804) France herself would only suffer as long as she should find it expedient." Bavaria, however, did not find it accordant with its own interests to place itself entirely in the power of Austria. At the beginning of the war, the elector joined the French with about 30,000 troops, and the peace of Presburg annexed to his dominions 10,595 square miles, and 1,000,000 inhabitants, and conferred on him the dignity of king; in return for which, he ceded Würzburg, which was erected into an electorate, in the place of Salzburg. The king of Bavaria, like the rulers of Würtemberg and Baden, now assumed sovereignty over the lands of the nobility of the empire within his borders. The political connexion recently formed with France was confirmed by the marriage of the princess Augusta, daughter of the king, with Eugene Napoleon, viceroy of Italy, son-in-law of the French emperor. An immediate consequence of this alliance was the exchange of Berg, which Bavaria surrendered to Napoleon, for Anspach, which Prussia had given up to France in exchange for Hanover, and finally, what was most important, the signing of the confederation of the Rhine (July 12, 1806), in which Bavaria promised to bring into the field 30,000 troops, and to fortify Augsburg and Lindau. Thereupon, the king of Bavaria was obliged to take part in the war against Prussia, in 1806, and in the war against Austria, in 1809, one of the consequences of which was the revolution of Tyrol. After its termination, Bavaria received important additions, partly at the expense of Austria, partly by treaties of exchange with Würtemberg and Würzburg.—When, in 1812, the war between France and Russia broke out, Bavaria sent anew its whole proportion of troops to the French army. Insignificant re-

mains only of the 30,000 Bavarians returned in the spring of 1813. Maximilian Joseph, notwithstanding this sacrifice, placed fresh troops under the command of Napoleon as the protector of the confederation of the Rhine, when the new campaign was opened, near the close of April. This army also suffered great losses, but distinguished itself with its wonted bravery, under the command of marshal Oudinot. It suffered particularly in the battles of Luckau and Grossbeeren (1813). At this time, the whole political system of Bavaria was suddenly changed. Whilst the French army of observation was formed at Würzburg, under Augereau, a Bavarian corps of observation was placed on the Inn, over against a division of the Austrian army. For a long time, both corps remained inactive. The departure of the corps of Augereau, by which Bavaria was exposed in its most vulnerable point, accelerated the resolution of its king. The Bavarian general Wrede concluded an armistice with the Austrian general Frimont, October 8, at Ried, which was followed by a proclamation, October 15, by which the king of Bavaria abandoned the confederation of the Rhine, and turned his forces against France. In this convention, his present territories, with full sovereignty, were assured to the king, and a sufficient indemnification for those lands which should be made over to Austria. At the same time, Wrede, as commander-in-chief, united the Austrian corps with his own, and turned the Bavarian arms against the French, in the battle of Hanau. In 1815, at the breaking out of the new war, the present king, then crown-prince, took the command of the national army. Meanwhile, the congress of Vienna, and, more particularly, the preparation of the statutes of the German diet (as well as the different interests originating from the new European, and especially the new German system of states), had given sufficient opportunity to the Bavarian government for the developement of its system of diplomacy. Bavaria has jealously maintained its station as an independent sovereign state. Since 1825, Bavaria has been under the government of Louis I, the most liberal of the German princes. He has hitherto acted with much energy.—Bavaria was erected into a kingdom in 1805, and is now one of the most considerable of the secondary states of Europe. It is composed of the greater part of the circles of Bavaria and Franconia, part of Suabia, and, on the west side of the Rhine, embraces the greater part of that portion of the circle of Upper Rhine included in the late French department of Mont Tonnerre. Exclusive of the part west of the Rhine, it is bounded N. by Hesse-Darmstadt, Hesse-Cassel, and the Saxon principalities of Meiningen, Hildburghausen, Coburg and Reuss, and the kingdom of Saxony; E. and S. by Austria, and W. by Würtemberg, Baden and Hesse-Darmstadt.—The kingdom of Bavaria is divided into the 8 following circles:—Iser, Upper Maine, Lower Maine, Rezat, Regen, Upper Danube, Lower Danube, Rhine. The last is on the west side of the river Rhine.—This kingdom contains 32,000 square miles and 3,800,000 inhabitants. Its army is 53,900 strong, of whom 35,800 form the seventh *corps d'armée* of the German confederacy. Its public debt amounted, in Sept., 1824, to 103,157,859 florins; the income was, at the same time, 29,132,260 florins. The present king, Louis, endeavors, with much zeal, to introduce economy into the expenses of the government: he has diminished the standing army, and discharged many officers from the civil government.—The various inhabitants of this country differ very much in their character, the Bavarian, from the highlands near Tyrol, and the Franconian, in the north part of the kingdom, being as unlike as any two Germans probably can be; and the different parts of this young kingdom have been so recently united, that it is not possible to speak of any character as common to its inhabitants. The native of Upper Bavaria is hardy, laborious, short in stature. Many portions of the population are distinguished by mechanical talent. The excellence of Frauenhofer's telescopes and Bader's rail-road is generally known. Munich and Nuremberg have, in recent times, produced more philosophical instruments than any other two cities of Germany. (See *Munich*.) The manufactures of Bavaria include linen, woollen and cotton cloths, iron, fire-arms, and other articles, designed chiefly for the supply of domestic wants. Glass, paper, clocks and hard ware are also made in several of the principal towns. The common language of Bavaria, of course, is German; but the dialects vary much, from the strong Franconian spoken in Würzburg to the broad Swiss dialect in Lindau. At the head of each of the circles, into which the kingdom is divided, stands a general commissioner (*General Kreiscommissair*), with great power, chiefly of an executive character. All

the lower courts, municipal magistrates, village officers, &c., are under his control. The judiciary consists of a high court of appeal (*Ober Appellations Gericht*) at Munich; also a court of appeal for each circle, and the inferior courts. The *Codex juris Bavarici* has been in force since Jan. 1, 1811. The penal code is now under revision. A complete code is also in preparation. (See *Feuerbach.*) The executive consists of a privy council, called *Geheime Rath*, composed of 4 ministers of state, the 4 crown-officers, and from 12 to 16 other members, who deliberate in 3 sections on the affairs of the kingdom. The affairs of the Catholics in the kingdom are regulated by the concordat concluded with Pius VII, Jan. 5, 1817, which, in 1821, was promulgated as the law of the land. Those of the Protestants are under the direction of a general consistory. The two sects live without contention. The circumstance that the queen of the late king was a Protestant (as is also the present queen, if we are not greatly mistaken) had a most beneficial influence. In the smaller council of the German diet, Bavaria has the third place, and in the *plenum* has four votes. (See *German Confederacy.*) Education made much progress under the government of the late Maximilian Joseph, and it is to be expected that the present king, who has manifested liberal views, on many occasions, more openly than any prince of the continent now living, will continue to give it the aid of the government. Many seminaries for the training of instructers have been erected, and the academy of sciences at Munich, with the three universities at Munich, Würzburg and Erlangen, produce the best results. (See *Munich*, *Würzburg* and *Erlangen.*) The first of these universities contains nearly 2000 students, whilst the medical department of Würzburg is considered one of the first in Europe. Agriculture and industry in general have received, since the reign of Maximilian, much attention. Several institutions for promoting them have been established, including agricultural seminaries, in which those young men who prepare themselves for village school-masters learn gardening, &c. A festival was instituted by Maximilian, generally called the *October festival*, at which prizes are assigned, by order of the king, for the best specimens of agricultural produce, the best cattle, &c. There are also races connected with this celebration. The present king, when crown-prince, was a liberal patron of the fine arts, and still affords them much encouragement. As Bavaria is entirely an inland country, and has no great river crossing it, its commercial resources could be fully developed only in case of a perfectly free intercourse between all the German states; to obtain which, efforts have several times been made, but, unhappily, in vain. A great canal, near Nuremberg, has been sometimes spoken of, to unite, by means of small rivers, the Rhine and Danube, a work begun by Charlemagne: the traces of his work, still remaining, are called *fossa Carolina:* but the expense would be great for so small a kingdom, and it is very doubtful whether the commerce carried on in this way would be considerable, depending, as it would, upon so many governments, from the Turkish to that of the Netherlands.—According to Rudhart, Bavaria contains 1384 noble families. Agriculture is the chief branch of industry. Bavarian beer is excellent.

Bavaria, constitution of. Like most of the states of the middle ages, Bavaria had its constitution. No other state of Germany has so complete a collection of works relating to its ancient form of government. The estates consisted, as usual, of the three classes—the prelates, among whom the university had the first rank; the nobility, and the burgesses. Their privileges were great, but early lost by dissension among themselves. The last diet was holden in 1669. A committee of the estates arrogated the privileges belonging to the whole body; the secularization of the ecclesiastical establishments, in 1803, made the old constitution still more inefficient, and, in 1808, the system of the estates was abolished; but an order was issued, May 1 of the same year, instituting a new constitution. The king of Bavaria was the first among the sovereigns of Germany to fulfil the promise contained in the thirteenth article of the ordinances of the German confederation, which assures the people that they shall receive constitutional forms of government. The king promulgated the new representative constitution May 26, 1818. The system of the two chambers has been adopted. The chamber of peers, or, as they are called in Bavaria, *Reichs Räthe* (counsellors of the realm), consists of the princes, the crown-officers, 2 archbishops, the 16 seniors of the families which were formerly members of the German empire, 1 bishop, appointed by the king, the president of the Protestant

consistory, besides 15 hereditary peers, and 12 who hold their stations for life, chosen by the king. The lower chamber consists of 14 representatives of the lower nobility, 1 representative of each of the three universities of the kingdom, 9 representatives of the Catholic, and 5 of the Protestant clergy, 2 of Munich, 1 of Augsburg, 1 of Nuremberg, 24 of all the other cities and market-places, and 56 of the land-owners (not noblemen). The elections in the cities are badly conducted, as they are in the hands of the city councils, the mayors, &c. Another great fault is, that the amount of property required in a representative is so great, that whole districts are excluded from representation. The rights which the representatives have are not altogether insignificant; yet there are many other things wanted, as, a perfectly free press, and many real guarantees of freedom, before we can speak of it as actually existing in Bavaria. The ministers are responsible, and yet their power is unconstitutionally great. It would not be very difficult for the Bavarian government to do any thing they pleased, without encountering many constitutional obstacles. The first meeting of the representatives was held Feb. 4, 1819. There is 1 representative for about 35,000 souls. The constitution is a granted one, viz., given by the king, not a compact between two parties, the people and the ruler. It promises liberty and equal rights to all religions, and also freedom of the press, which, however, no American or Englishman would call truly free. Bond-service is abolished. The king appoints the president of the representatives.

Bavius, Marcus, and Mævius; still notorious as two miserable poets and presumptuous critics, satirized by Virgil.

Bawdy-House; a house of ill fame, to which persons of both sexes resort for sexual intercourse. Such houses, under the name of *brothels* or *stews*, are licensed by the laws of some countries. They were formerly licensed in England, from the reign of Henry II to the last year of Henry VIII, when they were suppressed by sound of trumpet, with as great ceremony as the religious houses. The laws of most civilized countries prohibit the keeping of bawdy-houses, as tending not only to the corruption of morals and manners, but also to a breach of the peace, by bringing together disorderly and vicious people. The keeping of such a house is indictable at the common law, and so is the frequenting of it; but these offences are, most generally, the subjects of positive statutes. In some parts of Europe, such houses are licensed, and under the care of the medical police.

Baxter, Andrew; an ingenious philosopher and metaphysician. He was a native of Aberdeen, and was educated at King's college in that city; after which he was employed as a private tutor. About 1730, he published an Enquiry into the Nature of the Human Soul; wherein the Immateriality of the Soul is evinced from the Principles of Reason and Philosophy. This work was applauded by Warburton, and obtained for the author a high reputation; though his arguments, which are founded on the *vis inertiæ* of matter, have since been controverted by Hume and Colin Maclaurin. In 1741, he went abroad with one of his pupils, and remained for some years at Utrecht, where he contracted an acquaintance with some of the Dutch literati. He returned to Scotland in 1747, and resided at Whittingham, in East Lothian, where he died in 1750, aged 63. He was the author of a Latin treatise, entitled *Matho sive Cosmotheoria puerilis Dialogus*, which he afterwards translated into English, and published in 2 vols. 12mo.

Baxter, Richard, the most eminent of the English nonconforming divines of the 17th century, was born in the village of Rowton in 1615. The example of his father, who was accused of Puritanism, gave him a serious turn very early in life. After receiving his education, he was sent to London, under the patronage of sir Henry Herbert, master of the revels; but he soon returned into the country with a view to study divinity, and, in 1638, received ordination in the church of England. The imposition of the oath of universal approbation of the doctrine and discipline of the church of England, usually termed the *et cætera oath*, detached him and many others from the establishment. When the civil war broke out, he sided with the parliament, and, after the battle of Naseby, accepted the appointment of chaplain to colonel Whalley's regiment. He is said to have been, the whole of this time, a friend to the establishment, according to his own notions, and to have repressed sectaries as much as he was able. In 1647, he retired, in consequence of ill-health, from his military chaplainship, and, when he recovered, opposed the measures of those in power, and preached urgently against the covenant. He even endeavored to persuade the soldiery not to encounter the Scottish troops who came

into the kingdom with Charles II, and hesitated not to express an open dislike to the usurpation of Cromwell, whom he told, in a conference very characteristic of both parties, that the people of England deemed the ancient monarchy a blessing. The fact is, that B., with many more zealous religious partisans, held civil liberty to be of secondary consequence to what he esteemed true religion, and appears, from the tenor of a sermon which he preached before Cromwell, to have deemed the toleration of separatists and sectaries the grand evil of his government. After the restoration, he was made one of the king's chaplains, and a commissioner of the Savoy conference, to draw up the reformed liturgy. The active persecution of the Nonconformists soon followed; and, upon the passing of the act against conventicles, he retired, and preached more or less openly, as the act was more or less rigidly enforced. After the accession of James II, in 1685, he was arrested for some passages in his Commentary on the New Testament, supposed hostile to Episcopacy, and was tried for sedition. The violence of Jefferies, who would neither hear the accused nor his counsel, produced a verdict of guilty on the most frivolous grounds. He was sentenced to two years' imprisonment and a heavy penalty, which, after a short confinement, the king remitted, probably with some degree of compunction for the manner of its infliction. Henceforward, B. lived in a retired manner till his death, in 1691. His wife cheerfully shared all his sufferings on the score of conscience, both in and out of prison. The character of B. was formed by his age; his failing was subtle and controversial theology; his excellence, practical piety. In divinity, he sought to establish a resting-place between strict Calvinism and high-church Arminianism, by the admission of election, and the rejection of reprobation. Christ died for some especially, and for all generally; that is to say, all possess the means of salvation. A body called *Baxterians* long acknowledged these distinctions, and the nonconformist clergy, after the revolution, were divided between this body, the pure Calvinists, and the high-church passive-obedient Arminians. B. was a voluminous writer: his Saints' Everlasting Rest, and the Call to the Unconverted, have been extraordinarily popular.

Bayadeer, in the East Indies; young girls, from 10 to 17 years of age, who are instructed in dancing, singing, and acting little plays. They are under the care of matrons, who are experienced in all female arts, and particularly in that of pleasing. These select from the lowest classes of the people the most beautiful girls, of seven or eight years of age, secure them, by inoculation, from the disfiguring consequences of the small-pox, and instruct them in all the arts of their profession, the object of which is to amuse the rich, and minister to their passions. Their presence is considered necessary, even at the smallest entertainments. If any of the spectators desires to become better acquainted with the talents of a bayadeer, only a hint is needed. For a girl of the greatest attractions, the matron to whom she belongs receives a hundred rupees for an evening, and as much for a night, besides a present for the girl. After their 17th year, when their first charms have faded, they retire to a pagoda (the temple of their idols), under the protection of the Bramins, but not, like public girls in Europe, to become devotees. They continue to exercise their profession in the temple, and what they gain belongs to the Bramins, who give them food and shelter. Their profession is not thought infamous in India.

Bayamo, or St. Salvador; a town of Cuba, on a river which forms a port on the S. E. coast; 520 miles E. S. E. Havannah; lon. 76° 55′ W.; lat. 20° 46′ N.; population estimated at 12,000. The town is about 20 miles distant from the port. It gives name to a channel situated between the main land of Cuba and the islands called the *Queen's Gardens*.

Bayard, Pierre du Terrail, chevalier de, called the *knight without fear and without reproach*, born in 1476, in the castle of Bayard, near Grenoble, was one of the most spotless characters of the middle ages. He was simple and modest; a true friend and tender lover; pious, humane and magnanimous. The family of Terrail, to which he belonged, was one of the most ancient in Dauphiné, and was celebrated for nobility and valor. Young B., educated under the eyes of his uncle George of Terrail, bishop of Grenoble, early imbibed, in the school of this worthy prelate, the virtues which distinguished him afterwards. At the age of 13, he was received among the pages of the duke of Savoy, the ally of France. Charles VIII, who saw him at Lyons, in the suite of this prince, was struck with the dexterity with which the youth managed his horse: he begged him of the duke, and committed him to the care of

Paul of Luxemburg, count de Ligny. The tournaments were his first field of glory. At the age of 18, he accompanied Charles VIII to Italy, and distinguished himself greatly in the battle at Verona, where he took a standard. At the beginning of the reign of Louis XII, in a battle near Milan, he pursued the fugitives with such eagerness, that he entered the city with them, and was taken prisoner. Ludovico Sforza returned him his arms and his horse, and dismissed him without ransom. Whilst the French were in Apulia, B. defeated a Spanish corps, and made their leader, don Alonzo de Sotomayor, prisoner. He treated him with generosity. Sotomayor, however, not only violated his parole by flight, but calumniated B., who, according to the custom of that time, challenged him, and killed him. Afterwards, like Horatius Cocles, he defended a bridge over the Garigliano singly against the Spaniards, and saved the French army by checking the advance of the victorious enemy. For this exploit, he received as a coat of arms a porcupine, with the motto *Vires agminis unus habet.* He distinguished himself equally against the Genoese and the Venetians. When Julius II declared himself against France, B. went to the assistance of the duke of Ferrara. He did not succeed in his plan of taking the pope prisoner; but he refused, with indignation, an offer made to betray him. Being severely wounded at the assault of Brescia, he was carried into the house of a nobleman, who had fled, and left his wife and two daughters exposed to the insolence of the soldiers. B. protected the family, refused the reward of 2500 ducats, which they offered to him, and returned, as soon as he was cured, into the camp of Gaston de Foix, before Ravenna. In an engagement, which shortly after ensued, he took two standards from the Spaniards, and pursued the fugitives. Gaston, the hope of France, perished through his neglect of the advice of B. In the retreat from Pavia, B. was again wounded. He was carried to Grenoble; his life was in danger. "I grieve not for death," he said, "but to die on my bed, like a woman." In the war commenced by Ferdinand the Catholic, he displayed beyond the Pyrenees the same talents, the same heroism, which had distinguished him beyond the Alps. The fatal reverses which imbittered the last years of Louis XII only added a brighter splendor to the personal glory of B. Henry VIII of England, in alliance with Ferdinand and Maximilian, threatened Picardy in 1513, and besieged Terouane. The French army disgracefully took to flight. B., with his accustomed intrepidity, made an ineffectual resistance to the enemy: overpowered by superior numbers, his troop was on the point of laying down their arms, when B., perceiving an English officer at some distance from him, immediately galloped towards him, presented his sword to his breast, and cried, "Yield, or die!" The Englishman surrendered his sword: B. immediately gave him his own, saying, "I am Bayard, and your captive, as you are mine." The boldness and ingenuity of this action pleased the emperor and the king of England, who decided that B. needed no ransom, and that both captives were released from their parole. When Francis I ascended the throne, he sent B. into Dauphiné, to open for his army a passage over the Alps, and through Piedmont. Prosper Colonna lay in wait for him on his march, expecting to surprise him, but B. made him prisoner. This brilliant exploit was the prelude to the battle of Marignano, in which B., at the side of the king, performed wonders of bravery, and decided the victory. After this glorious day, Francis was knighted with the sword of B. When Charles V invaded Champagne, with a large army, and threatened to penetrate into the heart of France, B. defended the weakly-fortified town of Mezières against every assault, until the dissensions of the hostile leaders compelled them to retreat. B. was saluted in Paris as the savior of his country: the king bestowed on him the order of St. Michael, and a company of 100 men, which he was to command in his own name—an honor which, till then, had only been conferred on princes of the blood. Soon afterwards, Genoa revolted from France: B's presence reduced it to obedience. But, after the surrender of Lodi, fortune changed, and the French troops were expelled from their conquests. Bonnivet was obliged to retreat through the valley of Aosta; his rear was beaten, and himself severely wounded, when the safety of the army was committed to B. It was necessary to pass the Sesia in the presence of a superior enemy, and B., always the last in retreat, vigorously attacked the Spaniards, when a stone, from a blunderbuss, struck his right side, and shattered his back-bone. The hero fell, exclaiming, "Jesus, my God, I am a dead man!" They hastened towards him. "Place me under yon tree," he said, "that I may see the enemy." For want of a crucifix, he kissed the cross of his

sword, confessed to his squire, consoled his servants and his friends, bade farewell to his king and his country, and died, April 30, 1524, surrounded by friends and enemies, who all shed tears of admiration and grief. His body, which remained in the hands of his enemies, was embalmed by them, given to the French, and interred in a church of the Minorites, near Grenoble. His monument consists of a simple bust, with a Latin inscription. (See *Hist. de P. Terrail, dit le Chevalier Bayard sans Peur et sans Reproche*, by Gayard de Berville, new edition, Paris, 1824).

Bayard, James A., an eminent American lawyer and politician, was born in Philadelphia, in 1767. His classical education was completed at Princeton college. In the year 1784, he engaged in the study of the law, and, on his admission to the bar, settled in the state of Delaware, where he soon acquired considerable practice and reputation. A few years after he reached his majority, he was elected a representative of Delaware in congress. The first occasion, on which he particularly distinguished himself, was the impeachment of William Blount, a senator of the U. States. Mr. B. was chairman of the committee of eleven, who were selected, by the house of representatives, to conduct that impeachment. He took the chief and a very brilliant part in the discussion of the constitutional questions which arose out of the successful plea of the accused to the jurisdiction of the senate. At an early period of his political career, president Adams offered him the post of envoy to the French republic, which prudential reasons induced him to decline. Mr. B. was one of the leaders of the federal party in congress at the epoch of the election of Mr. Jefferson to the office of president. In the memorable contest in the house of representatives, which was produced by the equality of votes for Mr. Jefferson and colonel Burr, he finally prevailed upon his political coadjutors to adopt the mode of proceeding which enabled the friends of Mr. Jefferson to triumph. Hostile as he was to that statesman, and much as he had reason to expect of personal advantage from a different issue, he sacrificed party feeling and ambitious hope, when he perceived that the peace of the country and the stability of the constitution might be endangered by continuing the struggle. In no debate of the house did Mr. B. display his genius more than in that which preceded the repeal, in March, 1802, of the judiciary bill. A volume of the speeches which were delivered in this famous controversy has been published. It was almost universally conceded that he was the ablest advocate of the system or organization which was destroyed. He continued in the house of representatives after the change of administration, always conspicuous for his sound principles, constant acuteness, extensive knowledge, and manly, copious eloquence. Elected to the senate of the U. States by the legislature of Delaware, he displayed, for several years, in that assembly, the same talents and patriotism. In 1812, he strenuously opposed the declaration of war with Great Britain. President Madison selected him as one of the commissioners to treat for peace under the proffered mediation of the emperor Alexander of Russia. He embarked on this important mission, which had not been sought nor expected by himself or his friends for him, from the port of Philadelphia, May 8, 1813, and arrived at St. Petersburg in July of that year. The absence of the emperor prevented the transaction of any business, and, when all hope of advancing the main object seemed idle, Mr. B. proceeded (January, 1814) by land to Holland. There he learned the willingness of the British court to treat directly with the American envoys. Previously to the arrival of his colleagues, who, in consequence of this annunciation, were despatched by the American government, he visited England. At the proper period, he repaired to Ghent, which was ultimately chosen as the scene of the negotiations which terminated in the treaty that bears the name of that place. His share in the oral discussions and the written correspondence with the British plenipotentiaries was such as might have been expected from his peculiar fitness for the task of negotiation. On the conclusion of this business, he made a journey to Paris, where he remained until he heard of the ratification of the treaty, and of his appointment as envoy to the court of St. Petersburg. This he promptly declined. It was his intention, however, to go to England, in order to co-operate in the formation of a commercial treaty with the British cabinet, as he was included in the commission sent for that purpose; but an alarming illness put an end to every plan, except that of reaching his home as early as possible. He embarked at Havre in May, 1815, in a state of the most painful debility, suffered unfortunate delays in the voyage, and arrived in the U. States only to die in the arms of his family.—

Mr. B. was a logician of the first order, possessed a rich and ready elocution, and commanded attention as well by his fine countenance and manly person as his cogent reasoning and comprehensive views. He acquired a reputation, both as a lawyer and political orator, scarcely inferior to that of any one of his American contemporaries.

Bayle, Pierre, born at Carlat, in the county of Foix (Languedoc), in 1647, received his first instruction from his father, a Calvinistic preacher. He gave early proofs of an astonishing memory, and of a singular vivacity of mind. At the age of 19 years, he entered the college of Puy-Laurens, to finish his studies. The ardor with which he devoted himself to them weakened his constitution. All books were eagerly devoured by him; his taste for logic led him particularly to study religious controversies, but Amyot's Plutarch and Montaigne were his favorite works. The latter encouraged, without doubt, his inclination to scepticism; perhaps both contributed to give to his style that vivacity, that boldness of expression and antique coloring, so observable in it. In Toulouse, he studied philosophy with the Jesuits. The arguments of his professor, and, still more, his friendly discussions with a Catholic priest, who dwelt near him, confirmed his doubts of the orthodoxy of Protestantism, so that he resolved to change his religion. His conversion was a triumph to the Catholics. His family, however, tried all means to regain him, and, after 17 months, he returned to his old faith. In order to escape from the punishment of perpetual excommunication, which the Catholic church then pronounced against apostates, he went to Geneva, and thence to Copet, where count Dohna intrusted him with the education of his sons, and where he studied the philosophy of Des Cartes. But, after some years, he returned to France, and settled in Rouen, where he was employed in teaching. From thence he went to Paris, where the society of learned men indemnified him for the fatigues of an occupation to which he was obliged to submit for a third time. In 1675, he obtained the philosophical chair at Sedan, where he taught with distinction until the suppression of this academy in 1681. He was afterwards invited to discharge the same duties at Rotterdam. The appearance of a comet, in 1680, which occasioned an almost universal alarm, induced him to publish, in 1682, his *Pensées diverses sur la Comète*, a work full of learning, in which he discussed various subjects of metaphysics, morals, theology, history, and politics. It was followed by his *Critique générale de l'Histoire du Calvinisme de Maimbourg*. This work, received with equal approbation by the Catholics and Protestants, and esteemed by Maimbourg himself, excited the jealousy of his colleague, the theologian Jurieu, whose *Refutation du P. Maimbourg* had not succeeded, and involved B. in many disputes. He afterward undertook a periodical work, *Nouvelles de la République des Lettres*, in 1684. A letter from Rome, published in this work, excited the displeasure of the queen Christina of Sweden, who caused two violent letters to be sent to him. B. apologized, and his excuses so perfectly satisfied the queen, that from that time she kept up a literary correspondence with him. The death of his father and of his two brothers, together with the religious persecutions in France, induced him to undertake his *Commentaire philosophique sur ces Paroles de l'Evangile; Contrains-les d'entrer;* which, in regard to style and tone, is not worthy of him. B. himself was unwilling to acknowledge it; but Jurieu, who probably recognised its author by the zeal with which toleration is defended in this work, attacked it with violence. His hatred only waited for a pretence to break out against B.; he found it in the *Avis aux Refugiés*, a work in which the Protestants are treated with little ceremony. Jurieu not only accused B. of being the author of this work (which certainly is not his), but also of being the soul of a party devoted to France, in opposition to the Protestants and allied powers. B. repelled these charges in two publications; but the calumny prevailed. In 1693, the magistrates of Rotterdam removed him from his office, and forbade him to give private instruction. He now devoted all his attention to the composition of his *Dictionnaire historique et critique*, which he first published in 1696, in 2 vols. fol. This was the first work which appeared under his name. Jurieu opposed him anew, and caused the consistory, in which he had the greatest influence, to make a severe attack upon him. B. promised to remove every thing which the consistory deemed offensive; but, finding the public had other views, and preferring rather the satisfaction of his readers than that of his judges, he left the work, with the exception of a few trifles, unaltered. He found two new enemies in Jacquelot and Le Clerc, who both at-

tacked his religion: others persecuted him as the enemy of his sect and his new country. These contests increased his bodily infirmities. His lungs became inflamed; but he was unwilling to use any medical applications against a disorder which he considered as hereditary and incurable. He died, so to speak, with the pen in his hand, in 1706, at the age of 59 years. "Bayle," says Voltaire, "is the first of logicians and sceptics. His greatest enemies must confess that there is not a line in his works which contains an open aspersion of Christianity; but his warmest apologists must acknowledge, that there is not a page in his controversial writings which does not lead the reader to doubt, and often to scepticism." He compares himself to Homer's cloud-compelling Jupiter. "My talent," he says, "consists in raising doubts; but they are only doubts." The confidence of most theologians induced him to undertake to prove that several points are not so certain and so evident as they imagined. But he gradually passed these limits: his penetration caused him to doubt even the most universally acknowledged facts. Yet he never attacked the great principles of morality. Though an admirable logician, he was so little acquainted with physics, that even the discoveries of Newton were unknown to him. His style is natural and clear, but often prolix, careless and incorrect. He himself calls his *Dictionnaire* "*une compilation informe des passages cousus à la queue les uns des autres.*" Without assenting implicitly to this modest judgment, we must confess that the articles, in themselves, are of little value, and that they serve only as a pretext for the notes, in which the author displays, at the same time, his learning, and the power of his logic. The character of B. was gentle, amiable, disinterested, highly modest and peaceable: he devoted himself entirely to literature. The most esteemed edition of his *Dictionnaire historique* is that of 1740, in 4 vols. fol. (an edition was also printed at Bâle, the same year). At the Hague appeared the *Œuvres diverses de P. Bayle* (also 4 vols. fol.) An edition of his *Dict. histor.*, in 16 vols., printed with great typographical beauty, was published, in 1820, by Desoer, in Paris: it contains notes, and the life of the author. In the *Disc. prelimin.*, the editor, Beuchot, reviews the 11 former editions. Gottsched has translated the *Dict.* into German (Leipsic, 1741—44, 4 vols. fol.) An English translation, with considerable additions, by Th. Birch, Lockman and others, was published, 1734—41, 10 vols. fol.

Baylen, capitulation of general Dupont at; an event which, in July, 1808, raised the courage of Spain, and hastened a general insurrection. Joseph Bonaparte had entered Madrid as king; the provinces Leon, Valencia, Valladolid, Zamora and Salamanca had been subdued and disarmed. In the south alone, on the Guadalquivir, in the naturally fortified Andalusia, in Cordova, Grenada, Jaen, the spirit of insurrection still prevailed, and was excited as much as possible by the junta of Seville. Thither general Dupont directed his march, at the end of May, with three divisions. Cordova and Jaen were taken by assault, after the most terrible resistance. The monks promised the joys of heaven, without purgatory, to every one who should kill three Frenchmen. The corps of Castaños soon increased to 30,000 men. The able manœuvres of this general, together with famine and sickness in the French army, augmented by the total want of hospitals, prepared the way for the overthrow of general Dupont. 3000 Spaniards had possession of the Sierra Morena, in the rear of his army. In order to re-establish his communication with the capital, he occupied the cities of B. and Carolina with detachments, while he himself took a position near Andujar, on the Guadalquivir. But, on the 14th of July, 18,000 men, with some pieces of heavy artillery, marched against the front of the French position near Andujar; while 3000 men came through the defiles of the Sierra Morena upon the rear, and 6000 men attacked Dupont's left wing. He defended himself, for three days, with skill and courage; but the 18th of July decided the contest. The Spanish generals Reding and Compigny attacked B. Peñas and Jones overawed the main body, under Dupont. He was compelled to evacuate Andujar, after B. had been taken by the Spaniards. The action continued nine hours, when Dupont requested a suspension of arms, but was told that he must surrender at discretion. Meanwhile the division of Vedel, not acquainted with the proceedings of Dupont, had attacked the Spaniards anew, and taken the regiment of Cordova prisoners, together with two pieces of artillery, but were finally overpowered by superior numbers. On the 23d of July, the whole French army, 17,000 men strong, being surrounded, was obliged to capitulate, having lost 3000 men on the field of battle. The di-

visions of Dupont and Vedel were made prisoners of war: the latter was to be permitted to embark at Cadiz for Rochefort: the same terms were afterwards promised to the division of Dupont, but not fulfilled. General Dupont returned, with his staff, to France, and was arrested at Toulon, and subjected to trial. But, before a decision, he was delivered by the capture of Paris, March 30, 1814. He was afterwards appointed, by Louis XVIII, minister of war; but was superseded by Soult, in December, 1814.

Bayley, Richard, M. D., was born at Fairfield, Connecticut, in the year 1745. Having completed his medical studies, he went to London, to attend the lectures and hospitals. After little more than a year's residence in that city, he returned to New York, and commenced practice there in 1772. At this period, his attention was first drawn to the then prevalent and fatal croup, which had been treated as the putrid sore throat. Observing how fatal was the use of stimulants and antiseptics, he examined the nature of the disease, and became convinced that it was of an inflammatory character. He accordingly treated it as such, with decided success, and, soon after the publication of his View of the Croup, his opinions and treatment of it were universally adopted. In the autumn of 1775, B. revisited London, where he spent a winter, and, in the following spring, returned to New York, in the capacity of surgeon in the English army under Howe. He resigned this post in 1777, and, during the rest of his life, continued the practice of his profession in the same city. In 1787, he lectured on surgery. In 1788, he lost his valuable collection in morbid anatomy, and some delicate preparations, by the violence of the famous "doctors' mob," who broke into his house, and carried off and burned his cabinet. In the spring of 1792, he was appointed professor of anatomy in Columbia college, and, in 1793, became professor of surgery, which was his favorite subject. His lectures were clear, precise and practical. As an optician, he acquired great celebrity, and also as an experienced and successful lithotomist. When the yellow fever desolated New York, soon after the revolution, doctor B. devoted himself to personal attention to the sick, and became practically familiar with the disease, and its most successful remedies. He likewise investigated its cause, and declared that it was the filth which polluted the docks and some of the streets, affirming, "that when a more rigid police prevailed, to free the city from nuisances, no more would be heard of particular diseases." In 1797, he published his work On Yellow Fever, wherein he proved the malady to be of local origin. So strong was his belief on this point, and so clear his perception of the cause of the fever, that he predicted the very spot where it afterwards appeared, in the year 1799. In the year 1795 or 6, he was appointed health physician for the port of New York, and, in 1798, published Letters from the Health Office, submitted to the New York Common Council, being a series of letters in the years '96–7–8. One letter, dated Dec. 4, 1798, assigns the reasons why the fever in '98 was more extensively prevalent than in '95, 6 or 7, which he considers to be the rains flooding large portions of the city, its low levels, new-made ground, and a hot sun.—In 1798, a correspondence took place between the cities of New York and Philadelphia, in the course of which a proposition was made by the committee of the latter to that of the former, soliciting their co-operation in a memorial to the general government for a quarantine law. This gave doctor B., who was on the New York committee, an opportunity of impressing upon the general government the propriety of establishing a lazaretto, below and at a distance from the city or port of entry. He was the person to whom the state of New York is, in fact, chiefly indebted for its quarantine laws, although they have since been altered and amended. In August, 1801, doctor B., in the discharge of his duty as health physician, enjoined the passengers and crew of an Irish emigrant ship, afflicted with the ship fever, to go on shore to the rooms and tents appointed for them, leaving their luggage behind. The next morning, on going to the hospital, he found that both crew and passengers, well, sick and dying, were huddled together in one apartment, where they had passed the night. He inconsiderately entered into this room before it had been properly ventilated, but remained scarcely a moment, being obliged to retire by a most deadly sickness at the stomach, and violent pain in the head, with which he was suddenly seized. He returned home, and retired to his bed, from which he never rose. In the afternoon of the seventh day following, he expired.

Bayonet. This is the name of the iron blade, formed like a dagger, and placed upon the muzzle of the musket, which is thus transformed into a thrusting

weapon. It was probably invented, about 1640, in Bayonne, and was used in the Netherlands, in 1647, but was not universally introduced until after the pike was wholly laid aside, in the beginning of the 18th century. Since the general war in Europe, some officers have adopted the idea of former military writers (for instance, Guibert), of increasing the efficiency of the bayonet by a more regular exercise of the infantry in its use. A Saxon captain, von Selmnitz, has the merit of having first developed this idea in a systematic treatise. (See *The Art of Fighting with the Bayonet*, by E. von Selmnitz, Dresden, 1825, with copperplates.) As cavalry are often counted by horses, infantry are sometimes counted by bayonets.

Bayonne; a well-built, rich, commercial city, the largest in the French department of the Lower Pyrenees, formerly capital of the district Labour, in Gascony (lon. 1° 24′ W.; lat. 43° 29′ N.), at the confluence of the Nive and the Adour, about two miles from the bay of Biscay. It has 13,600 inhabitants, 6000 of whom live in the suburbs. The Nive and the Adour (the former of which is navigable about 30, and the latter 70 miles) form a harbor capable of admitting men of war from 40 to 50 guns, but it has a difficult access. These two rivers serve to convey timber, tar and iron from the Pyrenees to B. A citadel, built by Vauban, on the summit of an eminence in the suburb, commands the harbor and the city. The bishop of B. is under the archbishop of Toulouse, and exercises spiritual jurisdiction over three departments. The cathedral is a beautiful ancient building. B. has considerable commerce with Spain; French and foreign goods being exchanged for iron, fruit, gold and silver. B. is much engaged in the cod and whale fishery, in which, before the revolution, 30—40 vessels of 250 tons burthen were employed. Masts and other timber for ship-building, from the Pyrenees, are exported to Brest and other ports of France. The hams of B. are famous. Its wine and chocolate are shipped to the north of Europe. Among the lower class, the ancient Biscayan or Basque language is spoken. Catharine of Medicis had an important interview with the duke of Alba in B., June 1565. The meeting of Napoleon with the king of Spain, Charles IV, and the prince of the Asturias, also took place here in May, 1808, in consequence of which the two last signed (5th and 10th May) an agreement, by which they, and all the children of the king, transferred their rights to the Spanish territories, in Europe and India, to the French emperor. Napoleon convened a Spanish general junta at B., June 15th, to draw up a constitution. This constitution was published July 6, and Joseph departed, on the 9th, from B. for Madrid. The convention of B., between the Poles and France, was signed on the 10th May, 1808. (See Schöll's *Traités de Paix*, vol. 9, page 28.) The transactions at B. are some of the most important in Napoleon's life, and disclose the wretched character of the royal family of Spain.

Bazar, Bazaar, or Basar; a market-place in the East. The word is Arabic, and originally denotes *sale* or *exchange*. Some are open, some covered with lofty ceilings, or domes. At the bazars, or in the neighborhood of them, are the coffee-houses, so much frequented in Turkey, Persia, &c.; and, as the Orientals live almost entirely out of doors, the bazars of populous cities, besides their mercantile importance, are of consequence as places of social intercourse. The bazar of Ispahan is one of the finest places in Persia. That of Tauris is the largest known. At Constantinople are two bazars—the old and new one. In the Oriental tales,—for instance, in the Arabian Nights,—the bazars occupy a very conspicuous place. Since the system of credit is almost entirely unknown in Eastern trade, and all commercial transactions take place in merchandise and money, the places where this merchandise is brought and changed from one owner to another are, of course, very much frequented.—The word *bazar* has been used, in recent times, also, in Europe. Thus there is the well-known bazar in Soho square, in London.

Beacon. (See *Signals*, and *Lighthouse*.)

Beagle; a species of the genus *dog*, kept entirely for hunting hares. They are small, and much inferior to the hare in swiftness, but have a very delicate scent, and seldom fail of running her down.

Bear (*ursus*, L.); a genus of carnivorous, or, more accurately, frugi-carnivorous, mammiferous quadrupeds, belonging to the family *plantigrada*, which tread on the entire soles of the [hind] feet. The genus is characterized by a heavy body, covered with a thick, woolly coat, a large head, terminating in a prolonged snout, with very extensible lips. The ears are of moderate size, and rather pointed, and the tongue smooth. The limbs are large and heavy, and all the feet are five-toed, and furnished with

very strong, hooked claws, well suited for burrowing.—Five species at present belong to this genus. The Linnæan genus comprised the raccoon, badger, &c., now, properly, separated from it. These species are, the brown bear of Europe (*U. arctos*); the white or polar bear (*U. maritimus*); the American or black bear (*U. Americanus*); the grisly bear (*U. horribilis*), also of America; and the Malayan or Asiatic bear (*U. labiatus*).—The brown bear is chiefly an inhabitant of cold and elevated situations, and feeds on a great variety of animal and vegetable substances. During winter, this species, like some others, remains torpid in caves, whither it retires, in the autumn, very fat, and comes out, in the spring, extremely emaciated. The brown bear is remarkable for its sagacity, as well as the ferocity of its disposition, and it becomes especially sanguinary as it advances in age. Besides the differences of color and size which distinguish this bear from those belonging to the old continent, it differs from the American bears, by having a convexity of front above the eyes, which renders its physiognomy strikingly dissimilar to theirs. Other distinctions, sufficiently obvious, present themselves when the species are compared.—The polar, or maritime bear, is only found in high northern latitudes, along the borders of the Icy ocean and northern coasts of America in the vicinity of Hudson's bay. It does not descend to the eastern coast of Siberia nor Kamtschatka; neither is it found in the islands lying between Siberia and America. It is uniformly white, attains a large size, is very powerful, ferocious and daring. It is an excellent diver and swimmer, being apparently as much at home in the ocean as on land. An individual of this species was seen, by the late northern explorers, in the middle of Melville sound, swimming across, where the shores were at least 30 miles apart. The polar bear is the most exclusively carnivorous of the genus, though equally capable of living on vegetable food with the rest. He preys upon seals, the cubs of the whale, morse, &c., or the carcasses of whales left by whalers after removing the blubber. Individuals of this species are sometimes, though rarely, seen in caravans of wild animals in the U. States. A large and beautiful one was exhibited in New York, in the spring of 1826, and, notwithstanding the coolness of the weather, it appeared to suffer extremely from heat, as it bathed itself frequently in water provided for the purpose. When ice was placed in the cage, it rolled upon it with great satisfaction, and showed every sign of being gratified. —The black bear of America is distinguished by its color and a peculiarly convex facial outline. It is found very generally in mountainous and forest lands, and subsists, in a great degree, on berries and vegetable substances, though it preys upon small animals, and insects, which it searches for industriously, by turning over large logs of decayed timber. It is rarely, if ever, known to attack man, unless in self-defence. It is very fond of young corn and honey, which, being an expert climber, like the brown European bear, it obtains by plundering the wild bees.—The grisly bear inhabits the country adjacent to the Rocky mountains, and is, of all the race, the most dreadful for size, strength and terrible ferocity of nature.* —The Malay, Asiatic or long-lipped bear, is a native of the mountainous parts of India, and feeds on white ants, rice, honey, the fruit of the palm, &c. The species is inoffensive and timid, burrows in the ground, and lives in pairs, together with the young, which, when alarmed, seek safety by mounting on the backs of the parents.

Beard; the hair round the chin, on the cheeks and the upper lip, which is a distinction of the male sex. It differs from the hair on the head by its greater hardness and its form. The beard begins to grow at the time of puberty. The connexion between the beard and puberty is evident from this, among other circumstances, that it never grows in the case of eunuchs who have been such from childhood; but the castration of adults does not cause the loss of the beard. According to Cæsar, the Germans thought, and perhaps justly, the late growth of the beard favorable to the developement of all the powers. But there are cases in which this circumstance is an indication of feebleness. It frequently takes place in men of tender constitution, whose pale color indicates little power. The beards of different nations afford an interesting study. Some have hardly any, others a great profusion. The latter generally consider it as a great ornament; the former pluck it out; as, for instance, the American Indians. The character of the beard differs with that of the individual, and, in the case of nations, varies

* For the detailed history of this and the two preceding species, too extensive to be introduced into this work, see the first volume of the *American Natural History*, by the writer of this article.

with the climate, food, &c. Thus the beard is generally dark, dry, hard and thin in irritable persons of full age: the same is the case with the inhabitants of hot and dry countries, as the Arabians, Ethiopians, East Indians, Italians, Spaniards. But persons of a very mild disposition have a light-colored, thick and slightly curling beard: the same is the case with inhabitants of cold and humid countries, as Holland, England, Sweden. The difference of circumstances causes all shades of variety. The nature of the nourishment, likewise, causes a great variety in the beard. Wholesome, nutritious and digestible food makes the beard soft; but poor, dry and indigestible food renders it hard and bristly. In general, the beard has been considered, with all nations, as an ornament, and often as a mark of the sage and the priest. Moses forbade the Jews to shave their beards. With the ancient Germans, the cutting off another's beard was a high offence; with the East Indians, it is severely punished. Even now, the beard is regarded as a mark of great dignity among many nations in the East, as the Turks. The custom of shaving is said to have come into use during the reigns of Louis XIII and XIV of France, both of whom ascended the throne without a beard. Courtiers and inhabitants of cities then began to shave, in order to look like the king, and, as France soon took the lead in all matters of fashion on the continent of Europe, shaving became general; but it is only since the beginning of the last century, that shaving off the whole beard has become common. Till then, fashion had given divers forms to mustachioes and beards. Much could be said, and has been said, in a medical point of view, on shaving the beard. Such a discussion would lead us, however, here too far. It is not to be denied, that the mouth, one of the most expressive parts of the countenance, is shown to much better advantage in consequence of shaving; but, at the same time, old age appears to much greater disadvantage, the beard concealing the loss of the teeth. Moreover, the eye gains much in expression by a full beard. Every one knows the trouble of shaving; and who does not remember Byron's computation of the amount of this trouble in Don Juan? Seume, a German author, says, in his journal, "To-day I threw my powder apparatus out of the window: when will come the blessed day, that I shall send the shaving apparatus after it!" —Shaving, among many ancient nations, was the mark of mourning; with others, it was the contrary. Plutarch says that Alexander introduced shaving among the Greeks, by ordering his soldiers to cut off their beards; but it appears that this custom had prevailed before among the Macedonians. The Romans began to shave about 454 A. U., 296 B. C., when a certain Ticinius Mœnas, a barber from Sicily, introduced this fashion. Scipio Africanus was the first who shaved every day. The day that a young man first shaved was celebrated, and the first hair cut off was sacrificed to a deity. Adrian, in order to cover some large warts on his chin, renewed the fashion of long beards; but it did not last long. In mourning, the Romans wore a long beard sometimes for years. They used scissors, razors, tweezers, &c., to remove the beard. The public barber shops (*tonstrinæ*), where the lower classes went, were much resorted to; rich people kept a shaver (*tonsor*) among their slaves.

Bearn; before the revolution, a province of France, at the foot of the Pyrenees, with the title of a principality; about 42 miles long and 36 broad; bounded E. by Bigorre, N. by Armagnac, Tursan and Chalosse, W. by Dax, a part of Soule, and the Lower Navarre, and S. by the Pyrenees. It belonged, with Navarre, to Henry IV, when he obtained the crown. The plain country is very fertile, and the mountains are covered with firtrees, while within are mines of copper, lead and iron; and the little hills are planted with vines, which yield good wine. It is now included in the department of Lower Pyrenees. Pau was the capital town. Pop. about 220,000.

Beatification, in the Roman Catholic church; an act by which the pope declares a person beatified or blessed after his death. It is the first step to canonization, i. e. the raising one to the honor and dignity of a saint. No person can be beatified till 50 years after his or her death. All certificates or attestations of virtues and miracles, the necessary qualifications for saintship, are examined by the congregation of rites. This examination often continues for several years; after which his holiness decrees the beatification. The corpse and relics of the future saint are from thenceforth exposed to the veneration of all good Christians; his image is crowned with rays, and a particular office is set apart for him; but his body and relics are not carried in procession Indulgences, likewise, and remissions of

sins, are granted on the day of his beatification; which, though not so pompous as that of canonization, is, however, very splendid. Beatification differs from canonization in this, that the pope does not act as a judge in determining the state of the beatified, but only grants a privilege to certain persons to honor him by a particular religious worship, without incurring the penalty of superstitious worshippers; but, in canonization, the pope speaks as a judge, and determines, *ex cathedra*, upon the state of the canonized. Beatification was introduced when it was thought proper to delay the canonization of saints, for the greater assurance of the truth of the steps taken in the procedure. Some particular orders of monks have assumed to themselves the power of beatification. Thus Octavia Melchiorica was beatified by the Dominicans. (See *Canonization*.)

Beaton, David, archbishop of St. Andrews, and cardinal, was born in 1494. Pope Paul III raised him to the rank of cardinal in December, 1538; and, being employed by James V in negotiating his marriage at the court of France, he was there consecrated bishop of Mirepoix. Soon after his instalment as archbishop, he promoted a furious persecution of the reformers in Scotland; but the king's death put a stop, for a time, to his arbitrary proceedings, he being then excluded from affairs of government, and confined. He raised, however, so strong a party, that, upon the coronation of the young queen Mary, he was admitted into the council, made chancellor, and received a commission as legate *a latere* from Rome. He now began to renew his persecution of heretics, and, among the rest, of the famous Protestant preacher George Wishart, whose sufferings at the stake he viewed from his window, with apparent exultation. B. was murdered in his chamber, May 29, 1546. He united with great talents equally great vices, and left several children, the fruit of open concubinage.

Beattie, James, LL. D., a pleasing poet and miscellaneous writer, was born at Lawrencekirk, in the county of Kincardine, in 1735. He lost his father when he was only seven years of age, but was placed early at the only school his birthplace afforded, whence he was removed to Marischal college, Aberdeen. He there studied Greek, under the principal, Thomas Blackwell, and made a general proficiency in every branch of education, except mathematics. In 1753, he obtained the degree of A. M., and accepted the office of school-master and parish-clerk to the parish of Fordoun, looking forward to the church of Scotland as his principal prospect, for which reason he still attended, during winter, the divinity lectures at Marischal college. In June, 1758, these views were somewhat changed, by the attainment of the situation of one of the masters of the grammar-school of Aberdeen. In 1761, he published a volume of poems, which were received favorably, but which he subsequently thought very little of, and endeavored to buy up. They nevertheless procured him some powerful friends, whose patronage obtained him the appointment of professor of moral philosophy and logic at Marischal college. In 1765, he published a poem, the Judgment of Paris, (4to.), which proved a failure, although it was afterwards added to a new edition of his poems, in 1766. The work which procured him the greatest fame was his Essay on Truth, which first appeared in 1770. It was so popular, that, in four years, five large editions were sold; and it was translated into several foreign languages. Among other marks of respect, the university of Oxford conferred on the author the degree of LL. D.; and George III honored him, on his visit to London, with a private conference and a pension. He was also solicited to enter the church of England by flattering proposals from the archbishop of York and the bishop of London; which proposals he declined, lest his opponents should attribute the change to self-interest. The popularity of this celebrated essay, which was written in opposition to the prevalent scepticism of Hume and others, was principally owing to its easiness of style, and to a mode of treating the subject, calculated for the meridian of slight scholarship and medium intellect. This is often a great source of immediate celebrity; but, thus produced, it is usually as transitory as spontaneous, which has proved the case in the present instance. A few months after the appearance of the Essay on Truth, B. published the first book of the Minstrel (4to.), and, in 1774, the second; which pleasing poem is, indisputably, the work by which he will be the longest remembered. To a splendid edition of his Essay on Truth, published, by subscription, in 1776, he added some miscellaneous dissertations on Poetry and Music, Laughter and Ludicrous Composition, &c. In 1783, he published Dissertations, Moral and Critical (4to.); and

in 1786, appeared his Evidences of the Christian Religion (2 vols., 12mo.) In 1790, he published the first volume of his Elements of Moral Science, the second of which followed in 1793; and to the latter was appended a dissertation against the slave-trade. His last publication was an Account of the Life, Character and Writings of his eldest son, James Henry Beattie, an amiable and promising young man, who died at the age of 22, in 1790. This great affliction was followed, in 1796, by the equally premature death of his youngest and only surviving son, in his 18th year; which losses, added to the melancholy loss of reason by his wife, wholly subdued his constitution; and, after two paralytic strokes, he died at Aberdeen, in August, 1803. B. was a religious and an amiable man, but constitutionally more calculated for a poet than a philosopher, and for a pleader than a controversialist. He was, however, a respectable, if not a strong writer, and might have been thought more of at present, had he been thought less of heretofore.

Beaucaire; a small, well-built, commercial city of France, with 8000 inhabitants (lon. 4° 43′ E.; lat. 43° 48′ N.), in Lower Languedoc, now in the department of the Gard, on the right bank of the Rhone, opposite Tarascon, with which it communicates by a bridge of boats. It has a commodious harbor for vessels which ascend the river from the Mediterranean, 7 leagues distant, and is famous for its great fair (founded in 1217, by Raymond II, count of Toulouse), held yearly, from the 22d July, during 10 days. In former times, this fair was frequented by merchants and manufacturers from most countries of Europe, the Levant, and even from Persia and Armenia, so that many thousand booths were erected for foreigners in the adjoining valley. Before 1632, the fair of B. was exempt from all taxes, and the annual sale amounted to several million dollars. Since that time, B. has gradually declined, and its trade, the articles of which are the productions of the vicinity, was valued, in 1816, at 23,000,000 francs.

Beaufort; a seaport and post-town in a district of the same name, in South Carolina, on Port Royal island, at the mouth of the Coosawhatchie; 60 miles N. E. Savannah, 72 S. W. Charleston; lon. 80° 33′ W.; lat. 32° 31′ N.; population about 1000. It is a very pleasant and healthy town, with an excellent harbor, though but little commerce. It contains 3 churches and a seminary, which was incorporated as a college, endowed with funds amounting to 60 or $70,000, having a handsome edifice, and a library of 700 volumes, but it has hitherto assumed only the form of an academy.

Beaufort, Henry, legitimate brother of Henry IV, king of England, was made bishop of Lincoln, whence he was translated to Winchester. He was also nominated chancellor of the kingdom, and sent ambassador to France. In 1426, he received a cardinal's hat, and was appointed legate in Germany. In 1431, he crowned Henry VI in the great church of Paris. He died at Winchester, 1447. He was a haughty, turbulent prelate, and Shakspeare is considered as giving a true portrait of him, when he describes his last scene.

Beauharnais, Alexander, viscount; born in 1760, in Martinique; served with distinction, as major, in the French forces under Rochambeau, which aided the U. States in their revolutionary war; married Josephine Tascher de la Pagerie, who was afterwards the wife of Napoleon. At the breaking out of the French revolution, he was chosen a member of the national assembly, of which he was, for some time, president, and which he opened, after the king's departure, with the following words:—*Messieurs, le roi est parti cette nuit: passons à l'ordre du jour.* In 1792, he was general of the army of the Rhine, and, in 1793, was appointed minister of war. In consequence of the decree removing men of noble birth from the army, he retired to his country-seat. He was falsely accused of having promoted the surrender of Mentz, and was sentenced to death, July 23, 1794, when 34 years old. (For information respecting his son Eugene, viceroy of Italy, see *Eugene;* respecting his daughter Hortense, see *Louis Bonaparte;* and respecting his elder brother, François Beauharnais, see the next article.)

Beauharnais, François, marquis de; born at La Rochelle, Aug. 12, 1756; voted with the right side in the national assembly. He violently opposed the motion of his younger brother, the viscount Alexander, to take from the king the chief command of the army, and would not listen to any of the amendments proposed, saying, *Il n'y a point d'amendement avec l'honneur.* He was called, in consequence of this, *le fëal Beauharnais sans amendement.* In 1792, with the count d'Hervilly, the baron de Viomenil and others, he formed the project of a new

flight of the royal family; but the arrest of his companion, the baron Chambon, prevented the execution of the plan. He was appointed major-general in the army of the prince of Condé, and wrote, in 1792, to the president of the national assembly, protesting against their unlawful treatment of the king, and offering to appear himself among his defenders. When Bonaparte became first consul, the marquis sent him a letter, in which he exhorted him, by the glory which he would gain by such a course, to restore the sceptre to the house of Bourbon. The empress Josephine married her niece, the daughter of the marquis, to the emperor's aid, Lavalette (q. v.), and effected the recall of the marquis. Appointed senator, and ambassador to the court of Spain, he united, in 1807, with the prince of the Asturias (now Ferdinand VII), against the prince of peace, and fell into disgrace with Napoleon, who banished him. After the restoration, he returned to Paris, where he died, Jan. 10, 1819.

Beaumarchais, Pierre Augustin Caron de; born at Paris, 1732; son of a watchmaker, who destined him for his trade. He early gave striking proofs of his mechanical and also of his musical talents. He was afterwards the teacher on the harp of the daughters of Louis XV, and was admitted into their society. By a rich marriage, he laid the foundation of his immense wealth. He now aspired to literary reputation. His *Eugenie* appeared in 1767; *Les deux Amis* in 1770. The first still holds its place on the stage. He showed all his talent in his lawsuit against Goesman and La Blache, when he wrote against the former (who belonged to the *parlament Maupeou*, so called, which was engaged in a dispute with the ministry) his celebrated *Memoires* (Paris, 1774), which entertained all France. Had he remained more quiet, he probably would have gained his process. The fame of his *Memoires* alarmed even Voltaire, who was jealous of every kind of glory. The Barber of Seville and the Marriage of Figaro have given him a permanent reputation. Shortly before the revolution, he was involved in the process against the banker Kornmann. In 1792, he wrote *La Mère coupable*, but never regained his former fame. He was once more in his true element in his memoir *Mes six Époques*. He relates, in that work, the dangers to which he was exposed, in a revolution, where a celebrated name, talent and riches, were sufficient causes of proscription. He still possessed, at the age of more than sixty, all the vigor of his youth, and had lost nothing but his gayety. His contract to supply the U. States with military stores, during their revolutionary war, had increased his fortune, of which he always made a noble use; but he lost about a million livres by his famous edition of the works of Voltaire, the very imperfect execution of which was not answerable to the immense cost. He lost still more, at the end of 1792, by his attempt to provide the French army with 60,000 muskets. Discontented with the present, despairing of the future, wearied with struggling against the revolution and his creditors for the ruins of his wealth, he died, at the age of 69 years, without any particular disease, in May, 1799. His biography appeared in 1802; and, in 1809, an edition of his works, in 7 vols.—B. was a singular instance of versatility of talent, being at once an artist, politician, projector, merchant and dramatist. He was passionately attached to celebrity. His Marriage of Figaro excited one of those extraordinary sensations, for which Paris has always been remarkable. The English modifications and versions of this comedy convey but a slight notion of the mischievous subtlety and deep spirit of intrigue in the original. B. left to his heirs a claim against the U. States of a million of francs for supplies furnished during the war, which has been repeatedly presented to congress, but always rejected on the ground that B. acted only as the agent of the French government, from whom he received funds to that amount.

Beaumont, Francis, and Fletcher, John; two dramatic writers. The former was born in 1585, studied at Oxford, and died in 1616; the latter was born at London in 1576, and died there, in 1625, of the plague. Animated by the same inclination, they both devoted themselves to poetry. Their plays, about 50, appeared under their joint names (London, 1679, and lately, 1812, in 14 vols.), and it is impossible now to determine their respective shares in these productions. According to the testimony of some of their contemporaries, Fletcher was the inventing genius, while Beaumont, though the younger, was more distinguished for maturity and correctness of judgment. Shakspeare was their model, and, like him, they intermix pathetic and low comic scenes; but their attempts to surpass their model sometimes lead them into extravagances. The desire, also, of

pleasing the public at times induces them to deviate from a correct standard of taste. They succeed best in comic scenes. Their contemporaries preferred them even to Shakspeare, affirming that the English drama reached its perfection in them. Impartial posterity has reversed this decision, and adjudged the palm to Shakspeare. They are said to have frequented taverns and alehouses, to study the human character, and to have been arrested, while disputing in such a place respecting the conclusion of a play. One wished to have the king in the piece assassinated, the other opposed it; and, being overheard, they were apprehended on suspicion of conspiring the death of their sovereign.

Beaumont, madame Leprince de; born at Rouen, 1711; died at Annecy, in Savoy, 1780; lived partly in France, partly in England, where she devoted her talents to the instruction of youth. A simple and easy style, a pleasing moral, well chosen historical passages, and a happy imagination, render her writings agreeable, although much is too artificial, and the theological views are no longer of value. She has written a great many romances and works for children. Her *Magazin des Enfans* was formerly the manual of all governantes and French boarding-schools.

Beauty. (See *Philosophy.*)

Beaver (*castor*, L.); a genus of claviculated, mammiferous quadrupeds, of the order *glires*, L., *rodentia*, C., or gnawers. —Having drawn up, with great care, the natural history of this species in another work (American Natural History, vol. ii., p. 21), we shall avail ourselves of some of the most interesting statements, and refer the reader thereto for more ample details, as well as for the fabulous history of the animal.—It is only in a state of nature that the beaver displays any of those singular modes of acting, which have so long rendered the species celebrated. These may be summed up in a statement of the manner in which they secure a depth of water that cannot be frozen to the bottom, and their mode of constructing the huts in which they pass the winter. They are not particular as to the site which they select for the establishment of their dwellings, but if it is in a lake or pond, where a dam is not required, they are careful to build where the water is sufficiently deep. In standing waters, however, they have not the advantage afforded by a current for the transportation of their supplies of wood, which, when they build on a running stream, is always cut higher up than the place of their residence, and floated down. The materials used for the construction of their dams are the trunks and branches of small birch, mulberry, willow and poplar trees, &c. They begin to cut down their timber for building early in the summer, but their edifices are not commenced until about the middle or latter part of August, and are not completed until the beginning of the cold season. The strength of their teeth, and their perseverance in this work, may be fairly estimated by the size of the trees they cut down. Doctor Best informs us, that he has seen a mulberry tree, eight inches in diameter, which had been gnawed down by the beaver. We were shown, while on the banks of the Little Miami river, several stumps of trees, which had evidently been felled by these animals, of at least five or six inches in diameter. The trees are cut in such a way as to fall into the water, and then floated towards the site of the dam or dwellings. Small shrubs, &c., cut at a distance, they drag with their teeth to the stream, and then launch and tow them to the place of deposit. At a short distance above a beaver dam, the number of trees which have been cut down appears truly surprising, and the regularity of the stumps might lead persons, unacquainted with the habits of the animal, to believe that the clearing was the result of human industry.—The figure of the dam varies according to circumstances. Should the current be very gentle, the dam is carried nearly straight across; but when the stream is swift, it is uniformly made with a considerable curve, having the convex part opposed to the current. Along with the trunks and branches of trees they intermingle mud and stones, to give greater security; and, when dams have been long undisturbed and frequently repaired, they acquire great solidity, and their power of resisting the pressure of water, ice, &c., is greatly increased by the willow and birch occasionally taking root, and eventually growing up into something like a regular hedge. The materials used in constructing the dams are secured solely by the resting of the branches, &c. against the bottom, and the subsequent accumulation of mud and stones by the force of the stream, or by the industry of the beavers. —The dwellings of the beavers are formed of the same materials as their dams, are very rude, and adapted in size to the number of their inhabitants: seldom more

than four old, or six or eight young ones, are found in one of the lodges, though double that number have been sometimes seen. In building their houses, they place most of the wood crosswise, and nearly horizontally, observing no other order than that of leaving a cavity in the middle. Branches projecting inwards are cut off with their teeth, and thrown among the rest. The houses are not of sticks, and then plastered, but of all the materials used in the dams—sticks, mud and stones, if the latter can be procured. This composition is employed from the foundation to the summit. The mud is obtained from the adjacent banks or bottom of the stream or pond near the door of the hut. The beaver always carries mud or stones by holding them between his fore paws and throat. Their work is all performed at night, and with much expedition. When straw or grass is mingled with the mud used in building, it is an accident owing to the nature of the spot whence the mud is obtained. As soon as any portion of the materials is placed, they turn round, and give it a smart blow with the tail. The same sort of blow is struck by them on the surface of the water when they are in the act of diving. The outside of the hut is covered or plastered with mud, late in the autumn, and after frost has begun to appear. By freezing, it soon becomes almost as hard as stone, effectually excluding their great enemy, the wolverene, during the winter. Their habit of walking over the work frequently, has led to the absurd idea of their using the tail as a trowel. The houses are generally from four to six feet thick at the apex of the cone: some have been found as much as eight feet thick at top. The door or entrance is always on the side farthest from land, and is near the foundation, or a considerable depth under water: this is the only opening into the hut. The large houses are sometimes found to have projections of the main building thrown out, for the better support of the roof, and this circumstance has led to all the stories of the different apartments in beaver huts. These larger edifices, so far from having several apartments, are double or treble houses, the parts having no communication except by water. It is a fact, that the muskrat is sometimes found to have taken lodgings in the huts of the beaver. The otter, also, occasionally intrudes: he, however, is a dangerous guest, for, should provisions grow scarce, it is not uncommon for him to devour his host. All the beavers of a community do not co-operate in fabricating houses for the common use of the whole. The only affair in which they have a joint interest, and upon which they labor in concert, is the dam. Beavers also make excavations in the adjacent banks, at regular distances from each other, which have been called *washes*. These are so enlarged within, that the beaver can raise his head above water to breathe without being seen, and, when disturbed at their huts, they immediately swim under water to these washes for greater security, where they are easily taken by the hunters.—The food of the beaver consists chiefly of the bark of the aspen, willow, birch, poplar, and, occasionally, alder: to the pine it rarely resorts, unless from severe necessity. They provide a stock of wood from the trees first mentioned, during summer, and place it in the water, opposite the entrance into their houses.—The beaver produces from two to five at a litter. It is a cleanly animal, and always performs its evacuations in the water, at a distance from the hut: hence no accumulation of filth is found near their dwellings.—The beaver is about two feet in length; its body thick and heavy; the head compressed, and somewhat arched at the front, the upper part rather narrow; the snout much so. The eyes are placed rather high on the head, and the pupils are rounded; the ears are short, elliptical, and almost concealed by the fur. The skin is covered by two sorts of hair, of which one is long, rather stiff, elastic, and of a gray color for two thirds of its length next the base, and terminated by shining, reddish-brown points; the other is short, thick, tufted and soft, being of different shades of silver-gray or light lead color. The hair is shortest on the head and feet. The hind legs are longer than the fore, and are completely webbed. The tail is 10 or 11 inches long, and, except the third nearest the body, is covered with hexagonal scales. The third next the body is covered with hair like that on the back. (See Godman's *Am. Nat. Hist.*, vol. ii, p. 19, et seq.)

Beccaria, Cesare Bonesana, marchese di, born at Milan, 1735, was early excited, by Montesquieu's *Lettres Persanes*, to the cultivation of his philosophical talents, and afterwards favorably known as a philosophical writer by his memorable work, full of a noble philanthropy, *Dei Delitti e delle Pene* (On Crimes and Punishments), Naples, 1764, and several others. With the eloquence of true feeling, and a lively

imagination, he opposes capital punishments and the torture. This work led to the establishment of more settled and more correct principles of penal law, and contributed to excite a general horror against inhuman punishments. B. was a true friend, a good son, a tender husband and a real philanthropist. He is also known, in Italy, as the author of a philosophical grammar and theory of style, *Ricerche intorno alla Natura dello Stilo* (Milan, 1770), and of several good treatises on style, on rhetorical ornament, &c., contained in the journal *Il Caffe*, edited by him, in conjunction with his friends Visconti, Verri and others. A fit of apoplexy put an end to his useful life in November, 1793.

Beccaria, Giovanni Battista; born, 1716, at Mondovi; went to Rome in 1732, where he studied, and afterwards taught grammar and rhetoric; at the same time, he applied himself with success to mathematics. He was appointed professor of philosophy at Palermo, and afterwards at Rome. Charles Emanuel, king of Sardinia, invited him to Turin, in 1748, to fill the professorship of natural philosophy at the university there. Electricity had, at that time, through the experiments of Franklin and others, become an object of universal interest. He therefore published his *Dell' Elettricismo naturale ed artifiziale* (Turin, 4to). The experiments which this work contains on atmospherical electricity are so numerous and various, that Priestley affirmed, in his History of Electricity, that Beccaria's labors far surpass all that had been done, before and after him, on this subject. The academies in London and Bologna elected him a member. He wrote many other valuable works on this subject. The most important, *Dell' Elettricismo artifiziale* (1772), contains all that was then known of electricity. Franklin, who esteemed the works of B., had them translated into English. In 1759, the king employed him to measure a degree of the meridian in Piedmont. He began the measurement in 1760, together with the abbot Canonica, and published the result in 1774. The doubts expressed by Cassini of the exactness of this measurement, drew from him his *Lettere d'un Italiano ad un Parigino*, in which he showed the influence of the proximity of the Alps on the deviation of the pendulum. As his thoughts were entirely absorbed by his studies, he often neglected the nicer rules of good-breeding, without losing, however, the general esteem. He died April 27, 1781.

Becher, John Joachim; author of the first theory of chemistry; born at Spire, in 1635. He finished his restless life at London, in 1685, after having resided in many parts of Germany. He had many enemies, and has been accused, not entirely without justice, of charlatanry; yet his influence on the science of chemistry gives him still a claim to remembrance. He brought it into a nearer connexion with physics, and sought for the causes of all the phenomena of the inorganic universe in these two departments of science. This is the object of his principal work, *Physica subterranea*. At the same time, he began to form a theory of chemistry; and conceived the idea of a primitive acid, of which all the others were only modifications. He also made researches into the process of combustion. He maintained that every metal consists of a common earthy matter, of a common combustible principle, and of a peculiar mercurial substance. If we heat a metal so that it changes its form, we disengage the mercurial substance, and nothing remains but the metallic calx. This was the first germ of the phlogistic theory, which was further developed by Stahl, and prevailed until the time of Lavoisier. The numerous works of B. are, even now, not without interest.

Beck, Christian Daniel; one of the most active living philologists and historians, born in Leipsic, Jan. 22, 1757. He is professor at the university in that city, and has rendered himself famous by a great number of excellent works. His editions of the classics are in high esteem. Between 1787 and 1806 appeared the 4 volumes of his work, Introduction to a Knowledge of the General History of the World and of Nations, until the Discovery of America. He also translated Goldsmith's History of Greece, and Ferguson's History of the Roman Republic. Of his theological works, we may mention his *Commentarii historici Decretorum Religionis Christianæ, et Formulæ Luther* (Leipsic, 1800). He has also edited a learned periodical work.

Becket, Thomas, the most celebrated Roman Catholic prelate in the English annals, was born in London, 1119. He was the son of Gilbert, a London merchant. His mother is said to have been a Saracen lady, to whose father Gilbert was prisoner, in Jerusalem, being taken captive in one of the crusades. The lady is said to have fallen in love with the prisoner, and to have followed him to London, where he married her. After studying at Oxford

and Paris, B. was sent, by the favor of Theobald, archbishop of Canterbury, to study civil law at Bononia, in Italy, and, on his return, was made archdeacon of Canterbury and provost of Beverley. His claim to the good opinion of Theobald was founded on his skill in negotiation shown in a matter of the highest importance to England—the soliciting from the pope the prohibitory letters against the crowning of Eustace, the son of Stephen, by which that design was defeated. This service not only raised Becket in the esteem of the archbishop, but in that of king Henry II, and was the foundation of his high fortune. In 1158, he was appointed high chancellor and preceptor to prince Henry, and at this time was a complete courtier, conforming, in every respect, to the humor of the king. He was, in fact, his prime companion, had the same hours of eating and going to bed, held splendid levees, and courted popular applause. In 1159, he made a campaign with the king in Toulouse, having in his own pay 700 knights and 1200 horsemen; and it is said he advised Henry to seize the person of Louis, king of France, shut up in Toulouse without an army. This counsel, however, so indicative of the future martyr, being too bold for the lay counsellors of one of the boldest monarchs of the age, was declined. In the next year, he visited Paris, to treat of an alliance between the eldest daughter of the king of France and prince Henry, and returned with the young princess to England. He had not enjoyed the chancellorship more than four years, when his patron Theobald died, and king Henry was so far mistaken as to raise his favorite to the primacy, on the presumption that he would aid him in those political views, in respect to church power, which all the sovereigns of the Norman line embraced, and which, in fact, caused a continual struggle, until its termination by Henry VIII. It has been asserted, that B. told the king what he was to expect from him; but, independent of the appointment itself, there is evidence to prove his eagerness to obtain the dignity, and the disgust entertained by Henry at the first symptoms of the real temper of the man whom he had been so anxious to promote. B. was consecrated archbishop in 1162, and immediately affected an austerity of character which formed a very natural prelude to the part which he meant to play. Pope Alexander III held a general council at Tours, in 1163, at which B. attended, and made a formal complaint of the infringements by the laity on the rights and immunities of the church. On his return to England, he began to act in the spirit of this representation, and to prosecute several of the nobility and others, holding church possessions, whom he also proceeded to excommunicate. Henry, an able and politic monarch, was anxious to recall certain privileges of the clergy, which withdrew them from the jurisdiction of the civil courts; and it was not without a violent struggle, and the mediation of the pope, that B. finally acquiesced. The king soon after summoned a convocation or parliament at Clarendon, to the celebrated constitution of which, although the archbishop swore that he would never assent, he at length subscribed it, and, alleging something like force for his excuse, by way of penance, suspended himself from his archiepiscopal functions until the pope's absolution could arrive. Finding himself the object of the king's displeasure, he soon after attempted to escape to France; but, being intercepted, Henry, in a parliament at Northampton, charged him with a violation of his allegiance, and all his goods were confiscated. A suit was also commenced against him for money lent him during his chancellorship, and for the proceeds of the benefices which he had held vacant while in that capacity. In this desperate situation, he, with great difficulty and danger, made his escape to Flanders, and, proceeding to the pope at Sens, humbly resigned his archbishopric, which was, however, restored. He then took up his abode at the abbey of Pontigny, in Normandy, whence he issued expostulatory letters to the king and bishops of England, in which he excommunicated all violators of the prerogatives of the church, and included in the censure the principal officers of the crown. Henry was so exasperated, that he banished all his relations, and obliged the Cistercians to send him away from the abbey of Pontigny; from which he removed, on the recommendation of the king of France, to the abbey of Columbe, and spent four years there in exile. After much negotiation, a sort of reconciliation took place in 1170, on the whole to the advantage of Becket, who, being restored to his see, with all its former privileges, behaved, on the occasion, with excessive haughtiness. After a triumphant entry into Canterbury, the young king Henry, crowned during the life-time of his father, transmitted him an order to restore the suspended and excommunicated prelates, which he refused to do, on the pretence that the pope

alone could grant the favor, although the latter had lodged the instruments of censure in his hands. The prelates immediately appealed to Henry in Normandy, who, in a state of extreme exasperation, exclaimed, "What an unhappy prince am I, who have not about me one man of spirit enough to rid me of a single insolent prelate, the perpetual trouble of my life!" These rash and too significant words induced four attendant barons, Reginald Fitz-Urse, William de Tracy, Hugh de Morville and Richard Breto, to resolve to wipe out the king's reproach. Having laid their plans, they forthwith proceeded to Canterbury, and, having formally required the archbishop to restore the suspended prelates, they returned in the evening of the same day (Dec. 29, 1170), and, placing soldiers in the court-yard, rushed, with their swords drawn, into the cathedral, where the archbishop was at vespers, and, advancing towards him, threatened him with death if he still disobeyed the orders of Henry. B., without the least token of fear, replied, that he was ready to die for the rights of the church; and magnanimously added, "I charge you, in the name of the Almighty, not to hurt any other person here, for none of them have been concerned in the late transactions." The confederates then strove to drag him out of the church; but, not being able to do so, on account of his resolute deportment, they killed him on the spot with repeated wounds, all which he endured without a groan.—The conduct of Henry, and the consequences of this assassination, form a part of English history wherein the discerning student will perceive the subtle policy of the court of Rome, which eagerly availed itself of this opportunity to advance its general object, with a due regard to the power of Henry and his strength of character. The perpetrators of the deed, on taking a voyage to Rome, were admitted to penance, and allowed to expiate their enormity in the Holy Land.—Thus perished Thomas Becket, in his 52d year, a martyr to the cause which he espoused, and a man of unquestionable vigor of intellect. He was canonized two years after his death, and miracles abounded at his tomb. In the reign of Henry III, his body was taken up, and placed in a magnificent shrine, erected by archbishop Stephen Langton; and of the popularity of the pilgrimages to his tomb, the Canterbury Tales of Chaucer will prove an enduring testimony.

Beckmann, John, for almost 45 years professor of philosophy, economy, policy, finance and commerce in Göttingen, was born at Hoya in 1739. In 1763, he was appointed, on Büsching's recommendation, professor of the Lutheran gymnasium in St. Petersburg. In 1766, he became professor in Göttingen, where he lectured with great success. B. died in 1811, being a member of most of the learned societies of the north of Europe. There are a number of text-books, in the different sciences above-mentioned, by him. Among his other works is a History of Inventions, Leipsic, 1780—1805, 5 vols.

Bed, in gunnery; the frame of timber or planks in which cannon, mortars, &c. are placed, to give them a steady and even position, necessary for aiming.

Bed of Justice. (See *Lit de Justice.*)

Bede, or Beda, an eminent ecclesiastic of the eighth century, usually called the *venerable Bede*, was born in the year 672 or 673, in the neighborhood of Wearmouth, in the bishopric of Durham. From the age of 7 to that of 19, he pursued his studies in the monastery of St. Peter, at Wearmouth. Being then ordained deacon, he was employed in the task of educating the youth who resorted to the monastery for instruction, and pursued his own studies with unremitting ardor. In his thirtieth year, he was ordained priest; and, his fame for zeal and erudition reaching the ears of pope Sergius, he was invited to Rome, but, in consequence of the death of that pontiff, never went there. It is not even certain that he ever left Northumberland, which, of course, reduces the incidents of his life to his literary pursuits and domestic occupations, as he accepted no benefice, and never seems to have interfered in civil transactions. His church history was published in 731. His last literary labor was a translation of the Gospel of St. John into Saxon, which he completed, with difficulty, on the very day and hour of his death. The writings of Bede were numerous and important, considering the time in which they were written, and the subjects of which they treat, which extended to ecclesiastical affairs, religion and education only. His English Ecclesiastical History is the greatest and most popular of his works, and has acquired additional celebrity by the translation of king Alfred. The collections which he made for it were the labor of many years. Besides his own personal investigations, he kept up a correspondence with the monasteries throughout the Heptarchy, to obtain archives and records for his purpose; and

thus nearly all the knowledge possessed of the early state of Christianity in his country is due to B. There have been several editions of the original Latin, which is easy, although not elegant. The latest and best is that of Dr. Smith, Cambridge, 1722. There is a translation into English by Thomas Stapylton, D. D., Antwerp, 1505, besides the Saxon version of Alfred. B. was also the author of many other works, a catalogue of which he subjoined to his history. Several of these were printed early; but the first general collection of his works was that of Paris, 1554, 3 vols. fol. Some of his treatises have been published by Mr. Wharton, from MSS. in the library at Lambeth palace, London, 4to, 1693. While the number and variety of the writings of B. show the extent of his erudition, his probity, moderation and modesty insured him general respect; and his disinterestedness is proved by the fact, that he was never any thing but an unbeneficed priest. A letter of advice, which he wrote, late in life, to Egbert, archbishop of York, proves, at once, the purity of his morals, the liberality of his sentiments, and the excellence of his discernment; his wish being to curtail the number of monasteries, and to increase the efficacy and respectability of the secular clergy. Notwithstanding the veneration with which he was regarded, not a single miracle is recorded of him; and, as monks were the great miracle mongers, and his views of monastic reform such as we have mentioned, this is not surprising. The manner of the death of this virtuous ecclesiastic was striking and characteristic. He was dictating a translation of the gospel of St. John to an amanuensis. The young man who wrote for him said, "There is now, master, but one sentence wanting;" upon which he bade him write quickly; and, when the scribe said, "It is now done," the dying sage ejaculated, "It *is* now done," and a few minutes afterwards expired, in the act of prayer, on the floor of his cell, in the 63d year of his age, in the month of May, A. D. 735.

Beddoes, Thomas; a physician and author; born, 1760, at Shiffnal in Shropshire; died 1808. He was educated by his grandfather. He made great progress at school, in classical studies, and distinguished himself at Oxford by his knowledge of ancient and modern languages and literature. The great discoveries in physics, chemistry and physiology, irresistibly attracted him. He continued his studies with success in London and Edinburgh. In his 26th year, he took his doctor's degree, afterwards visited Paris, and formed an acquaintance with Lavoisier. On his return, he was appointed professor of chemistry at Oxford. There he published some excellent chemical treatises, and Observations on the Calculus, Sea-Scurvy, Consumption, Catarrh and Fever. But, dazzled by the splendid promises of the French revolution, he offended some of his former admirers, and excited such a clamor against him by the publication of his political opinions, that he determined to resign his professorship, and retired to the house of his friend Mr. Reynolds, in Shropshire. There he composed his observations on the nature of demonstrative evidence, in which he endeavors to prove, that mathematical reasoning proceeds on the evidence of the senses, and that geometry is founded on experiment. He also published the History of Isaac Jenkins, which was intended to impress useful moral lessons on the laboring classes in an attractive manner. Above 40,000 copies of this popular work were sold in a short time. After he had married, in 1794, he formed the plan of a pneumatic institution, for curing diseases, particularly consumption, by means of factitious airs or gases. He succeeded, with the assistance of the celebrated Wedgewood, in opening this institution, in 1798. He engaged, as superintendent of the whole, a young man, Humphrey Davy, the foundation of whose future fame was laid here. The chief purpose of the institution, however, was never realized, and B.'s zeal gradually relaxed, so that he relinquished it one year before his death, after having published a number of valuable works upon the application of factitious airs. In the last years of his life, he acquired the reputation of the best medical writer in Great Britain, particularly by his *Hygeia*, in 3 vols., a popular work, which contains passages of extraordinary eloquence. His political pamphlets, from 1795—97, are forgotten.

Bedford, John, duke of; one of the younger sons of Henry IV, king of England; famous as a statesman and a warrior. Shakspeare, who calls him *prince John of Lancaster*, introduces him, in his plays of Henry IV, as distinguishing himself by his youthful courage in the battle of Shrewsbury, in 1403, and forming a kind of moral contrast to his more dissipated brother, the prince of Wales. During the reign of Henry V, he participated in the fame acquired by the conquest of

France; but his talents were fully displayed when, after the death of that king, he became regent of France, having been appointed to this post by Henry, in his will. At Verneuil, in 1424, he displayed his military talents; and the difficulties, which, from various causes, he experienced in endeavoring to maintain possession of the conquered provinces in France, afforded frequent occasion for the manifestation of his ability. The greatest blemish in his character is his cruel execution of the maid of Orleans, in 1431. He survived this event about four years, and dying, in 1435, at Rouen, was buried in the cathedral of that city. The duke deserves notice also for his patronage of the arts. A curious monument of his taste still exists—the Bedford Missal. Mr. Dibdin, in his *Bibliomania*, p. 253, gives an account of it. It was made for the duke and duchess, and contains 59 large, and more than 1000 small miniature paintings. In 1786, it was purchased, by Mr. Edwards, for 215 guineas, from the collection of the duchess of Portland; and, a few years after, 500 guineas were offered for it. In a historical point of view, it is interesting on account of several portraits of eminent persons; some of which have been engraved by Vertue, for his portraits to illustrate the history of England. For the antiquarian and the student of the fine arts, it is one of the most interesting monuments of that age. Gough, the antiquarian, published a work in 8vo., describing the Bedford Missal.

Bedford; a town in England, and capital of the county of Bedford, to which it gives name, situated on the Ouse; 22 miles S. E. of Northampton, 50 N. of London; lon. 0° 27′ W.; lat. 52° 8′ N.; pop. 4605. It contains 5 churches, 3 on the north and 2 on the south side of the river, 3 independent meeting-houses, and a free grammar school liberally endowed. The principal manufacture is lace. It is a place of considerable trade, which is much assisted by the river, navigable to Lynn, and is the only market-town of the county, on the north side of the Ouse. The soil about it is fertile, particularly in excellent wheat. It sends two representatives to parliament. It has two markets weekly.

Bedford; a borough town, and capital of Bedford county, Pennsylvania; 91 miles E. by S. of Pittsburg, 190 W. of Philadelphia: population of the borough, 789; including the township, 2116. It is finely situated on a branch of the Juniatta, regularly laid out, and built on an eminence enveloped by mountains. Will's mountain, on the west side of the town, is 1300 feet high, and Dunning's mountain, on the east side, is 1100 feet high. A mile and a half south of the town, there are mineral springs, which were discovered in 1804, and are much resorted to, and found useful in cutaneous complaints, ulcers, rheumatisms, chronic complaints, &c.—There are several other towns and counties of the same name in the U. States: as, B. in the state of New York, Westchester county, population nearly 2500; B. county in the south of Virginia; and another in West Tennessee.

Bedford Level; a large tract of land in England, in the counties of Cambridge, Norfolk, Suffolk, Huntingdon, Northampton and Lincoln, formerly full of fens and marshes, and, in rainy seasons, for the most part under water; but drained, at the expense of £400,000, by the noble family of Russell, earls and dukes of Bedford, and others; by which means 100,000 acres of good land have been brought into use.

Bedford, New; a seaport in Massachusetts. (See *New Bedford.*)

Bedouins, or Bedoweens (that is, *inhabitants of the desert*); a numerous Mohammedan race, which dwells in the deserts of Arabia, Egypt and Northern Africa. It is still doubtful whether they belong to the same race with the Arabs, or differ from them in their descent, as they do in their manner of living. The Bedouins live at a distance from cities and villages, in families, under sheiks, or in tribes, under emirs. Their dwellings are tents, huts, caverns and ruins. With their herds and beasts of burden, which carry their little property, they wander in quest of fresh water and pasture. They are all good horsemen, and are generally fond of hunting. The peaceful tribes exchange horses (which they raise with great care) and fat cattle, for arms and cloth, with the neighboring nations. Other hordes are such open robbers, that it is dangerous to travel through their country without a guard or a passport, which the different chiefs sell. They not only plunder, but murder, even when the travellers offer no resistance. Notwithstanding this barbarous custom, the Bedouins hold the rights of hospitality sacred; and the most defenceless enemy is sure of their protection, if they have once allowed him shelter. But the Bedouin considers every one his enemy who is not his brother, kinsman or ally. Always

careful of his own safety, he attacks no caravan or camp without being sure of his superiority. To superior numbers, and a bold resistance, he yields, and saves himself by a speedy flight. A terror to the neighboring nations, the rapacious Bedouin lives in a state of continual watchfulness; poor, ignorant, wild and rude, but free, and proud of his liberty. This people is remarkable for temperance in regard to food, amounting almost to abstinence.

Bee (*apis mellifica*, L.); a species of hymenopterous insect, belonging to the family *apiaria*.—The honey-bee is universally celebrated for its singular instincts, and highly prized for the valuable products of its industry. A vast number of interesting facts have consequently been collected in relation to the economy of the species, for the detail of whose history a volume of considerable size would be required. We shall therefore be able to present nothing more than a sketch of the most striking generalities, obtained from the admirable works of Huber, Cuvier, &c., and to these authentic sources must refer the reader desirous of more ample information.—Three sorts of individuals are found to form a community of honey-bees; the female, mother, or, as she is commonly called, *queen;* the males, or drones; and the working bees, improperly termed *neuters*, as they are actually females, though, in a peculiar respect, imperfect. A hive commonly consists of one mother, or queen, from 6 to 800 males, and from 15 to 20,000 working bees. The last mentioned are the smallest, have 12 joints to their *antennæ*, and 6 abdominal rings: the first joint or square portion of the posterior *tarsi* is enlarged at the posterior angle of its base, and shaped like a pointed auricle, having its internal surface covered with a fine, short, close, silky down. They are provided with stings. The mandibles are spoon-shaped, and not dentated. There is, on the outside of the hind legs, a smooth hollow, edged with hairs, called the *basket:* the silky brush of the first joint of the posterior *tarsi* has 7 or 8 transverse *striæ*. The mother, or queen, has the same characteristics, but is of larger size, especially in the abdomen: she has a shorter sucker or trunk, and the mandibles grooved and velvet-like beneath the tip. The males, or drones, differ from both the preceding by having 13 joints to the *antennæ;* a rounded head, with larger eyes, elongated and united at the summit; smaller and more velvety mandibles, and shorter anterior feet, the two first of which are arched. They have no auricular dilatation nor silky brush on the square part of the posterior *tarsi*, and are destitute of stings. The genitals consist of two horn-shaped bodies of a reddish-yellow color, with a broad-ended penis.—When we examine the internal structure of this insect, we find at the superior base of the trunk or sucker, below the *labrum*, a considerable aperture, shut by a small, triangular piece, which has been called *tongue*, *epipharynx*, &c. This opening receives the food, which is thence conveyed by a delicate *œsophagus*, through the corselet, to the anterior stomach, which contains the honey; the second stomach receives the pollen of flowers, and has, on its internal surface, a number of transverse and annular wrinkles. The abdominal cavity of the queen and working bees also contains the little bag of poison communicating with the sting. In the queen, there are, moreover, two large ovaries, consisting of a great number of small cavities, each containing 16 or 17 eggs. These ovaries open near the anus, previous to which they dilate into pouches, where the egg is delayed to receive a viscous coating from an adjacent gland. The inferior half-circles, except the first and last, on the abdomens of working bees, have each on their inner surface two cavities, where the wax is formed in layers, and comes out from between the abdominal rings. Below these cavities is a particular membrane, formed of a very small, hexagonally-meshed network, which is connected with the membrane lining the walls of the abdominal cavity.—Wax, of which the combs are formed, is elaborated from honey. The pollen collected from flowers, mixed with a small quantity of wax, constitutes the food of bees and their larves; and this food appears to be modified in its composition, according to the sort of individuals it is intended for. Another substance collected by bees from the opening buds of poplar and other trees, and used by them for lining their hives, stopping holes, &c., is called *propolis*.—Besides the distinctions remarked in the female, male and working bees, Huber regards the working bees as of two sorts; one devoted to the collection of provisions, and all the materials necessary to the comb, as well as to its construction; these he calls *ciriéres*. The others are more delicate, small and feeble, and employed exclusively within the hive, in feeding and taking care of the young.—The re-

semblance existing between the working and female bees first led to the idea that they were of the same sex, and the ingenious experiments and accurate observations of Huber enabled him to establish this fact in the most satisfactory manner. Having deprived a hive of the mother or queen, he found that the working bees immediately began to prepare a larve of their own class to occupy this important station. This was effected by enlarging the cell to the dimensions of a maternal or royal chamber, and feeding the selected individual on food exclusively destined for the nourishment of the royal larves. If merely fed upon this food, without an accompanying enlargement of the cell, the maternal faculties were but imperfectly acquired, as the female did not attain the proper size, and was incapable of laying any eggs but those which produced males.—The cells of the comb compose two opposite ranges of horizontal hexagons, with pyramidal bases: each layer of the comb is perpendicular, and attached by the summit, and separated from the rest by a space sufficient for the bees to pass in and out. The comb is always built from above downward. The cells, with the exception of those for the female larve and nymph, are nearly of equal size, some containing the progeny, and others the honey and pollen of flowers. Some honey cells are left open, others are closed for future use by a flat or slightly convex covering of wax. The maternal or regal cells vary from 2 to 40 in number, are greatly superior in size, nearly cylindrical, and somewhat larger at the extremity. They have small cavities on the outside, and commonly depend from the comb like stalactites, so that the larve has its head downwards.—The season of fecundation occurs about the beginning of summer, and the meeting between the females and males takes place high in the air, whence the female returns with the sexual parts of the male attached to the extremity of the abdomen. This one fecundation is thought to be sufficient to vivify the eggs which the mother may lay in the course of two years. The laying begins immediately afterwards, and continues until autumn. Réaumur states that the female, in the spring, lays as many as 12,000 eggs in the lapse of 24 days. Each sort of egg is deposited in the appropriate cell, unless a sufficient number of cells have not been prepared: in this case, she places several eggs in one, and leaves to the working bees the task of subsequently arranging them. The eggs laid at the commencement of fine weather all belong to the working sort, and hatch at the end of 4 days. The larves are regularly fed by the workers for 6 or 7 days, when they are enclosed in their cell, spin a cocoon, and become nymphs, and in about 12 days acquire their perfect state. The cells are then immediately fitted up for the reception of new eggs. The eggs for producing males are laid two months later, and those for the females immediately afterwards. This succession of generations forms so many particular communities, which, when increased beyond a certain degree, leave the parent hive to found a new colony elsewhere. Three or four swarms sometimes leave a hive in a season. A good swarm is said to weigh at least six or eight pounds. The life of the bee, like that of all the other insects of its class, does not continue long after the great business of providing for the continuance of the species is completed.—The history of the bee, as already stated, is too extensive to allow us to attempt more than this brief sketch. But to such as have leisure, and are desirous of instructive amusement, we know of no study which promises a greater degree of satisfaction; and there is no book better adapted for this purpose, than the excellent treatise of Huber, which may almost be regarded as the *ne plus ultra* of its kind. A beautiful little poem, called *The Bees*, written by the Florentine Giovanni Rucellai, appeared in 1539.

Beech. The beech (*fagus sylvatica*), one of our handsomest forest-trees, is known by its waved and somewhat oval leaves, and its triangular fruit, consisting of three cells, and enclosed, by pairs, in a husk, which is covered with simple prickles.—Beech woods are very common in almost all the New England and Middle States, in the states of Maine, Pennsylvania, Ohio, &c. They are very luxuriant in their growth. These woods, it has been observed, are peculiarly dry, and pleasant to walk in, and, under their shade, afford to the botanist many interesting plants, such as the bird's nest (*monoiropa*), winter-green (*pyrola*), and some rare *orchideæ*. Beech-trees bear lopping well, and may be trained so as to form lofty hedges, which are valuable for shelter, since the leaves, though faded, remain through the winter, and the twisted branches may be formed into a very strong fence. The wood is hard and brittle, and, if exposed to the air, is

liable soon to decay. It is, however, peculiarly useful to cabinet-makers and turners: carpenters' planes, &c. are made of it. When split into thin layers, it is used to make scabbards for swords. Chairs, bedsteads and other furniture are occasionally formed of beech. The fruit of this tree, which has the name of *beech-mast*, and falls in September, is very palatable, but, if eaten in great quantity, it occasions giddiness and headaches; when, however, it is dried and powdered, it may be made into a wholesome bread. The inhabitants of Scio, one of the Ionian islands, were once enabled to endure a memorable siege by the beech-mast which their island supplied. This fruit has occasionally been roasted, and used as a substitute for coffee. When subjected to pressure, it yields a sweet and palatable oil, which is equal in quality to the best olive-oil, and has the advantage of continuing longer than that without becoming rancid. Beech-oil is manufactured in several parts of France, and is used by the lower classes of Silesia instead of butter. The cakes which remain after the oil is extracted are a wholesome food, and may be also advantageously employed for the fattening of swine, poultry and oxen. In some countries, the leaves of the beech-tree are collected in the autumn, before they have been injured by the frost, and are used instead of feathers, for beds; and mattresses formed of them are said to be preferable to those either of straw or chaff.

Beef-Eaters (a corruption from the French *buffetiers*, from *buffet*, sideboard) are yeomen of the guard of the king of Great Britain. They are stationed by the sideboard at great royal dinners. There are now 100 in service and 70 supernumeraries. They are dressed after the fashion of the time of Henry VIII.

Beejapoor (*Bija-pur*, a corruption of *Vijaya-puri*, the city of victory, the original name of the capital); a large province of Deccan, between the 15th and 18th degrees of N. lat.; bounded N. and E. by Aurungabad and Beder, S. by North Canara and the river Toombudra, and W. by the sea; about 350 miles long, and 200 broad. It is watered by the Crishna, Toombudra, Beemah and Gatpurba; and is traversed by the Ghaut mountains. The soil is generally fertile, and provisions plentiful. The chief cities are Beejapoor, Boonah (the capital of the Mahrattas), St. Kuttany and Nubely. Four fifths of the country are subject to the Mahrattas, the rest to the Nizam. The population is estimated at 7,000,000; one twentieth Mohammedans, the rest Hindoos. The province is divided into 15 territorial divisions. In the southern part of Concan, one of these divisions, Goa (*Gowah*, or, more properly, *Govay*), the capital of the Portuguese settlements in the East, is situated. (See *Goa*.) The productions of B. are, in general, similar to those of the rest of the Deccan. One part—the neighborhood of the Beemah—is celebrated for its breed of horses, and supplies the best cavalry in the Mahratta armies.

Beejapoor; the former capital of the above province. (See *Bija-pur*.)

Beek, David, a portrait-painter of considerable merit, was born in 1621, at Arnheim, in Guelderland; became a pupil of Vandyck; resided, for some time, at the court of Sweden, and died in 1656. It is related of him, that, on a journey through Germany, he fell sick, and became, to appearance, dead; when one of his servants pouring a glass of wine into his throat, to amuse his companions, B. opened his eyes, and, after a while, recovered his health.

Beelzebub (in Hebrew, *the god of flies*); an idol of the Moabites or Syrians. This term is applied, in the Scriptures, to the chief of the evil spirits. We must remember what a terrible torment insects often are in the East, in order to conceive how this name came to be given to one of the greatest of the imaginary spirits of evil. We find that almost all nations, who believe in evil spirits, represent them as the rulers of disgusting, tormenting or poisonous animals—flies, rats, mice, reptiles, &c. The Greeks worshipped several of their chief deities under the character of protectors against these animals; for instance, Apollo Σμίνθευς, the destroyer of rats. Every one knows, that Christ was charged by the Jews with driving out demons by the power of Beelzebub. (*Matt.* xii. 24.)

Beer. (See *Ale* and *Brewing*.) We have evidence of the use of this liquor for more than 2000 years. The Grecian poet and satirist Archilochus, who lived about 700 B. C., and the Grecian tragedians Æschylus and Sophocles, who lived more than 400 B. C., call it *wine of barley*. Diodorus of Sicily, who lived about the time of Julius Cæsar, about 50 B. C., mentions beer in his History (lib. i. chap. 20). Pliny also, about the middle of the first century after Christ, speaks of this beverage in several places of his Natural History. He says that it is prepared in different ways,

and that there is a species more intoxicating than wine. He says, further, that, in Spain, it is called *celia* and *ceria*; but, in Gaul and in other provinces of the Roman empire, *cerevisia*; that it was in general use among the ancient Germans, who also called it *cerevisia* (from *Ceres*, the goddess of grain, and *vis*, power.) The Egyptians, as the first promoters of agriculture, are said to have invented beer, and to have prepared a kind, in later times, at Pelusium, which was called by the name of that city, and was much celebrated. Beer was afterwards unknown in Egypt, until the French army introduced it anew, since which it is said that beer is still brewed there. We are ignorant how far the beer of the ancients resembled the modern article. The word *beer* may most naturally be derived from *bibere*, to drink.

Beer, Michael, sometimes called *Michael Berr*, a learned Jew in Paris, born at Nancy, in 1784, was the first of his religion who pursued the profession of an advocate in France. His success in this career was brilliant; but he soon gave himself up exclusively to literature, and received the honor, never before conferred on a Jew, of being admitted into the learned academies of France. He was elected a member of the royal society of antiquaries, of the philotechnic society, of the academies of Nancy, Strasburg, Nantes and Göttingen. Napoleon invited him, in 1807, to the assembly of Jews, who were to advise concerning the amelioration of the condition of that people; and the general sanhedrim for France and Italy chose him their secretary. At the erection of the kingdom of Westphalia, on account of his knowledge of the language of the country, he received an appointment in the ministry of the interior, and, afterwards, was appointed to a corresponding office in the French ministry: he also delivered a course of lectures on German literature in the athenæum of Paris. Among his numerous works is an *Eloge de Charles Villers*.

Beering, Vitus, captain in the Russian navy, born at Horsens, in Jutland, being a skilful seaman, was employed by Peter the Great in the navy which he had newly established at Cronstadt. His talents, and the undaunted courage displayed by him in the naval wars against the Swedes, procured him the honor of being chosen to command a voyage of discovery in the sea of Kamtschatka. He set out from Petersburg, Feb. 5, 1725, for Siberia. In the year 1728, he examined the northern coasts of Kamtschatka as far as lat. 67° 18′ N., and proved that Asia is not united to America. It remained, however, to be determined whether the land opposite to Kamtschatka was, in reality, the coast of the American continent, or merely islands lying between Asia and America. June 4, 1741, he sailed, with two ships, from Ochotsk, and touched the north-western coast of America, between lat. 35° and 69° N. Tempests and sickness prevented him from pursuing his discoveries: he was cast on a desolate island, covered with snow and ice, where he grew dangerously sick, and died Dec. 8, 1741. The straits between Asia and America have received the name of *Beering's straits* (also called *Anian*), and the island on which he died that of *Beering's island*. (See Müller's *Voyages et Découv. faites par les Russes*, Amsterdam, 1766).

Beering's Island; an island in N. Pacific ocean, about 90 miles long, and 25 to 30 wide; lon. 163° 12′ to 164° 12′ E.; lat. 54° 45′ to 56° 10′ N. Neither thunder nor the aurora borealis have ever been observed here. The island has springs of excellent water, and beautiful cataracts. No animals are found here but ice-foxes, seals, sea-bears, sea-lions, sea-cows, &c. No wood grows here, but several kinds of plants are seen. The island is uninhabited. It was discovered by Vitus Beering (q. v.) in 1741. It is sometimes classed with the Aleutian chain.

Beering's Straits; the narrow sea between the north-west coast of N. America and the north-east coast of Asia; 39 miles wide in the narrowest part; lon. 168° 15′ to 169° 20′ W.; lat. 65° 46′ to 65° 52′ N. There is a remarkable similarity in the portions of both continents north of the strait: both are without wood; the coasts are low, but, farther from the sea, they rise and form considerable mountains. The depth, in the middle of the straits, is from 29 to 30 fathoms; towards the land, the water on the Asiatic side is deeper. Captain Vancouver, who visited these shores in 1740, gave this name to the straits in honor of Vitus Beering (q. v.), because he thinks that he anchored there. Some have also called these straits *Cook's straits*.

Beet (*beta vulgaris*) is a well-known valuable succulent root, which is cultivated in our kitchen gardens, and grows wild in several countries of the south of Europe. There are two principal varieties of beet, one of which is of a deep red or purple color, and the other is white, crossed with bands of red.—Red beet is

principally used at table, in salad, boiled, and cut into slices, as a pickle, and sometimes stewed with onions; but, if eaten in great quantity, it is said to be injurious to the stomach. The beet may be taken out of the ground for use about the end of August, but it does not attain its full size and perfection till the month of October. When good, it is large, and of a deep red color, and, when boiled, is tender, sweet and palatable. It has lately been ascertained, that beet roots may be substituted for malt, if deprived of the greater part of their juice by pressure, then dried, and treated in the same manner as the grain intended for brewing. The beer made from the beet has been found perfectly wholesome and palatable, and little inferior to that prepared from malt.—From the white beet the French, during the late wars in Europe, endeavored to prepare sugar, that article, as British colonial produce, having been prohibited in France. For this purpose, the roots were boiled as soon as possible after they were taken from the earth. When cold, they were sliced, and afterwards the juice was pressed out, and evaporated to the consistence of sirup. The sugar was obtained from this sirup by crystallization. 110 pounds weight of the roots yielded 41½ pounds of juice, which, on further evaporation, afforded somewhat more than 4½ pounds of brown sugar; and these, by a subsequent operation, produced 4 pounds of well-grained white powder sugar. The residuum, together with the sirup or molasses which remained, produced, after distillation, 3½ quarts of rectified spirit, somewhat similar to rum. But many subsequent experiments, both in France and in Prussia, have tended to prove, that sugar can never be advantageously manufactured from the beet upon a large scale, it yielding, upon a fair average, barely enough to defray the expenses of making. The leaves of the beet, when raised in richly-manured soil, have been found to yield a considerable quantity of pure nitre, proceeding, in all probability, from the decomposition of the animal matter contained in the manure; but this, like the sugar of the root, will probably never pay the expenses of cultivation, which will also increase rather than diminish; so that it may be considered valuable, at present, only as an esculent plant. The French, however, and other European nations, still persevere in manufacturing beet sugar, and make great quantities of it, although it can never supersede the use of common sugar, unless its production be encouraged by bounties and prohibitions.

Beethoven, Louis von, born in Bonn, 1772, was the son of a man who had been a tenor singer in that place (according to another account, in Fayolle's Dictionary of Musicians, a natural son of Frederic William II, king of Prussia). His great talent for music was early cultivated. He astonished, in his eighth year, all who heard him, by his execution on the violin, on which he was in the habit of performing, with great diligence, in a little garret. In his 11th year, he played Bach's *Wohl Temperirtes clavier*, and, in his 13th, composed some sonatas. These promising appearances of great talent induced the then reigning elector of Cologne to send him, in 1792, in the character of his organist, and at his expense, to Vienna, that he might accomplish himself there in composition, under the instruction of Haydn. Under Haydn and Albrechtsberger he made rapid progress, and became, likewise, a great player on the piano forte, astonishing every one by his extempore performances. In 1809, he was invited to the new court of the king of Westphalia, at which several men of distinction, and among them his pupil in music the archduke Rodolph, now bishop of Olmütz, persuaded him to remain, by the promise of a yearly salary. He composed his principal works after 1801. A few years before his death, a cold, which he had caught by composing in the open air, produced a deafness, which became, by degrees, very great. He lived, afterwards, very much retired, in the village of Mödlingen, near Vienna. Instrumental music has received from his compositions a new character. Beethoven united the humor of Haydn with the melancholy of Mozart, and the character of his music most resembles Cherubini's. His boldness is remarkable. Reichhardt, in a comparison of Beethoven with Haydn and Mozart, says, "The *Quartett* of Haydn was the offspring of his amiable and original character. In naivete and good humor he is unrivalled. The more powerful nature and richer imagination of Mozart embraced a wider field, and many of his compositions express the whole height and depth of his character. He placed more value also on exquisite finish. Beethoven, early acquainted with Mozart's compositions, gave a still bolder cast to his ideas." Besides his great symphonies and overtures, his quintetts, quartetts, and trios for stringed instruments, his numerous sonatas, variations, and other pieces for

the piano forte, in which he shows the great richness of his imagination, he also composed vocal music, but with less success. To this department belongs his opera *Leonore* (in its altered state, called *Fidelio*), some masses, an oratorio (Christ on the Mount of Olives), and songs for the piano forte, among which the composition of Matthison's *Adelaide*, called, by the English, *Rosalie*, and some songs of Goethe are celebrated. B. died March 26th, 1827, near Vienna, in the greatest poverty.

Beetle (*scarabæus*, L.); a tribe of coleopterous insects, belonging to the family *lamellicornua*, C. The beetle tribe comprises a large number of insects, among which some are very remarkable for projections or horns growing from the head and corselet. The species found in warm climates are generally of large size and formidable appearance, though by no means noxious. They all are winged, flying with much rapidity and force; when on the ground, their movements are slow and heavy. The body of the perfect insect is oval, or nearly so, and the *antennæ* are composed of eight or ten pieces, inserted into a cavity under the border of the head. From the arrangement of the *antennæ*, which is peculiar to this family, its essential or distinctive character is formed. The extremities of the *antennæ* are club-shaped, and composed of plates or joints, either disposed like the leaves of a book, or arranged perpendicularly to the axis, like the teeth of a comb. The two first legs of beetles, and even the others, in some instances, are dentated externally, and suited for burrowing. The *tracheæ* are all vesicular.—The larves or young are soft, flexible, whitish, semi-cylindric worms, having the body divided into 12 rings, and having a scaly head, armed with strong jaws. They have nine *stigmata*, or breathing holes, on each side; and the feet, which are six, are scaly. The body is thicker at the posterior than at the anterior extremity, rounded, and almost uniformly curved downwards, so that the larve moves with difficulty over an even surface, and frequently tumbles down. The period during which the larves remain in the state of destructive worms varies in different species; those of some kinds becoming nymphs at the end of several months, and of others, not sooner than in three or four years. During this period, they live in the earth, where they feed upon the roots of vegetables, animal matter in a state of decomposition, &c. It is in this stage of their existence that various species prove exceedingly injurious to farmers, from their great numbers and voracity. When about to undergo their change of form, they make an egg-shaped cover or cocoon from fragments gnawed off wood, &c., which are stuck together by a peculiar glutinous fluid furnished by their bodies. The larves have a cylindric stomach, surrounded by three ranges of minute *cæca*, a very short, small intestine, an exceedingly large *colon*, and moderate-sized *rectum*. In the perfect insect, none of these inequalities exist, as there is but one long intestine, of equal size throughout. All of the beetle tribe are not destructive or injurious in their inceptive state, as many of them breed in the dung-heap, or feed upon the excrement of animals, which they serve to prepare more completely as manure. The tumble-bug, which is well known, forms a ball of dung, in the centre of which the egg is deposited, rolls it off to a distance, and buries it in the ground. Great numbers, uniting in this work, speedily clear away excrementitious matter, that might otherwise soon prove offensive. Among the ancient Egyptians, a species of beetle was held in great veneration, and Eusebius informs us (*De Præp. Evang.*) that it was regarded as the animated image of the sun. We find it generally embalmed with the Egyptian mummies, placed immediately upon the root of the nose. A number of models of these insects, in clay and stone, have been found in the places already explored in the ancient dominion of the Pharaohs. Linnæus bestowed the name of *scarabæus sacer* on this species, which is found in Africa and Europe.

Befana (Ital.; from *Befania*, which signifies *Epiphany*) is a figure, generally representing an old woman, which is exhibited, in Italy, on the day of Epiphany, by children, or in shops, &c., where things for children are sold. In Germany, presents are given to children on Christmas-eve, and in France, on new-year's evening, but in Italy, on the day of Epiphany, and it is said that the befana brings them to good children. Generally, a little bag is hung in the chimney, and, next morning, the children find the presents there.

Beg (*prince*, or *lord*); the title of certain Turkish officers, several of whom are subject to a beglerbeg. (See *Bey*.)

Beggary. (See *Pauperism*.)

Beglerbeg (*prince of princes*, or *lord of lords*) is the title of a high officer among the Turks, the governor of a province, called a *beglerbeglic*, who has under him

several sangiacs, begs, agas, &c. The governors of Sophia, Kintaha and Damascus, in particular, have this title.

Beguards, or Beghards. (See *Beguines.*)

Beguines (*beguttæ*); females who, without having taken the monastic vows, or bound themselves to obey the rules of an order, unite for the purpose of devotion and charity, and form societies, living together in houses called *beguinages* (which have been frequently enriched by donations), distinguishing themselves, above others of the laity, by their industry, their retired life, and their attention to the education of children. These societies originated, towards the end of the 11th century, in Germany and the Netherlands, and were very flourishing in the 12th and 13th centuries. They still exist in considerable numbers in the Netherlands. In imitation of them, males formed similar societies, under the name of *beghards.* These societies, whose names signify *suppliants*, or *beggars*, underwent many persecutions from the jealousy of the clerical orders, and were sometimes confounded with the Lollards. (See *Brotherhoods.*) There are, in some places of Germany, beguinages, which are, however, only eleemosynary institutions, where unmarried females, of the lower class of people, have a lodging free of expense, and enjoy some other advantages.

Behaim, Martin, born at Nuremberg, about 1430, is distinguished as one of the most learned mathematicians and astronomers of his age. He was engaged in commerce, and travelled, for the purpose of carrying on his business, from 1455 to 1479; but he also devoted himself to the study of the mathematical and nautical sciences, in which Regiomontanus is said to have been his master. He went from Antwerp to Lisbon, in 1480, where he was received with marks of distinction. He sailed in the fleet of Diego Can, on a voyage of discovery, and explored the islands on the coast of Africa as far as the river Zaire. He is also said to have discovered, or, at least, to have colonized, the island of Fayal, where he remained for several years, and assisted in the discovery of the other Azores. He was afterwards knighted, and returned to his native country, where he constructed a terrestrial globe, in 1492, which bears the marks of the imperfect acquaintance of that age with the true dimensions of the earth. B. died, after many voyages, in Lisbon, 1506. Some ancient Spanish historians assert that he made many discoveries, and that he gave to his friend Columbus the idea of another hemisphere. Robertson (in his History of America) and others contradict this statement. It is also rejected by Irving.

Beheading; a capital punishment, wherein the head is severed from the body by the stroke of an axe, sword, or other cutting instrument. *Decollatio*, or beheading, was a military punishment among the Romans. In early times, it was performed with an axe, and afterwards with a sword. It is worth remarking, that, in all countries where beheading and hanging are used as capital punishments, the former is always considered less ignominious. Thus, in England, beheading is often the punishment of nobles, when commoners, for the same crime, are hanged. The crime of high treason is there punished with beheading. Commoners, however, are hanged before the head is cut off, and nobles also, unless the king remits that part of the punishment. In Prussia, formerly, a nobleman could not be hanged, and, if his crime was such that the law required this punishment, he was degraded before the execution. At present, hanging is not used in that country, and, since so many instances have occurred of extreme suffering, on the part of the criminal, caused by the unskilfulness of the executioner in beheading with the sword, this mode of execution has been abolished. Beheading, in Prussia, is now always performed with a heavy axe, the sufferer being previously tied to a block. In France, during the revolutionary government, beheading by means of a machine, the guillotine (q. v.), came into use, and still prevails there, to the exclusion of all other modes of capital punishment. A person who has murdered his father or mother, however, has his right arm cut off the moment before he is guillotined. In the middle ages, it was, in some states, the duty of the youngest magistrate to perform the executions with the sword. In China, it is well known that beheading is practised, sometimes accompanied with the most studied torments. In the U. States of America, beheading is unknown, the halter being the only instrument of capital punishment. Respecting the bad or good consequences of public beheading, the same remarks may be made, which are applicable to public executions in general. In many European countries, beheading with the sword still prevails.

Behn, Aphara, a lady of some celebrity as a writer of plays and novels, was de-

scended from a good family in Canterbury, of the name of Johnson, and was born in the reign of Charles I. Her father, through the interest of his relation, lord Willoughby, being appointed lieutenant-general of Surinam, embarked with his family for the West Indies, taking with him Aphara, who was then very young. The father died at sea; but his family arrived safely at Surinam, and remained there some years, during which time Aphara became acquainted with the American prince Oroonoko, whom she made the subject of a novel, subsequently dramatized by Southern. On her return to England, she married Mr. Behn, a merchant of London, of Dutch extraction; but was probably a widow when selected by Charles II as a proper person to acquire intelligence on the continent during the Dutch war. She accordingly took up her residence at Antwerp, where she engaged in gallantries for the good of her country; and it is said that, by means of one of her admirers, she obtained advice of the intention of the Dutch to sail up the Thames, which she transmitted to England. This intelligence, although true, being discredited, she gave up politics, returned to England, and devoted herself to intrigue and writing for support; and, as she had a good person and much conversational talent, she became fashionable among the men of wit and pleasure of the time. She published three volumes of poems, by Rochester, Etherege, Crisp and others, with some poetry of her own; and wrote 17 plays, the heartless licentiousness of which was disgraceful both to her sex and to the age which tolerated the performance of them. She was also the author of a couple of volumes of novels, and of the celebrated love-letters between a nobleman and his sister-in-law (lord Gray and lady Henrietta Berkeley). Pope, in his character of women, alludes to Mrs. Behn, under her poetical name of *Astrea:*

> The stage how loosely does Astrea tread,
> Who fairly puts all characters to bed.

She died in 1689, between 40 and 50 years of age, and was buried in the cloisters of Westminster abbey.

Behring, Behring's Straits, Behring's Island. (See *Beering.*)

Beira; a province of Portugal, bounded chiefly by the river Douro on the north, by Spain on the east, by the Tagus and Portuguese Estremadura on the south, and by the Atlantic on the west. Its extent is computed at 11,000 square miles, and the population at nearly 900,000, which is about 82 persons to a square mile, or rather less than the average number for the whole kingdom. B. contains 7 episcopal cities, and about 230 other towns: the chief one is Coimbra. (q. v.) It is mountainous and well watered. The produce of wine and olives is considerable. (See *Portugal.*)

Beiram. (See *Bairam.*)

Bekker, Elizabeth; an ornament of Dutch literature in the department of the belles-lettres. Few female authors have united with so great talents so much dignity and purity of morals. The influence of her numerous works was much increased by her character, and several of them are considered classics in Dutch literature, particularly her romances Willem Leevend, in 8 vols.; Letters of A. Blankart to C. Wildschut, and the History of Sara Burgerhart. She wrote her most important works in conjunction with her friend Agatha Deken (q. v.), and the share of each in the composition of them is unknown. Elizabeth was born at Flushing, in 1738, and died at the Hague, in 1804. Her inseparable friend in life followed her nine days later in death.

Bekker, Immanuel, member of the academy of sciences, and professor in the university of Berlin, is known for his learning in the ancient languages, particularly the Greek, displayed in many valuable works. He was born at Berlin, in 1785. He was a pupil of the famous philologer Wolf, at Halle, who declared him the person most capable of continuing his researches in philology. B. was appointed professor in the new academy of Berlin, and set out, May, 1810, for Paris, where he remained until Dec., 1812, and made use of the manuscripts of the library, principally collating those of Plato, and some rhetorical and grammatical writers. The academy of sciences of Berlin elected him a member in 1815, and sent him back to Paris to examine the papers of Fourmont, for the sake of a *Corpus Inscriptionum Græcarum*, which they intended to publish. He returned the same year. In 1817, he was sent to Italy, to examine, with his colleague Göschen, the Institutions of Gaius at Verona, discovered by Niebuhr in a *Codex rescriptus*, and to prepare an edition of Aristotle, which the academy had in view. He spent two winters in Rome, particularly favored in the use of the libraries by means of his friend Niebuhr. In 1819, he went through Turin to Paris; spent the summer of 1820 in England, principally in Oxford, Cambridge and London; and returned through

Leyden and Heidelberg to Berlin. With what industry and talent he collected literary treasures, in all these places, can be but imperfectly conceived from any thing he has yet published. It is sufficient to cite here the *Anecdota Græca*, 3 vols., of a grammatical character; editions of Apollonius Dyscolus *De Pronomine* (never before printed) and *De Syntaxi* of Theognis (augmented with 150 verses); of Coluthus, Demosthenes, and other Attic orators; of the *Bibliotheca* of Photius; of the *Scholiæ* to the Iliad, &c.

Bel. (See *Baal.*)

Belem (properly *Bethlehem*); a quarter of Lisbon, formerly a market-town, situated on the spot where, after Vasco da Gama's first return from India, in 1499, king Emanuel built a church in honor of the nativity of Christ, and founded the celebrated monastery belonging to the order of St. Jerome, whose walls enclose the magnificent burying-vault of the royal family, adorned with white marble. After the earthquake of 1755, the *burial-church*, so called, was rebuilt in the Gothic style. B., at that time, became the residence of the royal family; but after the palace there had been consumed by fire, they resided in the castle of Quelus, two leagues distant, in a retired situation, until their departure for Rio Janeiro. The new royal palace in B. is not yet finished. It has a beautiful situation, with a view of the harbor and the sea. Many persons of distinction, and the greater part of the important officers of state, reside at B. Here is also the church of *Nossa Senhora da Ajuda*, in the neighborhood of which lies the botanical garden, with a chemical laboratory, and a cabinet of natural curiosities. The latter contains some curious specimens of native copper from Brazil, and a large piece of elastic sand-stone, interspersed with crystals of calcarious spar. In B., the royal garden (*a quinta da raynha*), with a menagerie, and many aviaries for rare birds, must likewise be noticed, as well as the great royal park, and, above all, the old tower, *Torre de Belem*, which rises out of the river Tajo, and is provided with batteries. No ship is permitted to pass by it without being visited.

Belfast; a royal borough and seaport in Ireland, in Antrim, at the entrance of the river Lagan into Carrickfergus bay; 50 miles E. S. E. Londonderry, 76 N. Dublin. Lon. 5° 46′ W.; lat. 54° 35′ N. Population in 1821, including the suburbs, 35,084; houses, 5,754. It is commodiously situated for trade, in a populous and well-cultivated country, is connected with Lough Neagh by a canal, and is the principal seaport in the north of Ireland. The bay is a spacious estuary, affording safe anchorage. Vessels drawing 13 feet of water can come up to the wharves at full tide. It is well built, chiefly of brick; the streets are broad, straight, well paved and lighted. It contains 13 houses of public worship. Belonging to the port are above 50 vessels, amounting to more than 8,330 tons. The principal exports are linen, butter, beef, pork and oatmeal:—total value, in 1810, £2,904,520. The duties have, of late, amounted to £400,000 per annum. The manufactures consist, chiefly, of linens and cottons; the former employing 723 looms. It sends one member to parliament.

Belfast; a seaport and post-town in Waldo county, Maine, 12 miles N. W. Castine, 224 N. E. Boston. Lon. 69° 1′ W.; lat. 44° 25′ N. Population in 1810, 1,274; in 1820, 2,026. It is delightfully situated on Belfast bay, at the mouth of a small river of the same name, and at the N. W. part of Penobscot bay. It has a good harbor and great maritime advantages, and is a flourishing town.

Belgians; a collection of German and Celtic tribes, who inhabited the country extending from the Atlantic ocean to the Rhine, and from the Marne and Seine to the southern mouth of the Rhine, which is united with the Meuse. From time to time, until the period of Cæsar, German nations pushed forward beyond the Rhine, partly expelling the Celts from their seats, partly uniting with them; and from this union sprung a mixed nation, which, in its language as well as in its manners, resembled the Germans more than the Celts. According to the testimony of Cæsar, they were the most valiant of the Gauls, particularly that portion which resided on the northern frontiers of Germany.

Belgium; the name of that part of the Netherlands which formerly belonged to Austria, but now makes a part of the kingdom of the Netherlands.—*Belgium*, a part of ancient Gaul, was originally the land of the Bellovaci and Atrebates, who lived in the neighborhood of the city of Amiens, and perhaps of Senlis.

Belgrade (the ancient *Alba Græcorum*; in German, *Griechisch Weissenburg*, which name, however, is seldom used); a Turkish commercial city and fortress in Servia, at the confluence of the Save and the Danube, with 30,000 inhabitants, consisting of four parts, the citadel in the centre,

which commands the Danube, is well fortified, is the residence of the pacha of Servia, and contains the chief mosque. The whole number of mosques in B. is 14. Between the citadel and the other 3 parts of the city there is an empty space, 400 yards wide. B. is badly built; the streets are not paved. At the mouth of the Save lies the island of the Gipsies. B., on account of its important situation, plays a conspicuous part in almost every war between Austria and Turkey. After having been, at different times, in the possession of the Greeks, Hungarians, Bulgarians, Bosnians, Servians and Austrians, it was, in 1442 and 1456, besieged by the Turks, and, in 1521, conquered by Solyman II. In 1688, the Austrians reconquered it, but lost it again in 1690. Prince Eugene took it in 1717, and the peace of Passarowitz, in 1718, left it in the hands of Austria, but it was again lost in 1739. The Porte retained it by the terms of the peace of Belgrade, in 1739, on condition that the fortifications which Austria had erected should be demolished—a work which required almost nine months. General Laudon took B. in 1789, but it was restored to the Porte at the peace of Szistowe, in 1791. In 1806, it was taken by the revolutionary Servians, but, with their suppression, it came again into the hands of the Turks. Formerly, a bishop resided here, but his seat is now in Semendria.

Belgrano, Manuel, was born at Buenos Ayres, of wealthy parents, who emigrated from Italy. After completing his education at the university of Salamanca, he was appointed secretary of the *consulado* at Buenos Ayres, and thus came in contact continually with the mercantile classes, the most enlightened and important portion of the population of that city. His polished and amiable manners, and his taste for letters and the fine arts, enabled him to improve the opportunity afforded him by his situation, so as to acquire extensive popularity. When the political troubles in America commenced, B. was at first disposed to favor the princess Carlota, sister of Ferdinand, and establish an independent monarchy in Buenos Ayres. But he soon adopted the plan of erecting a perfectly free government, and entered with zeal and ability into the measures which prepared and followed the deposition of the viceroy Cisneros, in May, 1810. In the new order of things, B. entered on a military career, and was speedily raised to the rank of general, in which capacity he commanded the expedition sent against Paraguay, which, after advancing into the heart of that province, was compelled, by the skill of Yedros and Francia, to return to Buenos Ayres, without an engagement, and leave the Paraguayans unmolested. B.'s next enterprise was more successful. September 24, 1812, he gained a complete victory over the royalist general D. Pio Tristan, at Tucuman, and thus defeated the intended expedition of the latter against Buenos Ayres. On the 13th of February following, he obtained another signal victory over Tristan at Salta. But these brilliant advantages were soon followed by equally striking reverses. B. imprudently released Tristan and his troops upon their parole, which the Spaniards, with that profligate disregard of all conventions and engagements, which has characterized their policy in the contest with the South Americans, dishonorably violated. The consequence was, that general Pezuela, with the very same troops, added to others collected in Peru, attacked and defeated B. at Vilcapugio, Oct. 1, 1813, and again at Ayoma, Nov. 14, of the same year; and San Martin was appointed to succeed him in command. In 1816, B. was reappointed to the command of the troops in Tucuman, and was making the most judicious arrangements for acting against the Spaniards in Upper Peru, when the spirit of anarchy seized upon the army, and he was deposed, and the troops dispersed. B. was liberal, upright and disinterested to a degree not exceeded by any of his compatriots, and faithful and exact in the discharge of all his duties. He displayed considerable ardor as an officer, and applied himself closely to the study of tactics; but had neither the experience nor the military capacity necessary to constitute a great general. Regardless of his occasional reverses of fortune, and of the persecution which he underwent from some of the transitory factions of the day, he continued to labor unremittingly for the welfare of his country until his death, in 1820, which was very justly deplored. (See *Memoirs of General Miller, in the Service of the Republic of Peru*, London, 1828.)

Belial was, with the Hebrews, what Pluto was with the Greeks—the ruler of the infernal regions. The word itself signifies the *bad*, the *destructive*.

Belisarius; one of the greatest generals of his time, to whom the emperor Justinian chiefly owed the splendor of his reign. Sprung from an obscure family in Thrace, B. first served in the body-

guard of the emperor, soon after obtained the chief command of an army of 25,000 men, stationed on the Persian frontiers, and, in the year 530, gained a complete victory over a Persian army of not less than 40,000 soldiers. The next year, however, he lost a battle against the same enemy, who had forced his way into Syria—the only battle which he lost during his whole career. He was recalled from the army, and soon became, at home, the support of his master. In the year 532, civil commotions, proceeding from two rival parties, who called themselves the *green* and the *blue*, and who caused great disorders in Constantinople, brought the life and reign of Justinian in the utmost peril, and Hypatius was already chosen emperor, when B., with a small body of faithful adherents, restored order. Justinian, with a view of conquering the dominions of Gelimer, king of the Vandals, sent B., with an army of 15,000 men, to Africa. After two victories, he secured the person and treasures of the Vandal king. Gelimer was led in triumph through the streets of Constantinople, and Justinian ordered a medal to be struck, with the inscription *Belisarius gloria Romanorum*, which has descended to our times. By the dissentions existing in the royal family of the Ostrogoths (see *Goths*) in Italy, Justinian was induced to attempt to bring Italy and Rome under his sceptre. B. vanquished Vitiges, king of the Goths, made him prisoner at Ravenna (540), and conducted him, together with many other Goths, to Constantinople. The war in Italy against the Goths continued; but B., not being sufficiently supplied with money and troops by the emperor, demanded his recall (548). He afterwards commanded in the war against the Bulgarians, whom he conquered in the year 559. Upon his return to Constantinople, he was accused of having taken part in a conspiracy. But Justinian was convinced of his innocence, and is said to have restored to him his property and dignities, of which he had been deprived. B. died in the year 565. His history has been much colored by the poets, and particularly by Marmontel, in his otherwise admirable politico-philosophical romance. According to his narrative, the emperor caused the eyes of the hero to be struck out, and B. was compelled to beg his bread in the streets of Constantinople. Other writers say, that Justinian had him thrown into a prison, which is still shown under the appellation of the *tower of Belisarius*. From this tower he is reported to have let down a bag fastened to a rope, and to have addressed the passengers in these words:—*Date Belisario obolum, quem virtus evexit, invidia depressit* (Give an obolus to Belisarius, whom virtue exalted, and envy has oppressed). Of this, however, no contemporary writer makes any mention. Tzetzes, a slightly-esteemed writer of the 12th century, was the first who related this fable. Certain it is, that, through too great indulgence towards his wife Antonina, B. was impelled to many acts of injustice, and that he evinced a servile submissiveness to the detestable Theodora, the wife of Justinian.

Belknap, Jeremy; an American clergyman and author, of considerable reputation. He was born in June, 1744, graduated at Harvard college in 1762, and ordained pastor of the church in Dover, New Hampshire, in 1767. Here he spent 20 years in the diligent performance of his clerical duties, and the cultivation of literature. It was during this period that he composed his History of New Hampshire, a work by which he established himself as an author in the good opinion of his countrymen. In 1787, he took charge of a church in Boston, where he continued to officiate until his death, in 1798. Besides his History, he published two volumes of his unfinished American Biography, and a number of political, religious and literary tracts. Doctor B. wrote with ease and correctness, though not with elegance: he was more remarkable for research and extensive information, than for brilliancy or originality of talents. The History of New Hampshire and the American Biography, above mentioned, are often consulted. His sermons, and many dissertations, are but little known. As a public preacher and citizen, he enjoyed the highest estimation. He was one of the founders of the Massachusetts historical society, whose Collections are important to the public annals.

Bell. Church bells originated in Italy, being formed, by degrees, out of the cymbals, small tinkling bells and handbells of the East, used, in religious ceremonies, as a means of honoring the gods, or of summoning them to the feast. The feast of Osiris, particularly, is known to have been announced by bells, and, in Athens, the priests of Cybele made use of them at their sacrifices. Pliny says that bells were invented long before his time. They were called *tintinnabula*; and Suetonius tells us that Augustus caused one to be hung before the temple

of Jupiter. Among Christians, they were first employed to call together religious congregations, for which purpose runners had been employed before. Afterwards, the people were assembled by the sound of little pieces of board struck together; hence called *sacred boards*. To the present day, the Catholics use such boards in Passion-week and Lent, because the noise of bells seems to them unsuited to the solemnity of the season. On the first day of Easter, the bells ring again, and the return of the accustomed sound produces a very cheerful effect. Paulinus, bishop of Nola, in Campania, is said to have first introduced church bells, in the fourth century, and thence the Latin names of the bell, *campana* and *nola*, are said to have originated. In the sixth century, bells were used in the convents; they were suspended on the roof of the church in a frame. Towards the end of this century, bells were placed on some churches at the expense of certain cities. About 550, they were introduced into France. Pope Sebastian, who died in 605, first ordered that the hours of the day should be announced by striking the bell, that people might better attend to the *horæ canonicæ*, that is, to the hours for singing and praying. In 610, Clothair besieged Sens, when Lupus, bishop of Orleans, ordered the bells of St. Stephen to be rung. The sound so frightened Clothair, that he gave up the siege. In the eighth century, the custom of baptizing and naming bells began. (See *Baptism*.) Church bells were probably introduced into England soon after their invention. They are first mentioned by Bede, about the close of the seventh century. In the East, they came into use in the ninth century; in Switzerland, in 1020; at what period they were brought into Germany is uncertain. In the 11th century, the cathedral at Augsburg had two bells. The same spirit which induced people to build immense minsters, and to apply their wealth in ornamenting the places of worship, made them vie with each other in the size of their bells. The great bell of Moscow, cast in 1653, in the reign of the empress Anne, is said, by Mr. Clarke, to be computed to weigh 443,772 lbs. A bell in the church of St. Ivan, in the same city, weighs 127,836 lbs.; another, 356 cwt.; and the one cast in 1819 weighs 1600 cwt., the clapper alone weighing 18 cwt. On the cathedral of Paris a bell was placed, in 1680, which weighed 340 cwt., and measured 25 feet in circumference. In Vienna, a bell was cast, in 1711, of 354 cwt. In Olmütz is one of 358 cwt. The famous bell at Erfurt, in Germany, which is considered to be of the finest bell-metal, having the largest proportion of silver in it, and is baptized *Susanne*, weighs 275 cwt., is more than 24 feet in circumference, and has a clapper of 4 feet, weighing 11 cwt. Great Tom, of Christ church, Oxford, weighs 17,000 lbs.; of Lincoln, 9894 lbs.; the bell of St. Paul's, London, 8400 lbs.; a bell at Nankin, in China, is said to weigh 50,000 lbs.; and seven at Pekin, 120,000 lbs. each. The inscriptions on old bells are curious, and, in some cases, have even historical value; and, at this time, when curiosities of all kinds are eagerly sought for, a collection of these inscriptions would not be uninteresting. The different uses of bells have given rise to many poems, some of which are inscribed on the bells themselves. One of the most common is the following:

Funera plango, fulgura frango, sabbata pango
Excito lentos, dissipo ventos, paco cruentos.

Perhaps the finest poem which has ever been written on bells is Schiller's poem, *Die Glocke* (The Bell), in which he describes the casting of the bell, and all its uses, in a highly poetical manner. This has been translated into many languages, and lately into Greek and Latin, by a professor at Liege. (For the metal of which bells are made, called *bell-metal*, see *Copper*.) A bell is divided into the *body* or *barrel*, the *clapper*, and the *ear* or *cannon*.—The word *bell* is used in many arts and sciences for instruments similar in form to church bells.

Bell. (See *Lancaster*.)

Bell-Metal. (See *Copper*.)

Bell-Rock, sometimes called *Inch cape*; a dangerous rock of Scotland, about 12 miles from Arbroath, nearly opposite the mouth of the river Tay; lon. 2° 22′ W.; lat. 56° 29′ N. A light-house has been erected on it, finished in 1811, 115 feet high. During high tides, the rock is entirely covered. It is said that, in former ages, the monks of Aberbrothock caused a bell to be suspended on this rock, which was rung by the waves, and warned the mariners of this highly dangerous place. The Bell-rock light-house is famous for its construction.

Bella, Stefano de la; an engraver, born at Florence, in 1610. He followed, at first, Callot's manner, but soon adopted one of his own. In 1642, he went to Paris, where he was employed by cardinal Richelieu. He returned to Florence, and became the teacher, in drawing, of Cosmo, the son of the great duke, and

died in 1664. It is said that he engraved 1400 plates.

Bellamy, James, a Flemish poet, was born at Flushing, in the year 1757, and died in 1796. He was 25 years old, and following the trade of a baker, when, in the year 1772, the second secular festival, in commemoration of the foundation of the republic, was celebrated throughout Holland. His genius, suddenly inflamed by the love of his native land, rendered him a poet, and his first productions met with success. He studied Latin, made himself better acquainted with his mother tongue, and composed several pieces of merit sufficient to induce the society of arts at the Hague to incorporate them in their collections. He published his patriotic songs under the title *Vaderlandse-Gezengen*, which secure him a place among the first poets of his nation. B. sung, likewise, the praise of love. The later works of this poet betray a certain melancholy, which renders them still more interesting. A biographical account of him has been written by G. Kniper. He may be placed by the side of Bilderdyk, Helmers, Loots, R. Feyth, &c., as one of the restorers of modern Dutch poetry.

Bellarmin, Robert, a cardinal, and celebrated controversialist of the Roman church, was born at Monte Pulciano, in Tuscany, in 1542. At the age of 18, he entered into the college of Jesuits, where he soon distinguished himself; and his reputation caused him to be sent into the Low Countries, to oppose the progress of the Reformers. He was ordained a priest, in 1569, by Jansenius, bishop of Ghent, and placed in the theological chair of the university of Louvain. After a residence of seven years, he returned to Italy, and was sent by Sixtus V to France, as companion to the legate. He was made a cardinal, on account of his learning, by Clement VIII, and, in 1602, created archbishop of Capua. At the elections of Leo XI and Paul V, he was thought of for the pontificate, and might have been chosen, had he not been a Jesuit. Paul V recalled him to Rome, on which he resigned his archbishopric without retaining any pension on it, as he might have done. In 1621, he left his apartments in the Vatican, and returned to a house of his order, where he died the same year, at the age of 71. So impressed were the people with the idea of his sanctity, that it was necessary to place guards to keep off the crowd, which pressed round to touch his body, or procure some relics of his garments. B. had the double merit, with the court of Rome, of supporting her temporal power and spiritual supremacy to the utmost, and of strenuously opposing the Reformers. The talent he displayed in the latter controversy called forth all the similar ability on the Protestant side; and, for a number of years, no eminent divine among the Reformers failed to make his arguments a particular subject of refutation. The great work which he composed in this warfare is entitled *A Body of Controversy*, written in Latin, the style of which is perspicuous and precise, without any pretension to purity or elegance. He displays a vast amount of Scriptural learning, and is deeply versed in the doctrine and practice of the church in all ages, as becomes one who determines every point by authority. To his credit, he exhibits none of the lax morality of his order, and, in respect to the doctrines of predestination and efficacious grace, is more a follower of St. Augustine than a Jesuit. His maxims on the right of pontiffs to depose princes caused his work on the temporal power of the popes to be condemned at Paris. On the other hand, it did not satisfy the court of Rome, because it asserted, not a direct, but an indirect, power in the popes in temporal matters; which reservation so offended Sixtus V, that he placed it among the list of prohibited books. These differences among the Catholics necessarily gave strength to the Protestant side, and produced a work from Mayer in exposition of them. In the rancor of controversy, some malignant calumnies were uttered against the morals of B.; but it is evident, that he inclined to superstition in faith, and scrupulosity in practice. At his death, he bequeathed one half of his soul to the Virgin, and the other to Jesus Christ. His society thought so highly of his sanctity, that proofs were collected to entitle him to canonization; but the fear of giving offence to the sovereigns, whose rights he oppugned, has always prevented a compliance with the ardent wishes of the Jesuits. The best edition of his controversial works is that of Prague, 1721, 4 vols., folio.

Belle Alliance. (See *Waterloo.*)

Belle-Isle, or Belle-Isle-en-Mer (anciently *Vindilis*); an island in the bay of Biscay, 115 miles from the west coast of France, about nine miles long, and from two to four broad, surrounded by sharp rocks, which leave only three fortified passages to the island. The soil is diverse, consisting of rock, salt marsh, and fertile grounds. Palais is the

capital. It contains three other small towns, and many villages. Lon. 3° 6′ W.; lat. 47° 18′ N. Pop., 5,569.

Belle-Isle, or Bellisle; an island N. E. of the gulf of St. Lawrence, about 21 miles in circuit; on the north-west side has a small harbor, fit for small craft, called *Lark harbor*, within a little island which lies close to the shore. At the east point, it has another small harbor or cove, that will only admit fishing shallops; from whence it is about 16 miles to the coast of Labrador. The narrow channel between Newfoundland and the coast of Labrador is called the *straits of Bellisle*; 15 miles N. Newfoundland. Lon. 55° 15′ W.; lat. 52° N.

Bellegarde, count, born at Chamberry, in Savoy, in the year 1760, of one of the oldest Savoyard families, early entered the Austrian service, and distinguished himself during the campaigns of 1793—96 in such a manner as to become a member of the archduke Charles's counsel of war, and, in 1796, field-marshal lieutenant. In this capacity, he concluded, in 1797, an armistice, at Leoben, with Bonaparte, and, in 1799, commanded the corps that was to maintain the connexion between Suwaroff and the archduke Charles. After the campaign in Italy, in 1800, he was made privy counsellor of the archduke Frederic, who commanded the army of Italy. In July, 1805, the chief command in the territories of Venice was committed to him. In 1806, he was created field-marshal, and appointed civil and military governor of both the Galicias. In the campaign of 1809, he distinguished himself at Aspern. B. afterwards became president of the council of war at Vienna, acted in Italy against Murat, was appointed governor of Lombardy, and lives now retired from the service on account of a disorder in his eyes.

Bellegarde, Gabriel du Pac de; born at the palace of Bellegarde, in the year 1717; one of the most indefatigable compilers of history, who has thrown much light on the historical events of the 17th century.

Belleisle (Charles Louis Auguste Fouquet), count de, marshal of France, born at Villefranche, Sept. 22, 1684, distinguished himself during the famous siege of Lille, and became brigadier in the royal forces. After the conclusion of the war of the Spanish succession, he went, with marshal Villars, to Rastadt, where he displayed diplomatic talents. The cession of Lorraine to France, in 1736, was principally his work. Cardinal Fleury reposed confidence in him; Louis XV made him governor of Metz and the three bishoprics of Lorraine, which office he held until his death. Before the breaking out of the war, in 1741, he visited the principal courts of Germany with the design of disposing them, after the death of Charles VI, to choose the elector of Bavaria emperor of Germany; and he displayed so much address, on this occasion, as to excite the admiration of Frederic II. After his return, he placed himself, together with Broglio, at the head of the French forces, to oppose those of Maria Theresa. He took Prague by assault; but, the king of Prussia having made a separate peace, he was compelled to a retreat, which he performed with admirable skill. In Dec., 1744, when on a diplomatic journey to Berlin, he was arrested at Elbingerode, a Hanoverian post, and sent to England, where he was exchanged, however, in 1746. In the following year, he forced general Browne, who had entered the south of France from Italy, to raise the siege of Antibes, and to retreat over the Var. In 1748, the king made him a duke and peer of France, and the department of war was committed to his charge. He reformed the army by abolishing many abuses, enlarged the military academy, and caused an order of merit to be established. The city of Metz is indebted to him for an academy. He died in 1761.

Bellenden, William; a Scottish writer of the 17th century, distinguished for the elegance of his Latin style. He was educated at Paris, where he was professor of belles-lettres in 1602, and, though he was made master of requests by James I, he still continued to reside in the French metropolis. In 1608, he published a work entitled *Cicero Princeps*, containing a selection from the works of Cicero, consisting of passages relating to the duties of a prince, &c. He afterwards republished this work, with some other treatises, in his *Bellendenus de Statu*. This work was published again, in 1787, by an anonymous editor, since known to have been doctor Samuel Parr, who added a Latin preface on the politics of that time.

Bellerophon. (See *Hipponoüs*.)

Belles-Lettres (*French*) signifies the same with *polite literature*. It is impossible to give a satisfactory explanation of what is or has been called *belles-lettres*: in fact, the vaguest definition would be the best, as almost every branch of knowledge has, at one time, been included in, at another, excluded from, this denomina-

tion. The most correct definition, therefore, would be, perhaps, such as embraced all knowledge and every science, not merely abstract, nor simply useful. In the division of the departments at the lyceum of arts, established at Paris in 1792, the belles-lettres comprehended general grammar, languages, rhetoric, geography, history, antiquities and numismatics; whilst philosophy, mathematics, &c., were called, in contradistinction, *sciences*. If the name of *belles-lettres* ought to be retained at all, it would seem proper to include under it poetry, rhetoric, and all prose which has pretensions to elegance. A historical work, therefore, would fall within the definition of belles-lettres, only if its style was distinguished for elegance. The same would be the case with books of travels, &c. It is, however, to be hoped that this vague, unnecessary name will soon be abandoned, in imitation of the example of the Germans, who, having investigated the philosophy of the arts and sciences more thoroughly than any other nation, and critically analyzed their principles, have rejected the term; so that it is known in Germany only as matter of history. They class poetry with the fine arts, and its history, like the history of any other art, science, nation or thing, with the sciences. Rhetoric, too, is called a fine art. It was formerly said, that the difference of *belles-lettres* and *beaux-arts* consisted in the difference of the means employed by each respectively. The former, it was said, used arbitrary signs, by which was meant language; the latter, natural signs, i. e., sounds and visible forms. It is easy to see how untenable this division is.

Bellevue (Fr. *fine prospect*). This name is given to several villas and palaces, but particularly to a beautiful country palace in the neighborhood of Paris, situated on the ridge of those mountains which stretch from St. Cloud towards Meudon. Mad. de Pompadour (q. v.) built it. The building was commenced in July, 1748, and finished in November, 1750. After the death of Louis XV, the use of it was granted to the aunts of Louis XVI, mesdames de France. The first French artists of the time, Coustou, Adam, Salu, Pigalle, Gragenard, Laprenue, had exerted all their talents in embellishing Bellevue; so that this palace, at the period when it was built, was considered the most charming in all Europe. After the revolution, the convention decreed that Bellevue should be kept in repair at the expense of the nation, and that it should be devoted to public amusements. Nevertheless, it was publicly sold, during the highest pitch of revolutionary excitement, and the purchaser, M. Lenchère, a post-master in Paris, had it demolished, quite in the spirit of the *Bande noire*. (q. v.) Its ruins are frequently visited, on account of the beautiful view of Paris from this spot.

Bellini, James, and his two sons, Gentile and Giovanni (who surpassed their father); celebrated painters, who made a new epoch in the Venetian school. Of James's works nothing has been left; but several of Gentile's (e. g., a *St. Mark*) have reached our times. In the year 1479, Gentile went to Constantinople, Mohammed II having sent to Venice for a skilful painter. He is said to have there copied the bass-reliefs of the column of Theodosius, and to have died at Venice, in the year 1501. The most distinguished of the family was Giovanni B., who was born at Venice, about 1424, and died about 1516. He studied nature diligently, and his drawing was good. He contributed much to make oil painting popular, and has left many excellent pictures, of which one, the *Savior pronouncing his Benediction*, is to be found in the gallery of Dresden. His own reputation was much increased by that of his celebrated disciples, namely, Titian and Giorgione. As their instructer, he is sometimes called the *founder of the Venetian school*.

Bellisle. (See *Belle-Isle*.)

Bellmann, Charles Michael, the most original among the Swedish poets, was born at Stockholm, in 1741, and grew up in the quietude of domestic life. The first proofs which he gave of his poetic talents were religious and pious effusions. The dissipated life of young men, at Stockholm, devoted to pleasure, was afterwards the subject of his poems. By these his name was spread over all Sweden. Even the attention of Gustavus III was attracted to him, and he received from the king an appointment, which enabled him to devote himself almost entirely to poetical pursuits, in an easy independence, until his death, in 1795. His songs are truly national, principally describing scenes of revelry.

Bellona; the goddess of war; daughter of Phorcys and Ceto. She was called by the Greeks *Enyo*, and is often confounded with Minerva. She was anciently called *Duelliona*, and was the sister of Mars, or, according to some, his daughter or his wife. She prepared his chariot when he was going to war, and drove his

steeds through the tumult of the battle with a bloody scourge, her hair dishevelled, and a torch in her hand. The Romans paid great adoration to her; but she was held in the highest veneration by the Cappadocians, chiefly at Comana, where she had above 3000 priests. Her temple at Rome was near the Porta Carmentalis. In it the senators gave audience to foreign ambassadors and to generals returned from war. At the gate was a small column, called the *column of war*, against which they threw a spear, whenever war was declared. The priests of this goddess consecrated themselves by making great incisions in their bodies, and particularly in the thigh, from which they received the blood in their hands to offer as a sacrifice to the goddess. In their wild enthusiasm, they often predicted bloodshed and wars, the defeat of enemies, or the besieging of towns.

Bellows; a machine so formed as to expire and inspire air by turns, by the enlargement and contraction of the capacity. As soon as men began to make use of fire, the importance of bellows was felt, since the natural bellows, if we may give this name to the lungs, could not be applied to any great extent. The invention of bellows is ascribed to Anacharsis the Scythian. Probably, this invention, like so many others, took place in different countries, since the want which occasioned it is universal. The first deviation from the ancient, and still common form of the bellows, was made by the Germans, about 100 years ago, and the forms at present are very various, as many attempts have been made for the improvement of this highly important machine, which becomes necessary wherever a powerful flame is required in the arts. As mining is carried on extensively in Germany, and great heat is required in smelting the ores, and working the metals, many new kinds of bellows have been invented in that country, of which we only mention that of Mr. von Baader, in Munich (known as the inventor of a new kind of rail-roads). It consists of an empty box, which moves up and down in another, partially filled with water. Between the bottom of the empty box and surface of the water is a space filled with air, which is driven out by the descent of the enclosed box. Bellows of very great power are generally called *blowing-machines*. One of the largest is that recently erected in England, at the smithery in the king's dock-yard, at Woolwich. It is adequate to the supply of air for 40 forge fires, amongst which are several for the forging of anchors, iron knees, and many other heavy pieces of smithery. The common Chinese bellows consist of a box of wood about two feet long, and one foot square, in which a thick, square piece of board, which exactly fits the internal cavity of the box, is pushed backwards and forwards. In the bottom of the box, at each end, there is a small conical or plug valve to admit the air, and valves above to discharge it.

Belloy, Pierre Laurent Buirette de, the first French dramatist who successfully introduced native heroes upon the French stage, instead of those of Greece and Rome, or the great men of other nations, was born at St. Flour, in Auvergne, in 1727. He went to Paris when a child, lost his father soon after, and was supported by his uncle, a distinguished advocate in the parliament of Paris, who designed him for the same profession. He applied himself to this profession with reluctance, while he showed much genius for the drama. His uncle opposed this taste, and the young man secretly left his house. He now made his appearance at several northern courts, as an actor, under the name of *Dormont de Belloy*. Every where his character gained him love and esteem. He spent several years in Petersburg, where the empress Elisabeth showed him much kindness. In 1758, he returned to France, with the intention of having his tragedy *Titus* represented. His uncle obtained a warrant of imprisonment against him, in case he should appear on the stage. B. had hoped to reconcile his family to him by the success of *Titus*, but this hope was disappointed by the failure of the piece; and the author went once more to Petersburg. Shortly after, his uncle died, and B. returned again to France, where he brought out his tragedy *Zelmire*, which was acted with the most complete success. In 1765 followed his *Siège de Calais*, a tragedy which produced a great sensation, and is still esteemed, though it owes the applause bestowed on it rather to its subject than to its poetical merit. He received the medal promised by the king to those poets who should produce three successful pieces, and which has been awarded only on this occasion. On account of the great applause with which the Siege of Calais was received, it was counted as two, it being, in fact, only the second successful piece of B. The city of Calais sent him the freedom of the city, in a gold box, with the inscription *Lauream*

tulit, civicam recipit. B. has written sundry other dramatic pieces, of which *Gaston et Bayard* procured his reception into the *Académie Française.* Upon the whole, he was not happy in the expression of tragical pathos. He died in 1775.

Bell-Rock. (See Bell-*Rock.*)

Beloochistan. (See *Belujistan.*)

Belt, the Great and Little; two straits of Denmark, connecting the Baltic with the Cattegat. The former runs between the islands of Zealand and Funen, and is about 15 miles in width, where it is crossed from Nyborg, in Funen, to Corsoer, in Zealand. The greatest breadth of the strait is 20 miles. The navigation is very dangerous, on account of the many small islands and sand-banks, by which the channel is impeded. Vessels sailing through this strait pay tribute at Nyborg. The Little Belt is between the island of Funen and the coast of Jutland, and the narrowest part of the strait is not more than a mile in width. At this place stands the fortress Fredericia, where the tolls are paid. The fortress commands completely the entrance from the Cattegat. The sound between Zealand and the Swedish coast is preferred for all large vessels.

Belujistan, or Beluchistan; a country in Asia, situated on the north-west of the peninsula of Hindostan, formerly belonging to Persia; now connected with Cabulistan. It comprehends, in its most extensive acceptation, all the space between lon. 58° and 67° E.; lat. 24° and 30° N. It extends from the country of the Afghans on the north to the Indian ocean, and from the provinces of Laristan and Kerman on the west to that of Sind on the east. It contains six principal divisions:—1. Jhalawan and Sarawan, with the district of Kelat; 2. Macran and Les; 3. Kohistan, that is, the mountainous region west of the Desert; 4. the Desert; 5. Cach Gandavah and the district of Herend Dajel; 6. the province of Sind. It is very mountainous. Many of the mountains are of great height, covered with snow. In the plains, the heat is very great; in summer, water is generally scarce. The rivers are the Pooralle Muktoo, Dast, Nughor, Sinroo and Sudgee. The desert of Belujistan is 300 miles long, and upwards of 200 broad, consisting of waves of sand extremely difficult to be traversed. The minerals are gold, silver, lead, iron, copper, tin, rock salt, alum, saltpetre and sulphur. The soil produces grain, cotton, indigo, madder and assafœtida. The Belooches, or Balojes, consist of three tribes—the Beluches, the Brahuis, the Dehwars. They are warlike and semi-barbarous. They live a pastoral life, and are of the Mohammedan religion. Little was known of this country, till Mr. Pottinger, and some other enterprising officers in the East India company's service, explored it in 1809 and 1810.

Belvedere (Ital. *fine sight.* See *Bellevue.*) The name of buildings in Italy destined for the enjoyment of prospects. The name is also given to the small cupolas on houses, which are ascended for the sake of fresh air, or of the view which they afford. Many of the buildings in Rome are furnished with such cupolas; yet the term *belvedere* is generally applied only to those on the palaces of the rich. In France, the name *bellevue* is given to small country-seats, in a simple style, or to arched bowers at the end of a garden or park, intended for the enjoyment of fresh air, or as places of shelter against the burning sun. This is the name, also, of a part of the Vatican, where the famous statue of Apollo is placed, which, on this account, is called *Apollo Belvedere.*

Belzoni, Giambattista, that is, John Baptist; born at Padua, and educated at Rome. He was destined for the monastic life, but left the city when it was occupied by the French armies, and, in 1803, went to England, where he acted the parts of Apollo and Hercules, at Astley's amphitheatre. Here he acquired, besides an acquaintance with the English language, much knowledge of the science of hydraulics, the study of which had been his chief occupation in Rome, and which afterwards carried him to Egypt. He left England, after a residence of nine years, accompanied by his wife (who faced the Arabs with the courage of an Amazon), and took his way through Portugal, Spain and Malta to Egypt. There he lived, from 1815 to 1819, at first as a dancer, till he won the favor of the pacha, who made use of his services. B., though often alone amidst the rude inhabitants of the country, kept them in awe by his extraordinary stature and strength. He succeeded in opening, not only the pyramid of Ghiza, which had been already opened, in the 17th century, by Pietro della Valle, and to which the French, during their expedition to Egypt, could not find the entrance, but, also, a second, known by the name of *Cephrenes*, and several catacombs near Thebes, especially one, in a fine state of preserva tion, in the valley of Biban el Molook,

which is considered to be the mausoleum of Psammis (400 B. C). The drawings which he has furnished of these antiquities are the most exact which we possess. In the year 1816, his perseverance and skill succeeded in transporting the bust of Jupiter Memnon, together with a sarcophagus of alabaster, found in the catacombs, from Thebes to Alexandria, from whence they came to the British museum. On the 1st of August, 1817, he opened the temple of Ipsambul, near the second cataract of the Nile, which two Frenchmen, Cailliaud and Drovetti (the French consul-general), had discovered the year before, but had not succeeded in opening. B. discovered a subterraneous temple in its ruins, which, until that time, had been unknown. He then visited the coasts of the Red sea, and the city of Berenice, and made an expedition into the Oasis of Jupiter Ammon. His journey to Berenice was rewarded by the discovery of the emerald mines of Zubara. B. refuted Cailliaud's assertion, that he had found the famous Berenice, the great emporium of Europe and India, by subsequent investigations on the spot, and by the actual discovery of the ruins of that great city, four days journey from the place which Cailliaud had taken for Berenice. B.'s Narrative of the Operations and recent Discoveries within the Pyramids, Temples, Tombs and Excavations in Egypt and Nubia; and of a Journey to the Coast of the Red Sea, in Search of Berenice; also of another to the Oasis of Jupiter Ammon (London, 1820); accompanied by a folio vol. of 44 copper-plates; was received with general approbation. Padua, his native city, requited his present of two Egyptian statues from Thebes, with a medal by Manfredini. (Concerning the models, which B. placed in Bullock's museum, see *Museum*.) In the year 1823, this enterprising traveller had made preparations for passing from Benin to Houssa and Timbuctoo, when he died, at Gato, on his way to Benin, Dec. 3, 1823. He believed the Nile and the Niger to be different streams, and that the Niger empties its waters into the Atlantic ocean.

Bembo, Pietro; one of the most celebrated of the Italian scholars, that adorned the 16th century; born at Venice, in 1470. He very early learned the Latin, and afterwards, at Messina, under the direction of Lascaris, the Greek language; after which he returned to his native country, and there published a small treatise on mount Etna. In compliance with the will of his father, he entered upon the career of public business, but, soon conceiving a dislike for it, he devoted himself to science and the theological profession. At Ferrara, where he completed his philosophical studies, he entered into a connexion with Ercole Strozzi, Tibaldeo, and particularly with Sadoleto. From Ferrara he returned to Venice, where a literary society had been established, in the house of the printer Aldus Manutius. B. became one of its principal members, and, for some time, took pleasure in correcting the beautiful editions which proceeded from this celebrated press. After visiting Rome, he went, in 1506, to the court of Urbino, at that time one of those Italian courts where the sciences stood highest in esteem. He lived there about six years, and gained several powerful friends. In 1512, he went to Rome with Giulio de' Medici, whose brother, pope Leo X. made him his secretary, and gave him his friend Sadoleto for a colleague. About this time, B. became acquainted with the young and beautiful Morosina, with whom he lived, in the most tender union, during 22 years. She presented him with two sons and a daughter, whom he educated with the greatest care. His many labors, arising from his office, as well as his literary pursuits, and, perhaps, too great an indulgence in pleasure, having impaired his health, he was using the baths of Padua, when he was apprized of the death of Leo X. Being by this time possessed of several church benefices, he resolved on withdrawing entirely from business, and on passing his days at Padua, (the air of which he had found very beneficial), occupied only with literature and science, and enjoying the society of his friends. The learned members of the famous university of this city eagerly frequented his house, and strangers also flocked thither. B. collected a considerable library: he had a cabinet of medals and antiquities, which, at that time, passed for one of the richest in Italy, and a fine botanical garden. He spent the spring and autumn at a villa called *Bozza*, which had always belonged to his family. He devoted the leisure of a country life principally to his literary pursuits. In the year 1529, after the death of Andreas Navagero, the office of historiographer of the republic of Venice was offered to him, which he accepted, after some hesitation, and declining the salary connected with it. At the same time, he was nominated librarian of the library of St. Mark. Pope Paul III, having resolved upon a new promotion of cardinals,

from the most distinguished men of his time, conferred on him, in 1539, the hat of a cardinal. From that time, B. renounced the belles-lettres, and made the fathers and the Holy Scriptures his chief study. Of his former labors, he continued only the History of Venice. Two years later, Paul III bestowed the bishopric of Gubbio on him, and, soon after, the rich bishopric of Bergamo. He died, loaded with honors, 1547, in the 77th year of his age. B. united in his person, his character and conversation, all that is amiable. He was the restorer of a pure style, as well in Latin composition, in which Cicero, Virgil and Julius Cæsar were his constant models, as in the Italian, in which he chiefly imitated Petrarca. He was so rigorous with regard to purity of style, that he is said to have had 40 different partitions, through which his writings, as he polished them by degrees, successively passed; nor did he publish them till they had sustained these 40 examinations. A collection of all his works, which were frequently printed singly, appeared, in 1729, at Venice, in 4 folio vols. The most important of them are, History of Venice from 1487 to 1513, in 12 books, which he wrote both in Latin and Italian; *Le Prose*, dialogues, in which the rules of the Italian language are laid down; *Gli Asolani*, dialogues on the nature of love; *Le Rime*, a collection of beautiful sonnets and canzonets; his letters, both in Latin and Italian: *De Virgilii Culice et Terentii Fabulis Liber; Carmina*, which are ingenious and elegant, but more free than the author's profession would lead us to expect; besides several others.

Ben (*Hebrew*, son); a prepositive syllable, found in many Jewish names; as, *Bendavid*, *Benasser*, &c., which, with the Jews in Germany, has been changed into the German *Sohn* (son), e. g., *Mendelssohn*, *Jacobssohn*, &c. The origin of this manner of naming is to be found in the ancient custom of the Israelites' having no family names, which is still their usage in many countries.

Benares; a town and district in the province of Allahabad, in Bengal. It has an area of 12,000 square miles, 10,000 of which are rich cultivated flats on each side of the Ganges. The heat, in summer, is excessive, but, in winter, fires are requisite. Garden-stuff, grain of different kinds, flax for oil (no linens are manufactured here), and sugar, are the principal objects of cultivation. The gross revenue, in 1813, amounted to 4,562,707 rupees (£570,338). Muslins, silks and gauzes, salt, indigo and opium are made in this district. The principal towns are Benares, Mirza-pur, Chunargarh and Ghazi-pur. The population exceeds 3,000,000, and the Hindoos are to the Mussulmans as 10 to 1 in the town, and as 20 to 1 in the villages. The rajah Chet Singh was expelled by Mr. Hastings in 1781.

Benares (in Sanscrit, *Vara Nasi*, from the two streams, Vara and Nasi) stands in lat. 25° 30′ N., and lon. 83° 1′ E., on the high bank and northern side of the Ganges. The town rises like an amphitheatre. The height of the houses and narrowness of the streets give it all the usual inconveniences of an Asiatic town. Its inhabitants are more than 600,000, of whom 8000 are said to be Bramins; and, at the great Hindoo festivals, the concourse is immense; for *Casi*, or *Cashi*, *the splendid*, as the Indians commonly call it, is one of the most sacred places of pilgrimage in all India. To die at B. is the greatest happiness for a Hindoo, because he is then sure of immediate admission into heaven. The number of pious foundations and temples is exceedingly great. Several of the Hindoo princes have agents here to offer up sacrifices in their behalf. The principal temple is called *Visweswar* or *Bisesar*, and is dedicated to Siva, whose sacred relic it contains. Aurungzeb built a splendid mosque on the highest ground in the city, and on the ruins of a temple. At the end of the 17th century, an observatory was erected in this city, which still exists; and a college for the instruction of Hindoos in their own literature was established by the British government in 1801; but it has not yet done much for the revival of learning among the natives, owing to the pride of the Bramins. B. has long been the great mart for diamonds and other gems, brought principally from the Bundelcund. The merchants and bankers are numerous and wealthy. There are few English inhabitants, except the government officers and the members of the circuit court. Casi was ceded to the East India company by the nabob of Aud'h (Oude), in 1775, and, since 1781, has enjoyed uninterrupted tranquillity. The inhabitants are better mformed than the natives of the country in general. The reader will find an interesting account of B. in bishop Heber's Narrative of a Journey through the Upper Provinces of India, in 1824—26; London, 1828, Philadelphia, 1829, vol. 1.

Benavides; an outlaw and pirate, who, for several years, proved the scourge of the southern parts of Chile. He was a native of Quirihue, in the province of Concepcion, and entered the patriot army as a common soldier at the commencement of the revolution. Having deserted to the Spaniards, and being made prisoner by the Chilians, at the battle of Membrilla, in 1814, he was to have been tried for desertion, but effected his escape. Being made prisoner again at the battle of Maypu, in 1818, he was sentenced to be shot, and was supposed to have been killed; but, although shockingly wounded, and left for dead, he recovered, and, having obtained a commission from the Spanish commander Sanchez, he commenced a war upon the southern frontier of Chile, never surpassed in savage cruelty. He laid waste the country with fire and sword, murdered his prisoners, and perpetrated the most horrid cruelties upon the unarmed peasants, including women and children, who chanced to fall into his power. Notwithstanding repeated engagements with the Chilian forces of the province of Concepcion, he sustained himself, for a long time, in this atrocious course. At length he undertook to establish a navy, and, for this purpose, piratically seized upon several English and American vessels, which unsuspectingly stopped for refreshment not far from the town of Arauco, the centre of his operations. So intolerable had the grievance become, that, in 1821, the Chilians fitted out an expedition against Arauco, and succeeded in breaking up the robber's strong hold. He attempted to escape to Peru in a launch, but, being captured, was condemned to death, and executed Feb. 23, 1822.—*History of Rev. in Spanish America.*

Benbow, John; an English naval character of distinguished merit; born in Shrewsbury, about 1650, and brought up to the sea in the merchant service; fought so desperately against a pirate from Sallee, in one of his trips to the Mediterranean, about the year 1686, as to beat her off, though greatly his superior in men and metal. For this gallant action, he was promoted at once, by James II, to the command of a ship of war. William III employed him in protecting the English trade in the channel, which he did with great effect. His valor and activity secured him the confidence of the nation, and he was soon promoted to the rank of rear-admiral, and charged with the blockade of Dunkirk. But the squadron in that port, under the command of Du Bart, managed to slip out of port; nor could Benbow, though he sailed instantly in pursuit, overtake it. In 1701, he sailed to the West Indies with a small fleet, having accepted a command previously declined by several of his seniors, from the supposed superiority of the enemy's force in that quarter. In August of the following year, he fell in with the French fleet under Du Casse, and for five days maintained a running fight with them, when he at length succeeded in bringing the enemy's sternmost ship to close quarters. In the heat of the action, a chain-shot carried away one of his legs, and he was taken below; but the moment the dressing had been applied to the wound, he caused himself to be brought again on deck, and continued the action. At this critical instant, being most disgracefully abandoned by several of the captains under his command, who signed a paper expressing their opinion that "nothing more was to be done," the whole fleet effected its escape. B., on his return to Jamaica, brought the delinquents to a court-martial, by which two of them were convicted of cowardice and disobedience of orders, and condemned to be shot; which sentence, on their arrival in England, was carried into execution at Plymouth. B., who suffered equally in mind and body from this disgraceful business, gradually sunk under his feelings, and expired at Jamaica, Nov. 4, 1702.

Bencoolen, or Benkahule; a seaport of Sumatra, on the S. W. coast; lon. 102° 11′ E.; lat. 3° 50′ S. The English settled here in 1685, and, in 1690, the East India company built a fort here, calling it *fort York*. A convenient river on its N. W. side brings the pepper out of the inland country; but there is great inconvenience in shipping it, by reason of a dangerous bar at the river's mouth. The place, which is almost two miles in compass, is known at sea by a high, slender mountain, which rises in the country, 20 miles beyond it, called the *Sugar-Loaf*. It is inhabited by a mixed population. The medium heat throughout the year is from 81° to 82°. B. is the chief establishment of the East India company on the island of Sumatra. The settlement, latterly, is of but little importance. Pepper is the only produce of the adjacent country, which is mountainous and woody. The air is full of malignant vapors, and the mountains always covered with thick clouds, which burst in storms of thunder, rain, &c.

Benda, George, director of the chapel at Gotha, born at Jungbuntzlau, in Bohemia, 1721, received from Frederic II the place of the second violinist in the chapel at Berlin, but, in 1748, entered the service of the duke of Gotha, as chapel-master, where he constantly cultivated his talents for composition, particularly of sacred music. His Ariadne, an opera, was received with enthusiastic applause in Germany, and afterwards in all Europe, being distinguished for originality, sweetness and ingenious execution. His compositions are numerous; but his Ariadne is his best work. He died in the neighborhood of Gotha, 1795. His absence of mind has given rise to many amusing anecdotes. His elder brother, Francis, was a distinguished violinist. Their father was a poor linen-weaver.

Bender (in the Moldau language, *Tigino*); the chief city of a district in the Russian province Bessarabia, on the Dniester; lon. 24° 46′ E.; lat. 46° 51′ N.; population, 10,000. It is built in the shape of a crescent, is well fortified, has 12 mosques and 1 Armenian church. The streets are narrow and dark. Its commerce is important, and it carries on some branches of manufacture. Here resided Charles XII. (q. v.) In 1771, the Russians took the place, and killed most of the troops and citizens, amounting to nearly 30,000 persons. The peace of Cainardshi, in 1774, restored it to Turkey. In 1809, it was conquered by the Russians, but again restored to the Turks by the peace of Jassy. Since the peace of Bucharest, in 1812, it has belonged to Russia.

Benedict XIV (Prosper Lambertini), born at Bologna, in 1675, of a very respectable family, distinguished himself, in his youth, by a rapid progress in all the sciences. His favorite author was St. Thomas. He applied himself with success to the canon and civil law, and became advocate to the consistory at Rome. Afterwards, he was appointed *promotor fidei*, and wrote a valuable work on the Ceremonies used in Beatifications (Bologna, 1734, 4 vols. fol.) He was passionately fond of learning, of historical researches and monuments of art, and also associated with the distinguished men of his time; among others, with father Montfaucon, who said of him, "Benedict has two souls; one for science, and the other for society." He also made himself familiar with the best poetical works, whereby his mind became elevated and his style animated. Benedict XIII made him, in 1727, bishop of Ancona; in 1728, cardinal, and in 1732, archbishop of Bologna. In every station, he displayed great talents, and fulfilled his duties with the most conscientious zeal. He opposed fanaticism even at the risk of his own safety, defended the oppressed, and expressed himself with the greatest frankness to Clement XII, without losing his favor. When, after the death of Clement XII, in 1740, the election of a new pope in the conclave was retarded by the intrigues of cardinal Tencin, and the cardinals could not agree, Lambertini, with his usual good nature, said to them, "If you want a saint, take Gotti; if a politician, Aldobrandi; if a good old man, myself." These words, thrown out in a humorous manner, operated on the conclave like inspiration, and Lambertini, under the name of *Benedict XIV*, ascended the papal throne. His choice of the ministers and friends, whom he assembled around him, does the greatest honor to his judgment. The condition of the church, and of the Roman court, had not escaped his penetration. Since the reformation, princes no longer trembled at the thunders of the Vatican. The popes had renounced their pretensions to worldly authority, and Lambertini knew that respect for the papal authority could be maintained only by a wise moderation. He constantly regulated his measures by this principle, and thus succeeded, even in difficult circumstances, in satisfying, not only the Catholic, but even the Protestant princes. The sciences were a special object of his care. He established academies at Rome; promoted the prosperity of the academy at Bologna; caused a degree of the meridian to be measured; the obelisk to be erected in the Campus Martius; the church of St. Marcellino to be built after a plan projected by himself; the beautiful pictures in St. Peter's to be executed in mosaic; the best English and French works to be translated into Italian; and commanded a catalogue of the manuscripts contained in the Vatican library (the number of which he had enlarged to 3300) to be printed. His government of the papal states did equal honor to his wisdom. He enacted severe laws against usury, favored commercial liberty, and diminished the number of holydays. His piety was sincere, yet enlightened and forbearing. He strove to maintain purity of doctrine and of morals, giving, in his own character, the most praiseworthy example. He died, after a painful sickness, during which his

cheerfulness and vivacity never deserted him, May 3, 1758. The sole reproach brought against him by the Romans was, that he wrote too much, and governed too little. His works compose, in the Venice edition, 16 vols. fol. The most important of his works is that on the synods, in which we recognise the great canonist.

Benedict, St.; the founder of the first religious order in the West; born at Norcia, in Spoleto (in the present Ecclesiastical States), 480. In the 14th year of his age, he retired to a cavern situated in the desert of Subiaco, 40 miles from Rome, and, in 515, drew up a rule for his monks, which was first introduced into the monastery on Monte Cassino, in the neighborhood of Naples, founded by him (529) in a grove of Apollo, after the temple had been demolished. This gradually became the rule of all the Western monks. The abbots of Monte Cassino afterwards acquired episcopal jurisdiction, and a certain patriarchal authority over the whole order. B., with the intention of banishing idleness, prescribed, in addition to the work of God (as he called prayer and the reading of religious writings), the instruction of youth in reading, writing and ciphering, in the doctrines of Christianity, in manual labors (including mechanic arts of every kind), and in the management of the monastery. With regard to dress and food, the rule was severe, but not extravagant. B. caused a library to be founded, for which the aged and infirm brethren (*ordo scriptorius*) were obliged to copy manuscripts. By this means he contributed to preserve the literary remains of antiquity from ruin; for, though he had in view only the copying of religious writings, yet the practice was afterwards extended to classical works of every kind; and the learned world is indebted for the preservation of great literary treasures to the order of St. Benedict. (See *Benedictines.*)

Benedictbeurn; formerly an abbey, situated in the Bavarian circle of the Iser, about 40 miles distant from the city of Munich, on the descent of the mountains towards the Tyrol. The convent was founded as early as 740. In our days, it is only remarkable for the manufactory of optical instruments belonging to Reichenbach and Liebherr, who have furnished instruments to almost all the observatories of Europe.

Benedictines. From the 6th to the 10th century, almost all monks, in the West, might be so called, because they followed the rule of St. Benedict of Norcia. (See this article, *Monastery* and *Order*.) The rules which, at that time, the monasteries, in Spain and France, received from their bishops, as well as the rule of the Irish St. Columba (born 560, died 615), were essentially the same as those of St. Benedict; and, in the progress of his order, the monasteries in Spain and France, as well as those of the order of Columba, united themselves with it. Monte Cassino, the magnificent primitive monastery of the Benedictines, became the model of all others. At that time, the monasteries, having no common superiors, were under the immediate control of the bishops in their respective dioceses, and differed from one another in many qualifications of the primitive rule. Not even the color of their dress was the same. The disciples of Columba wore white garments, like the first Benedictine nuns, who originated in France, in the 6th century. After the unions which took place at a later period, all the members of this order wore black, as the founder is said to have done. The decline of monastic discipline, after the 8th century, occasioned the reforms of Benedict of Aniana, in France, the renewed inculcation of the old rule, and the adoption of new ordinances suited to the times, by the council of Aix-la-Chapelle (817), as well as the particular rules and fraternities of the celebrated monasteries in France, Germany and England, which, in those barbarous times, became seats of civilization; and, finally, the institution of the Cluniacs, a new branch of the Benedictines, which proceeded from the convent of Clugny, in Burgundy, founded in the year 910. The Benedictine monasteries, in the middle ages, were often asylums in which science took refuge, and found protection. In the place of the discordant and uncertain rules which had hitherto existed, the Cluniacs made fixed regulations concerning the hours of worship, the obedience, discipline and common government of all the monasteries belonging to their order, which were soon imitated in all Europe. In the 12th century, their order contained 2000 monasteries, whose luxury frequently called for reforms, and finally became the chief cause of their decline. The remains of the Cluniacs united themselves, in the 17th century, under the patronage of Richelieu, with the Benedictine fraternities of St. Vannes and St. Maurus, the latter of which, founded in 1618, had, in the beginning of the 18th century, 180 abbeys and priories in France, and acquired, by means of its learned members,

such as Mabillon, Montfaucon, Marténe, merited distinction. To this family belong those new orders, established on the foundation, and observing the rule of St. Benedict, which have originated since the 11th century, and are distinguished from the proper Benedictines by their dress, names and particular regulations; e. g., the Camaldulians, the monks of Vallombrosa, the Sylvestrians, the Grandimontenses, the Carthusians, the Cœlestines, the Cistercians and Bernardines, the Trappists, and the monks of Fontevraud. (q. v.) The Benedictine monasteries never constituted one society, constitutionally regulated and governed under an aristocratical or monarchical form: on the contrary, a great many monasteries, which descended from the old Benedictines, were compelled, by the council of Trent, to unite themselves gradually into particular fraternities. Among these, the Benedictines of Monte Cassino, of Monte Vergine, and Monte Oliveto (who call themselves *Olivetanians*), in Italy and Sicily, where they have flourished uninterruptedly even to the present time; those of Valladolid and Montserrat, in Spain, where they are among the wealthiest orders; those of Hirschau and Fulda, together with Bursfeld, which have now ceased to exist, and that of Moelk, in Germany, deserve particular notice, on account of the extent of their possessions, the magnificence of their churches, and the mildness of their rules. To the fraternity of Moelk, which still exists, but accommodated to the spirit of the times (the government having ordered its revenues to be applied to the public service), the rest of the Benedictine convents in Austria are joined. Many of the nunneries of this order are reserved for the nobility, because the places in them are equal to the most lucrative benefices. The Benedictines in Sicily, who are, for the greater part, the younger sons of distinguished families, live under very lax rules. In Modena, they have settled again, and received a convent, with revenues for their support.

Benediction signifies the act of conferring a blessing (q. v.).—*Benedictio beatica*; the blessing bestowed on the penitent sick. It is also called *viaticum*.—*Benedictio sacerdotalis* is the nuptial benediction pronounced by the priest on the occasion of a wedding.—*To give the benediction*, is an expression used with regard to the pope, the cardinals, bishops or papal nuncios, when they bestow a blessing, either in the church, or in the street, with the sign of the cross, on the people, or some private person. The pope gives a solemn benediction three times every year; viz. on Maundy-Thursday, on Easter, and on Ascension-day.

Benefit of Clergy was a privilege of clergymen, which originated in a pious regard for the church, whereby the clergy of Roman Catholic countries were either partially or wholly exempted from the jurisdiction of the lay tribunals. It extended, in England, only to the case of felony; and, though it was intended to apply only to clerical felons or clerks, yet, as every one who could read was, by the laws of England, considered to be a clerk, when the rudiments of learning came to be diffused, almost every man in the community became entitled to this privilege. Peers were entitled to it, whether they could read or not; and by the statutes of 3 and 4 William and Mary, c. 9, and 4 and 5 William and Mary, c. 24, it was extended to women. In the earlier ages of the English Roman Catholic church, the clerk, on being convicted of felony, and claiming the benefit of clergy, was handed over to the ecclesiastical tribunal for a new trial or purgation, the pretty uniform result of which was his acquittal. This pretended trial or purgation gave rise to a great deal of abuse and perjury, so that, at length, the secular judges, instead of handing over the culprit to the ecclesiastics for purgation, ordered him to be detained in prison until he should be pardoned by the king. By the statute of 18 Elizabeth, c. 7, persons convicted of felony, and entitled to the benefit of clergy, were to be discharged from prison, being first branded in the thumb, if laymen, it being left to the discretion of the judge to detain them in prison not exceeding one year; and, by the statute of 5 Anne, c. 6, it was enacted, that it should no longer be requisite that a person should be able to read, in order to be entitled to the benefit of clergy, so that, from the passing of this act, a felon was no more liable to be hanged on account of defect of learning. The English statutes formerly made specific provisions, that, in particular cases, the culprit should not be entitled to benefit of clergy, but the statute of 7 and 8 George IV, c. 28, provides, that "benefit of clergy, with respect to persons convicted of felony, shall be abolished."—This privilege has been formally abolished in some of the United States, and allowed only in one or two cases in others, while, in others again, it does not appear to have been known at all. By the act of congress of April 30

1790, it is enacted, "that benefit of clergy shall not be used or allowed, upon conviction of any crime, for which, by any statute of the United States, the punishment is, or shall be, declared to be death."

Benevento; a dukedom in the Neapolitan province Principato Oltra (86 square miles, with 20,348 inhabitants), which, including a city and eight villages, belongs to the papal see. In 1806, Napoleon made a present of it to his minister Talleyrand, who received thence the title of *prince of Benevento*. In 1815, it was restored to the pope. Cattle, grain, wine, oranges and dead game are exported. The public revenue amounts to 6000 dollars. In 1820, the inhabitants revolted. In the most remote times, the state of Benevento belonged to the country of the Samnites. The Lombards, in 571, made it a dukedom, which, long after the extinction of the Lombard kingdom, remained independent. At a later period, it fell into the hands of the Saracens and Normans. The city, however, was not conquered by the latter, because Henry III had given it to the pope, Leo IX. The city of B. (lon. 14° 38′ E., lat. 40° 6′ N.), on a hill between the rivers Sabato and Calore, has 13,900 inhabitants, 8 churches and 19 convents. Since 969, it has been the see of an archbishop. It has several manufactories. Few cities in Italy deserve so much attention, on account of the antiquities which they contain, as B. Almost every wall consists of fragments of altars, sepulchres, columns and entablatures. Among other things, the well-preserved, magnificent triumphal arch of Trajan, built in 114, deserves particular mention. It is now called *porta aurea* (the golden gate), and is a gate of the city. The cathedral is a gloomy building, in the old Gothic style.

Benezet, Anthony; a distinguished philanthropist, born at St. Quentin, in France, January 1713. His parents were opulent, and of noble descent. On the revocation of the edict of Nantes, the family associated themselves with the Huguenots; and, on this account, his father's estate was confiscated, in 1715, who thereupon sought temporary refuge in Holland, and afterwards in England, where Anthony received his education. Of Anthony's juvenile habits and dispositions, but an imperfect account is preserved: it is only known that he became a member of the society of Friends, about the 14th year of his age. In 1731, four years subsequent, he arrived, along with his parents, in Philadelphia. His first employment was that of an instructer of youth at Germantown—a calling which led him to prepare and publish, several elementary books for the use of schools. The leading traits of his character—enthusiastic benevolence and profound piety—were developed at this period. About the year 1750, he was particularly struck with the iniquity of the slave trade, and the cruelty which was exercised by too many of those who purchased and employed the negroes. His voice and his pen were now employed in behalf of this oppressed portion of his fellow-beings. Finding the blacks in Philadelphia numerous, and miserably ignorant, he established an evening school for them, and taught them himself, gratuitously. In this office he was signally successful, and accomplished the additional good of removing prejudices against the intellect of the Negro by exhibiting the proficiency of his pupils. His first attempts to rouse the public feeling, on the subject of Negro slavery, consisted in short essays in almanacs and newspapers, which he was indefatigable in circulating. He soon published a variety of more elaborate and extensive tracts, among which are the following:—An Account of that Part of Africa inhabited by the Negroes, 1762: a Caution and Warning to Great Britain and her Colonies, on the calamitous State of the enslaved Negroes, 1767: an Historical Account of Guinea, its Situation, Produce, and the general Disposition of its Inhabitants; with an Enquiry into the Rise and Progress of the Slave-Trade, its Nature and calamitous Effects. These works were printed at his own expense, and distributed, without charge, wherever he thought they would make an impression. He addressed them directly, with suitable letters, to most of the crowned heads of Europe; and to many of the most illustrious divines and philosophers. The fervor of his style, and the force of his facts, obtained for his philanthropic efforts the notice which he sought for the benefit of his cause. Great personages, on both sides of the Atlantic, corresponded with him, and it is certain that he gave the original impulse to dispositions and measures which induced the abolition of the slave-trade by England and the United States. Clarkson, the British philanthropist, whose labors contributed so largely to the accomplishment of that object, acknowledges, that his understanding was enlightened, and his zeal kindled, by one of B.'s books,

when he was about to treat the question submitted to the senior bachelors of arts in the university of Cambridge, *Anne liceat invitos in servitutem dare?*—B. regarded all mankind as his brethren. About the year 1763, the wrongs inflicted on the aboriginal race of North America excited his susceptible mind, and prompted him to publish a tract, entitled, Some Observations on the Situation, Disposition and Character of the Indian Natives of this Continent. He addressed the British governors and military commanders, on the effect of hostilities against the natives, with characteristic boldness and pathos. His various philanthropical efforts, and his excellent qualities, obtained for him peculiar consideration in the society of Friends.—In 1780, he wrote and published a Short Account of the religious Society of Friends, commonly called Quakers; and, in 1782, a Dissertation on the Plainness and innocent Simplicity of the Christian Religion. About the same time, he issued several tracts against the use of ardent spirits.—The person of B. was small, and his face far from handsome, though benignity might be traced in his animated aspect, even by those who knew not how his whole being and small estate had been devoted. His understanding was originally strong, and much improved by reading and observation. His private habits, morals and pursuits were adapted to endear and dignify his public career. He died at Philadelphia, May 5, 1784, aged 71 years. When it was announced that he was seriously ill, a multitude of his fellow-citizens presented themselves at his dwelling with anxious inquiries; and he conversed lucidly with hundreds after his case was pronounced to be hopeless. There is extant a full and interesting memoir of his life, by Roberts Vaux.

Bengal; an extensive and valuable province of Hindostan, situated between the 21st and 27th degrees of N. lat., and between the 86th and 92d degrees of E. lon., being in length about 400 miles, and in breadth, 300. On the north and east, it is defended by the mountains of Nepaul, Assam and Ava; on the south, by a line of inhospitable and dangerous seacoast, containing but one harbor capable of admitting ships of any considerable size, and even that one guarded by innumerable shoals: on the west, it joins Behr and Oude; and, although rather exposed to invasion on this frontier, it is, nevertheless, better defended by nature than any province of similar extent on the continent of Asia: and should the English be ever driven from all the other parts of India, as long as they shall retain their maritime pre-eminence, they will find in B. a secure asylum against their enemies. Thus guarded from a foreign foe, they are equally safe from any insurrection of the natives, whose mildness of disposition and aversion to war are such, that nothing short of the most atrocious cruelty, or religious persecution, could induce them to draw their swords against their present rulers.—The fertile soil of B. produces every thing requisite for the sustenance of life, and in such abundance, that the crops of one year are sufficient for the consumption of its inhabitants for two. It abounds in fruits and animals of many varieties, and yields every article essential to the comfort, or even luxury, of man. Its ingenious inhabitants are well versed in all the arts of useful industry; and, whilst their delicate and valuable manufactures are exported to every part of the world, they require no assistance from other countries. In short, it has been truly said of this province, that it is the most valuable jewel in the British crown. The revenues of B. consist chiefly of rents paid to the government for land. In the year 1811—12, they amounted, including those of Behar and Orissa, to £2,590,000 sterling, to which may be added nearly £200,000 for the monopolies of salt and opium. The exports of B. are principally rice, cotton and silk, both raw and manufactured; indigo, sugar, saltpetre, ivory, tobacco, and drugs of various kinds: hemp and flax are also to be procured in great abundance. Its imports by sea are gold and silver, copper and bar-iron, woollen cloths of every description, tea, salt, glass and china ware, wines, and other commodities, for the use of its European inhabitants, and a few Arabian and English horses. The native breed of these animals being diminutive, B. is chiefly supplied with them from the north-west provinces, although the government have a stud of their own in Behar, and hold out great encouragement to the zemindars, or landholders, to breed them. The south-east districts produce fine elephants, which are not only in considerable demand, among the opulent natives, for state or riding, but also used for carrying the camp equipage of the army. They vary in price from £50 to £1000: a good one should be from 8 to 10 feet high, and not less than 30 years of age.—B. is intersected by the

Ganges, the Brahmapootra, Dummooda, and several other rivers, so connected by various streams, and the annual inundations, that there is scarcely a town which does not enjoy the benefits of an inland navigation, the boats employed in which are of various sizes and shapes, many of them very handsome, and fitted both for convenience and state. The Delta of the Ganges, the water of which is either salt or brackish, exhibits a labyrinth of uninhabited inland navigation; and in other parts of the country, during the rainy season, some hundred miles of rice fields may be sailed over. These inundations are, however, frequently the cause of much injury, by carrying away the cattle, stores of grain, and habitations of the poor peasants.—The greater proportion of the inhabitants of B. are Hindoos: they are olive-colored, with black hair and eyes. They are small and delicate in their persons, and, although very timid, are litigious; humble to their superiors, and insolent to their inferiors. In youth, they are quick and inquisitive, and would probably be much improved by their intercourse with Europeans, but for the supreme contempt in which they hold other nations, from the notion of their being degraded Hindoos. The indigent wear scarcely any clothing other than a rag round their waist: the rich, when out of doors, dress much like Mohammedans; within the house, they usually resume their old national costume, which consists merely of different pieces of cloth twisted round the body, and having one end tucked into the folds. No small part of the population are Mohammedans; they are the descendants of the Afghan and Mogul conquerors, and Arabian merchants, softened, in the course of time, by an intermixture with Hindoo women, converts, and children, whom they purchased during a scarcity, and educated in their own religion. There are also a number of the descendants of the Portuguese, and of various other nations; and, in spite of the checks held out by the English against colonization, it is probable, that, in the course of another century, their descendants will become so numerous, that it will be necessary to permit them to become cultivators of the soil.—The thermometer, part of the year, in B., is as high as 100 degrees, and the climate is injurious to European constitutions. The year is there divided into three seasons, viz. the hot, the rainy and the cold: the former begins in March, and ends in June; the rains then commence, and continue till October; after which it becomes cool, and the weather continues pleasant for four months.—Of the ancient history of B. we have no authentic information. It is said to have been sometimes an independent kingdom, and at other times tributary to Magadha (Behar). In the institutes of Akbar, a list of 61 Hindoo kings is given; but the number of years assigned to many of the reigns does away its credibility. B. was first invaded and conquered by the Afghan Mohammedans in A. D. 1203, and continued tributary to the emperor of Delhi till the year 1340, when Fakher Addeen, a confidential servant of the governor, murdered his master, and, having seized the reins of government, threw off his allegiance, and took the title of *sultan Sekunder*. From this period till 1538, B. remained an independent kingdom, when it was conquered by Shere Shah, who shortly after annexed it to Delhi. From the descendants of Shere Shah it was conquered by the emperor Akbar, and continued subject to Delhi, or nominally so, till the year 1757, when it fell into the hands of the English, who have gradually changed its form of government, and introduced a code of regulations, founded on the Hindoo, Mohammedan and English laws, by which impartial justice is administered to all the inhabitants, and toleration granted to all religions, owing to which the country improves, and the population increases. The cities of Gour, Tonda, Rajemahil, Dacca and Moorshedabad have each, at various times, been the capital; but, since the conquest of it by the English, Calcutta is become the seat of government.—The government of this presidency is vested in the supreme council, consisting of the governor-general and three counsellors. The former is appointed by the king; the latter are chosen by the court of directors from the civil servants of at least 12 years' standing. For the administration of justice, there is 1 supreme court at Calcutta, 6 courts of appeal and circuit, and 46 inferior magistrates, stationed in as many different towns or districts. The circuit courts are formed by 3 judges, with an assistant and native officers. Criminal cases are tried by the Mohammedan law, in form and name, but so modified as to approach nearly, in fact, to the English; and capital sentences are confirmed by the *nizamat adalat*, or supreme court at Calcutta. The district magistrates or *judges*, as they are often called, have each a registrar and one or more of the junior civil servants,

as assistants, with native lawyers, Mussulman and Hindoo. An appeal lies from their sentence, in almost all cases, to the provincial court. The average size of a district in this presidency is about 6000 square miles. In civil causes, the respective codes of the Mohammedans and Hindoos are generally followed. In 1793, regular advocates, educated at the Mohammedan and Hindoo colleges at Calcutta and Benares, were appointed to plead in these courts. Their fees are regulated by law. Written pleadings are allowed, and written evidence must sometimes be admitted, on account of the disinclination of the Asiatics to have women appear in public.—Domestic slavery is permitted by law, but the slaves are kindly treated. The number of these slaves it has been thought unsafe to ascertain. Their marriage is never impeded; but few children are sold, as it is reputed discreditable to sell them, and their manumission is considered an act of piety. Parents themselves, who are reduced by famine, &c., are usually the persons who supply the slave-market. Inability to provide for their children, not the desire of gain, seems to be the real motive of this horrid custom. Slaves, like freemen, are under the protection of law.—The Mohammedans may be estimated at one seventh of the whole population. Various estimates of the population have been made at different times, but rather from conjecture than from well-authenticated documents. The sum total for Bengal appears to be 25,306,000, and there are strong reasons for believing this number to be short of the real amount. The number of native troops, called *seapoys* (*sipahis*) or *soldiers*, was, in 1811, 207.579, besides 5875 invalids. The non-commissioned officers are natives, those who have commissions are Europeans, and the number of the latter in this presidency, at the time above mentioned, was 2024. About 22,000 of the king's troops are also stationed in India, and occasion an expense to the company of about £160,000 per annum.—Before concluding this article, it may be proper to observe, that the Dutch possess the town of Chinsura, the French, Chindunagore, and the Danes, Serampore, with a small territory adjoining each. These towns are situated on the Hoogly river, from 15 to 25 miles above Calcutta.

Bengel, John Albanus, a famous German theologian, born in 1687, at Winneden, in Würtemburg, studied at Stuttgart and Tübingen, and, in 1713, became a preacher and professor at Denkendorf. His chief studies were the fathers of the church and the New Testament. He died, after having been appointed to several offices, in 1752. B. was the first Lutheran theologian who applied to the criticism of the New Testament a comprehensive spirit, which embraced the subject in its whole extent, and manifested the power of patient investigation which the study required. His suggestions for the correction of the text are particularly valuable. In some of his observations, his judgment has been led astray by his inclination to mysticism. His explanation of the Apocalypse has given him, with some persons, the fame of an inspired prophet; with most people, that of an enthusiast. He was esteemed for his private virtues.

Benger, Miss Elizabeth Ogilvy, was born in 1778, at Portsmouth, in England. She was the daughter of a purser in the navy, who died in 1796, and left his wife and daughter with a slender provision. In 1802, she removed with her mother to London. She soon attracted attention by her verses, and Miss Sarah Wesley early became her patron. She composed some theatrical pieces, which did not meet with success. Mr. Bowyer, the engraver, employed her to write a poem on the Slave-Trade, which, with two others, was published in quarto, with engravings, in 1812. She successively published memoirs of Mrs. Elizabeth Hamilton, memoirs of John Tobin, the dramatist, and notices of Klopstock and his friends, prefixed to a translation of their letters from the German. These writings were followed by the history of Anne Boleyn, which was translated into French, and the memoirs of Elizabeth, queen of Bohemia. She undertook to compile memoirs of Henry IV of France, but the progress of this work was prevented by her death, January 9, 1827. By all who knew her, among whom the editor has the pleasure of counting himself, she was esteemed as a kind, faithful and candid friend, a most affectionate daughter, beloved by all ages and both sexes on account of her fine talents, benevolent disposition, and pure heart.

Benguela; a country in Africa, bounded N. by Angola, E. by the country of Jaga Cassangi, S. by Mataman, and W. by the sea. Cape Negro forms its S. W. extremity, whence mountains run northward, in which are contained the springs of many rivers. The productions are similar to those of Angola and Congo;

one of the principal is manioc; divers sorts of palms are found; dates grow in great abundance; the vines naturally form alleys and arbors; cassia and tamarinds also flourish; and, from the humidity of the soil, there are two fruit seasons in the year. The air of the country is exceedingly unwholesome. The chief towns are Old Benguela, St. Philip or New Benguela, Man-kikondo, and Kaschil. Lon. 30° to 35° E.; lat. 13° 30′ to 15° 30′ S.

Benin; a kingdom in the west of Africa, the limits of which are not well ascertained; but the name may be applied to that part of the coast extending from the river Lagos, the eastern limit of the Slave coast, to the Formosa, about 180 miles. The interior limit is unknown. The whole coast presents a succession of estuaries, some of them very broad, and their origin never explored. Between the Lagos and Cross rivers, the number of rivers flowing into the gulf of Guinea is said to exceed 20, some of them very broad and deep. This tract, called the *Delta of Benin*, is about 260 miles in extent. The aspect of the coast, and the great body of water flowing into the gulf, have led to the supposition that the waters of the Niger here find an entrance into the ocean. This region has been but little explored, and is little known. The country is low and flat, the soil on the banks of the rivers very fertile, but the climate unhealthy. The inhabitants are of a mild disposition; polygamy is practised; almost all labor is performed by females; the government is despotic. Chief towns, Benin, Agatton, Bododa, Ozebo and Meiberg, which are situated on the Formosa, the principal river.

Benin; capital of the above kingdom, on the Formosa; lon. 5° 6′ E; lat. 6° 12′ N. This town, according to some, is 18 miles in circuit, the largest street 3 miles long, and others nearly equal; according to other statements, it is only 4 miles in circuit. The streets are filled with various articles of merchandise, and present the appearance of a crowded market, though always clean. The houses are large, and, though their walls are of clay, the reeds and leaves, with which they are covered, give them a pleasing appearance. The king's palace consists of a great number of square enclosures.

Benjowsky, Maurice Augustus, count of, a man of indefatigable activity and extraordinary adventures, born in 1741, at Werbowa, in Hungary, where his father was a general in the Austrian army, entered the same service himself, and acted as lieutenant in the seven years' war till 1758. He afterwards studied navigation in Hamburg, Amsterdam and Plymouth. He then went to Poland, joined the confederacy against the Russians, and became colonel, commander of cavalry and quarter-master general. B. was taken prisoner by the Russians in 1769, and sent, the next year, to Kamtschatka. On the voyage thither, he saved the ship that carried him, when in peril from a storm. This circumstance procured him a favorable reception from governor Niloff, whose children he instructed in the German and French languages. Aphanasia, Niloff's younger daughter, fell in love with him. B. prevailed on her father to set him at liberty and to betroth her to him. He had, however, already conceived the project of escaping from Kamtschatka, together with several other conspirators. Aphanasia discovered his design, but did not forsake him. On the contrary, she warned him when it was resolved to secure his person. Accompanied by Aphanasia, who remained invariably faithful to him, though she had now learned that he was married, B., together with 96 other persons, left Kamtschatka in May, 1771, and sailed to Formosa; from thence to Macao, where many of his companions died, and among them the faithful Aphanasia. At length he arrived in France, where he was commissioned to found a colony in Madagascar; an undertaking of which he foresaw the difficulties, especially as the success depended on the assistance of the officers in the Isle of France, to whom he was referred for the greater part of his equipment. In June, 1774, B. arrived in Madagascar, established a settlement at Foul point, and gained the good will of several tribes, who, in 1776, appointed him their *ampansacabe*, or king; on which occasion the women also swore allegiance to his wife. Afterwards, he went to Europe, with the design of obtaining for the nation a powerful ally and some commercial advantages. But, on his arrival in France, he was compelled, by the persecutions of the French ministry, to enter into the Austrian service, in which he commanded against the Prussians in the battle of Habelschwerdt, 1778. In 1783, he made an attempt in England to fit out an expedition to Madagascar. He received assistance from private persons in London, and particularly from a commercial house at Baltimore, in America. In

October, 1784, he set out, leaving his wife in America, and landed in Madagascar, 1785. Having there commenced hostilities against the French, the authorities in the Isle of France sent troops against him. In an action which took place May 23, 1786, he was mortally wounded in the breast by a ball. B. wrote an account of the events of his life in French. William Nicholson has published an English translation of it, made from the manuscript. His widow died at her estate Vieska, near Betzko, Dec. 4, 1825. Benjowsky's only son is said to have been devoured by rats in Madagascar.

Ben-Lawers; a mountain of Scotland, in the county of Perth, 4015 feet above the level of the sea; 11 miles S. Georgetown.

Ben-Lodi; a mountain of Scotland, in Perthshire, 3009 feet above the sea; 4 miles S. W. Callander.

Ben-Lomond; a mountain of Scotland, in Stirlingshire, 3240 feet above the sea; 26 miles W. Stirling.

Ben-Macduie; a mountain of Scotland, on the western confines of Aberdeenshire, 4300 feet high. It is the second highest mountain in Great Britain.

Ben-More; a mountain of Scotland, in the island of Mull, 3097 feet above the evel of the sea.

Ben-More; a mountain of Scotland, in Perthshire, 3903 feet above the level of the sea; 20 miles W. Crief.

Ben-Nevis; a mountain of Scotland, in the county of Dumbarton, the highest in the island of Great Britain. It rises 4370 feet above the level of the sea. A great portion of this mountain consists of porphyry of different shades, and beautiful red granite. It also contains a vein of lead ore, richly impregnated with silver. The summit is generally covered with snow.

Benningsen, Levin Augustus, baron of, Russian commander-in-chief, born at Banteln, in Hanover, 1745, early entered into the Russian service, and distinguished himself by great gallantry in the war against Poland, under the empress Catharine II. He acted a chief part in the conspiracy of the palace against the emperor Paul I. In 1806, he was appointed to command the Russian army which hastened to the assistance of the Prussians; but, before his arrival, the Prussians were defeated at Jena. He afterwards fought the murderous battle of Eylau (next to that of Mojaisk, perhaps, the most bloody in military history), and the battle of Friedland. After the peace of Tilsit, he retired to his estates. In 1813, he led a Russian army, called the *army of Poland*, into Saxony, took part in the battle of Leipsic, and blockaded Hamburg. After commanding the army in the south of Russia, he finally settled in his native country, and died Oct. 3, 1826. He is the author of Thoughts on certain Points requisite for an Officer of Light Cavalry to be acquainted with (Riga, 1794; Wilna, 1805).

Bennington; a post-town in a county of the same name, in Vermont, watered by a branch of the Hoosack; 37 miles N. E. Albany, 68 S. W. Windsor, 115 S. by W. Montpelier, 132 W. N. W. Boston. Lon. 73° W.; lat. 42° 42′ N. Population in 1810, 2524; in 1820, 2485. It borders on New York, is situated in a good farming country, and is a place of considerable trade and manufactures. The courts for the county are held alternately at Bennington and Manchester. On mount Anthony, in this town, there is a cave containing many beautiful petrifactions.—Two famous battles were fought here, on the 16th of August, 1777, in which general Stark, at the head of 1600 American militia, gained a distinguished victory over the British.

Benno, St., of the family of the counts of Woldenberg, born at Hildesheim, in 1010, became (1028) a Benedictine monk, in the convent of St. Michael there. Henry IV (1066) made him bishop of Misnia, and favored him by repeated donations of estates for his church. Nevertheless, B. took a secret part in the conspiracy of the Saxon nobles against the emperor, for which reason Henry led him away prisoner, when he passed Misnia, in 1075, after the battle on the Unstrut. He was afterwards set at liberty, but several times proved faithless to the emperor. He died 1107. His bones began by degrees to work miracles; and pope Adrian VI, after many entreaties from the Saxons, as well as from the emperor Charles V, and having received large sums of money, placed him among the saints, 1523. It was thought that this canonization would tend to the promotion of the Catholic faith in Saxony. At present, the bones of St. Benno are in the city of Munich, which has chosen him for its patron.

Benserade, Isaac de, a poet at the court of Louis XIV, born, 1612, at Lyons-la-Forêt, a small town in Normandy, wrote for the stage, and composed a great number of ingenious verses for the king and many distinguished persons at court. In the first half of the reign of Louis XIV,

the court, and the followers of the court, patronised songs of gallantry, rondeaux, triolets, madrigals and sonnets, containing sallies of wit, conceits and effusions of gallantry, in the affected style then prevalent. No one succeeded so well in this art as B., who was therefore called, by way of eminence, *le poète de la cour*. He received many pensions for his performances, and lived at great expense. Wearied, at last, with the life which he led at court, he retired to his country-seat, Gentilly, and died 1691.

Bensley, Thomas; a printer in Fleet street, London. He and Bulmer are among the first typographical artists in England. He distinguished himself first by the edition which he printed of the English translation of Lavater's Physiognomy, London, 1789, 5 vols., 4to. The most beautiful productions of his press are Macklin's splendid edition of the English translation of the Bible (1800—15, 7 vols., folio), and that of Hume's History of England (1806, 10 vols., folio), both adorned with excellent copper-plates. Among his impressions of a smaller size, the editions of Shakspeare (1803, 7 vols.), and Hume (1803, 10 vols.), with masterly engravings on wood, are distinguished. He has also furnished several well-executed impressions on parchment, and first used the printing-press invented by Koenig and Bauer, for Elliotson's English translation of Blumenbach's Physiology (London, 1818).

Bentham, Jeremy, an English lawyer, born in 1749, never appeared at the bar, nor has he published his chief works himself. They have been arranged and translated into French by his friend M. Dumont, and printed partly in Paris and partly in London. Among them are *Traités de Législation, civile et pénale*, &c. (Paris, 1802, 3 vols.), and *Théorie des Peines et des Récompenses* (London, 1801, 2 vols.). B. is a friend of reform in parliament, and of a thorough correction of civil and criminal legislation. His Fragments on Government, in opposition to Blackstone, appeared anonymously in 1776, and with his name, London, 1823. In France, his literary labors found a better reception than in England or Germany. A small pamphlet on the liberty of the press (London, 1821) was addressed by him to the Spanish cortes, during their discussion of this subject; and, in another (Three Tracts relative to the Spanish and Portuguese Affairs, London, 1821), he refuted the idea of the necessity of a house of peers in Spain, as well as Montesquieu's proposition, that judicial forms are the defence of innocence. His latest work is the Art of Packing (London, 1821); that is, of arranging juries so as to obtain any verdict desired. His previous work, *Essai sur la Tactique des Assemblées législatives*, edited, from the author's papers, by Etienne Dumont (Geneva, 1815), and translated into German, contains many useful observations. His Introduction to the Principles of Morals and Legislation (London, 1823, 2 vols.) treats of the principal objects of government in a profound and comprehensive manner. Zanobelli has translated Bentham's Theory of Legal Evidence into Italian (Bergamo, 1824, 2 vols.). Among the earlier works of B. was his Defence of Usury, showing the Impolicy of the present legal Restraints on the Terms of pecuniary Bargains (1787).

Bentivoglio, Cornelio; cardinal and poet, born at Ferrara, 1668, of a family that held the highest offices in the former republic of Bologna. He early distinguished himself by his progress in the fine arts, literature, philosophy, theology and jurisprudence. While at Ferrara, he patronised the literary institutions there. Pope Clement XI made him his domestic prelate and secretary to the apostolic chamber, and sent him, in 1712, as nuncio to Paris, where, during the last years of the reign of Louis XIV, he acted an important part in the affair of the bull Unigenitus. The duke of Orleans, regent after the death of Louis, was not favorably disposed towards him; the pope, therefore, transferred him to Ferrara, and, in 1719, bestowed on him the hat of a cardinal, and employed him at first in Rome, near his own person, then as legate *a latere* in Romagna, &c. B. died in Rome, 1732. Poetry had occupied the leisure hours of the learned cardinal. Some sonnets composed by him are to be found in Gobbi's collection, vol. 3, and in other collections of his time. Under the name of *Selvaggio Porpora*, he translated the *Thebais* of Statius into Italian. He delivered several addresses before societies for the promotion of the fine arts. His discourse in defence of the utility and moral influence of painting, sculpture and architecture, delivered in the academy of design, at Rome, 1707, was reprinted by the academy of the Arcadians, in the 2d vol. of the *Prose degli Arcadi*.

Bentivoglio, Guy or Guido, celebrated as a cardinal and a historian, was born at Ferrara, in 1579. He studied at Padua with great reputation, and afterwards, fix-

ing his residence at Rome, acquired general esteem by his prudence and integrity. He was nuncio in Flanders from 1607 to 1616, and afterwards in France till 1621. His character stood so high, that, on the death of Urban VIII, in 1644, he was generally thought to be the most likely person to succeed him; but, on entering the conclave, in the hottest and most unhealthy season of the year, he was seized with a fever, of which he died, aged 65 years. He had lived in a magnificent style, and was much embarrassed at the time of his death—a circumstance attributed to his canvass for the papacy. Cardinal B. was an able politician, and his historical memoirs are such as we should expect from such a man. The most valuable of these are his History of the Civil Wars in Flanders, written in Italian, and first published at Cologne, 1630, a translation of which, by Henry earl of Monmouth, appeared in 1654 (London, folio); an Account of Flanders, during his legation, also translated by the earl of Monmouth (folio, 1652); his own Memoirs; and a collection of letters, which are reckoned among the best specimens of epistolary writing in the Italian language (an edition of which was published at Cambridge, in 1727). All these, except the Memoirs, have been published together at Paris, 1645—1648, folio, and at Venice, 1668, 4to.

Bentley, Richard, a celebrated English divine and classical scholar, distinguished as a polemical writer, in the latter part of the 17th century, was born in 1662. His father is said to have been a blacksmith. To his mother, who was a woman of strong natural abilities, he was indebted for the first rudiments of his education. At the age of 14, he entered St. John's college, Cambridge. In 1682, he left the university, and became usher of a school at Spalding; and this situation he relinquished, in the following year, for that of tutor to the son of doctor Stillingfleet, dean of St. Paul's. He accompanied his pupil to Oxford, where he availed himself of the literary treasures of the Bodleian library, in the prosecution of his studies. In 1684, he took the degree of A. M. at Cambridge, and, in 1689, obtained the same honor at the sister university. His first published work was a Latin epistle to doctor John Mill, in an edition of the Chronicle of John Malela, which appeared in 1691. It contained observations on the writings of that Greek historian, and displayed so much profound learning and critical acumen, as excited the sanguine anticipations of classical scholars from the future labors of the author. Doctor Stillingfleet, having been raised to the bishopric of Worcester, made B. his chaplain, and, in 1692, collated him to a prebend in his cathedral. The recommendation of his patron and of bishop Lloyd procured him the honor of being chosen the first preacher of the lecture instituted by the celebrated Robert Boyle for the defence of Christianity. The discourses against atheism, which he delivered on this occasion, were published in 1694: they have since been often reprinted, and translated into several foreign languages. In 1693, he was appointed keeper of the royal library at St. James's —a circumstance which incidentally led to his famous controversy with the hon. Charles Boyle, afterwards earl of Orrery, relative to the genuineness of the Greek Epistles of Phalaris, an edition of which was published by the latter, then a student at Christ-church, Oxford. In this dispute, Bentley was completely victorious, though opposed by the greatest wits and critics of the age, including Pope, Swift, Garth, Atterbury, Aldrich, Dodwell, and Conyers Middleton, who advocated the opinion of Boyle with a degree of warmth and illiberality which appears very extraordinary. But the motives of B.'s assailants were various. Swift, in his Battle of the Books, took up the cudgels against him in defence of his friend sir William Temple; doctor Garth attacked him probably from mere wantonness, in the well-known couplet in his Dispensary—

> So diamonds owe a lustre to their foil,
> And to a *Bentley* 'tis we owe a *Boyle*.

Some were actuated by personal considerations, among whom was Conyers Middleton, whose persevering hostility to B., during a long series of years, seems to have originated from the latter having applied to the former, when a young student in the university, the contemptuous epithet of *fiddling* Conyers, because he played on the violin. It does not appear who was the author of a punning caricature, which was produced on this occasion, representing B. about to be thrust into the *brazen bull* of Phalaris, and exclaiming, "I had rather be *roasted* than *Boyled*." In 1699, B., who had three years before been created D. D., published his Dissertation on the Epistles of Phalaris, in which he satisfactorily proved that they were not the compositions of the tyrant of Agrigentum, who lived more than five centuries before the Christian era, but

were written by some sophist, under the borrowed name of *Phalaris*, in the declining age of Greek literature. Soon after this publication, doctor B. was presented by the crown to the mastership of Trinity college, Cambridge, worth nearly £1000 a year. He now resigned the prebend of Worcester, and, in 1701, was collated to the archdeaconry of Ely. His conduct as head of the college gave rise to accusations against him from the vice-master and some of the fellows, who, among various offences, charged him with embezzling the college money. The contest was much protracted, and occasioned a lawsuit, which was decided in the doctor's favor, about twenty years after. In 1711, he published an edition of Horace, at Cambridge, in 4to., which was reprinted at Amsterdam; and, in 1713, appeared his remarks on Collins's Discourse on Free-thinking, under the form of a Letter to F. H. [Francis Hare] D. D., by Phileleutherus Lipsiensis. He was appointed regius professor of divinity in 1716, and, in the same year, issued proposals for a new edition of the Greek Testament—an undertaking for which he was admirably qualified, but which he was prevented from executing, in consequence of the animadversions of his determined adversary, Middleton. In 1717, George I, visiting the university, nominated by mandate, as is usual on such occasions, several persons for the doctor's degree in divinity. It was the duty of B., as professor, to perform the ceremony called *creation;* previous to which he made a demand of four guineas from each candidate beyond the usual fees, absolutely refusing to create any doctor without payment. Some submitted; but others, among whom was Middleton, withstood the demand, and commenced a prosecution against the professor before the vice-chancellor, who, deciding in favor of the complainants, first suspended B., and subsequently degraded him from his honors, rights and offices in the university. These proceedings were, after considerable litigation, annulled by the court of king's bench; and the doctor, in 1728, was restored to all his former honors and emoluments. In 1726, he published an edition of Terence and Phædrus; and his notes on the comedies of the former involved him in a dispute with bishop Hare, on the metres of Terence, which provoked the sarcastic observation of sir Isaac Newton, that "two dignified clergymen, instead of minding their duty, had fallen out about a play-book." The last work of doctor B. was an edition of Milton's Paradise Lost, with conjectural emendations, which appeared in 1732. This added nothing to his reputation, and may, in one word, be characterized a failure. He died at the master's lodge at Trinity, July 14, 1742, and was interred in the college chapel. As a scholar and a critic, B. was very distinguished. The best informed of his opponents respected his talents, while they were loading him with classical abuse, which he did not fail to return with interest. Now that the prejudices, excited apparently by his personal conduct, have subsided, his preëminence in that species of literature which he cultivated, is universally acknowledged. The celebrated German philologist J. A. Wolf wrote an excellent biography of B. in the *Analecta*, (vol. 1, Berlin.)

Benzel-Sternau, Charles Christian, count, born at Mentz, 1750, was, in 1812, president of the ministry for the department of the interior in the former grand-duchy of Frankfort, and now lives in the neighborhood of Hanau. He is one of the most humorous writers of our time, and, in the character of his writings, resembles J. Paul Richter. His fame was established by the Golden Calf (a biography, 1802—1804, 4 vols. in the first edition). B. has written much, and all his productions display wit, richness of imagery, and nice observation of character.

Benzenberg, John Frederic, born, May 5, 1777, at Schöller, a village between Elberfeld and Düsseldorf, studied theology in Marburg, and, in Göttingen, mathematics and natural philosophy. He rendered much service to the latter science, by his observations on the fall of bodies, and the motion of the earth, which he began by experiments in the steeple of the church of St. Michael, in Hamburg, and continued in the shaft of a mine, in the county of Mark, having a depth of 266 feet. He was appointed, in 1805, professor of astronomy and natural philosophy, by the then elector of Bavaria, in Düsseldorf. At a later period, he has written much in favor of the Prussian government; but the influence of his political pieces has not been so great as that of his scientific observations abovementioned. B. lives now retired, near Crefeld, in the neighborhood of the Rhine.

Benzoic Acid is obtained by the application of a moderate heat to the balsam of Peru: it rises in vapor, and condenses in slender prisms, which are white and brilliant. It has a peculiar aromatic odor. When heated on burning fuel, it inflames

and burns with a clear yellow light. It unites with alkalies and earths, forming salts called *benzoates*, which are unimportant, except the benzoate of iron, which, from its insolubility, affords a convenient means of separating iron from its solutions, so as to ascertain its quantity, and also of obtaining it free from manganese, which forms with the acid a soluble salt. (See *Benzoin.*)

Benzoin is a solid, fragile, vegetable substance, of a reddish-brown color. In commerce, two varieties are distinguished, viz. the common and the amygdaloidal; the latter containing whitish tears, of an almond shape, diffused through its substance. It is imported from Sumatra, Siam and Java, and is found, also, in South America. Benzoin is obtained from the tree called *styrax benzoin*, and perhaps from some others. On making incisions into the bark, it flows out in the form of a balsamic juice, having a pungent taste, and an agreeable odor. The pure balsam consists of two principal substances, viz. a resin, and a peculiar acid termed *benzoic* (q. v.), which is procured from the mass by sublimation. It is soluble in water. This acid is found, also, as a constituent principle in storax and the balsams of Tolu and Peru: it exists in the urine of cows, camels, and even of young children. It is sometimes found in a crystalline form on the pods of the vanilla. Benzoin is not soluble in water, but is readily dissolved in alcohol, by the aid of a gentle heat. The tincture thus made is used in pharmacy. A small quantity of this tincture, dropped into water, forms a white, milky fluid, which is used in France as a cosmetic, under the name of *lait virginal.* The gum is a principal ingredient of the common court plaster. The acid, as well as the gum, is employed in medicine: they are stimulating, and act more particularly upon the pulmonary system; whence they are used in asthma and chronic catarrh.

Béranger, Pierre, Jean de; a lyric poet, of that class which, in modern literature, is almost peculiar to the French, called *chansonnier;* born Aug. 19, 1780; educated by his grandfather, a poor tailor; was destined for the printing business, when his talents for poetry excited attention. Lucien Bonaparte became the patron of the amiable poet, who gave zest to his social songs by allusions to the politics of the day. The imperial censors spared him; the royal suppressed his songs, which, for this reason, were read and sung with the greater eagerness. In 1822, he was condemned to imprisonment for 13 months, and deprived of a small office in the royal university. This process increased his reputation. The last edition of the *Chansons de P. J. de Béranger*, (1 vol., Paris, 1829, 24mo.,) contains the happiest specimens of wit, humor, gayety, satire, and flashes of sublime poetry, which place him by the side of the most distinguished *chansonniers* of France—Blot, Collé and Panard. B. ascends with singular ease from the lower sphere of poetry to a high and noble enthusiasm, and the rapidity of the transition produces a striking effect. We would refer the reader to his beautiful verses entitled *Mon Ame.* He was never a flatterer of Napoleon when money or titles were to be gained by flattery, and has never reviled him since reviling has been a means of rising. He is a truly national poet, and Benjamin Constant has said of him, *Béranger fait des odes sublimes, quand il ne croit faire que de simples chansons* (Béranger makes sublime odes, when he thinks he is making simple songs). Dec. 11, 1828, B. was sentenced, by the court of correctional police, to pay 10,000 francs (about 1800 dollars), and to undergo nine months' imprisonment, for having attacked the dignity of the church and of the king in his poems the Guardian Angel, Coronation of Charles the Simple, and Gerontocracy. His songs are at once a storehouse of gayety and satire, and a record of the history of his time; and happy is that nation which can boast of so excellent and national a poet. He often sings of wine, and we recollect no other great modern, poet who has written a series of songs on this subject, except Göthe, in his *Buch des Schenken*, one of the 12 books of the *Westöstlicher Divan.* The difference between them is striking. Göthe mixes philosophical reflections and praises of the liquor with a boldness which borders on temerity, while B. is gay almost to extravagance. We doubt whether B.'s poems in translation would ever give a fair idea of the original, because their beauty consists, in a great measure, in the delicacy and pungency of the expression, which could hardly be transferred to another language.

Berbers; the name of a people spread over nearly the whole of Northern Africa. From their name the appellation of *Barbary* is derived. (See *Barbary States.*) They are considered the most ancient inhabitants of that country. Their different tribes are scattered over the whole

space intervening between the shores of the Atlantic and the confines of Egypt; but the different branches of mount Atlas are their principal abode; while to the south they are bounded by the Negro states on the edge of the great Sahara, or Desert. For most of what we know of them, we are indebted to Leo Africanus and the Arabian writers, whose statements are corroborated by Hornemann (q. v.) and captain Lyon, who have visited them in our own days. Much information concerning them is yet wanted. Where they live by themselves, and are not spread among the Arabians and other people of the Barbary states, they manifest very little cultivation,—warlike nomades, without written laws,—and exhibit the chief traits which characterize all the African nations. They are extremely abstinent. Their language is a matter of much curiosity for the philologist. It has many points of resemblance with the Teutonic languages. (See Adelung's *Mithridates*, vol. 3., 5th part, page 42 et seq., and the article, in volume 2, new series, p. 438 et seq. of the *Transactions of the American Philosophical Society*.) We know, from trustworthy accounts, that Mr. Hodgson, attached to the American consulate-general at Algiers, has sent to an eminent scholar of the U. States communications concerning the Berber language, which will add much to the knowledge already possessed of that dialect. (For further information respecting the Berbers, see Lyon's *Travels in Northern Africa*, Langlé's translation of *Hornemann's Travels in Africa*, and almost all the works which treat of the north of Africa.) It appears from the Berber language, that the first inhabitants of the Canary islands were of the Berber race.

Berbice; a district of Guiana, formerly belonging to the Dutch, but ceded to Great Britain in 1814; watered by the river Berbice, the Canje, and others. It extends from Abarry creek, on the west, to Courantine river on the east, along the coast, about 150 miles. The towns are New Amsterdam, the capital, and Fort Nassau. The productions are sugar, rum, cotton, coffee, cocoa and tobacco. The coast is marshy and the air damp. Population, in 1815, 29,959; of whom 550 were whites, 240 people of color, and 25,169 slaves.

Berchtesgaden; a market-town in the Salzburg Alps, in the kingdom of Bavaria, with 3000 inhabitants; famous for the salt mines in its neighborhood, the salt-work Frauenreith, and the aqueducts which conduct the salt water to the works called *Reichenhall*. The rock-salt does not appear here in large, solid masses, but in small pieces mixed with clay. Fresh water is let into the mines, and, having been saturated with salt, is carried into large reservoirs, from which, at the works of Frauenreith, 130,000 cwt. of salt are annually obtained. A large part of the water is conducted to Reichenhall. At this place a large salt-spring was discovered in 1613, and, on account of a deficiency in wood required in the preparation of the salt, the water was conveyed, by means of an aqueduct, to Traunstein, 20 miles distant. Another aqueduct, 35 miles long, from Reichenhall to Rosenheim, was completed in 1809, and, in 1817, these were again brought into communication with B. in a most admirable way. The first machine, which raises the brine coming from B. 50 feet high, is near this place. From hence, it runs in pipes 3500 feet, with a fall of 17 feet only, into the second reservoir. A hydraulic machine, invented by von Reichenbach, here lifts the salt water 311 feet high, in iron pipes 934 feet long. The water then runs in pipes 7480 feet, with 37 feet fall, to a valley, over which it is led in iron pipes, 1225 feet long, and, after running 12,073 feet farther, it falls into the third reservoir. Here is a second hydraulic machine, which lifts the water to a perpendicular height of 1218 feet, in pipes 3506 feet long; and hence it flows, in pipes 73,000 feet long, to Reichenhall. The pipes running from B. to Reichenhall amount to 104,140 feet. From Reichenhall to Siegsdorf there is but one aqueduct for the salt water intended for Traunstein and Rosenheim, 94,800 feet long. From Siegsdorf to Traunstein the brine flows without an aqueduct. In Traunstein, 140,000 cwt. are annually produced. The other part of the brine flows in pipes, 78,000 feet long, to Rosenheim, which produces annually 180,000 cwt. of salt. The water required to work the numerous machines is brought from places many of which are 16—19,000 feet distant.

Berchtold, Leopold, count, born in 1758, devoted his life to the relief of the wretched. He spent 13 years in travelling through Europe, and 4 in travelling through Asia and Africa, to assuage human misery. The results of his experience are contained in his Essay to direct and extend the Inquiries of patriotic Travellers (London, 1789, 2 vols.) He

wrote several pamphlets on the means of reforming the police, which he caused to be printed in different European countries, at his own expense, and to be distributed gratis. His prize-questions gave rise to many pamphlets and treatises on the means of saving the drowned and the seemingly dead. He offered a prize of 1000 florins for the best treatise on beneficent institutions, and was himself the founder of many. From 1795 to 97, he travelled through Asiatic and European Turkey, chiefly for the purpose of counteracting the ravages of the plague. At a later period, he was engaged in making vaccination more extensively known. During the famine that raged in the Riesengebirge (Giant mountains), from 1805 to 1806, he procured corn and other provisions from distant regions. He fitted up the palace Buchlowitz on his estate Buchlau in Moravia, as an hospital for the sick and wounded Austrian soldiers. Here this patriot and philanthropist was carried off by a contagious nervous fever, July 26, 1809.

Bercy; a village on the Seine, at its confluence with the Marne, in the neighborhood of Paris. The Parisian wine-merchants have here their stores of wine, wine-vinegar, distilled liquors, &c.; so that the intercourse between B. and the capital is extremely active. It is increased also by several important tanneries, sugar-refineries and paper-mills. A large palace, Le grand Bercy, was built by Levau at the close of the 17th century. The park which belongs to it, containing 900 acres, was planted by Lenôtre. M. de Calonne was for some time in possession of it. The present possessor is M. de Nicolai.

Berengarius, or Berenger, of Tours, a teacher in the philosophical school in that city, and, in 1040, archdeacon of Angers, is renowned for his philosophical acuteness as one of the scholastic writers, and also for the boldness with which, in 1050, he declared himself against the doctrine of transubstantiation, and for his consequent persecutions. He was several times compelled to recant, but always returned to the same opinion, that the bread in the Lord's supper is merely a symbol of the body of Christ, in which he agreed with the Scotchman John Erigena (called *Scotus*). The Catholics ranked him among the most dangerous heretics. He was treated with forbearance by Gregory VII, but the scholastics belonging to the party of the great Lanfranc, archbishop of Canterbury, were irritated against him to such a degree, that he retired to the isle of St. Cosmas, in the neighborhood of Tours, in the year 1080, where he closed his life at a great age, in pious exercises (1088). On the history of this controversy, which has been very much misrepresented by the Benedictines, new light has been shed by Lessing, in his *Berengar* (1770), and by Stäudlin, who has likewise published the work of B. against Lanfranc. This B. must not be confounded with Peter Berenger of Poitiers, who wrote a defence of his instructer Abelard.

Berenhorst, Francis Leopold von; one of the first of the writers by whom the military art has been founded on clear and certain principles. He was a natural son of prince Leopold of Dessau, and was born in 1733. In 1760, he became the adjutant of Frederic II. After the seven years' war, he lived at Dessau. He died in 1814.

Berenice (*Greek*, a bringer of victory). 1. This was the name of the wife of Mithridates the Great, king of Pontus. Her husband, when vanquished by Lucullus, caused her to be put to death (about the year 71 B. C.), lest she should fall into the hands of his enemies. Monima, his other wife, and his two sisters, Roxana and Statira, experienced the same fate.—2. The wife of Herod, brother to the great Agrippa, her father, at whose request Herod was made king of Chalcis, by the emperor Claudius, but soon died. In spite of her dissolute life, she insinuated herself into the favor of the emperor Vespasian and his son Titus. The latter was, at one time, on the point of marrying her.—3. The wife of Ptolemy Euergetes, who loved her husband with rare tenderness, and, when he went to war in Syria, made a vow to devote her beautiful hair to the gods, if he returned safe. Upon his return, B. performed her vow in the temple of Venus. Soon after, the hair was missed, and the astronomer Conon of Samos declared that the gods had transferred it to the skies as a constellation. From this circumstance, the seven stars near the tail of the Lion are called *coma Berenices* (the hair of Berenice).

Beresford, William, baron, duke of Elvas and marquis of Campo Mayor, for the ability and courage which he displayed in the war of Portugal against France, is ranked among the distinguished generals of Great Britain. He organized the Portuguese army, and also the militia of the country, in so excellent a manner, that they could vie with the

best soldiers of the combined armies in the wars of the peninsula. In 1810, B. gained a victory over Soult, at Albufera. In 1812, he commanded under Wellington, and took an important part in the victories at Vittoria, Bayonne and Toulouse. He made his entrance into Bordeaux, March 13, 1814, with the duke of Angoulême. May 6, he was raised to the rank of baron by the king of England, and, soon after, sent to Brazil, whence he returned to England in 1815. The prince regent of Portugal made him generalissimo of the Portuguese armies. He had scarcely arrived at Lisbon, when he was sent, by the English government, on an important mission to Rio Janeiro. The rigor with which he punished a conspiracy of general Freyre against the British army and the regency, in Lisbon (1817), rendered him odious to the Portuguese military. He was, therefore, dismissed by the cortes in 1820. He then went again to Brazil, afterwards to England, and, in Dec., 1826, appeared anew in Lisbon, at the head of the English forces sent to aid in quelling the rebellion.

Berezina; a river in the Russian province of Minsk, rendered famous by the passage of the French army under Napoleon, Nov. 26 and 27, 1812. Admiral Tschitschakoff, with the Moldavian army, forced his way from the south, to join the main army, which, after Borizoff had been retaken, was to assist the army led by Witgenstein from the Dwina, and, in this manner, cut off Napoleon from the Vistula. Napoleon was, therefore, obliged to make the greatest efforts, notwithstanding immense difficulties occasioned by the nature of the country, the climate, and the critical situation of his troops, to reach Minsk, or, at least, the B., and to pass it earlier than the Russians. To effect this, it was necessary to sacrifice a great part of the baggage and artillery, Nov. 25. After the advanced guard of the Moldavian army had been repelled to Borizoff, by Oudinot, and the bridge there burnt by them, early in the morning of Nov. 26, two bridges were built near Sembin, about two miles above Borizoff, an undertaking the more difficult, because both banks of the river were bordered by extensive morasses, covered, like the river itself, with ice not sufficiently strong to afford passage to the army, while other passes were already threatened by the Russians. Scarcely had a few corps effected their passage, when the greater part of the army, unarmed and in confusion, rushed in crowds upon the bridges. Discipline had long before disappeared. The confusion increased with every minute. Those who could not hope to escape over the bridges sought their safety on the floating ice of the Berezina, where most of them perished, while many others were crowded into the river by their comrades. In this fatal retreat, the duke of Reggio (Oudinot) led the advanced guard, with the Poles under Dombrowsky in front; the rear guard was formed by the corps of the duke of Belluno. Nov. 27, at noon, the dear-bought end was gained, and the army, leaving the road to Minsk, took that of Wilna to Warsaw, with the hope of providing for their necessities in Wilna.—Besides the multitudes who were obliged to remain beyond the B., the division of Partouneaux, which formed the rear guard, was also lost. It was intrusted with the charge of burning the bridges in its rear, but it fell into the hands of the enemy. According to the French bulletins, only a detachment of 2000 men, who missed their way, was taken; according to the Russian accounts, the whole corps, 7500 men and 5 generals.

Berg; a duchy of Germany; bounded on the north by the duchy of Cleves, on the east by the county of Mark and Westphalia, on the south by the Westerwald, and on the west by the Rhine. It belonged, formerly, to the elector of Bavaria, but has been included, since 1815, in the grand-duchy of the Lower Rhine, which belongs to Prussia. It contains 1188 square miles, with 983,000 inhabitants. There are mines of iron, copper, lead and quicksilver; but the principal objects of attention are the manufactures, which render it one of the most populous and flourishing countries in Germany: of these, the principal are iron, steel, linen, woollen, cotton and silk. The extent of the manufactures of B. is, in a great measure, owing to the multitude of skilful workmen whom the fury of the Spaniards, in the war against the Netherlands, forced to leave their country. The richest fled to London and Hamburg, the poorer sort, which included a great proportion of the manufacturers, to the neighboring Berg. At a later period, when Louis XIV revoked the edict of Nantes, many of the most industrious of the French Protestants fled also to this duchy, which thus became the most manufacturing part of Germany. Elberfeld is the most important of the manufacturing places of B. Another reason of the great prosperity of this country is, that it

has been under the government of rich princes; and the smallness of its territory has often enabled it to remain a long time neutral, when all the other German states were desolated by war. The duchy of B. continued in the possession of the electors of Bavaria until 1806, when it was ceded to France, and bestowed by Napoleon on his brother-in-law Murat, under the title of the *grand-duchy of Berg*. There was at the same time added to it part of Cleves, the counties of Homburg, Bentheim-Steinfurt, Hortsmar, Nassau-Dietz, Dillenburg, Hadamar, and a number of lordships and scattered bailiwicks and towns. On Murat's receiving the kingdom of Naples, Napoleon named his nephew Napoleon Louis, eldest son of the king of Holland, hereditary grand-duke of Berg, with the condition that the country should be under the immediate management of the French government until the young prince should be of age. At the same time, the Prussian part of Munster and the county of Mark were annexed to it, and the whole was divided into the departments of the Rhine, the Ems, the Roer and the Sieg, having a population of 878,000 on 6908 square miles. At the congress of Vienna, in 1815, the whole was given to the king of Prussia.

Berg, Book of. (See *Symbolic Books*.)

Bergamo, capital of the district of Bergamo (1150 square miles and 306,600 inhabitants), in the Lombardo-Venetian kingdom, is situated on hills between the rivers Brembo and Serio, has a castle within the city, and another, called *la capella*, without it, besides two suburbs encircled by walls, and four others that are open, containing together 30,680 inhabitants. Amongst many distinguished men born here, is the famous Tiraboschi, the historian of Italian literature. B. exported, formerly, more than 1200 bales of silk, which produced, on an average, £150,000 sterling yearly. In 1428, the Bergamese put themselves under the republic of Venice. In 1796, Bonaparte took B., and it was subsequently made the capital of the department of the Serio, in the kingdom of Italy. Lon. 9° 38′ E.; lat. 45° 42′ N. The city is the seat of a bishop and of the authorities of the district. It has an academy of painting and sculpture, a museum, an athenæum, a public library, several academies, many manufactories, especially of silk. There is, also, a small Protestant congregation in this city. —The comic characters, Arlechino, or Truffaldino, and Brighella, in the Italian masqued comedy, are Bergamese, or affect the dialect of the country people in the neighborhood of this city.

Bergamots are a variety of citron. It is said to have been produced at first by grafting a citron on the stock of a bergamot pear-tree. The fruit has a fine taste and smell, and its essential oil is in high esteem as a perfume.

Bergasse, Nicholas; a statesman and author, born at Lyons, in 1750, where he was an advocate. He afterwards became advocate to the parliament of Paris. Here he showed his talents in the famous lawsuit of Beaumarchais (q. v.) with the banker Kornmann. Upon the breaking out of the revolution, he was chosen a member of the states-general by the city of Lyons, but abandoned his seat, even earlier than Mounier and Lally-Tollendal, a step which, both in his case and theirs, was universally condemned. During the reign of terror, his life was saved only by the events of the 9th of Thermidor. Since that time, B. has devoted himself to metaphysical speculations. He is distinguished among the modern French ideologists by a splendid style and richness of ideas. He is the author of *Morale réligieuse*, *De l'Influence de la Volonté et sur l'Intelligence*, and *De la Propriété* (1807). B. was also one of the most zealous adherents to the doctrine of Mesmer respecting animal magnetism. During the abode of the Russian emperor in Paris, 1815, this monarch paid him a visit.

Bergen; a bishopric in the kingdom of Norway, that borders on Aggerhuus to the east, Drontheim to the north, Christiansand to the south, and the German ocean to the west; lon. 4° 45′—6° 55′ E.; lat. 59° 34′—62° 39′ N. It contains about 13,900 square miles, 57 parishes, 180 churches and chapels, 137,700 inhabitants, or nearly 10 to a square mile.—*Bergen*, the fortified capital, with a citadel (Bergenhuus), the largest city in Norway, is situated in lon. 5° 21′ E., lat. 60° 10′ N., 180 miles N. of Stavanger, 270 S. W. of Drontheim, at the bottom of the bay of Waag, that stretches far into the country, forming a safe harbor, surrounded by high and steep rocks. The entrance, however, is dangerous. The wall of rocks also makes the access to the city on the land side difficult. The climate is comparatively mild, on account of the sheltered situation of the town. It is remarkable for frequent rains. B. is well built, yet several streets are crooked and uneven, on account of the rocks. The city contains 2200 houses, 18,000

inhabitants, 1 German and 3 Danish churches: it has a bishop, a classical school, a seminary, founded by bishop Pontoppidan, for 12 students, who are instructed gratis in the higher branches of literature, a naval academy, an hospital for such as are infected with the scurvy, which is common among the fishermen, arising from their food, principally smoked or salt meat and fish; besides other useful institutions. The inhabitants of the middle coast of Norway bring their boards, masts, laths, fire-wood, tar, train-oil, hides, &c., and particularly dried fish (stock-fish), to B., to exchange them for corn and other necessaries, brought thither by the English, Dutch and Germans. B. thus carries on its commerce with but 100 vessels of its own.—In the year 1445, a factory and several warehouses were established here by the Hanseatic cities of Germany, and the *German traders*, as they called themselves, enjoyed, for some time, the protection of the Hanseatic league. The German factory consisted of about 60 warehouses. The roads leading into the interior of the country are frequented only in the winter, when they are passable in sleds. B. is the native place of the poet Holberg.—*Bergen* is also the name of other places; amongst them is, 1, a town in the Netherlands, a post of some consequence in the wars of 1739 and 1814.—2. A town in the electorate of Hesse. A bloody battle was fought here, April 13, 1759, between the French and allies, in the seven years' war, in which the former were victorious. It is three miles N. E. Frankfort. —3. The capital of the island of Rügen, in the Baltic, now subject to Prussia.—4. A small island in the Indian ocean, 60 miles W. of Sumatra; lat. 3° 20′ S.

Berger, Louis von, was born in Oldenburg, where he held a high office in the administration. When the Russians approached, in 1813, the citizens of Oldenburg took up arms. The French magistrates fled, but not until they had appointed a committee of regency, of which von Berger and Fink were members. This committee was afterwards summoned before a court-martial in Bremen, in which general Vandamme presided, and these two excellent men were condemned to death, though their accuser had only proposed their imprisonment. They were shot, April 10, 1813. The clearness, firmness and power of language, with which von Berger exposed this mock-trial, is well described in the Murder of Fink and Berger, written by Gildemeister of Bremen. The remains of the two patriots are deposited in Oldenburg.

Bergerac; a town of France, in the department of the Dordogne, 48 miles E. of Bordeaux, which gives the name to an agreeable French wine, cultivated on the banks of the Dordogne. There is a white and a red sort. In France, it is sometimes also called *petit Champagne*.

Berghem, Nicholas, born at Harlem, in 1624, received his first instruction in painting from his father, Peter of Harlem, who was a very indifferent artist. He then continued his studies under van Goyen, and the elder Weenix. It is related, that once, when pursued by his father, he fled into the workshop of van Goyen, who, to protect him, called to his pupils, "*Berg hem*" (conceal him): this, it is said, occasioned his new name. Love of his art, and the great demand for his paintings, as likewise the avarice of his wife, prompted him to labor with extreme assiduity. To buy engravings, of which he was very fond, he was often compelled to borrow money from his students, which he could only refund by deceiving his wife in regard to the price of his paintings. In this manner he obtained a rich collection. B's. landscapes and representations of animals adorn the most celebrated galleries. The distinguishing characters of the pictures of B. are the breadth and just distribution of the lights, the grandeur of his masses of light and shadow, the natural ease and simplicity in the attitudes of his figures, the brilliancy and harmony as well as transparency of his coloring, the correctness and true perspective of his design, and the elegance of his composition. Although he hardly ever left his workshop, yet he had closely observed nature, during a long residence in the palace of Benthem. He died at Harlem, 1683. Charles Dujardin and Glauber were among his pupils. At the auction of P. de Smeth's collection of paintings, Amsterdam, 1810, four of B.'s were sold for 800, 1000, 1625, 2500 Dutch guilders.

Bergmann, Torbern Olof, a natural philosopher and chemist, born at Catharineberg, in the Swedish province of West Gothland, March 9, 1735, obtained, after many difficulties, the permission of his family to devote himself entirely to the sciences. At that time, disciples flocked from all quarters to Linnæus at Upsal. They were joined by B., in 1752, who, by his acuteness and his discoveries, which were facilitated by his attainments in geometry and physics, excited the no-

tice of this great man. In 1758, he became doctor of philosophy and professor of physics at Upsal. Upon the resignation of the celebrated Wallerius, B. was a candidate for the professorship of chemistry and mineralogy. His competitors charged him with ignorance of the subject, because he had never written on it. To refute them, he shut himself up for some time in a laboratory, and prepared a treatise on the manufacture of alum, which is still considered as a standard work. In 1767, he became professor of chemistry, and devoted himself with ardor to this science. He invented the preparation of artificial mineral-waters, and discovered the sulphuretted hydrogen gas of mineral springs. We are indebted to him for a knowledge of the characters which distinguish nickel from other metals. On a number of minerals he made chemical experiments, with an accuracy before uncommon. He published a classification of minerals, in which the chief divisions are based on their chemical character, and the subdivisions on their external form. In preparing this work, he was much aided by his former discovery of the geometrical relations between different crystals of the same substance, which may be deduced from one primitive form, and are produced by the aggregation of similar particles, according to fixed and obvious laws. His theory of the chemical relations is still esteemed, and, if it has received some new developements from the further researches of Berthollet, it has not been overthrown. The order of Gustavus Vasa was bestowed on B. He declined the invitation of Frederic the Great to remove to Berlin. He died, exhausted by his exertions, in 1784, in the 49th year of his age. Among his works, the first place is due to *Opuscula Phys. et Chem.* (Stockholm, 1779, 3 vols.), and Physical Description of the Globe.

Bergstrasse (*Germ.*, mountain road); a fertile tract of land on the right of the Rhine, lying west of the Odenwald and Melibœus, and forming a beautiful road about 30 miles in length, planted with walnut and chestnut-trees and vines. It extends from Darmstadt to the convent of Neuburg, about a mile distant from Heidelberg. All travellers on the Rhine are delighted with this road.

Berkeley, doctor George; bishop of Cloyne, in Ireland; celebrated for his ideal theory. He maintains that the belief in the existence of an exterior material world is false and inconsistent with itself; that those things which are called *sensible material objects* are not external, but exist in the mind, and are merely impressions made on our minds by the immediate act of God, according to certain rules termed *laws of nature*, from which he never deviates; and that the steady adherence of the Supreme Spirit to these rules is what constitutes the reality of things to his creatures; and so effectually distinguishes the ideas perceived by sense from such as are the work of the mind itself or of dreams, that there is no more danger of confounding them together on this hypothesis than on that of the existence of matter. He was born at Kilcrin, Ireland, in 1684; became fellow of Trinity college, Dublin, in 1707; travelled in Italy as far as Leghorn, in 1713 and 1714, and, at a later period, accompanied Mr. Ashe, son of the bishop of Clogher, on a tour through Italy, Sicily and France. In 1721, he was appointed chaplain to the lord lieutenant of Ireland, the duke of Grafton. He appeared with much applause as an author before he was 20 years old. His works on philosophy and mathematics (among which his Theory of Vision, published in 1709, is the most brilliant proof of the author's acuteness) procured him a wide-spread fame. By a legacy of Mrs. Vanhomrigh, the celebrated Vanessa, who has become so generally known through her love to Swift, his fortune was considerably increased. In 1724, he was promoted to the deanery of Derry, and resigned his fellowship He now published his Proposals for the Conversion of the American Savages to Christianity by the Establishment of a College in the Bermuda Islands. The project was very favorably received, and persons of the first rank raised considerable sums by subscription to aid it; and B., having resigned his preferment, set sail for Rhode Island, with several other persons of similar views, to make arrangements for carrying on his college. The assistance of parliament, which had been promised, not being afforded, his undertaking miscarried, after he had spent seven years and a considerable part of his fortune in his efforts to accomplish it. He afterward wrote numerous philosophical, religious and politico-economical works. Towards his 60th year, he was attacked by a nervous colic, which he attempted to cure by the use of tar-water, whereby he was induced to publish two treatises on the utility of this water. He died suddenly at Oxford, in 1753. B. is said to have been acquainted with almost all branches of human

knowledge. His character commanded the respect and love of all who knew him. Pope, his constant friend, describes him as possessed of "every virtue under heaven." His most celebrated philosophical works are, a Treatise on the Principles of Human Knowledge (London, 1710); Three Dialogues between Hylas and Philonous (London, 1713); Alciphron, or the Minute Philosopher (London, 1732). His Works appeared in London, 1784, 2 vols. 4to., preceded by a biography written by Arbuthnot.

Berlichingen, Götz, or Godfrey, von, with the iron hand; born at Jaxthausen, in Suabia; a bold, restless, warlike and honorable German knight, of the middle ages. He placed himself at the head of the rebellious peasants, in the war which they waged against their oppressors (see *Peasant War*, in Germany), but was soon made prisoner. Before that time, he had lost his right hand, and therefore wore one made of iron. He died July 23, 1562. His biography, written by himself, was printed at Nuremberg, in 1731 and 1775, and, for the third time, at Breslau, in 1813. This book contains an excellent picture of the social life and customs of the middle ages, and has furnished Göthe with the subject for his beautiful drama, *G. von Berlichingen.*

Berlin; the capital of the Prussian dominions; principal residence of the king, and seat of the highest councils of the kingdom; situated in the province of Brandenburg, on the Spree, 127 feet above the level of the sea; lon. 13° 22′ E.; lat. 52° 31′ N.; one of the largest and handsomest cities of Europe. It is about 12 miles in circumference, and consists of 5 towns—Berlin Proper, Köln, or Cologne, on the Spree, Friedrichswerder, Neu- or Dorotheenstadt and Friedrichsstadt; and 5 suburbs—Louisenstadt, the King's suburb, those of Spandau and Stralau, and, outside of the walls, Oranienburg suburb. B. has 22 squares and market-places, 15 gates, 27 parish churches, 37 bridges, &c. In the year 1817, there were 7133 houses, including the churches, the other public buildings (174), the manufactories (61), the stables and barns (483). At the close of the year 1825, B. contained (the military included) 220,000 inhabitants, among whom were about 3700 Jews, 4000 Catholics, and more than 10,000 Calvinists.—1. *Berlin Proper*, consisting of 39 streets, was built, in 1163, by margrave Albert the Bear. It received its name from the wildness of the country, and was settled by emigrants from Holland. It contains the royal post-office, the town-house, the general military academy, the academy for cadets, the royal school of the gray convent, that of Joachimsthal, the Lutheran parish church of St. Nicholas (the oldest church in B.), the Frederic orphan asylum (established in 1818, for 1009 orphans), with a church, and a royal institution for vaccination (where, since 1802, 25,332 children, beside adults, have been vaccinated gratuitously), the synagogue of the Jews, the new market, and many other public buildings. The suburbs of B., taking the name in its most limited sense, are, the King's suburb (Königsvorstadt), containing the new theatre, where the famous Mlle. Sontag performed before she went to Paris; the suburb of Spandau, where are the royal palace Monbijou, the veterinary college, the great hospital *La Charité*, with which a clinical institution is connected (numbering, in 1816, 5144 patients, among whom were 419 with mental disorders), the new royal mint, &c. and, finally, Stralau. Outside of the walls, the Rosenthal-suburb, or Neuvoigtland, is situated. Before the Oranienburg gate are the iron foundery, where cast-iron ware, of every description, is made; the royal hospital of invalids, which receives upwards of 1000 inmates, officers, soldiers, women and children.—2. *Köln*, or *Cologne*, on the Spree, which received this name when it was built from the *Kollnen* (piles), on which the Vandals (Wenden), driven out by Albert the Bear, had built their huts in the midst of bogs and morasses, contains 25 streets, enclosed by two branches of the Spree; a bridge 100 feet long, of stone, resting upon 5 arches, and adorned with a colossal equestrian statue of the great elector Frederic William, in bronze, planned by Schlüter, and cast by Jacobi; the royal palace, 460 feet in length, 276 in breadth, and 101½ in height, containing the gallery of paintings, the cabinet of artificial and natural curiosities, the collection of medals, &c.; the museum of art, a most magnificent building, newly erected by Schinkel; the royal riding academy. A part of Köln is called *Neu-Köln*, and consists of 4 streets, built along the Spree.—3. *Friedrichswerder*, including 19 streets, was founded by the elector Frederic William the Great. Here are situated the palace, inhabited by the present king, originally intended for the crown-prince; the splendid arsenal, in the yard of which the 365 famous heads of dying warriors, in relief, by Schlüter, serve as key-stones in the arches of the windows; the royal foundery; the new guard-house,

built by Schinkel, near which are the statues of Scharnhorst and Bülow, by Rauch, and three pieces of ordnance of the largest caliber, two of which were taken from the French; opposite to it stands the colossal statue of Blücher, in bronze, a work of Rauch.—4. *Neu-* or *Dorotheenstadt*, likewise built by the elector Frederic William the Great, and named after his second wife, has but 5 regular streets, among which is the stately street "beneath the limes," 2088 feet in length, and 170 in breadth, affording the most beautiful walk in the city, and a part of Frederic-street, which is 4250 paces in length. The principal buildings in this quarter are, the university edifice; the Catholic church, built on the plan of the Pantheon in Rome; the fine opera-house; the royal library, the style of which is bad; the academy building, destined for a museum, with an observatory whose platform rises 84 feet from the pavement of the street; the great singing-academy, erected by Schinkel, and devoted only to church music; the Paris-place, &c. The Brandenburg gate, which is 195 feet in width, was built, in 1789, by Langhans, in imitation of the Propylæum at Athens, but on a much larger scale. Above it is the famous Victoria in a *quadriga*, which was carried away by the French, in 1807, and, in 1814, brought back from Paris by the Prussians: before it lies the park, 880 acres in extent, containing, besides various walks, the royal palace Bellevue, and several country-seats, belonging to wealthy individuals.—5. *Friedrichsstadt*, founded, in 1688, by the elector Frederic III (king Frederic I), surpasses the four other divisions of the city in extent, and consists of 23 wide streets, among which the above-mentioned Frederic-street is distinguished. Worthy of notice are, the Gendarmes market; also William-place, a quadrangle 190 paces in length and 90 in breadth, containing the marble statues of the generals Schwerin, Winterfeld, Seydlitz, Keith and Ziethen, who, in the grotesque taste of the last century, are represented in Roman costume and periwigs; the Leipsic-place; the place of Belle-Alliance; the Bohemian church; the Trinity church; the French and the new church, with two famous steeples; the royal porcelain manufactory; the academy of Frederic William, with the *Realschule* (which belongs to the class of high schools, and contained, in the year 1816, 650 scholars); the *Collegien* or council-house, where the legislative committee, the chief court of justice, also the *Kammergericht*, and council for minors, hold their sessions, and the archives of the Brandenburg fiefs are kept; the bank; the house of the society for foreign commerce; the theatre, which, in 1817, was consumed by fire, and was afterwards rebuilt under the direction of Schinkel; several handsome buildings belonging to private persons, &c.—Louisenstadt, for the greater part, consists of fields and gardens. Before the Cottbus gate, upon a rising ground covered with wood, called *Hasenhaide*, was the first spot devoted to the new gymnastic exercises in Germany, invented by doctor Jahn. On the top of the mountain of the cross, formerly *Tempelhof* mountain, before the Halle gate, is a monument of iron, erected, in 1820, in commemoration of the wars against France.—B. contains upwards of 100 public and 50 private elementary schools: of burgher or intermediate schools, 10 public, 60 private, and 13 special schools (schools in which youth are educated for particular employments): 5 gymnasia or classical schools, 7 higher special schools or colleges, and the university: also several academies and literary societies, as the royal academy of science (see *Academy*); the academy of fine arts, mechanical sciences and architecture, with the schools of art appertaining to this academy; the society for natural history and natural philosophy; the medico-chirurgical, the pharmaceutic, the philomathic, the physico-medical societies; the society for cultivating the German language; the association of artists. There are also, in this city, a museum of antiquities, established in 1820; the royal medico-chirurgical academy, for the military; two royal medico-chirurgical seminaries, intended to educate surgeons for the army; the royal veterinary school; two seminaries for the education of town and country school-masters; the seminary for missionaries, destined to convert the heathens in the western parts of Africa; several institutions for the deaf and dumb and the blind; a free school for Jewish children; an academy for foresters (an institution in which the knowledge relating to the cultivation of woods and forests is acquired); a singing academy; a military swimming-school; a Bible society; a society for the advancement of Christianity among the Jews; an association for the cultivation of gardens; an institution for preparing artificial mineral waters, &c. There are many charitable institutions in B., the poor, who cannot subsist without help, being about 12,000. Among them, the female charitable association, under 32

directresses, provided, December, 1816, for 1200 poor persons, dispersed in 180 families. The most benevolent institution is that established, in 1794, by Kranz, counsellor of war, for relieving impoverished citizens, and which has since numbered some of its former beneficiaries among its members. B. has a considerable commerce and some important manufactories; a royal bank; a royal society for foreign commerce; a wool-market; upwards of 300 machines for spinning wool and cotton, with 29,000 spindles, 4834 looms for weaving cloths, silk, woollen, cotton and linen, carpets, &c.; numerous manufactories of silk, woollen or cotton ribands, 326 lace-makers, 44 manufactories for coloring and printing stuffs, 66 dye-houses, 5 sugar refineries, 4 manufactories of ornamental tin-ware, porcelain and stone-ware factories, the royal bronze manufactories, important manufactories of gold and silver ware, of fine cabinet work, of petinet, straw hats, artificial flowers and feathers; about 25 printing houses, 8 powder mills, &c.; also Mr. Jacobi's valuable collection of works of art. The pavement of B. is extremely bad; the illumination of the streets imperfect. Though some parts of this city are beautiful, yet, on the other hand, its flat and sandy environs are extremely unpleasant. The university of B. was founded in 1809, when Prussia was groaning beneath the heavy yoke of the French. It proceeded from the noble efforts of those men who, at that time, conducted the public concerns of the kingdom (Stein was one of the most distinguished among them), and were convinced that the only effectual preparation for a future deliverance from the French was a moral regeneration of the people; at the same time thinking all that diffuses knowledge and intellectual light an excellent means of producing this moral change—an idea which was realized by the result. Although the university of B. is so young an establishment, yet it ranks among the first in the world, and is, in one branch of science—in philology—the very first. By means of this and many other scientific institutions, a literary spirit has been awakened among the citizens, by which they are very advantageously distinguished from the inhabitants of other cities; but, on the other hand, the society of B. has neither the refined manners of a royal residence, nor the easy manners of many other cities. To the university belong the botanical garden without the city, near Schönberg, the anatomical theatre, the anatomical and zoological museum, the theological and philological seminary, the cabinet of minerals, the clinical institution, the lying-in hospital, &c. In the year 1826, there were 1640 students in the university of B., among whom were 400 foreigners. More than 90 professors are employed in the university. In the year 1828, the annual meeting of German naturalists, for the promotion of natural science, was held at B., under the direction of Alexander von Humboldt. It furnished a splendid array of talent, and many discourses of great interest were delivered.

Bermudas' Islands, or Somers' Islands; a cluster of small islands in the Atlantic ocean. They are in number about 400, but for the most part so small and so barren, that they have neither inhabitants nor name. They were first discovered by Juan Bermudas, a Spaniard, in 1522; in 1609, sir George Somers, an Englishman, was wrecked here, and, after his shipwreck, formed the first settlement. The most considerable of these islands are St. George, St. David, Cooper, Ireland, Somerset, Long island, Bird island, and Nonesuch. The first contains a town (St. George's Town); the two following, some villages; the others, only farms dispersed.—The air is so healthy, that sick people, from the continent of America, frequently go thither for the recovery of their health. The winter is hardly perceptible; it may be said to be perpetually spring: the trees never lose their verdure, and the leaves only fall when new ones begin to appear. Birds sing and breed without intermission.—But these advantages are counterbalanced by frightful storms, accompanied by formidable thunder, which are announced by a circle round the moon. Some fertile plains are seen, but, in general, the country is mountainous. The soil is of divers colors, brown, white and red, of which the first is the best; although light and stony, it is, in general, rich and fertile. The water is, in general, salt; there is but little fresh, except rain water, preserved in cisterns. The inhabitants gather two harvests of Indian corn in a year, one in July, and the other in December: this forms their principal food. They likewise cultivate tobacco, legumes, and fruit sufficient for their wants. Their trees are principally the cedar and palmetto. Besides these, they have orange-trees, olive, laurel, pear-trees, &c. The red-wood is peculiar to these islands: its colored fruit feeds worms, which become flies, a little larger than the cochineal bug, instead

of which they are used. There are no venomous reptiles. Building of vessels is the principal trade of the inhabitants. These islands extend from N. E. to S. W., about 45 miles. The whole shore is surrounded with rocks, most of which are dry at low water, but covered at flood. They are 230 leagues S. E. cape Fear, in North Carolina. The north point of these islands lies in lon. 64° 28′ W.; lat. 32° 22′ N. Pop. a few years since, 10,381; whites, 5,462; slaves, 4,919.

Bern; the largest canton of Switzerland (3667 square miles, 338,000 inhabitants, among whom are 40,000 Catholics, and 250,300 Calvinists), with a capital of the same name. Cuno von Bubenberg, in the 12th century, enclosed the small place Bern, in the vicinity of the fortress of Nydeck, with a moat and walls, and the duke of Zähringen, to whom Nydeck belonged, gave the new city laws. Its population was much increased in the 13th century. The lower nobility of the adjacent country fled to it for protection against the oppressions of the higher, and were joined by the country people, and particularly by the citizens of Friburg and Zurich. The emperor Frederic II declared it a free city of the empire, in 1218, and confirmed its privileges by a charter, which is still preserved in the archives. In 1288, B. was besieged by Rodolph of Hapsburg, but not taken; and, in 1291, the citizens of B., under Ulrich von Bubenberg, made war against their own nobility, commanded by Ulrich von Erlach. B. now became an asylum for all those who suffered under the oppression of the nobles of Austria, and rose to a height of power that excited the envy of other cities, as well as of its own nobility. The latter, therefore, entered into an alliance with the hostile cities, for the purpose of destroying it. Their army, consisting of 18,000 men, headed by 700 of the higher nobility, with 1200 knights, was totally vanquished at Laupen, June 21, 1339, by the citizens of B., led by Rodolph von Erlach, though these were only one third of their number. After this victory, the city continued to increase, and, in 1353, entered into the perpetual league of the Helvetic confederacy, in which it held a rank inferior only to Zurich. Until the close of that century, B. enlarged its dominions, partly by purchase, and partly by conquest. In 1405, the greater part of the city was destroyed by fire, but was afterwards regularly rebuilt. The long wars with Austria, Milan, Burgundy and Savoy soon after broke out, from all which the confederacy came off victorious, and in which B. conquered Aargau. In 1528, the citizens of B. embraced the cause of the Reformation. In the subsequent war with the duke of Savoy, they conquered the Pays de Vaud. The countries gained by conquest were governed by bailiffs, who resided in mountain castles. From that time to March 5, 1798, the prosperity and wealth of B. was constantly increasing, as may be clearly perceived from the large sums spent for the public administration. At that time, the canton contained over 5000 square miles, and about 380,000 inhabitants. Upon the day above-mentioned, 30,000 French troops marched against B. It was again an Erlach who led 18,000 citizens of B., together with 8000 auxiliary troops of the confederate cantons, into the field; but the memory of Morgarten, of Laupen and Murten, no longer inspired them to victory: the troops of the confederates, on their retreat, slew their own commander. B., for the first time, opened its gates to an enemy, and lost about half of its possessions. The northern part was united with the present canton of Aargau, and out of the south-western (Pays de Vaud) the present canton of Vaud was formed. By the decrees of the congress at Vienna, however, the greater part of the bishopric of Bâle was joined to the canton of B. According to the new aristocratic constitution of the canton, the sovereign power is exercised by a bailiff, and the great and lesser councils of the city and republic of B., consisting of 200 members chosen from the city of B., and 99 from the towns and the country. The former are chosen from the citizens, over 29 years old, by an elective assembly composed of the members of the lesser council, and a committee of the great. The 99 members from the towns and country are chosen partly from the towns, by the municipal authorities; partly from each of the 22 districts, into which the country is divided, by elective assemblies; and partly by the great council. Two bailiffs preside in turn, each for the space of a year, in the great and lesser councils. The former has the legislative, the latter the executive power. The latter consists of the two bailiffs, 23 members, and 2 secretaries, and is chosen by the former from among its own members.—The northern part of the canton is hilly, with beautiful plains and valleys, and has a fertile and highly cultivated soil, producing corn, wine and fruits. Here is situated Emmenthal, one of the richest and most

fertile valleys in Switzerland, where the finest cattle are raised, and the well-known Emmenthal cheese made. Neat houses, comfortable dresses, and cheerfulness, indicate the prosperity of the inhabitants of this valley. The southern part of the canton, the Oberland (Upperland), (to which the valleys of Hasli, Grindervald, Lauterbrun, Cander, Frutingen, Adelboden, Simmen and Saanen, with numerous smaller valleys, belong), begins at the foot of the high mountain chain towards the Valais, and extends to its summit. The lower valleys produce good fruits, and are fertile and agreeable: higher up are excellent Alpine pastures; then succeed bare rocks, extensive glaciers (the source of magnificent water-falls), and the highest mountains of Switzerland, as the Finsteraarhorn, the Schreck-horn and Wetterhorn, the Eiger, the Jungfrau. The inhabitants of the Oberland live, principally, by raising cattle.—The chief trade is in linen and woollen manufactures, especially in Emmenthal. The revenues of the state amount to about 600,000 dollars. The canton furnishes 5824 men to the army of the confederacy, and contributes 104,080 Swiss francs to its support.—B. (1062 houses, with 17,620 inhabitants), one of the best built cities in Switzerland, is situated upon the declivity of a hill, on a peninsula, washed on three sides by the Aar. The streets are, for the greater part, straight, wide and well paved, and the houses partly provided with piazzas. Among the public buildings are the great Gothic cathedral, the church of the Holy Spirit, the university buildings, the handsomely built hospital, &c. B. has an academy, and several literary societies. The economical society, in particular, has done much for the improvement of agriculture, as well as for the better knowledge of the natural history of Switzerland. The historical society of Switzerland, of which the mayor of B., von Mülinen, is president, has published several chronicles relating to the former times of B., as that of Justinger (till 1421), 1819, that of Schachtlan, 1820, and that of Anshelm (till 1526), 1825. The gallery for native specimens of natural history, founded in 1802, contains viviparous animals, birds, butterflies, insects and plants. The public library possesses great treasures, both of printed books and manuscripts. Several private persons have museums, which are generally open to strangers. Trade and commerce are lively: the manufactories furnish woollen cloth, printed linen, silk stuffs, stockings, &c. There are few cities with finer promenades, or where they are kept in better repair. One of the favorite walks, for instance, is near the cathedral, raised at great expense, and planted with four rows of trees. The side towards the Aar is 108 feet above the river, which here forms a beautiful cascade, equalling that of the Rhine at Lauffen, if not in height, at least in breadth.

Bernadotte. (See *Charles XIV.*)

Bernard, Pierre Joseph; son of a statuary, born at Grenoble, 1710; died at Choisy, near Paris, 1775; studied with the Jesuits in Lyons, and entered as a clerk into the service of a notary in Paris. He was afterwards admitted into the service of the marshal de Coigny as secretary, and, by Louis XV, appointed treasurer of the dragoons, and, afterwards, librarian of Choisy. In 1771, he lost his memory by the apoplexy, and remained in this condition till his death. Among the poets who have sung in praise of pleasure, of whom the French nation possesses so many, B. is esteemed. In 1737, he brought the opera Castor and Pollux on the stage, which is a masterpiece of lyric-dramatic poetry. Rameau's music contributed to heighten the general applause with which it was received. *L'Art d'Aimer* was not published until after his death, but had been before communicated to his friends: it is, in part, an imitation of Ovid. Voltaire called B. *le gentil.* The whole of his works appeared at Paris, 1796.

Bernard, duke of Weimar, general in the thirty years' war, born Aug. 6, 1604, the fourth son of duke John of Saxe-Weimar, entered into the service of Holland, at that time the best school for a soldier, where prince Maurice of Nassau (the creator of a better system of tactics), his brother Frederic Henry, the marquis Spinola, and other great generals, were opposed to one another. B. afterwards entered the Danish army employed in Holstein against the troops of the emperor, and commanded by the margrave of Baden-Durlach, and was present at the conference of Lubeck, 1629, for negotiating peace. When Gustavus Adolphus entered Germany, B. joined him, and was present at the attack upon Wallenstein's camp, in the neighborhood of Nuremberg, Aug. 24, 1632. In the battle of Lutzen, Oct. 6, 1632, he commanded the left wing of the Swedish army, avenged the death of Gustavus Adolphus, and, although himself severely wounded, put the right wing of the imperial troops to flight. Chancellor Oxenstiern, the Swedish director

of the war in Germany, after the death of the king, committed the command of half the army to him. B., in 1633, took Bamberg, Cronach, Hochstadt and Aichstadt; but his attempt upon Ingolstadt miscarried. He also brought the cities of Ratisbon and Straubing into his power, and frustrated Wallenstein's intentions. The king of Sweden made him duke of Franconia. His impetuosity caused the defeat at Nordlingen (q. v.), Aug. 24, 1634. He himself narrowly escaped being made prisoner. The prudence of Oxenstiern and the valor of B. soon made amends for this fault. France, now entering into a closer alliance with Sweden, concluded a separate treaty with B., who went to Paris, Oct. 16, 1634. B. promised, for 4,000,000 livres, to raise an army of 18,000 men on the Rhine, to act against Austria. He now carried on the war in the country adjoining to the Rhine, took the fortress of Zabern, in Alsace, spread his army over Lorraine and Burgundy, and vanquished the forces of the emperor in several battles. At the commencement of the year 1638, he laid siege to Rheinfelden, not far from Bâle. Here he was unexpectedly attacked in his camp, Feb. 18, by an Austrian army that had advanced to raise the siege. B. was obliged to retreat before superior numbers; but, having soon collected his forces, he attacked the Austrians by surprise, Feb. 21, and obtained a complete victory. Several Austrian generals were made prisoners, and the fortress of Rheinfelden was obliged to surrender, May 13. He then undertook the siege of Brisach, the possession of which was necessary for maintaining himself in Alsace. An imperial army, under the command of general Goetze, that approached with the intention of raising the siege, was defeated with a great loss by B., July 30. B. captured several places of inferior importance, during the siege of Brisach, which, however, did not surrender until he had repeatedly defeated the Austrians, and then upon very moderate conditions, which B. signed in his own name, without mentioning France. The possession of Alsace, which he had before ceded to France under certain conditions, was now secured; but he also demanded Brisach as an appurtenance to Alsace. He garrisoned all the conquered places with German troops, and ordered money to be coined with the Saxon coat of arms and that of Brisach. In vain were the efforts of France to deprive the duke of the possession of Brisach, by proposing to place a French garrison in the fortress: the duke declined not only this proposal, but also an invitation to Paris, and the offer of a marriage with the duchess d'Aiguillon, niece of cardinal Richelieu. Instead of that match, he proposed one with the princess of Rohan, to which, however, the French court would not accede, lest the party of the Huguenots should be strengthened. It is probable that Richelieu had recourse to secret means, in order to rid France of the duke, who was become formidable by his growing power. He was suddenly seized with a disorder, which terminated his life, July 8, 1639. Most of the contemporary writers conjectured that Richelieu caused him to be poisoned: the duke himself had no doubt that he had swallowed poison. Immediately after his death, several French commissioners appeared, who enlisted his troops into the French army: the command of them was committed to marshal Guebriant. With B. fell one of the chief supports of the Protestants. His successors, Baner and Torstensohn (q. v.), pursued his victorious course, and France seriously exerted herself, in the war which continued, for the benefit of the Protestants. In B. a graceful person, intelligence and valor were united with a magnanimity which could not be shaken by adverse events: his only fault was too great impetuosity.

Bernard of Clairvaux; one of the most influential ecclesiastics of the middle ages, born at Fontaines, in Burgundy, 1091, of a noble family. In 1113, he became a monk at Citeaux; in 1115, first abbot of Clairvaux, near Langres. An austere manner of living, solitary studies, an inspiring eloquence, boldness of language, and the reputation of a prophet, rendered him an oracle to all Christian Europe. He was named the *honeyed teacher*, and his writings were styled *a stream from paradise*. The doctrine of the immaculate conception of Mary was rejected by him. He principally promoted the crusade in 1146, and quieted the fermentation, caused at that time by a party of monks, against the Jews in Germany. He declined all promotion, and, in the rank of abbot of his *beloved Jerusalem* (as he used to call Clairvaux), he continued with all humility, but with great boldness, his censures of the clergy and his counsels to the popes. Innocent II owed to him the possession of the right of investiture in Germany, and Eugenius III his education. He was, at the same time, the umpire of princes and bishops, and his voice in the synods was regarded as

divine. By his rigid orthodoxy and his mystical doctrines, which, though at times enthusiastic, were always directed to the promotion of practical Christianity, he refuted the subtleties and dialectics of the scholastic philosophers, although his severity against Abelard and Gilbert of Poree can by no means be justified. Luther says of him, "If there has ever been a pious monk who feared God, it was St. Bernard; whom alone I hold in much higher esteem than all other monks and priests throughout the globe." B. died in 1153, and was canonized by Alexander III, in 1174. (See Aug. Neander's *St. Bernard and his Times*, Berlin, 1813.) His works have been translated from the Latin, and published by professor Silbert Vienna, 1820).

Bernard, Great St.; a mountain between the Valais and the valley of Aosta, 11,006 feet high. On its top is the boundary between the Valais and Piedmont. The road from the lake of Geneva through the Valais, into the valley of Aosta, passes over it. The Little St. B., 7194 feet high, separates Piedmont from Savoy. Over this Hannibal directed his march. Bernard de Menthon, a Savoyard nobleman, who lived from 923 to 1008, built here, in 962, two *hospitia*, for the benefit of those on a pilgrimage to Rome, one upon mont Joux, where a temple of Jupiter stood, the other on the road that leads over the Grison Alps, at a place called *Colonne Jou*, from a pillar which was an object of idolatrous worship. Animated by a pious zeal, Bernard destroyed the pillar and temple, and, with their ruins, built the two *hospitia* on the Great and Little St. Bernard, so called after him. He committed the care of both these establishments to monks of the order of St. Augustine, who, with an almost unexampled self-devotion, exercised the most generous hospitality towards travellers, down to the time of Charles Emanuel III of Sardinia. This king, falling into a dispute with the cantons of Switzerland about the nomination of a provost, sequestrated the possessions of the monks, and gave the administration of the *hospitia* to regular canons of the Augustine order, who, with equal humanity and devotion, discharge the duties of their pious calling. Upon the barren height (7668 feet), where the *hospitium* of the Great St. Bernard stands, which is considered to be the highest inhabited place in Europe, an almost everlasting winter reigns; in vain do we look for a tree or bush; the glittering snow dazzles the eye of the wanderer. Assisted by the servants of the convent, the heroic ecclesiastics, provided with wine and bread, devote themselves to the guidance of travellers; and, in order to defend the poor against the cold, they lend or give them clothes, which are kept for that purpose. Upwards of 9000 persons annually pass over the mountain, who are refreshed in the *hospitium*. In the midst of tempests and snow-storms, the monks, accompanied by dogs (called *marons*), set out for the purpose of tracking those who have lost their way. If they find the body of a traveller who has perished, they carry it into the vault of the dead, where it is wrapped in linen, and remains lying on a table till another victim occupies the place. It is then set up against the wall, among the other dead bodies, which, on account of the cold, decay so slowly, that they are often recognised by their friends after the lapse of years. Adjoining this vault is a kind of burying-ground, where the bones are deposited, when they accumulate too much in the vault. It is impossible to bury them, because there is nothing around the *hospitium* but naked rocks. In the church is the monument of general Dessaix, who fell in the battle of Marengo. The first consul ordered him to be embalmed, and assigned him a resting place on the summit of the Alps. The monument of marble represents Dessaix in relief, wounded, and sinking from his horse into the arms of his aid Le Brun. On the stairs of the convent stands his statue of marble. Opposite to it there is a slab of marble, on which the republic of Valais commemorated Napoleon's passage over the St. B., May 15, 1800, with an inscription in letters of gold. By means of a contribution raised through Europe, a short time ago, the habitations of the 9 or 10 ecclesiastics have been made more comfortable.

Bernardi, Augustus Frederic, a German scholar, born in Berlin, in 1768, died there in 1820. In his youth, his attention was directed to universal language (that is, to language as far as it is common to all rational beings), to the mystery of its construction, the mathematics, as it were, of language. B., considering all different languages as a whole, endeavored to discover a universal grammar common to them all. The result of his researches appears in his works, *Reine Sprachlehre* (Abstract Grammar), 1801, 2 vols.; *Angewandte Sprachlehre* (Grammar in its Application), 1803; and *Anfangsgründe der Sprachwissenschaft* (Elements of the Science of Language), in which

many philosophical principles of language are laid down. B. was a man of cultivated mind and extensive knowledge. He was also a professor and director of a classical school in Berlin.

Bernardin de St. Pierre. (See *Pierre, St.*)

Bernardine Monks. (See *Cistercians.*)

Bernburg, Anhalt; one of the three dukedoms of Anhalt (253 square miles, 7 towns, 51 villages, with 38,400 inhabitants. The income is valued at 450,000 guilders. Its contingent to the army of the German confederation is 370 men. In 1820, the Lutheran and Calvinistic parts of the population were united. The capital of this dukedom is Bernburg, on the Saale, with 4900 inhabitants. The public debt amounts to 1,034,500 guilders. Napoleon made the princes of Bernburg dukes.

Berners, or Barnes, Juliana; an English lady of the 15th century, of whom little more is known than that she was prioress of the nunnery of Sopewell, near St. Alban's, and has her name prefixed, as the writer or compiler, to one of the earliest and most curious productions of the English press. The title of the second edition, printed in the abbey of St. Alban's, in 1486, is, *The Boke of Hawkyng and Huntyng, with other Pleasures dyverse, and also Cootarmuries.* The first edition (1481) does not treat of coat-armor or heraldry. This work, under the title of the Book of St. Alban's, became a popular manual of sporting science, and was several times reprinted in the 16th century. As a typographical curiosity, a small impression of it was published, in 1811, by Mr. Haslewood.

Berni, Francesco (also *Berna*, and *Bernia*); a poet of the 16th century, born at Lamporecchio, in the territory of Tuscany, towards the close of the 15th century, of a noble but poor Florentine family; went to Florence, and, at the age of 19, to Rome, where he lived under the care of his relation, cardinal Bibiena, who, as he himself says, did him neither good nor harm, and he was at length obliged to enter the service of the bishop of Verona, Ghiberti, datary of the papal chancery, as secretary. In the hope of promotion, he took orders; but, disgusted with the duties of his office, he sought recreation in amusements, which displeased the prelate. A society had been established at Rome, consisting of young ecclesiastics of a jovial temper, like B., and a poetical vein, who, in order to denote their love for wine, and their careless gayety, called themselves *i vignajuoli* (vine-dressers). Mauro, Casa, Firenzuola, Capilupi, &c. were of the number. They laughed at every thing, and made sport, in verse, of the most serious, nay, the most tragic matters. B.'s verses were the most successful, and were written in so peculiar a style, that his name has been given to it (*maniera Bernesca*, or *Berniesca*). When Rome was sacked by the troops of the constable Bourbon, 1527, B. lost all that he possessed. He afterwards made several journeys, with his patron Ghiberti, to Verona, Venice and Padua. At length, wearied with serving, and satisfied with a canonship in the cathedral at Florence, in the possession of which he had been for some years, he retired to that place. The favor of the great, however, which he was weak enough to court, brought him into difficulties. He was required to commit a crime, and his refusal cost him his life. Alessandro de' Medici, at that time duke of Florence, lived in open enmity with the young cardinal Ippolito de' Medici. B. was so intimate with both, that it is doubtful which first made him the proposal to poison the other. Certain it is, that the cardinal died by poison, in 1535. B. died July 26, 1536; and if, as is asserted, his life was terminated by poison, then the crime must be imputed to duke Alessandro.—In the burlesque style of poetry, B. is still considered the best model. His satire is often very bitter, and frequently unites the good humor of Horace with the causticity of Juvenal. The extreme licentiousness of his writings is his greatest fault. It should, however, be considered that he wrote for his friends only, and that his works were not printed until after his death. The admirable ease, for which his writings are distinguished, was the result of great efforts, since he repeatedly amended and corrected his verses. The same is asserted of Ariosto; and yet they are the most distinguished, among the Italian poets, for the ease and fluency of their style. B. also wrote Latin verses very correctly, and was well acquainted with Greek. His *Rime Burlesche* (Burlesque Verses) have great merit. So has also his *Orlando Innamorato, composto già dal Sig. Bojardo Conte di Scandiano, ed ora rifatto tutto di nuovo da M. Fr. Berni.*—Another Berni (count Francesco B., who was born in 1610, and died in 1673) has written 11 dramas, and also several lyric poems.

Bernini, Giovanni Lorenzo, called *Il*

cavaliere Bernini, born in Naples, 1598, is praised by his contemporaries as the Michael Angelo of modern times, on account of his success as a painter, a statuary, and an architect; but he deserves his fame principally in the latter character. Richly endowed by nature, and favored by circumstances, he rose superior to the rules of art, creating for himself an easy manner, the faults of which he knew how to disguise by its brilliancy. From his early youth, he manifested a great power to excel in the arts of design, and, at the age of eight years, executed the head of a child in marble, which was considered a remarkable production. That such rare endowments might be suitably cultivated, his father carried him to Rome. One of B.'s first works was the marble bust of the prelate Montajo; after which he made the bust of the pope, and of several cardinals; also sundry figures of the natural size. He was not yet 18, when he produced the *Apollo and Daphne*, in marble, a masterpiece of grace and execution. Looking at this group near the close of his life, he declared that he had made very little progress since the time when that was produced. His manner was indeed more chaste and less affected, in the early part of his career, than at a later period. After the death of Gregory XV, cardinal Maffeo Barberini, his successor, employed B. to prepare plans for the embellishment of the Basilica of St. Peter, assigning to him a monthly pension of 300 crowns, which was afterwards augmented. Without forsaking sculpture, B.'s genius embraced architecture, and he furnished the design for the canopy and the pulpit of St. Peter, as well as for the circular place before the church. Among his numerous works, were the palace Barberini, the belfry of St. Peter, the model of the monument of the countess Matilda, and the monument of Urban VIII, his benefactor.—In the year 1644, cardinal Mazarin, in the name of the king of France, offered him a salary of 12,000 crowns; but he declined the invitation. Urban had scarcely closed his eyes, and Innocent X ascended the papal throne, when the envy engendered by the merits of the artist and the favor bestowed on him broke forth. His enemies triumphed; but he regained the favor of the pope by a model for a fountain. About the same time, he erected the palace of Monte Citorio. Alexander VII, the successor of Innocent X, displayed much taste for the arts, and favor to this artist, and required of him a plan for the embellishment of the piazza di San Pietro. The admirable colonnade, which is so beautifully proportioned to the Basilica, was built under the direction of B. We may also mention the palace Odescalchi, the rotunda della Riccia, the house for novices, belonging to the Jesuits, on Monte Cavallo, &c. Louis XIV having invited him, in the most flattering terms, to Paris, he set out from Rome, in 1665, at the age of 68, accompanied by one of his sons, and a numerous retinue. Never did an artist travel with so great pomp, and under such flattering circumstances. The reception which he met with in Paris was highly honorable. He was first occupied in preparing plans for the restoration of the Louvre, which, however, were never executed. But, notwithstanding the esteem which he enjoyed in Paris, some disagreeable circumstances induced him to return to Rome: he left Paris loaded with presents. Cardinal Rospigliosi having become pope, B. was admitted to an intimate intercourse with him, and charged with several works; among others, with the decoration of the bridge of St. Angelo. In his 70th year, this indefatigable artist executed one of his most beautiful works, the tomb of Alexander VII. He still continued to devote himself to several works of architecture, as well as of statuary, with such ardor, that, exhausted by his labors, he died, Nov. 28, 1680, at the age of 82. He was buried, with great magnificence, in the church of St. Maria Maggiore. To his children he left a fortune amounting to about 3,300,000 francs. B.'s favorite maxim was, *Chi non esce talvolta della regola, non passa mai.* Thus he was of opinion, that, in order to excel in the arts, one must rise above all rules, and create a manner peculiar to one's self. This B. has accomplished with a rare good fortune, but the influence of his style has been transient. His most eminent disciples are Pietro Bernini, his brother, a statuary, architect and mathematician; Matthia Rossi, François Duquesnoi, surnamed *the Fleming*, and Borromini.

Bernis (François Joachim de Pierres, comte de Lyon) cardinal de, born at St. Marcel de l'Ardeche, in 1715, was descended of an ancient family, but little favored by fortune, for which reason, his parents destined him for the clerical profession. Me. de Pompadour, whom he had known as Me. d'Etioles, presented him to Louis XV, who, being pleased with him, assigned to him an apartment in the Tuileries, with a pension of 1500 livres. His wishes were directed towards raising

his income to 6000 livres. Not succeeding however, in attaining this moderate fortune, he resolved to aim at a larger one. He went as ambassador to Venice, and obtained great respect in this difficult post. After his return, he enjoyed the highest favor at court, and soon became minister of foreign affairs. The political system of Europe was changed at that time. France and Austria, hitherto enemies, united in an offensive and defensive alliance, which was succeeded by the seven years' war, so unfortunate for France. B. has been designated, by several writers, as the chief author of this alliance. Duclos, however, asserts, that it was the intention of B. to maintain the old system, which, since the time of Henry IV, and especially since the time of Richelieu, had made France the protectress of the less powerful states of Germany, and the rival of Austria. Oppressed by the misfortunes of his country, which, in part, at least, were ascribed to him, B. surrendered his post, and was soon after banished from court. His disgrace lasted till the year 1764, when the king appointed him archbishop of Alby, and, five years later, ambassador to Rome. Here he remained till his death. In the name of his court, and against his own opinion, he labored to effect the abolition of the order of the Jesuits. When the aunts of Louis XVI left France, in 1791, they fled to him for refuge, and lived in his house. The revolution deprived him of his fortune, and the means of indulging his generous disposition. He was reduced to a state of poverty, from which he was relieved by a pension from the Spanish court. B. died in Rome, Nov. 2, 1794, nearly 80 years old. The easy poetry of his youth had procured him a place in the French academy. He himself is its severest critic. His verses have been reproached with affectation, negligence, and an excess of ornament and mythological images. Voltaire called him *Babet-la-Bouquetière*, from a fat flower-woman, who sold her nosegays before the opera house. Nevertheless, Voltaire had a great esteem for his talents, his judgment, his criticisms, and his character, as is evident from their correspondence (published, in 1799, by Bourgoing), which, in every respect, is very honorable to B. Another correspondence, between B. and Paris du Verney, appeared in print in 1790. After his death, Azara published his poem *La Religion vengée* (Religion avenged), which, though it contains many beautiful verses and sublime ideas, is deficient in fire and animation. A collection of B.'s works was published in 1797, by Didot.

Bernouilli; a family which has produced eight distinguished men, who have all cultivated the mathematical sciences with success. The family, emigrating from Antwerp on account of religious persecutions, under the administration of the duke of Alva, fled first to Frankfort, and afterwards removed to Bâle, where it was elevated to the highest dignities of the republic.—1. James B., born at Bâle, 1654, became professor of mathematics there 1687, and died 1705. The differential calculus, discovered by Leibnitz and Newton, was applied by him to the most difficult questions of geometry and mechanics: he calculated the loxodromic and catenary curve, the logarithmic spirals, the evolutes of several curved lines, and discovered the *numbers of Bernouilli*, as they are called.—2. John B., born at Bâle, 1667, was one of the greatest mathematicians of his time, and the worthy rival of Newton and Leibnitz. He was destined for commerce, but his inclination led him to the sciences, and, from the year 1683, he principally devoted himself to medicine and mathematics. To him, and his brother James, we are indebted for an excellent treatise on the differential calculus. He also developed the method of proceeding from infinitely small numbers to the finite, of which the former are the elements or differences, and called this method the *integral calculus*. In 1690—92, he made a journey to France, where he instructed the marquis de l'Hôpital in mathematics. At this time, he discovered the exponential calculus, before Leibnitz had made any communications respecting it, and made it known in 1697. In 1694, he became doctor of medicine at Bâle, and, in 1695, went, as professor of mathematics, to Groningen, where he discovered the mercurial phosphorus or luminous barometer, for which he received, from king Frederic I of Prussia, a gold medal, and was made a member of the academy in Berlin, afterwards of that in Paris, &c. After the death of his brother, in 1705, he received the professorship of mathematics at Bâle, which he held until his death, January 1, 1748.—3. Nicholas B., nephew of the former, born at Bâle, in 1687, studied law, but more particularly devoted himself to mathematics; in 1705, went to Groningen, to John B.; returned, however, with him to Bâle towards the close of the year, and became there professor of

mathematics. He travelled through Switzerland, France, Holland and England, and, in 1713, became a member of the academies of science in London and Berlin. On the recommendation of Leibnitz, he went, as professor of mathematics, to Padua, in 1716, but returned to his native city, in 1722, as professor of logic. In 1731, he became professor of the Roman and feudal law in that place, and died in 1759. The three following were sons of the above-mentioned John B.—4. Nicholas B., born at Bâle, 1695, became professor of law there in 1723, and died in Petersburg, in 1726.—5. Daniel B., born at Groningen, Feb. 9, 1700. He studied medicine, in which he took the doctor's degree, and, at the same time, was engaged in mathematical studies, in which his father had been his instructer. He visited Bâle, Heidelberg, Strasburg, Venice and Padua. At the age of 24, he was offered the presidency of an academy about to be established at Genoa, but, in the following year, accepted an invitation to Petersburg. Accompanied by his younger brother, John, he returned to Bâle in 1733; became there professor of anatomy and botany; in 1750, professor of natural philosophy; resigned this place, because of his advanced age, to his brother's son, the younger Daniel B., in 1777, and died in 1782. He was one of the greatest natural philosophers, as well as mathematicians, of his time. At 10 different times, he received a prize from the academy of Paris. In 1734, he shared with his father a double prize, given by this academy, for their joint essay on the causes of the different inclinations of the planetary orbits. Most of his writings are contained in the transactions of the Petersburg, Paris, Berlin, &c. academies, of which he was a member.—6. John B., born at Bâle, in 1710, went to Petersburg in 1732, became professor of rhetoric at Bâle in 1743, and, in 1748, professor of mathematics. He died in 1790. The two following were his sons.—7. John B., licentiate of law and royal astronomer in Berlin, was born at Bâle, in 1744, and died, 1807, in Berlin, whither he had been invited in the 19th year of his age. He had travelled through all the countries of Europe, and lived, after 1779, in Berlin, where he had become director of the mathematical department of the academy. He is the author of numerous works.—8. James B. was born at Bâle, in 1759; went to Petersburg, where he became professor of mathematics, married a grand-daughter of Euler, but died in 1789, in the 30th year of his age, of an apoplexy, while bathing in the Neva.

Bernstorff; the name of a German noble family, many members of which have been distinguished. The most so was John Hartwig Ernst, count of B., Danish secretary of foreign affairs. He was born in Hanover, May 13, 1713. His father was also secretary of state in Denmark. In 1750, he was made member of the council of state, after having served for a long time as foreign minister. He soon became the most influential member of the government, which distinguished itself, under his direction, by a wise neutrality during the seven years' war, and other political disturbances in Europe; by liberal measures for improving the condition of the Danish peasantry, who were even then in a state of bondage; by promoting science, and sending an expedition to Asia, which the famous traveller Niebuhr accompanied. He himself set the example of manumitting the peasants, and gave the fourth part of his income to the poor. By his efforts, Denmark acquired Holstein. B. is described, by all historians, as a model of wisdom, benevolence and intelligence. Frederic V (q. v.), whose government he directed so well, died in 1766, and he continued in his office, under Christian VII, until 1770, when Struensee (q. v.) contrived to displace him. After the fall of Struensee, he was recalled, but died when preparing for his return to Denmark from Hamburg, in 1772, Feb. 19. Christian VII had made him count.—Andrew Peter, count of B., his cousin, was also a very distinguished statesman, successor of the preceding, and deserves great praise, among other things, for his endeavors to emancipate the peasantry. He was born Aug. 28, 1735, and died June 21, 1797. His son is now Prussian minister of foreign affairs.

Berri, or Berry, Charles Ferdinand, duke of; second son of the count d'Artois (now Charles X) and Maria Theresa of Savoy, born at Versailles, Jan. 24, 1778. Together with the duke of Angoulême, he received an inadequate education under the duke of Serent: nevertheless, in his early youth, he displayed some talents and a good heart. In 1792, he fled with his father to Turin, served under him and Condé on the Rhine, and early learned the art of winning the love of the soldiers. With his family, he repaired to Russia, and, in 1801, to England, where he lived alternately at London and Hartwell, continually occupied with plans for the restoration of the Bour-

bons. April 13, 1814, B. landed at Cherbourg, and passed through the cities of Bajeux, Caën, Rouen, &c., gaining over the soldiers and national guards to the cause of the Bourbons, distributing alms, and delivering prisoners. He made his entrance into Paris April 21, where he gained popularity by visiting the merchants, manufacturers and artists. May 15, he was appointed colonel-general, receiving a civil list of 1,500,000 francs. Aug. 1, he set out on a visit to the department of the North, and the fortified places in Lorraine, Franche-Comté and Alsace. When Napoleon landed from Elba, the king committed to B. the chief command of all the troops in and round Paris. All his efforts to secure their fidelity proving ineffectual, he was obliged to retreat, on the night of March 19, with the troops of the household, to Ghent, and Alost, where the king then was. The battle of Waterloo enabled him to return to Paris, where he arrived July 8, and surrendered his command over the troops of the household into the hands of the king. In August, he was made president of the electoral college of the department of the North. At the opening of the chambers in Paris, he took the oath to maintain the constitution, and was appointed president of the fourth bureau; but he soon retired from public life. Louvel (q. v.) had been, for several years, meditating the extirpation of the house of Bourbon, by the assassination of the duke. Feb. 13, 1820, he attacked him just as he had left the opera-house, and was on the point of stepping into his carriage, and gave him a mortal blow. The duke showed the greatest firmness and Christian resignation even to the moment of his death (Feb. 14, at 6 o'clock in the morning). He had been carried into the saloon of the opera-house. Here he consoled his wife, and said, *Ménagez-vous pour l'enfant que vous portez dans votre sein!* (Take care of yourself, for the sake of the child in your bosom!) He then caused the children, whom he had in London before his marriage, to be called, and, after recommending them to his wife, prepared himself for death, forgave his murderer, confessed himself, and received the sacrament. Benevolence, gratitude and generosity were the best features in the character of this prince, by whose death all France was plunged into consternation. (See Chateaubriand's *Memoires touchant la Vie et la Mort du Duc de Berri*, Paris, 1820.) The duke left by his wife Carolina Ferdinanda Louisa, eldest daughter of prince, afterwards king Francis I, ruler of the Two Sicilies, whom he married June 17, 1816, only a daughter, Louisa Maria Theresa of Artois, mademoiselle de France, born Feb. 21, 1819. Great was the joy of the royal family, when the duke's widow was delivered, Sept. 29, of a prince, who bears the name of Henry, duke of Bordeaux (Henri Charles Ferdinand Dieudonné d'Artois, petit-fils de France). (See *Chambord.*)—Although Louvel's deed had no connexion with a conspiracy, not the slightest trace of an accomplice being discovered, yet the mutual denunciations to which it gave rise produced much party excitement, and occasioned some laws of exception. (See *France*, and *Exception, laws of.*) The opera-house, near which the crime was committed, and in which the duke died, was pulled down, and a column erected on the spot. A new opera-house was built in another place.

Berri, or Berry; before the revolution of France, a province and dukedom of that country, of which Bourges was the capital, almost in the centre of France. (See *Department.*)

Berserker, a descendant of the eight-handed Starkader and the beautiful Alfhilde, was, according to the Scandinavian mythology, a famous warrior. He disdained the protection of armor, whence he received his name, which signifies, according to Ihre, *armorless*. He raged like a madman in battle. He killed king Swafurlam, and married his daughter, by whom he had 12 sons, as untameable as himself. They were also called *B.*, and, since their time, the name has been commonly given to men of headstrong violence.

Berthier, Alexander; prince of Neufchatel and Wagram, marshal, vice-constable of France, &c.; born in Paris, Dec. 30, 1753; son of a distinguished officer; was, while yet young, employed in the general staff, served in America, and fought with Lafayette for the liberty of the U. States. In the first years of the revolution, he was appointed major-general in the national guard of Versailles, and conducted himself in this post with uniform moderation. Dec. 28, 1791, he was appointed chief of the general staff in the army of marshal Luckner, marched against La Vendée in 1793, and joined the army of Italy in 1796, with the rank of general of division, where, as chief of the general staff, he contributed much to the success of the campaign. In October, 1797, general Bonaparte sent him to Paris to deliver to the directory the treaty

of Campo-Formio. In January, 1798, he received the chief command of the army of Italy, and was ordered by the directory to march against the dominions of the pope. In the beginning of February, he made his entrance into Rome, abolished the papal government, and established a consular one. Being much attached to general Bonaparte, he followed him to Egypt as chief of the general staff. After the 18th of Brumaire, Bonaparte appointed him minister of war. He afterwards became general-in-chief of the army of reserve, accompanied Bonaparte to Italy, in 1800, and contributed to the passage of St. Bernard and the victory at Marengo. He signed the armistice of Alessandria, formed the provisional government of Piedmont, and went on an extraordinary mission to Spain. He then received again the department of war, which, in the mean time, had been in the hands of Carnot. He accompanied Napoleon to Milan, June, 1805, to be present at his coronation, and, in October, was appointed chief of the general staff of the grand army in Germany. Oct. 19, he signed the capitulation of Ulm, with Mack, and, Dec. 6, the armistice of Austerlitz. Having, in 1806, accompanied the emperor in his campaign against Prussia, he signed the armistice of Tilsit, June, 1807. He afterwards resigned his post as minister of war, and, having been appointed vice-constable of France, married, in 1808, Maria Elizabeth Amalia, daughter of duke William of Bavaria-Birkenfeld, and continued to be the companion of Napoleon in all his expeditions. In the campaign against Austria, in 1809, he distinguished himself at Wagram, and received the title of *prince of Wagram*. In 1810, as proxy of Napoleon, he received the hand of Maria Louisa, daughter of the emperor Francis I, and accompanied her to France. Somewhat later, Napoleon made him colonel-general of the Swiss troops. In 1812, he was with the army in Russia, as chief of the general staff, which post he also held in 1813. After Napoleon's abdication, he lost his principality of Neufchatel, but retained his other honors, and possessed the favor and confidence of Louis XVIII, whom, after Napoleon's return, he accompanied to the Netherlands, whence he repaired to his family at Bamberg, where he arrived May 30. After his arrival at this place, he was observed to be sunk in a profound melancholy; and when, on the afternoon of June 1, the music of the Russian troops, on their march to the French borders, was heard at the gates of the city, he put an end to his life by throwing himself from a window of the third story of his palace. (See *Mémoires d'Alexandre Berthier, Pr. de Neufchatel et de Wagram*, Paris, 1826.) He left a son, Alexander (born in 1810), and two daughters.

Bertholle, Claude Louis, count; member of the scientific academies at Paris, London, Turin, Haerlem, &c.; one of the most eminent theoretical chemists of our times; born at Talloire, in Savoy, Dec. 9, 1748; studied medicine at Turin; went, in 1772, to Paris, where he became connected with Lavoisier; was admitted, in 1780, a member of the academy of sciences in that city; was made, in 1794, professor in the normal school there, and was sent to Italy, in 1796, in order to select the monuments that were to be carried to Paris. He followed Bonaparte to Egypt, and returned with him in 1799. After the 18th of Brumaire, he was made a member of the *senat-conservateur*; afterwards, count and grand officer of the legion of honor. In 1804, Napoleon appointed him senator for the district of Montpellier. In 1813, he received the grand cross of the order of the Reunion. April 1, 1814, however, he voted for the establishment of a provisional government and the dethronement of Napoleon. Louis XVIII made him a peer; but Napoleon passed him by in 1815. After the restoration of Louis, he took his seat again in the chamber of peers. Among the inventions and new processes with which the sciences and the arts were enriched by him, the most important are those for the charring of vessels to preserve water in ships, for the stiffening and glazing of linen, &c., but principally that for the bleaching of vegetable substances by means of oxymuriatic acid, which, since 1786, has been in general use in France. Besides different essays in the collections of the academy and the institute, he has written several larger works, among which his *Essai de Statique Chimique* (1803, 2 vols.; translated into English, German and Italian) must be considered as the most important, and as one of the finest productions of our times. The complicated phenomena of chemistry are reduced, in this work, to the strict and simple laws of mechanics. He had also a large share in the reformation of the chemical nomenclature, as well as in the publication of the work that appeared on this subject in Paris, 1787—*Méthode de Nomenclature Chimique*. He died in Paris, Nov. 7, 1822.

Berthoud, Ferdinand, celebrated for his marine chronometers, born at Plancemont, in the county of Neufchatel, in 1727, was destined for the church, but, at the age of 16, conceived an irresistible inclination for mechanics. His father caused him to be instructed in the art of watchmaking, and, to afford him an opportunity of perfecting his knowledge, sent him to Paris. He resided in that city from 1745, and there made his first marine chronometers, which have been used, by French navigators, on so many occasions, for extending and correcting geographical knowledge. He left several works relating to his art. He died in 1807. His nephew, Louis B., his pupil, and the heir of his talents, has extended his improvements still further. His chronometers are in the hands of almost all navigators, and are even more convenient than those of his uncle. They are famous for accuracy.

Bertoli, Giovanni Domenico, count of; born, in 1676, at Moreto, in Friuli; the patriarch of Aquileia, a place where many antiquities existed, of which nobody had taken notice. The inhabitants had even been in the habit, for a long time, of building their houses with ruins and remains of art. To prevent further destruction, B., in conjunction with other men of learning and taste, bought all the ancient marbles which were excavated. Muratori and Apostolo Zeno encouraged him in his antiquarian researches and publications. B. died in 1758. His most important work is *Le Antichità di Aquileja profane e sacre*, Venice, 1739, fol. Some of his treatises are to be found in the collection of P. Calogera; others in the memoirs of the *Società Columbaria* at Florence.

Berton, Henry Montan; son of Peter Berton, who, when director of the opera at Paris, induced Gluck and Piccini to come to Paris. B. was born Dec. 17, 1767, in Paris, and formed himself under the great masters Gluck, Piccini, Paesiello and Sacchini. When 19 years old, he first appeared before the public, as a composer, in the *Concert spirituel*. When the conservatory was established, he was appointed professor of harmony. In 1807, he was made director of the Italian opera, and afterwards leader of the choir (*chef du chant*) at the great imperial opera. He was afterwards employed in Russia by the emperor, but soon returned to France. His most famous opera is *Aline Reine de Golconde*. His *Montano* and *Stephanie*, also, are distinguished.

Bertrand, Henri Gratien, count; general of division, aid-de-camp of Napoleon, grand marshal of the palace, &c.; famous for his attachment to Napoleon, whom he and his family voluntarily accompanied to St. Helena. He was born of parents in the middle ranks of life, entered the military service, distinguished himself in the corps of engineers, and rose to the post of general of brigade. In the camp at Boulogne, in 1804, Napoleon had occasion to become acquainted with his worth. From that time B. was with him in all his campaigns, signalizing himself every where, especially at Austerlitz, where he was one of the emperor's aides-de-camp. In 1806, he took Spandau, a fortress about 6 or 7 miles from Berlin, after an attack of a few days; and, in 1807, contributed to the victory over the Russians at Friedland, and excited the admiration of the enemy by his masterly conduct in building two bridges over the Danube, after the battle at Aspern, in the war of 1809 against Austria. He distinguished himself equally in the campaigns of 1812 and 1813, particularly at Lutzen and Bautzen. In October, 1813, he defended several important posts against superior numbers, and, after the battle of Leipsic, in which he defended Lindenau against Giulay, conducted the retreat in good order. After the battle of Hanau, he covered Mentz till the army had passed the Rhine. He took part in the campaign of 1814, by the side of Napoleon, whom he accompanied to Elba, returned with him, and finally shared his residence in St. Helena. After Napoleon's death (1821), he returned from this island to France.

Bertuch, Frederic Justin, born at Weimar, in 1747, since 1785 counsellor of legation in the service of the duke of Weimar, has done much in several branches of literature and the arts, in the study of which he has been engaged from his early youth. He is principally known, in foreign countries, by the Geographical Institute (*Geographisches Institut*) which he established at Weimar. This society has published numerous maps, and, in connexion with the periodical paper *Geographische Ephemeriden*, conducted by B. and others, has been of much service to geography. B., together with Wieland and Schütz, also projected the *Allgemeine Literaturzeitung*, which now appears at Halle on the Saale. In 1817, he began the *Oppositionsblatt*, which was suppressed by government in 1820.

Bervic, Charles Clement, one of the most distinguished engravers of the

French school, born at Paris in 1756, studied his art under George Wille, and may be considered his most eminent pupil. The works of B. are among the best of the French school, but are not numerous. The most celebrated of them is the full length figure of Louis XVI, after a picture of Callot. The copies are very rare and dear, because the plate was broken to pieces in the revolutionary tumults of 1793. The exactness of his drawing, the firmness and brilliancy of his touch, the purity and correctness of his design, and the happiness with which he transferred to his plate the beauties of the original, give a high character to his productions. He died in 1822.

Berwick, James Fitz-James, duke of, commanded the armies of England, France and Spain, was a peer of England and France, as well as a grandee of Spain, and was knighted by the sovereign of each of these countries. He was the natural son of the duke of York, afterwards king James II, and Arabella Churchill, sister of the duke of Marlborough; was born in 1670, and first went by the name of Fitz-James. He received his education in France, and served his first campaigns in Hungary, under Charles duke of Lorraine, general of Leopold I. A short time after, the English revolution broke out. B. followed his father in the expedition against Ireland, and was wounded in a battle in 1689. He afterwards served under Luxemburg, in Flanders; in 1702 and 1703, under the duke of Burgundy; then under marshal Villeroi; and was naturalized in France. In 1706, he was made marshal of France, and was sent to Spain, where he gained the battle of Almanza, which rendered king Philip V again master of Valencia. In 1718 and 1719, however, he was obliged to serve against Philip V, who, from gratitude to the marshal, had taken a son of his into his service. On his entrance into the Spanish dominions, he wrote to his son, the duke of Liria, admonishing him to do his duty to his sovereign. At the siege of Philipsburg, in 1734, his life was terminated by a cannon ball.

Berwick-upon-Tweed (anciently *Tuesis*); a town of England, on the north or Scotch side of the Tweed, within half a mile of its confluence with the German ocean. It is a county of itself, regularly fortified with walls, bastions and ditches; 54 miles S. E. Edinburgh, 335 N. W. London; lon. 2° W.; lat. 55° 47′ N.; pop. 7746. It exports corn, pork, eggs and salmon. The town has been, of late, much improved, and the streets are well paved. The bridge over the Tweed is 1164 feet long, and contains 6 arches. The barracks can accommodate 600 men. B. sends two members to parliament, and has markets on Wednesday and Saturday. It was formerly the chief town in the county of Berwick, and the theatre of many sanguinary conflicts between the English and Scottish armies. Both nations considering it a fortress of great importance, the town and its neighborhood were a constant scene of bloodshed. After repeated sieges, it was finally ceded to England in the year 1502; and, by a treaty between Edward VI and Mary queen of Scotland, it was declared to be a free town, independent of both states. Upon the death of Elizabeth, in 1603, James VI of Scotland was proclaimed at B. king of England, France and Ireland; and when that monarch entered into his new dominions, the constituted authorities of the town received him with every demonstration of joy and respect. In return, the king confirmed all their ancient charters, adding many privileges, which still remain peculiar to the town and its liberties. The peculiar privileges of B., and the circumstance that it was once independent of England and Scotland, are the occasion why it was formerly the custom to extend the provisions of English statutes to B. by name. The statute 20 Geo. II, c. 42, provides, that, where England only is mentioned in an act of parliament, the same shall be deemed to comprehend the dominion of Wales and the town of B.

Beryl, or Emerald; a well-known species in mineralogy, sometimes massive in its structure, though commonly found crystallized in regular, six-sided prisms, often deeply striated longitudinally, and terminated at one or both extremities by a rough, imperfect plane, or, more rarely, by a very flat, six-sided pyramid, of which the summit is replaced. Its crystals are of various dimensions, being from half an inch to upwards of a foot in length, and from a quarter of an inch to 10 inches in diameter. The larger crystals, however, are inferior to the smaller, in regard to those qualities for which this species is esteemed. The lustre of the beryl is vitreous; its color, green, passing into blue, yellow and white. The brightest of these colors is emerald green, which, as it is rarely known to pass insensibly into the paler hues, has been made the basis of a distinct species in those specimens in which it occurs under the name of *emerald*. This distinction of species is not

considered, at present, as well founded; and the beryl and emerald are looked upon as identical by most mineralogists. It is translucent or transparent, and its hardness enables it to scratch quartz. Its specific gravity is from 2.6 to 2.7. It is composed of silex, 68.35; alumine, 17.60; glucine, 13.13; oxyde of iron, .72, with a trace of lime and oxyde of chrome.—The beryl is widely diffused. It belongs to the primitive rocks, and is embedded in veins of quartz and feldspar, which traverse granite and mica slate. It is also found in great abundance in a compact ferruginous clay in Daouria, and in fractured crystals and rolled masses in secondary deposits, where it is not supposed to have had its origin. Some of the most remarkable localities of beryl are found in Siberia, Limoges in France, and in Massachusetts, Maine and New Hampshire in the U. States. The deep-green variety, emerald, so much valued as a gem, comes from Peru and Upper Egypt: a few fine crystals have also been obtained from granite veins at Topsham in Maine.

Berzelius, James; born at Linkioping, in East Gothland, in 1779. As early as 1796, he began the study of medicine and the natural sciences, particularly chemistry, for the prosecution of which he has since made some scientific journeys. He is, at present, professor of chemistry and pharmacy, secretary of the royal academy of sciences at Stockholm, &c. Charles XIV (Bernadotte) has made him a nobleman. He has done much towards establishing the electro-chemical system, which at present prevails, and according to which no chemical process can take place without the intervention of electricity. He has enriched chemistry, which, in our times, has become a perfectly new science, by the most important discoveries and profound works. In particular, he has distinguished himself by researches into the laws of definite proportions, discovered by Richter, and has proved himself one of the best chemical analysts. His system of mineralogy is founded on his chemical principles. Most of his works have been translated into English and French.

Besançon (in old German, *Bisanz*); lon. 6° 3′ E.; lat. 47° 14′ N.; 48 miles from Paris; a large, old, well-built city, much fortified by Louis XIV; was transferred, by the peace of Nimwegen, with Franche-Compté to France; at present, is the chief place of the sixth military division; has 29,000 inhabitants, and is situated in the department Doubs. There is an archbishop in B., under whom are the bishops of Autun, Metz, Nancy, Strasburg and Dijon. The academy of sciences at B. was established in 1752: there is also here an academy of fine arts, a school for artillery, one for watch-makers, containing 200 pupils and a fine library, besides several museums, a botanical garden, an agricultural society, &c. B. is a great manufacturing place. It was called, in ancient times, *Visontium*, and was a fortified place as early as the time of Cæsar, who drove from hence the Sequani. Here also he conquered Ariovistus. Several streets have still the old Roman names. The ruins of a triumphal arch are yet to be seen. The river Doubs divides the city into two parts, the upper and lower. B. contains 3300 houses, 8 churches, 8 hospitals, a citadel, &c. The former university was changed, in 1801, into a lyceum. It is the chief place of an *arrondissement*, which contains 93,211 inhabitants.

Bessarabia; since the peace of Bucharest, in 1812, between Turkey and Russia, a Russian province, between 45° and 48° N. lat., and 28° and 31° E. lon.; containing about 8800 square miles (according to some accounts, more than double this amount), with 315,000 inhabitants; situated on the Black sea, between the northern arm of the Danube, the Pruth and the Dniester. B. is a plain country, fertile in grain, but is mostly used for the pasturage of sheep and horses. Most of the inhabitants are Walachians, Gipsies and Tartars. The capital is Chotzym, a fortress. Bender, Ismail, Ackerman and Kilia Nova are also fortresses. Kischenau, the seat of a Greek bishop, has a large nursery of trees. The population has been much increased by colonists from Poland, Germany, France, &c. These amount already to 8300, mostly Lutherans. A considerable number of troops are kept in B. to protect the frontiers. Many mechanics are thus drawn there to supply the wants of the army.

Bessel, Frederic William; considered by many the best astronomical observer of the present age; has been professor of astronomy in Königsberg since 1810; was born in Minden, July 22, 1784; entered, at the age of 15 years, one of the first commercial houses in Bremen. The maritime intercourse of that place with foreign countries excited in him an inclination for geography, and afterwards for the science of navigation, and induced him to attempt the acquisition of mathematical knowledge from books. He soon passed to astronomy, and, as his days were other-

wise occupied, he devoted his nights to these labors. An astronomical work which he wrote procured him the acquaintance of Olbers (q. v.), who, from that time, became his adviser. In 1806, he joined Schröter at Lilienthal, with recommendations from Olbers, and was employed for four years as inspector of the instruments belonging to the university of Göttingen. From thence he was invited to Königsberg, where he built, in 1812—13, the observatory, which is a monument of the scientific enterprise of the north of Germany, since it was erected when Prussia was almost exhausted by war, and Königsberg was situated on the great theatre of Napoleon's operations against Russia. The observations, uninterruptedly continued at this observatory, are contained in 5 vols., folio. The observatory of Königsberg was, till 1819, provided with English instruments, when the ministry supplied it with the means of procuring new instruments, made by Reichenbach (q. v.), of the best workmanship. Besides these observations and separate treatises, B. published, in his work on the comet of 1807, a theory of the disturbances of these celestial bodies, and *Fundamenta Astronomiæ pro an.* 1755—a work in which he has reduced Bradley's observations, and given their results. He treats also of the various subjects connected with these observations, namely, the instruments used and the corrections to be made in them. For the present period, B. has endeavored, by his own observations and a strict criticism of methods and instruments, to attain the necessary certainty. Of his Astronomical Observations at the Observatory of Königsberg, the 10th No., from Jan. 1 to Dec. 31, 1824, appeared at Königsberg, 1826.

Betel is the leaf of a climbing East Indian plant (piper-betel), which belongs to the same tribe as pepper, and, in shape and appearance, is not much unlike ivy, but is more tender, and full of juice. There is an almost incredible consumption of betel throughout India, and other parts of the East. The inhabitants chew it almost incessantly, and in such quantity that their lips become quite red, and their teeth black—a color greatly preferred by them to the whiteness which the Europeans so much affect. They carry it, in little white boxes, about their persons, and present it to each other, by way of compliment and civility, in the same manner as Europeans do snuff. This is done by the women as well as by the men; and it would be considered an offence, if those to whom it is offered should refuse to accept of and chew it. The leaves are sometimes used alone, but much more commonly when covered with a kind of lime made of sea-shell, and wrapped round slices of the areca nut, the fruit of the areca palm, of the size of a small egg, and resembling a nutmeg deprived of its husk.

Bethania, or Bethany; a village at the foot of mount Olivet, on the west side, about two miles east of Jerusalem, where Lazarus dwelt, and was raised from the dead, and where the ascension of Christ is related to have taken place. The house and grave of Lazarus and the house of Mary Magdalene are still shown to curious travellers. The name of B. was sometimes extended to the whole tract from the village itself to Bethphage.

Bethesda; a pool in Judea, the name of which signifies *house of mercy*. In the five halls or porticos near it many patients lay waiting, according to the account of John (ch. v), for the moving of the waters, to bathe in it. According to the opinion of the Jews, an angel descended, at a certain time, into the pool, and troubled the water, and whoever first entered the water, after this agitation, was cured. This pool seems to have been composed of a red-colored mineral water, which received its healing power from the red earth at the bottom. If the healing fountain, after having been obstructed for a time, began to bubble up anew, and the patient made use of it before the motion ceased, it healed his disease.—*To lie at the pool of Bethesda*, is used proverbially, in Germany, in speaking of the theological candidates who are waiting for a benefice.

Bethlehem; the birth-place of David and Christ; a village, formerly a town, in Palestine, a part of Syria, in the pachalic of Damascus, five miles from Jerusalem, at the foot of a hill covered with vines and olive-trees, which, however, is not the mount of Olives mentioned in the Bible. An aqueduct conveys water from the hill to the village. It has 300 houses, and 2400 Greek and Armenian inhabitants, who make wooden rosaries and crucifixes, inlaid with mother of pearl, for pilgrims; also excellent white wine. In a rich grotto, furnished with silver and crystal lamps, under the choir of the church of a convent in this village, a trough of marble is shown, which is said to be the manger in which Jesus was laid after his birth. There are three convents there, for Catholics, Greeks and Armenians. The greatest ornament of the place is the stately church erected by the

empress Helena over the place where Christ is said to have been born, and bearing her name. It is built in the form of a cross, and the top commands a fine view over the surrounding country. Several spots mentioned in the Bible are shown there.

Bethlehem. There are many places in the U. States with this name. One of the most important is the borough and post-town in Northampton county, Pennsylvania, on the Lehigh, 12 miles S. W. Easton, 54 N. N. W. Philadelphia. Population in 1810, 1436; in 1820, 1860. It is pleasantly situated, regularly laid out, built chiefly of stone, and inhabited wholly by Moravians, who have a bishop there. B. contains two academies, one for young ladies, and another for boys.

Betrothment, in law; a mutual promise or compact between two parties, by which they bind themselves to marry. The word imports giving one's troth, i. e., true faith or promise. Betrothment amounts to the same with what is called, by civilians and canonists, *sponsalia* or *espousals*, sometimes *desponsation*, and, by the French, *fiançailles*. Betrothment is either solemn (made in the face of the church), or private (made before witnesses out of the church). According to the Roman law, betrothment ought to be made by a stipulation, i. e., a contract, in which one binds himself, by an answer to a question put to him, to the fulfilment of a contract. As betrothments are contracts, they are subject to the same rules as other contracts; for instance, that they are valid only between persons whose capacity to contract is recognised by law; and the use of fraud, violence or intimidation vitiates the contract. The consent of both parties, of course, is required. This may be expressed either verbally, or by writing, or by action. In Germany, the consent of the parents is always necessary, if the parties are under age, not yet *sui juris*. But if the parents withhold their consent unreasonably, the permission of the judge is allowed to sanction the contract. If the opinions of the parents are diverse, the law gives effect to that of the father. Some provincial laws require the consent of the relations, and the presence of witnesses. Betrothments contracted thus, according to law, are called *sponsalia publica*; others are called *sponsalia clandestina*. The latter are, in some places, utterly invalid; in others, only punishable. By the common German law, however, they are valid in every case in which consummation or consecration by the priest has taken place. The parents, in these cases, are not allowed to apply for a dissolution of the contract, nor can they refuse their consent, except for highly important reasons. Public betrothment induces the obligation to marry. In case of refusal to complete the contract by marriage, the injured party is allowed an action at law to compel its performance; but, since unhappy marriages are among the greatest misfortunes, the means of compulsion applied by the law are never great, amounting only to a small fine, or a short imprisonment. If circumstances take place which, if happening before the betrothment, would have necessarily prevented it, the party affected by them is allowed to recede from the engagement, and the modern laws allow only an action for damages. In Germany, betrothment generally takes place in a small company of relations and friends. In Russia, it was once binding and indissoluble, like marriage, but is now a mere form accompanying the marriage ceremony.

Betterment is a term used, in some of the U. States, to signify the improvements made on lands by the occupant, in building, fencing, draining, &c.; and the statutes of some of the U. States provide, that where a purchaser comes into possession under what he supposes to be a good title, and the land is afterwards recovered against him by virtue of a better title, in case he or those under whom he claims have been in possession of it a certain number of years, he shall be entitled to claim against the owner who so recovers possession of the land, the value of the improvements or *betterments*. This is a very equitable provision of the laws in states where, as in many parts of the U. States, titles are not fully established and confirmed by a long period of possession, and where, in newly-settled territories, the improvements may, in a few years, amount to more than the original value of the land.

Betterton, Thomas, a celebrated actor in the reign of Charles II, was born in Westminster, in 1635, and excelled in Shakspeare's characters of Hamlet, Othello, Brutus and Hotspur. In 1635, he opened a new play-house in Lincoln's-inn-fields, but did not succeed. He died in 1710, and was buried in Westminster abbey. He wrote the Woman made a Justice, a comedy; the Amorous Widow, or the Wanton Wife; Diocletian, a dramatic opera, &c. The Unjust Judge, or Appius and Virginia, a tragedy, was

written originally by Mr. John Webster, and altered by B.

Bettinelli, Saverio, an Italian author, born at Mantua, in 1718, studied there and at Bologna, under the Jesuits; entered, in 1736, the novitiate of this order, and taught, from 1739 to 44, belles-lettres at Brescia, where he made himself known by some poems composed for the use of schools. In Bologna, where he studied theology, he continued to cultivate his poetical talents, and wrote for the theatre of the college his tragedy of Jonathan. In 1751, he was intrusted with the direction of the college of nobles at Parma. After having remained there eight years, he travelled in France and Germany, and returned to Verona, where he remained till 1767, engaged in preaching and instruction. After the suppression of the Jesuits, in 1773, he returned to his native city, where he resumed his literary labors with renewed zeal. He published several works, among which some were intended for ladies; as, his Correspondence between two Ladies, his Letters to Lesbia on Epigrams, and likewise his Twenty-four Dialogues on Love. He began, in 1799, a complete edition of his works (Venice, 1801, 12 vols. 12mo.) He preserved the cheerfulness and serenity of his spirit to the age of 90 years, and died in 1808, with the composure of a philosopher, and the devotion of a Christian. Besides his works already mentioned, we cite his *Dell' Entusiasmo delle belle Arti, Risorgimento negli Studj, nelle Arti e ne' Costumi dopo il Mille* (3 vols.), a superficial work, which is, however, not destitute of new and just views. The *Lettere dieci di Virgilio agli Arcadi* attracted great attention. The ideas expressed in this work of the two great names of Italian poetry, particularly of Dante, involved him in many contests. His *Poesie* (3 vols.) contain 7 *poemetti*, 16 letters in blank verse, sonnets, *canzoni*, &c. Although this collection does not show any great poetical power, yet it is always elegant and ingenious. It is preceded by a treatise on Italian poetry.

Bey, among the Turks, signifies a *governor* of a town, seaport or small district. The Turks write the word *beg*. (q. v.) (See also *Beglerbeg*.)

Beza (properly, *de Beze*), Theodore; next to Calvin, the most distinguished for genius and influence among the preachers of the Calvinistic church in the 16th century. Born of a noble family at Vezelay, in Burgundy, June 24, 1519; educated in Orleans, under Melchior Volmar, a German philologer devoted to the reformation; and early familiar with the ancient classical literature, he became known, at the age of 20 years, as a Latin poet, by his petulant and witty *Juvenilia* (a collection of poems of which he was afterwards ashamed). In 1539, he was made a licentiate of law, and, in the same year, invited by his family to Paris. He received from his uncle the reversion of his valuable abbey Froidmond, and lived on the income of two benefices and the property which he had inherited from a brother. His habits, at this time, were dissipated. His handsome figure, his talents, and his connexion with the most distinguished families, opened to him the most splendid prospects. But a clandestine marriage, in 1543, recalled him from his excesses, and a dangerous illness confirmed the intention, which he had formed at Orleans, of devoting himself to the service of the reformed church; so that, after his recovery, he forsook all the advantages of his situation in Paris, and repaired, with his wife, to Geneva, in 1547. Soon after, he accepted a professorship of the Greek language at Lausanne. During the 10 years of his continuance in this office, he wrote a tragi-comic drama, in French,—the Sacrifice of Abraham,—which was received with much approbation; delivered lectures (which were numerously attended) on the Epistle to the Romans and the Epistles of Peter (which served as the basis of his Latin translation of the New Testament, of which he afterwards published several editions, always with improvements); finished Marot's translation of the Psalms in French verse; and obtained to such a degree the confidence of the Swiss Calvinists, that he was sent, in 1558, on an embassy to the Protestant princes of Germany, to obtain their intercession at the French court for the release of the Huguenots imprisoned in Paris. In the following year, he went to Geneva as a preacher, and, soon after, became a professor of theology, and the most active assistant of Calvin, to whom he had already recommended himself by several works (on the punishment of heretics by the magistrate, the vindication of the burning of Servetus, and some violent controversial writings on the doctrine of predestination and the communion, against Castalio, Westphal and Hesshuss). His talents for negotiation were now often put in requisition by the Calvinists. He was sent to the court of Anthony, king of Navarre, at Nerac, to obtain the toleration of the French Hu-

guenots, and, at his desire, he appeared, 1561, at the religious conference at Poissy, where he spoke in behalf of his party with a boldness, presence of mind and energy, which gained him the esteem of the French court. He often preached in Paris before the queen of Navarre and the prince of Condé; also in the suburbs. At the conference of St. Germain, in 1562, he spoke strongly against the worship of images, and, after the commencement of the civil war, accompanied the prince of Condé as chaplain, and, on the capture of the prince, joined the admiral Coligny. After the restoration of peace, he returned to Geneva, in 1563, where, besides discharging the duties of his offices, he continued to engage in theological controversies in support of the Calvinists; and, after Calvin's death, in 1564, became his successor, and was considered the first theologian of this church. He presided in the synods of the French Calvinists at La Rochelle (1571) and at Nismes (1572), where he opposed Morel's proposal for the alteration of clerical discipline; was sent by Condé (1574) to the court of the elector palatine; and, at the religious conference at Montpellier (1586), opposed the theologians of Würtemberg, particularly James Andreas. At the age of 69 years, he married his second wife (1588), and still continued to repel, with the power of truth and wit, the attacks and calumnies which his enemies, apostatized Calvinists (such as Volsec), Lutherans, and particularly the Jesuits, heaped upon him. They reported, in 1597, that he had died, and returned before his death to the Catholic faith. B., now 78 years old, met his assailants in a poem full of youthful enthusiasm, and resisted, in the same year, the attempts of St. Francis de Sales to convert him, and the alluring offers of the pope. In 1600, he visited Henry IV, in the territory of Geneva, who presented him with 500 ducats. After having enjoyed excellent health during almost his whole life, he died, Oct. 13, 1605, of old age. By a rigorous adherence to the principles of Calvin, in whose spirit he presided over the church of Geneva, he had become the chief of his party, and enjoyed for 40 years the reputation of a patriarch, without whose approbation no important step was taken. In order to preserve the unity and permanency of his church, he sacrificed his own opinions to the established dogmas of Calvin, and rendered the most important services by his various erudition, his constant zeal, his active spirit, his brilliant eloquence, and even by the impression of his personal appearance, which age made still more striking. He defended his doctrines with ability and enthusiasm, and often with merciless severity and obstinacy. Among his many works, his exegetic writings, and an able and correct History of Calvinism in France, from 1521 to 63, which is ascribed to him, are still much esteemed. His correspondence with Calvin is to be found in the ducal library at Gotha. A catalogue of his works is given by Anthony la Faye, who has written an account of his life.

Bezant; round, flat pieces of pure gold, without any impression, supposed to have been the current coin of Byzantium. This coin was probably introduced into coat-armor by the crusaders. Doctor Henry, in his History of England, estimates its value at 9*s.* 4½*d.* sterling. The gold offered by the king of England on the altar, at the feast of the Epiphany and the Purification, is called *bezant*.

Bezoar (Persian, *pazar*, a goat, or *pazachar*, against poison); a concretion or calculus, of an orbicular or oval form, met with in the bodies of various animals. These substances are found in the stomach, gall-bladder, salivary ducts, and pineal gland, but especially in the intestines of certain animals of the order *ruminantia*. They were formerly celebrated for their supposed medicinal virtues, and distinguished by the name of the countries from which they came, or the animals in which they were found. They were considered as highly alexipharmic; so much so, that other medicines, supposed to possess the same virtues, obtained the name of *bezoardics*. So efficacious were these once thought, that they were eagerly bought for 10 times their weight in gold. Besides being taken internally, they were worn around the neck, as preservatives from contagion. For this purpose, it is said, that in Portugal it was customary to hire them at the price of about 10 shillings per day. On analysis, these substances are found to contain, for the most part, bile and resin. It is almost needless to add, that the accounts of their extraordinary virtues must now be considered as totally fabulous.—A strange origin was assigned to the bezoar by some of the old naturalists. The Oriental stags, when oppressed with age and infirmity, were said to feed upon serpents, which restored their youthful vigor. To counteract the poison which by this means was absorbed into their system, they plunged into some running stream, leav-

ing their heads only above water. In this situation, a viscous fluid distilled from their eyes, which was indurated by the heat of the sun, and formed the bezoar.—The great value of the bezoar at one time gave birth to many imitations of it, and various tests have been proposed to detect the artificial stones. The following cruel and absurd one is given by Clusius:—Thread a needle, and draw the thread through a leaf plucked from a yew-tree; then pass the needle through a dog's foot, and leave the thread in the wound; when the dog becomes convulsed, and appears dying, mix some scrapings of bezoar with water, and moisten the animal's mouth with it; if he recover, the stone is genuine. Simpler methods, perhaps, are, immersion in warm water, which neither loses its own color, nor diminishes the weight of the bezoar: or rubbing it over paper smeared with chalk or quick-lime; the genuine stone leaves a yellow hue on the first, a green one on the last.

Bia; a name given by the Siamese to those small shells which are called *cowries* throughout almost all the other parts of the East Indies. (See *Cowries*.)

Biagioli, Josaphat; a learned Italian linguist at Paris. Before the invasion of Italy, by the joint forces of Austria and Russia, in 1798, he was professor of Greek and Latin literature at the university of Urbino. As B. had shown himself a friend to the cause of liberty, he took refuge in Paris, and was appointed professor of Italian literature at a *prytaneum*, and delivered lectures before a splendid audience. He is the editor of the *Lettere del Card. Bentivoglio* (Paris, 1808—12), and author of a *Grammaire raisonnée de la Langue Italienne à l'Usage des François, suivie d'un Traité de la Poésie Italienne* (Paris, 1809), which obtained the approbation of the French institute, and has passed through four editions. He has also prepared a *Grammatica ragionata della Lingua Francese all' Uso degl' Italiani* (1812). His edition of the *Divina Commedia del Dante Alighieri* (Paris, 1818, 3 vols.), for the correctness of the text and the excellence of the commentary, is held in great esteem; but it has also contributed to the propagation of many new errors relating to Dante, partly from the editor's violent spirit of opposition to Lombardi. It obtained the honor of being reprinted in Italy (Milan, 1820, 16mo.) B. has published, at Paris, Petrarca, and the poems of Michael Angelo Buonarotti, with a commentary similar to that of Dante, and is now occupied with the composition of an Italian-French and French-Italian dictionary.

Bianchini, Francesco, born at Verona, 1662, studied mathematics, physics, anatomy and botany, at first under the Jesuits, afterwards (1680) at Padua. He was intended for the clerical profession, repaired to Rome, and there applied himself to jurisprudence, but continued at the same time the study of experimental physics, astronomy, &c., as well as of Greek, Hebrew, &c. Antiquities also became one of his favorite studies. He passed whole days amidst ancient monuments, was present at all the excavations in search of them, visited all the museums, and made drawings of the remains of antiquity with as much taste as skill. At the death of Innocent XI, cardinal Ottoboni ascended the papal throne under the name of *Alexander VIII*, and bestowed on B. a rich benefice, with the appointment of tutor and librarian to his nephew, the cardinal Pietro Ottoboni. Pope Clement XI also patronised him, and appointed him secretary to the commission employed in the correction of the calendar. B. was commissioned to draw a meridian in the church of St. Maria *degli Angeli*, and to erect a sun-dial. He successfully accomplished this difficult undertaking, with the assistance of Maraldi. Being on a tour through France, Holland and England, he formed the idea of drawing a meridian in Italy from one sea to the other, in imitation of that which Cassini had drawn through France. He was occupied eight years at his own expense in that work; but other employments withdrew his attention from it, and it remained unfinished. He concluded his career with two important works (1727), on the planet Venus and on the sepulchre of Augustus. He died in 1729. A monument was erected to his memory in the cathedral at Verona. He united the most extensive learning with modesty and the most amiable manners.

Bias; son of Teutamus; born at Priene, one of the principal cities of Ionia, about 570 B. C. He was a practical philosopher, studied the laws of his country, and employed his knowledge in the service of his friends; defending them in the courts of justice, or settling their disputes. He made a noble use of his wealth. His advice, that the Ionians should fly before the victorious Cyrus to Sardinia, was not followed, and the victory of the army of Cyrus confirmed the correctness of his opinion. The inhabitants of Priene, when besieged by Mazares, resolved to abandon the city with their property. On this oc-

casion, B. replied to one of his fellow-citizens, who expressed his astonishment that he made no preparations for his departure,—"I carry every thing with me." B. remained in his native country, where he died at a very advanced age. His countrymen buried him with splendor, and honored his memory. Some of his sayings and precepts are yet preserved. He was numbered among the seven sages of Greece.

Bibbiena, Fernando; a painter and architect. His father, Giovanni Maria Galli (a less distinguished painter and architect), named his son *B.* from his native town in Tuscany. The son was born at Bologna, 1657. Carlo Cignani (q. v.) directed his studies. B. was afterwards invited to Barcelona. The duke of Parma subsequently made him director of his theatres. Charles VI afterwards invited him to Vienna. Several beautiful buildings were erected in Austria from his plans. In his theatrical paintings, he has continued the vicious style of Borromini and others. His writings display extent and accuracy of knowledge. When considerably advanced in life, his weak sight prevented him from painting, and he occupied himself with the revision of his works, which he published anew at Bologna, 1725 and 1731, in 2 vols.; the first, under the title *Direzioni a' giovani Studenti nel Disegno dell Architettura civile:* in the second, he treats of perspective. He finally became blind, and died 1743. His three sons extended their father's art through all Italy and Germany. Antonio succeeded to his father's place at the court of the emperor Charles VI. Giuseppe died at Berlin, and Alessandro in the service of the elector palatine. A collection of B.'s decorations has been published at Augsburg.

Bible; a *book*, from the Greek βιβλος, which signifies the soft bark of a tree, on which the ancients wrote. The collection of the Sacred Writings, or Holy Scriptures of the Christians, is called the *Bible*, or the *Book*, by way of excellence. Some of these writings, which are also received by the Jews as the records of their faith, are called the *Old Testament*, or *writings of the old covenant*, because the Jewish religion was represented as a compact or covenant between God and the Jews, and the Greek word for covenant (διαθηκη) signifies also *last will*, or *testament*. The same figure was applied to the Christian religion, which was considered as an extension of the old covenant, or a covenant between God and the whole human race. The sacred writings peculiar to the Christians are, therefore, called the *Scriptures of the New Testament*. (See *Testament*.) The order of the books of the Old Testament, as they are arranged in the editions of the Latin version, called the *Vulgate* (q. v.), according to the decree of the council of Trent (sess. 4), is as follows:—Genesis, Exodus, Leviticus, Numbers, Deuteronomy, Joshua, Judges and Ruth; I Samuel, or I Kings; II Samuel, or II Kings; I Kings, otherwise called III Kings; II Kings, otherwise called IV Kings; I Esdras (as it is called in the Septuagint (q. v.) and Vulgate), or Ezra; II Esdras, or (as we call it) Nehemiah; *Tobit, *Judith, Esther, Job, Psalms, Proverbs, Ecclesiastes, Song of Solomon, *The Book of Wisdom, *Ecclesiasticus, Isaiah, Jeremiah and *Baruch; Ezekiel, Daniel, Hosea, Joel, Amos, Obadiah, Nahum (which, in our editions, is placed after Micah and before Habakkuk), Jonah (which we place after Obadiah), Micah, Habakkuk, Zephaniah, Haggai, Zechariah, Malachi, *I Maccabees and *II Maccabees. (Those to which an asterisk is prefixed are, by Protestants, considered apocryphal. q. v.) The books received by the Jews were divided by Ezra into three classes:—1. The Law, contained in the Pentateuch, (q. v.) or five books of Moses. 2. The Prophets, comprising Joshua, Judges and Ruth, I and II Samuel, I and II Kings, I and II Chronicles, Isaiah, Jeremiah and Lamentations, Ezekiel, Daniel, the 12 minor prophets, Ezra, Nehemiah and Esther. 3. The Cetubim, or Hagiographa, that is, *holy writings*, containing the Psalms, the Proverbs, Ecclesiastes and the Song of Solomon. These books were written in the Hebrew language (q. v.), while those which are rejected from the canon as apocryphal by the Protestants, are found only in Greek or Latin. The books of Moses were deposited, according to the Bible, after his death, in the tabernacle, near the ark: the other sacred writings, it is further said, were successively deposited in the same place, as they were written. After the building of the temple, they were removed by Solomon to that edifice: on the capture of Jerusalem by Nebuchadnezzar, the autographs probably perished, but numerous copies were preserved, as is inferred from allusions in writers subsequent to the Babylonish captivity. It is generally admitted, that the canon of the Old Testament was settled soon after the return from Babylon, and the reëstablishment of the Jewish religion. This work was accomplished, according to the traditions of the Jews, by Ezra, with the

assistance of the great synagogue, who collected and compared as many copies as could be found. From this collation a correct edition of the whole was prepared, with the exception of the writings of Ezra, Malachi and Nehemiah, which were added by Simon the Just. When Judas Maccabæus repaired the temple, which had been destroyed by Antiochus Epiphanes, he placed in it a correct copy of the Hebrew Scriptures, whether the autograph of Ezra or not is not known. This copy was carried to Rome by Titus. The division into chapters and verses is of modern origin. Cardinal Hugo de Sancto Caro, who flourished in the 13th century, having divided the Vulgate into chapters, for convenience of reference, similar divisions were made in the Hebrew text by rabbi Mordecai Nathan, in the 15th century. The present division into verses was made by Athias, a Jew of Amsterdam, in his edition of 1661. The punctuation is also the work of modern scholars. Biblical critics divide the Scriptures of the Old Testament into the Pentateuch, or five books of Moses; the historical books, from Joshua to Esther inclusive; the doctrinal or poetical books of Job, Psalms, Proverbs, Ecclesiastes and the Song of Solomon; the prophetical books.—The most esteemed manuscripts of the Hebrew Bible are those of the Spanish Jews. The most ancient are not more than seven or eight centuries old: the famous manuscript of the Samaritan Pentateuch, in the possession of the Samaritans of Sichem, is only 500 years old: a manuscript in the Bodleian library is thought to be 700 years old: one in the Vatican is supposed to have been written in 973. In some manuscripts, the Masora (q. v.) is added.—The printed editions of the Hebrew Bible are very numerous. The earliest were printed in Italy. The first edition of the entire Hebrew Bible was printed at Soncino, in 1488. The Brescian edition of 1494 was used by Luther, in making his German translation. The editions of Athias, a Jew of Amsterdam, 1661 and 1667, are much esteemed for their beauty and correctness. Van der Hooght followed the latter. Doctor Kennicott did more than any one of his predecessors to settle the Hebrew text. His Hebrew Bible appeared at Oxford, in 1776—1780, 2 vols., folio. The text is from that of Van der Hooght, with which 630 MSS. were collated. De Rossi, who published a supplement to Kennicott's edition (Parma, 1784—99, 5 vols., 4to.), collated 958 MSS. The German Orientalists, Gesenius, De Wette, &c., in recent times, have done very much towards correcting the Hebrew text. The earliest and most famous version of the Old Testament is the Septuagint, or Greek translation. The Syriac version, called the *Peschito*, was made early in the second century. It is celebrated for its fidelity. The Coptic version was made from the Septuagint, some time before the seventh century. The Gothic version, by Ulphilas, was also made from the Septuagint, in the fourth century. The most important Latin version is the Vulgate. (For an account of the principal polyglots, see *Polyglot*.)—The books of the New Testament were all written in Greek, unless it be true, as some critics suppose, that the Gospel of St. Matthew was originally written in Hebrew. Most of these writings have always been received as canonical; but the Epistle to the Hebrews, by an uncertain author, that of St. Jude, the second of Peter, the second and third of John, and the Apocalypse (q. v.) have been doubted. Eusebius distinguishes three sorts of books connected with the New Testament:—1. those which have always been unanimously received, namely, the four Gospels, the Acts of the Apostles, 13 Epistles of Paul, the first Epistle of Peter, and the first of John: 2. those which were not received, at first, by all the churches; of these, some which have been already mentioned, though at first rejected by some churches, have been since universally received; others, such as the Books of the Shepherd, the Letter of St. Barnabas, the two Epistles of St. Clement, have not been generally acknowledged as canonical: 3. books forged by heretics, to maintain their doctrines; such are the Gospels of St. Thomas, St. Peter, &c. The division of the text of the New Testament into chapters and verses was introduced earlier than that of the Old Testament; but it is not precisely known when, or by whom. (For the numerous translations of the Bible, in modern times, see the article *Bible Societies*, and the annual reports of these societies, particularly of the British and foreign Bible society.) In Biblical criticism, the Germans have, without doubt, done more than any other nation; and we should far exceed our limits, if we were to attempt an enumeration of their works in this department. (See *Wette*, *Griesbach*, *Gesenius*, *Schleiermacher*, *Michaelis*, &c.)—The whole Bible was translated into Saxon by Bede, in the beginning of the eighth century. The first English translation, by an unknown

hand, is supposed to have been made near the end of the 13th century. Wickliffe's translation of the entire Bible from the Vulgate, 1380, was first printed 1731. The first printed edition of any part of the Scriptures in English was a translation of the New Testament from the original Greek, published by Tindal, 1526. The whole impression was bought up and burnt by the bishop of London. The authorized version now in use, in England and America, was made by the command of James I, and is commonly called *king James's Bible*. Forty-seven distinguished scholars were appointed for this purpose, and divided into six classes. Ten at Westminster were to translate to the end of II Kings; eight at Cambridge were to finish the remaining historical books and the Hagiographa: at Oxford, seven were engaged on the Prophets: the four Gospels, Acts of the Apostles and Apocalypse were assigned to another company of eight at Oxford; and the Epistles were allotted to a company of seven at Westminster: the apocryphal books were to be translated by a company at Cambridge. Each individual translated all the books allotted to his class. The whole class then compared all the translations, and adopted the readings agreed on by the majority. The book, thus finished, was sent to each of the other classes. This translation occupied three years. Copies were then sent to London, one from each of the above-named places. Here a committee of six, one from each class, reviewed the whole, which was last of all revised by doctor Smith and doctor Bilson, bishop of Winchester. It was printed in 1611. The latest and most complete revision was made by doctor Blayney, Oxford, 1769. (For an account of the German translation, see *Luther*, and *Reformation*. As a general book of reference, relating to the literature of the Bible, Horne's Introduction to the Study of the Scriptures may be consulted. See also Harris's *Natural History of the Bible*.)

Bible, Geography of, describes Palestine, and gives an account of the Asiatic countries bordering on Palestine, and of the provinces of the Roman empire into which Christianity was introduced, during the age of the apostles. The sources of this science are the Scriptures, the writings of Josephus, the geographical authors of antiquity,—Strabo, Ptolemy and Pomponius Mela,—and the *Onomasticon Urbium et Locorum Scripturæ Sacræ*, written by Eusebius, bishop of Cæsarea, in the fourth century, in Greek, and translated by Jerome into Latin. Among the learned moderns who have cultivated this science, so important for the interpreter of the Holy Scriptures, are Bachiene, Wells, and the Dutchman Ysbrand of Hamelsfeld. (See *Geography*.)

Bible Societies. A clergyman of Wales, whom the want of a Welsh Bible led to London, occasioned the establishment of the British and foreign Bible society, which was founded in London, March 7, 1804. It was called the *Bible society*, because its object was the distribution of the Bible; *British*, because its operations were first directed towards the poor of Great Britain; and *foreign*, because it proposed, as far as its means would permit, to send Bibles, in all languages, to all parts of the world. The Bibles distributed by the society were to be without additions and explanations, in order to give them a more universal circulation. In the same year, the first general meeting was held in London, which unanimously adopted the proposed plan. Lord Teignmouth was chosen president, and many bishops, lords and members of parliament accepted the office of vice-president. In 1815, 484 similar institutions had been formed in all parts of Great Britain, and connected with the former as a parent society, to support it with pecuniary contributions, and to receive, in return, a supply of Bibles. There are, besides, several Bible societies among the lower class of people, the members of which pay, weekly, a penny or a halfpenny to provide themselves, their children or other poor persons with Bibles. In Germany, Switzerland, Holland, Russia, Sweden, Denmark, America, similar Bible societies have been formed, and are connected with the British. The 24th annual report of the British and foreign Bible society in London, 1828, gives a list of editions of the whole or parts of the Scriptures, printed for the society, in the following languages:—English, Welsh, Gaelic, Irish, Manks, French, Basque, Breton, Flemish, Spanish, Portuguese, Italian, Dutch, Danish, Hebrew, Swedish, German, Polish, Greek (ancient and modern), Armenian (ancient and modern), Arabic, Coptic, Indo-Portuguese, Syriac, Carshun, Esquimaux, Mohawk, Ethiopic, Malay, Turkish, Hindostanee, Greenlandish, Amharic, Persian, Bohemian, Latin, Albanian. The same report gives the following summary of languages and dialects, in which the distribution, printing or translation of the Scriptures, in whole or in part, has been promoted by the so-

ciety, directly or indirectly:—Reprints, 42; retranslations, 5; languages and dialects in which the Scriptures had never been printed before the institution of the society, 58; new translations commenced or completed, 38; total, 143. The society provides many translations of single books of the Bible, or of the New Testament, in numerous languages and dialects of the nations of Middle and Eastern Asia, at Calcutta and Madras; as well as in the languages of the Levant, North Africa, &c. (e. g., the Arabic, Tartar, Syriac, and two dialects of the Ethiopic), at Smyrna, Malta, and other depôts of the Mediterranean; and aids all the Bible societies of the continent of Europe. It has agents in almost all parts of the inhabited globe, who travel at its expense, to discover the best means of diffusing the Bible, and to procure able translators and manuscripts of ancient translations for the use of the society. Pinkerton found, in Paris, translations of the Bible in the dialects of Northern Asia and Thibet, with the characters belonging to them, which had been brought to France, under Napoleon, from the archives of the *propaganda* at Rome. The most difficult translation was that into the Esquimaux language. According to the 24th report above-mentioned, published in 1828, there were issued in England, during the 24th year from the establishment of the society, Bibles, 137,162; Testaments, 199,108; purchased and issued for the society, in foreign parts, during the same period, Bibles, 212,024; Testaments, 818,834: total issued on account of the society, from its establishment, Bibles, 2,248,182; Testaments, 3,422,341; grand total, 5,670,523. In addition to this, the society has granted about £53,800 for distributing, in various parts of the European continent, French, German, Swedish and Danish Bibles and Testaments. The number of Bible societies throughout the world, given in the same report, is as follows:—In Great Britain and Ireland, connected with the British and foreign Bible society, 262 auxiliaries, 350 branches, and 1493 associations; in Ireland, connected with the Hibernian Bible society, 70 auxiliaries, 38 branches, and 18 associations; on the European continent and in the Ionian islands, 854 societies; in Asia, 13; in Africa, 4; in America, 549 (there are, in fact, 631 societies in America, in the present year, 1829); total, 3733.—In Germany, the following were the chief Bible societies in 1817:—1 at Hanover, where an edition of the Bible, of 10,000 copies, has been completed; 1 at Berlin; 1 at Dresden, which, besides a stereotype edition of the German Bible, has also published an edition, in the Wendish tongue, for Lusatia; 1 at Frankfort on the Maine. In Bavaria, the distribution of the Bible has been confined to the efforts of individuals. (180,000 copies of the Catholic translations of the New Testament, by Gossner and van Ess, had been distributed in Germany and Switzerland, up to 1821. Many of these reached the Austrian provinces, which at present are closed against German Bibles.) The society at Stuttgart has printed an edition of 10,000 Bibles and 2000 Testaments, which have already been taken up. Societies exist at Hamburg, Baden, Weimar, Bremen, Lübeck; at Schleswig-Holstein, Schwerin, Ratzeburg, Eutin, Brunswick, &c. (each of them having auxiliary societies). Protestant Switzerland has a Bible society of its own; so has the kingdom of the Netherlands, which provides its colonies with Bibles. In Paris, such a society was instituted, Dec. 6, 1818, for the Protestants in France. The means of this society were small (in 1820, not more than 58,212 francs had been received), and it had principally in view the supplying of schools, hospitals and prisons; but, as Catholics also have received the Bible, it has met with a strong opposition from the papal-jesuitical party in France. In Strasburg, an edition of 20,000 Bibles was printed for Alsace. In Sweden, the chief society in Stockholm have distributed a large number of Bibles and Testaments. In Norway and Denmark, editions have been published with the same view, and the Danish society has branches in Iceland and the West Indies. The Russian society in Petersburg has vied with the English, and some years since had printed the Bible in 31 languages and dialects spoken in the Russian dominions, among which is one in the modern Russian, since the translation of the church is in the Sclavonic, and unintelligible to laymen. This new translation has been joyfully received by the country people, and shows them the errors and many superstitions which disfigure the ritual of the Greek church. On this account, it will probably give rise to contests, which can hardly be terminated without a gradual reformation of the Greek church. Part of the clergy are opposed to the distribution of the Bible, and persecutions against zealous readers of the sacred book have already taken place in the more distant governments. The Gospels in the

Calmuc language and the Persian New Testaments are much sought for. A translation of the Bible for the Booriaits, Mongol worshippers of the Lama, near lake Baikal, is preparing, with the assistance of two young Booriaits of high birth, who embraced Christianity at Petersburg. Auxiliary societies have been formed at Irkutsk, Tobolsk, among the Kirghises, Georgians, and Cossacks of the Don. The word of God is carried from Odessa to the Levant. The bull of Pius VII, June 28, 1816, obtained by the archbishop of Gnesen, did not prevent the Poles from forming a society in Warsaw, under the protection of Alexander. In 1817, the distribution of the Bible by such societies was forbidden in Austria, and those already existing in Hungary were suppressed. Italy, Spain and Portugal have had, as yet, no Bible societies; France only one; but the English have provided them with Bibles in their own tongues. In the U. States of America, the great American Bible society, formed in 1816, acts in concert with the auxiliary societies, of which, in 1829, there were 630. The management of the society is intrusted to a board of managers; stereotype plates have been procured, and Bibles are issued at a low price for the auxiliaries, and for gratuitous distribution among the poor. During the first year, 6,410 copies of Bibles and Testaments were distributed. In 1827, the number amounted to 134,000, and, during the first 8 months of 1828, to 146,000. The whole number issued since the organization of the society is about 700,000. These have been mostly in English, Spanish and French, from the society's plates. The managers have occasionally purchased Bibles in Europe, and issued them to applicants, in German, Dutch, Welsh, Gaelic, Portuguese, modern Greek, and some other European languages. They have also furnished money to print translations into pagan languages, by American missionaries. They have in operation 8 power-presses and 20 hand-presses, and copies are prepared at the rate of 300,000 a year. Many of the auxiliary societies have undertaken to discover the number of families in their vicinity destitute of the Bible, and to supply them. It is the object of the society to supply every family in the U. States, before devoting much attention to distribution abroad. Yet Spanish America and Ceylon, Greece and the Sandwich islands, have been furnished with Bibles by the society. The colonies also exert themselves in this cause. Hayti has offered her assistance, and even the Esquimaux already read the Acts of the Apostles in their own language. A similar zeal for the distribution of the Bible has been awakened in Southern Africa and in India, where Bibles are published in the languages of the country: even the islands on the eastern coast of Asia are not neglected. In the Netherlands, there is a fraternal union of different sects for this purpose, as is also the case in other countries containing various sects. Such associations excite among different sects a feeling of mutual sympathy, by a consideration of their mutual participation in the most important truths of Christianity.—Such a general diffusion of the Bible is an event of great historical importance. Its translation into languages which have been hitherto destitute of all literature, and even of writing, must contribute greatly to the progress of intellectual cultivation throughout the earth, and must have an especial influence on the advancement of general philology. The Bible societies may be considered as assisting to pave the way for the introduction of European civilization into all the less enlightened regions of the earth. The societies adhere to the principle of publishing the Bible without notes, starting from the Protestant principle, that the Bible, and the Bible alone, is the foundation of Christian faith. Undoubtedly, the various sects of Christians, differing so greatly as they do, and always must, respecting certain points of faith and the interpretation of particular passages of the Scriptures, could not be made to co-operate with zeal in the distribution of the Bible, if the text were accompanied with commentaries. But now missionaries and ministers must supply, by verbal explanation, the place of notes, because it is clear to every body that the Bible cannot be understood without the explanation afforded by study. Thus the opinions of individuals, orally delivered, are substituted for the more precise and profound criticism of united commentators. It seems to us, that the friends of Bible societies and their opponents (a part of the Catholic clergy) have both run into extremes; the former by injudiciously distributing the Scriptures, in some cases, before people were fit to understand them; and the latter by an unqualified prohibition of the reading of the Bible by the laity. The order of the pope, that only certain editions and versions should be read by the Catholics, originated from views founded on the experience of all ages of Chris-

tianity, that men of pure intentions often fall into dreadful errors and absurdities from want of just direction in the study of the Bible. And it remains a fact not to be disputed by the most ardent defender of immediate and supernatural assistance to the reader of the Bible, that, being composed of parts extremely various in their character, written in times and countries very remote from us, often in metaphorical language, and intimately connected with the customs, views, history and language of particular nations, and even individuals, its real meaning is not to be found without an extensive study of many different branches of science, the results of which may be used to assist the less informed reader. History shows us, that the blackest crimes and the most egregious follies have been defended by the misapplication of the text of the Sacred Scriptures. It must be left to time to show what will be the ultimate effect of Bible societies. Undoubtedly it will be found, that some portion of their efforts have been made in vain, as was, indeed, to be expected; and, in many instances, they appear to us to have been made injudiciously. The extension of the habit of reading through so many parts of the world, we imagine, will be one of the greatest and most lasting consequences of the exertions of these societies.

Biblical Archæology is the science which describes the political state, manners and customs of the Jewish nation, as well as the usages of the early Christian church; consequently, the antiquities of the Bible. Civil relations, religious ceremonies, holy places, domestic customs and utensils, modes of dress, and other external circumstances, form the subject of this science. The antiquities of the Bible are partly Jewish, partly Christian. The sources of the former are the Old Testament, the works of Josephus and Philo, the Talmud, and the writings of the rabbins. The sources of Christian antiquities are the New Testament and the writings of the fathers, who lived and wrote soon after the age of the apostles. Without the knowledge of the manners and customs of a nation, many passages of their authors, which contain allusions to them, remain unintelligible, and, on this account, the knowledge of the antiquities of the Bible is necessary to the interpreter of the Holy Scriptures. Among the modern authors, who have written on Jewish antiquities, Voland, John Simonis, Ernst Aug. Schulz, George Lawrence Bauer, Warnekros de Wette and John Jahn particularly deserve to be mentioned. We may find information concerning Christian antiquities in the commentaries on the New Testament, and in the historians of the church. The Germans have particularly distinguished themselves in this department.

Bibliography (from βιβλιον, a book, and γραφω, I describe) was originally a branch of *archæography*, or the art of describing or explaining antiquities, and denoted skill in the perusing and judging of ancient manuscripts; but in its modern and more extended sense, it signifies the knowledge of books, in reference to the subjects discussed in them, their different degrees of rarity, curiosity, reputed and real value, the materials of which they are composed, and the rank which they ought to hold in the classification of a library. It is, therefore, divided into two branches, the first of which has reference to the contents of books, and may be called, for want of a better phrase, *intellectual* bibliography; the second treats of their external character, the history of particular copies, &c., and may be termed *material* bibliography. The object of the first kind is to acquaint literary men with the most valuable books in every department of study, either by means of *catalogues raisonnées* simply, or by similar catalogues accompanied with critical remarks. Bibliography belongs to those sciences, the progress of which is dependent, in a great degree, on external circumstances. It has been and still is cultivated most successfully in France. This is owing not only to the riches of the great and daily increasing public libraries, liberally thrown open to the use of the public, the large number of fine private collections, and the familiarity of its numerous literary men with books of all ages and countries, but, in a great degree, to the practical spirit of the nation which induces their bibliographers to keep constantly in view the supply of existing wants. Brunet's *Manuel du Libraire* was the first important work which contained, in an alphabetical form, a list of the most valuable and costly books of all literatures; Barbier's *Dictionnaire des Ouvrages Anonymes*, the first systematic and satisfactory treatise on this subject; Renouard's *Catalogue d' un Amateur*, the first, and, for a long time, the best guide of the French collectors; the *Bibliographie de la France*, the first work which showed how the yearly accumulation of literary works can be recorded in the

most authentic manner. No less valuable are the works of Peignot, Petit Radel, Renouard on the Aldines (see *Aldine Editions*), and many others. English bibliography can boast of but one of the advantages of the French; that is, of rich public and private collections; but the use of them is allowed only to a limited degree, and the English bibliographers are far behind the French. The works of doctor Adam Clarke (Bibliographical Dictionary, 1820) and of Robert Watt (*Bibliotheca Britannica*, 1819) are compilations of little value; the undigested collections of Beloe (Anecdotes of Literature, 1807), of Brydges (British Bibliographer, 1818; *Censura Literaria*, 1805), of Savage (the Librarian, 1808), and others, are destitute of judicious selection, and often of correctness. Ottley's Inquiry into the Origin and Early History of Engraving (1816), and Singer's Researches into the History of Playing Cards (1816), works which belong to very important points of bibliography, are deficient in correct criticism; and if we are not dazzled by the type, the paper and the engravings of Dibdin's productions (Typographical Antiquities, 1810; *Bibliotheca Spenceriana*, 1814; Bibliographical Decameron, 1817; Tour in France and Germany, 1821), we cannot be blind to the superficial acquirements of the author. There is now publishing, in England, the Bibliographer's Manual, an imitation of Brunet's *Manuel* abovementioned. It is to be completed in 12 parts. The learned Germans, little assisted by public, almost entirely destitute of private collections, consulting only the real wants of the science, have actively endeavored to promote it. Ersch is the founder of German bibliography. He gave it a truly scientific character by his extensive work, *Allgemeines Repertorium der Literatur* (Universal Repertory of Literature, 1793—1807), and by his *Handbuch der Deutschen Literatur* (Manual of German Literature). German bibliography is particularly rich in the literature of separate sciences; and the bibliography of the Greek and Latin literature, as well as the branch which treats of ancient editions, was founded by the Germans. The first attempt, in Germany, to prepare a universal bibliographical work, was made by Ebert (q. v.), who wrote, also, in the 10th number of Hermes, a review of the whole modern German bibliography. The booksellers' dictionary is a very valuable German bibliographical work. A supplement is published annually. The following are valuable German bibliographical works in particular departments of science and literature:—T. A. Nösselt's *Anweisung zur Kenntniss der Besten Allgemeinen Bücher in der Theologie*, 4th ed. Leipsic, 1800, and the continuation of it by Simon, Leipsic, 1813; C. F. Burdach's *Literatur der Heilwissenschaft*, Gotha, 1810, 2 vols.; W. Gf. Ploucquet's *Literatura Medica*, Tübingen, 1808, 4 vols. 4to.; T. G. Meusel's *Bibliotheca Historica*, Leipsic, 1782—1802, 11 vols. in 22 volumes, not finished; his *Literatur der Statistik*, Leipsic, 1816, 2 vols.; G. R. Böhmer's *Bibliotheca Scriptorum Historiæ Naturalis*, Leipsic, 1785—99, 7 vols.: Alb. Haller's *Bibliotheca Botanica*, Zurich, 1771, 2 vols., 4to.; *Anatomica*, Zurich, 1774, 2 vols., 4to.; *Chirurgica*, Bern, 1774, 2 vols., 4to., and *Medicinæ Practicæ*, Bern, 1776 et seq., 4 vols., 4to., &c.—Fred. Blume has lately published the first volume of *Iter Italicum*, containing an account of the archives, inscriptions and libraries in the Sardinian and Austrian provinces. Italian bibliography is no longer what it was in the times of Mazzuchelli, Audiffredi and Tiraboschi. A great indifference is almost universal in regard to the public libraries; the private collections are becoming more and more scarce, and the precious ones of count Cassano Serra and Melzi, in Naples and Milan, have been lately sold to England. The bibliographical works of Italy treat principally of the provincial libraries (one of the latest is Moreri's *Bibliografia della Toscana*, 1805): Gamba's *Serie de' Testi* (1812) is a very valuable work. The Dutch, Spaniards and Portuguese have, of late years, done little for this science; but the learned Bentkowsky's Polish Literature (1814) deserves the highest praise. The count Zechenyi, a Hungarian, published a catalogue of all Hungarian works, Pest, 1799—1807, 9 vols., 8vo., and 1 vol., 4to. Russia has produced, in the department of bibliography, little more than catalogues. In regard to particular sciences, many useful catalogues exist, commonly called *Bibliothecæ*. Well arranged and accurate catalogues of libraries, which are rich in particular departments, may be used with advantage by the bibliographer, as may, also, the annual catalogue of the book-fair at Leipsic. (See *Books, Catalogues of.*)—Directions for the study of bibliography are contained in Achard's *Cours de Bibliographie* (Marseilles, 1807, 3 vols.), Th. Hartwell Horne's Introduction to the Study of Bibliography (London, 1814, 2 vols.), and Gabr. Peignot's *Dictionnaire*

aisonné de Bibliologie (Paris, 1802—4, 3 vols.)

Material Bibliography, often called, by way of eminence, *bibliography*, considers books in regard to their exterior, their history, &c., and has been principally cultivated in France and England. The different branches of material bibliography (see, also, *Bibliomania*) may here be mentioned :—the knowledge of the ancient editions (*incunabula*, or, if classical authors, *editiones principes*), some of the best works on which are, G. Wfg. Panzer's *Annales Typographici* (Nuremberg, 1793—1803, 11 vols., 4to.), coming down to 1536; the *Annales Typographici*, by Maittaire (Hague, 1719 et seq., 11 vols., 4to.), which not only contains the titles, but investigates the subjects of works. More exact descriptions of particular ancient editions are found in Serna Santander's *Dictionn. Bibliogr. der 15ième Siècle* (Brussels, 1805, 3 vols.); Fossius' *Catalogus Codicum*, sec. 15, *Impressor. Bibliothecæ Magliabecchianæ* (Florence, 1793, 3 vols. fol.), and others. The study of rare books, on account of the vague principles on which it rests, is more difficult than is generally believed, and easily degenerates into superficial and capricious trifling. This has been more injured than promoted by I. Vogt's *Catalogus Librorum Rariorum* (Frankfort and Leipsic, 1793), and J. Jac. Bauer's *Bibliotheca Libror. Rarior. Universalis* (Nuremberg, 1770—91, 12 vols.) We may also mention here the catalogues of the books prohibited by the Roman church (*Indices Librorum Prohibitorum et Expurgatorum*). For the discovery of the authors of anonymous and pseudonymous works, we may use Barbier's *Dictionnaire des Ouvrages anonymes et pseudonymes* (Paris 1806—9, 4 vols.), which is valuable for its accuracy (but it contains only French and Latin works). We need not observe, what an important source of information, in the department of bibliography, are literary journals. (See *Bibliomania*.)

Bibliomancy; divination performed by means of the Bible; also called *sortes biblicæ*, or *sortes sanctorum*. It consisted in taking passages at hazard, and drawing indications thence concerning things future. It was much used at the consecration of bishops. It was a practice adopted from the heathens, who drew the same kind of prognostication from the works of Homer and Virgil. In 465, the council of Vannes condemned all who practised this art to be cast out of the communion of the church; as did the councils of Agde and Auxerre. But, in the 12th century, we find it employed as a mode of detecting heretics. In the Gallican church, it was long practised in the election of bishops; children being employed, on behalf of each candidate, to draw slips of paper with texts on them, and that which was thought most favorable decided the choice. A similar mode was pursued at the installation of abbots, and the reception of canons; and this custom is said to have continued in the cathedrals of Ypres, St. Omer and Boulogne, as late as the year 1744. In the Greek church, we read of the prevalence of this custom as early as the consecration of Athanasius, on whose behalf the presiding prelate, Caracalla, archbishop of Nicomedia, opened the Gospels at the words, "For the devil and his angels." *Matt.* xxv. 41. The bishop of Nice first saw them, and adroitly turned over the leaf to another verse, which was instantly read aloud: "The birds of the air came and lodged in the branches thereof." *Matt.* xiii. 32. But, this passage appearing irrelevant to the ceremony, the first became gradually known, and the church of Constantinople was violently agitated by the most fatal divisions during the patriarchate.

Bibliomania is a word lately formed from the Greek, and signifies a passion for possessing curious books. The true bibliomanist is determined in the purchase of books, less by the value of their contents, than by certain accidental circumstances attending them. To be valuable in his eyes, they must belong to particular classes, be made of singular materials, or have something remarkable in their history. Some books acquire the character of belonging to particular classes, from treating of a particular subject of interest to the bibliomanist; others from something peculiar in their mechanical execution, or from the circumstance of having issued from a press of uncommon eminence, or because they once belonged to the library of an eminent man. Some of these collections are of much intrinsic value. Among them are, various editions of the Bible (the most complete is at Stuttgart); collections of editions of single classics (e. g., those of Horace and Cicero, in the city library at Leipsic); the editions *in usum Delphini* and *cum notis variorum*; the editions of Italian classics printed by the academy *della Crusca*; works printed by the Elzevirs, by Aldus, Comino in Padua, and Bodoni (the most complete collection of Bodoni's editions is in the library of the duchess

d'Abrantes); the classics edited by Maittaire, Foulis, Barbou, Brindley, and others, and the celebrated Bipont editions; with others.—It was more customary in former times than at present to make collections of books which have something remarkable in their history; e. g., books which have become very scarce, and such as have been prohibited. Of the first sort, the collections of Engel and Salthon were formerly among the most considerable. The one at Dresden is among the largest now existing. Books distinguished for remarkable mutilations have also been eagerly sought for. Those which appeared in the infancy of typography, called *incunabula*, from the Latin *cunæ*, a cradle, principally the first editions (*editiones principes*) of the ancient classics, are still in general request. Much of the value of a book, in the eyes of a bibliomanist, depends upon the material of which it is composed. An enormous price is frequently given for splendid proof impressions of copperplate engravings, and for colored impressions, for works adorned with miniatures and illuminated initial letters; likewise for such as are printed upon vellum. (The most considerable collection of vellum copies was sold at auction, in 1815, at the sale of M'Carthy's books, in Paris. A bibliographical work upon this subject is now preparing by van Praet, in Paris.)—Works printed upon paper of uncommon materials (e. g., *Œuvres du Marquis de Villeto*, Lond. 1786, 16mo.), or various substitutes for paper (e. g., E. Bruckmann's Natural History of Asbestos, upon paper made of asbestos, Brunswick, 1727, 4to.), have been much sought after; likewise those printed upon colored paper. In Italy, the color of books of this sort is commonly blue; in France, rose-color; in some ancient German books, the color is yellow; sometimes, though rarely, green. A list of books of this class is to be found in Peignot's *Repertoire des Bibliographies speciales*, Paris, 1810.—Other books, in high esteem among bibliomanists, are those which are printed on large paper, with very wide margins. True bibliomanists often measure the margin by inches and lines. In English advertisements of rare books, some one is often mentioned as particularly valuable on account of its being "a tall copy." If the leaves happen to be uncut, the value of the copy is much enhanced.—Other works, highly valued by bibliomanists, are those which are printed with letters of gold or silver, or ink of singular color; e. g., 1. *Fasti Napolionei*, Paris, 1804, 4to., a copy on blue vellum paper, with golden letters; 2. *Magna Charta*, London, Whitaker, 1816, folio, three copies upon purple-colored vellum, with golden letters; also, books printed from copperplates. Catalogues of these have been made by Peignot and others.—In France and England, the bibliomania often extends to the binding. In France, the bindings of Derome and Bozerian are most valued; in England, those of Charles Lewis and Roger Payne, several specimens of whose skill are to be seen in the library of lord Spencer; among others, the Glasgow edition of Æschylus, 1795, the binding of which cost £16 7*s*. sterling. Payne is said to have sometimes received from 20 to 30 guineas for binding a single volume. This species of luxury is carried to such a height in London, that a copy of Macklin's Bible (4 vols. in folio), in red or blue morocco leather, costs 75 guineas, and Boydell's large edition of Shakspeare (9 vols. with large engravings) £132 sterling. Even the edges of books are often adorned with fine paintings. Many devices have been adopted to give a factitious value to bindings. Jeffery, a London bookseller, had Fox's History of King James II bound in fox-skin, in allusion to the name of the author; and the famous English bibliomanist Askew even had a book bound in human skin. In the library of the castle of Kœnigsberg are 20 books bound in silver (commonly called the *silver library*.) These are richly adorned with large and beautifully engraved gold plates, in the middle and on the corners. To the exterior decorations of books belongs the bordering of the pages with single or double lines, drawn with the pen (*exemplaire reglé*), commonly of red color—a custom which we find adopted in the early age of printing, in the works printed by Stephens. The custom of coloring engravings has been dropped, except in cases where the subject particularly requires it (for instance, in works on natural history, or the costumes of different nations), because the colors conceal the delicacy of the engraving. On this account, the colored copies of Durer's wood-cuts are esteemed less than those which are left uncolored. The other means of idle competition being almost all exhausted, the bibliomanists have lately hit upon the idea of enriching many works by the addition of engravings, illustrative indeed of the text of the book, but not particularly called for, and of preparing only single copies. Thus Longman, in London, offers an illustrated copy

of the otherwise common Biographical Dictionary of all the Engravers, by John Strutt (London, 1785—86, 2 vols. 4to.), which is increased, in this way, to 37 large vols., in folio, and costs not less than £2000 sterling. The library of Dresden has a similar copy of Buddæus's Historical Lexicon, of an earlier date. Among the auctions, where the bibliomania raged with the greatest fury, was that of the library of the duke of Roxburgh (q. v.), in London, 1812. Every work was bought at almost incredible prices. The first edition of Boccaccio, published by Valdarfer, in 1471, was sold for £2260 sterling; to the memory of which a bibliomanio-Roxburgh club was founded in the following year, of which lord Spencer is president. It meets yearly on the 13th of July, the anniversary of the sale of Boccaccio, in the St. Alban's tavern. No further evidence is necessary to show that bibliomania, which flourished first in Holland (the seat likewise of the *tulipomania*), towards the end of the 17th century, prevails at present in England to a much greater extent than in France, Italy or Germany. —Thomas F. Dibdin's Bibliomania or Book-madness (London, 1811), and his Bibliographical Decameron (London, 1817, 3 vols.), contain many useful directions for the assistance of collectors of books.—The modern bibliomania is very different from the spirit which led to the purchase of books, in the middle ages, at prices which appear to us enormous. External decorations, it is true, were then held in high esteem; but the main reason of the great sums then paid for books was their scarcity, and the difficulty of procuring perfect copies before the invention of the art of printing. There is sometimes found a rage for possessing books, without reference to the value of their contents, or the other circumstances which have been mentioned as influencing the bibliomanist. A priest in Saxony is said to have murdered three persons, with a view of getting possession of their libraries. These, however, he did not read.

Bicètre; a castle and village in the neighborhood of Paris, situated on a hill, and commanding one of the finest prospects of Paris, of the course of the Seine, and of the environs. Louis XIII erected the castle for the residence of invalids. When Louis XIV afterwards erected the great *hôtel royal des invalides*, B. became a great hospital, for which it is particularly adapted by its healthy situation: water only was wanting in its vicinity, to obtain which a well was dug in the rock (1733). B. contains also a house of correction (*maison de force*) for dissolute persons, swindlers, thieves, &c. Since the revolution, a prison for criminals condemned to the galleys has been erected here, from which they are transferred to the public ship-yards. In the prison and the house of correction are shops for the grinding of glass, and for other kinds of work, in which the prisoners are usefully employed. In the hospital of B., 2200 beds are devoted to the reception of aged patients. No one is admitted under the age of 70 years. They are attended to with the greatest care, and fabricate neat little works of wood and bone, known in France by the name of *Bicètre works*. A large hospital for incurable madmen has also been erected since the revolution.

Bidassoa, a boundary river between Spain and France, rises in the Spanish territory, becomes a boundary at Vera, and is navigable to Biriatou at high tide. It forms the isle of Pheasants, or the island of Conference, where the peace of the Pyrenees was concluded (1659), and falls into the bay of Biscay, between Andaye and Fontarabia. On the Spanish side of the river, on the margin of the valley through which it flows, is an advantageous position, near St. Marcial, which commands the great road to Bayonne, before which (Aug. 31, 1813) 8000 Spaniards repulsed a French force of double that number, who attempted to force this position in order to relieve St. Sebastian.

Biddle, John, a celebrated Socinian writer, was born in 1615, at Wotton-under-Edge, in Gloucestershire. He entered Magdalen college, Oxford, in his 19th year. He graduated as A. M. in 1641. Being led to doubt of the doctrine of the Trinity, he drew up 12 arguments on the subject; in consequence of which he was committed to jail by the parliamentary committee then sitting at Gloucester, but was liberated on security being given for his appearance when called for. About six months afterwards, he was examined before a committee of the parliament, to whom he readily acknowledged his opinion against the divinity of the Holy Ghost. His Twelve Arguments were now ordered to be burnt by the common hangman. He however persisted in his opinion, and, in 1648, published two tracts, containing his Confessions of Faith concerning the Holy Trinity, and The Testimonies of Irenæus, Justin Martyr, and several other early writers on the same subject. These publications in-

duced the assembly of divines to solicit parliament to decree the punishment of death against those who should impugn the established opinions respecting the Trinity and other doctrinal points, as well as to enact severe penalties for minor deviations. The parliament indulged these ministers in their intolerant request, which immediately exposed Biddle, who would neither consent nor recant, to the loss of life; but difference of opinion in the parliament itself, and the penalties to which this sweeping measure rendered many in the army liable, prevented its execution. He was, some time after, again remanded to prison, by the zeal of president Bradshaw, and remained for some years in confinement, subjected to the greatest privations. A general act of oblivion, in 1651, restored him to liberty, when he immediately disseminated his opinions, both by preaching and by the publication of his Twofold Scripture Catechism. A complaint being made to Cromwell's parliament against this book, he was confined in the gate-house for six months. Cromwell banished him to St. Mary's castle, Scilly, where he assigned him an annual subsistence of a hundred crowns. Here he remained three years, until the protector liberated him, in 1658. He then became pastor of an independent congregation, and continued to support his opinions, until fear of the Presbyterian parliament of Richard Cromwell induced him to retire into the country. On the dissolution of that parliament, he preached as before, until the restoration, which obliged him to confine his exertions to private preaching. He was, however, in June, 1662, apprehended at one of the private assemblies, and, upon process of law, fined £100, and ordered to lie in prison until it was paid. He fell a martyr to this sentence, by catching one of the distempers so common at that time in jails, and died in Sept. of this year, in the 47th year of his age, a martyr to religious intolerance. The private character of this courageous sectarian, like that of most of those who suffer from principle, was moral, benevolent and exemplary; and his learning and logical acuteness rendered him very fit to gain proselytes. He did not agree in all points with Socinus, but was apparently unsolicitous to establish a perfect agreement. Toulmin styles him the *father of the modern Unitarians*.

Bidpai. (See *Pilpay*.)

Bielefeld; a town in the province of Westphalia, near Prussian Minden; lon. 8° 27′ E.; lat. 51° 53′ N.; population, 6000. The best German linens are manufactured here, and exported, in large quantities, to South America.

Bièvre, marquis de, marshal, born 1747, served in the corps of the French musketeers, was a life-guard of the king of France, and acquired much reputation by his puns and repartees. After publishing several entertaining works, he composed (1783) *Le Séducteur*, a comedy in verse, for the theatre, which has maintained its place on the stage, although it is bad both in plan and execution. When he was introduced to Louis XV, the king wished to hear a *calembourg* (pun) of his. *Donnez-moi un sujet, sire*, said B.—*Faites-en un sur moi.—Sire, le roi n'est pas un sujet*, was the witty answer of B. In 1789, he went to Spa for the benefit of his health, and died there. *Mes amis*, he said, dying, *je m'en vais de ce pas* (*de Spa*). He has written several works; among others, an *Almanac des Calembourgs*. There is also a collection of his jests called *Bièvriana*.

Bigamy, in the canon law, means being twice married; in the common acceptation of the word, as a term of municipal law, it means the being married to two wives or husbands at the same time. Though the laws relating to plurality of wives or husbands might, with more strict propriety, be treated of under the head of *polygamy*, they are more usually brought under that of *bigamy;* and, in compliance with this usage, they will be introduced in this place. The laws of every civilized society make some provision respecting this subject. By the statute of 4 Edward I, stat. 3, c. 5, the marrying of a second husband or wife, the first being alive, was made felony; and, by that of 2 James I, c. 11, this crime was made punishable by death. But the same statute provided that, where either party was absent beyond seas for seven years, whether known or not known to the other party to be alive, or was absent, though not beyond seas, for the same period, and not known by the other to be alive, the other party was at liberty to marry again. The determination of bigamy involves the consideration of what constitutes a valid marriage. If a person be married within the age of consent, which, in England, in the case of the husband, is 14, and in that of the wife 12 years, or was otherwise incapable of making such a contract; or in case the marriage was not celebrated with the forms and ceremonies required by law; in these cases, a second marriage does not subject the party to the penalty

of bigamy. The statute of James I has been adopted in most of the U. States as to the description of the crime, but the American laws generally differ from it as to the penalty, having assigned, heretofore, instead of death, as provided by the English statute, the punishment of whipping, setting on the gallows, &c., which latter is the punishment in France; but most, if not all of the U. States, have now dispensed with these corporeal inflictions, some of them prescribing imprisonment and hard labor for a number of years, according to the discretion of the court; others leaving it to the verdict of the jury to fix the period of imprisonment.

Big. (See *Barley.*)

Bignon, Louis Edward, born 1771, at Meilleraye, department of Lower Seine, studied at Paris, in the *collège Lisieux.* He approved the principles of the revolution in 1789, but was proscribed in 1793, because he opposed all violent measures. He therefore joined the army. In 1797, he entered on the diplomatic career. In Berlin, where the royal family of Prussia bestowed on him many marks of favor, he was, in 1801, secretary of legation, and, in 1802 and 1803, *chargé d'affaires.* From 1803 to 6, he was minister plenipotentiary at the court of Cassel, where, the day before the battle of Jena, he proposed to the elector a treaty of neutrality, which was declined. After the entry of the French troops into Berlin, he was appointed imperial commissary to the Prussian states. He was afterwards charged with the general administration of the domains and finances in the countries taken possession of until the end of 1808. He asserts, that he conducted this difficult business with as much mildness as possible, and that he has since received many proofs of gratitude from the people among whom he acted. In 1809, he was minister plenipotentiary to the grand duke of Baden, when an imperial decree, dated Schönbrunn, appointed him administrator-general in Austria. He was afterwards intrusted with an important mission to Warsaw, with secret instructions: here he remained about three years. At the opening of the campaign in 1812, M. de Pradt succeeded him, and he was appointed imperial commissary at the provisory government in Wilna. After the retreat from Moscow, he took the place of M. de Pradt in the embassy at Warsaw, and, in conjunction with prince Poniatowski, succeeded in delaying for four months the retreat of the Austrian allied army under prince Schwarzenberg, afterwards under general Frimont, until the scattered Polish corps, of about 7000 men, were collected under Poniatowski in Cracow. This was increased to 20,000 men, and made its retreat, in May, through Austria into Saxony. B. now repaired to the French headquarters at Dresden, and remained there, with the other members of the diplomatic corps, during the siege, until the capitulation. As he had procured passports from the confederation of the Rhine for several foreign ministers, prince Schwarzenberg caused him to be escorted by one of his aides to the French out-posts at Strasburg. On his arrival in Paris, Dec. 7, 1813, he brought to the emperor the first information of the defection of Murat. He soon after retired into the country. On the restoration of the Bourbons, he wrote his *Exposé comparatif de la Situation de la France et celle des principales Puissances de l'Europe*, in which he showed great penetration, and also proved himself a true Frenchman of the school of Napoleon. During the "hundred days," Napoleon appointed him under-secretary of state for foreign affairs, and, in 1820, several departments chose him their deputy. He spoke against the law of exception, and advocated the recall of the exiles, reminding the ministers of certain secret circumstances, on which he did not think proper to explain himself more fully. B. also advocated the law of election. In 1820, he wrote *Des Proscriptions*, in which he paints the struggle for liberty against every kind of tyranny. His latest writings on national disputes have attracted much notice; for instance, *Coup d'Œil sur les Démêlés des Cours de Bavière et de Bade* (1818), and particularly his work *Du Congrès de Troppau* (1821), his *Lettre sur les Différends de la Maison d'Anhalt avec la Prusse*, and his *Les Cabinets et les Peuples* (Paris, 1824).

Bija-pur, or Vijaya-puri; a city of Hindostan, formerly capital of the province of Beejapoor (q. v.), called *Viziapoor*, by the European travellers of the three last centuries. The city is 306 miles N. Seringapatam, 384 N. W. Madras; lon. 75° 47′ E.; lat. 16° 46′ N. It is situated in a fertile plain, and is of very great extent, consisting of three towns within each other: the innermost is the citadel, a mile in circuit; the next a fort, eight miles in compass; and the exterior is environed with walls many miles in circuit. But a great proportion of the space is covered with ruins. It is thinly inhabited, but the population is unknown. The inhabitants affirm, that, according to au-

thentic records, it contained, in the time of its prosperity, 984,456 houses, and 1600 mosques; and travellers are of opinion that the latter number is not exaggerated. It was taken by Aurangzeb in 1689, when, it is said, 15,000 cavalry could encamp between the fort and the city wall. It was one of the wealthiest cities of Asia. The fort is protected by high walls, with massive towers, and is surrounded by a ditch. It has seven gates, and contains several cannon of enormous dimensions, particularly one called the *sovereign of the plains*.

Bilbao. (See *Bilboa*.)

Bilboa, or Bilbao, or Vilvao, a Spanish province in Biscay. The capital, of the same name, is a seaport on the Ybaiçabal, in a plain surrounded with high mountains; lon. 3° 4′ W.; lat. 43° 16′ N.; population, 15,000. It contains about 1200 houses, part of which are built on piles. The harbor is good, and well frequented. Between 500 and 600 vessels visit this port annually; and the yearly export of wool is estimated at 50 or 60,000 sacks of 2 cwt. each. The air is healthy; the inhabitants are strong, robust, and live long. It is well supplied with water and provisions: fish are very abundant; and the environs are fertile in legumes and fruits. It contains 5 parishes and 12 religious houses. Among the laws peculiar to the town is one against ingratitude. Its commerce principally consists in wool and iron.

Bilderdyk, William, born at Amsterdam, 1750, lives at Leyden, and is now considered one of the greatest lawyers in Holland—a man of learning in the fullest extent of the word, and, according to the judgment of the Dutch critics, one of the greatest poets of the present age. He studied the classics at Leyden, chiefly under Ruhnken and Valkenaer. In 1776, he obtained from the learned society of Leyden, whose judgment was always respected, the first prize for a poem on the influence of poetry upon government. In the following year, he obtained from the same society two prizes for an ode and a didactic poem, On True Patriotism. Since that period, he has ranked with Feith and madame de Launoy, among the first Dutch poets. The present age is the epoch of the modern Dutch school of poetry, in which, besides B., Feith and Launoy, and particularly Bellamy, Helmers, Tollens, Loots, van Hall, Kinker, Klyn and others are distinguished. B. introduced into Dutch poetry iambics and hexameters, rather to show his talent for overcoming difficulties of all kinds than from preference to these measures, which, on the contrary, he declared not admissible into Dutch poetry. In 1780, he obtained a new prize for a poem, on the connexion of poetry and eloquence with philosophy. He added to this poem, some time afterwards, an important commentary, which showed him to be a man of learning and a philologer. B., besides, devoted himself to law, at the Hague, with great success. On the invasion of the Netherlands by the French, he left his country on account of his adherence to the hereditary stadtholder, and removed to Brunswick, where he studied the German language and poetry, and afterwards to London, where he delivered, in the French language, lectures on literature and poetry, which were numerously attended. After the new order of things was firmly established in Holland, he returned, in 1799, and soon afterwards published some of his principal works. Among these are a didactic poem on astronomy, and the masterly imitations of Delille's *L'Homme des Champs*, and Pope's Essay on Man. Louis Bonaparte, on his accession to the throne, appointed him his teacher of Dutch, and one of the first members of the national institute founded by him. After the incorporation of Holland into the French empire, B.'s muse was silent; but she rose the more vigorously after the deliverance of his country. Perhaps there is no poem of our time superior in fire, vigor and enthusiasm, to *Holland's Verlossing*, the joint composition of B. and his wife, who is a successful poetess. When Napoleon returned from Elba, B. produced a number of war-songs, which are considered among the best in Dutch poetry. He published his *Mengelpoezy* (Miscellaneous Poems, two small volumes, Rotterdam, 1823, second edition), which contains some ballads and imitations of Ossian. We may also mention that he is a bitter enemy of German literature.

Bildge. (See *Bilge*.)

Bile; a yellowish-green liquid substance, of a bitter taste. Man and many animals have, on the inferior surface of the liver, a peculiar bladder, in which the bile, formed by the liver from the blood, is preserved. It consists of water and several other substances. The water constitutes the greatest part, and keeps the other parts in a state of solution. The remaining ingredients are a yellow, very bitter, fusible resin, which contributes most to the taste of the bile; a small por-

tion of natron; some mineral alkaline salts; some oxyde of iron; a small quantity of a yellowish substance, which is only partly dissolved in the natron; and a considerable portion of albumen. Thenard and Berzelius have done much to determine the ingredients of the bile. Its principal use seems to be, to separate the excrement from the chyle, after both have been formed, and to produce the evacuation of the excrement from the body. It is probable that these substances would remain mixed together, and they would, perhaps, even be partly absorbed together, were it not for the bile, which seems to combine with the excrement, and, by this combination, to facilitate its separation from the chyle, and thus to prevent its absorption. Fourcroy supposes that the bile, as soon as it is mixed with the contents of the intestinal canal, suffers a decomposition; that its alkali and saline ingredients combine with the chyle, and render it more liquid, while its albumen and resin combine with the excrementitious matters, and gradually render them less fluid. From the late experiments of Berzelius on fæces, it cannot be doubted that the constituents of the bile are to be found in the excrementitious matter; so that the ingenious theory of Fourcroy is so far probable. The bile also stimulates the intestinal canal, and causes it to evacuate its contents sooner than it otherwise would do; for when there is a deficiency of bile, the body is constantly costive.—Biliary calculi, or gall-stones, are sometimes found in the gall-bladders of men and animals. They are more rarely met with in the substance and body of the liver. Those that are found in the human subject consist, principally, of that peculiar substance, called, by Fourcroy, *adipocire*. They are of a white, grayish-brown, or black color. The calculi found in the gall-bladders of quadrupeds have been thought to consist almost entirely of inspissated bile; but, though much less complicated than the corresponding concretions in the human subject, they must contain something more than the inspissated fluid, since they are insoluble, both in alcohol and water.

Biledulgerid (*Bhelad al Dsherid*, country of dates); a country in Northern Africa, south of mount Atlas, bounded on the north by Tunis, on the west by Algiers and the Sahara, on the east by Tripoli; supposed to be about 180 miles square. In the desert are oases (q. v.), which are cultivated and watered like gardens. At the foot of mount Atlas, the winds which come from these mountains allay the heat of the climate. The chief products of the oases are barley of an excellent kind, used by the caravans, and dates, which are no where else so excellent. Much dew falls in the oases, rain but seldom. All the productions of the tropics, which can ripen without rain, grow here in abundance. The Berbers who live here, as likewise the Negroes and Arabs, carry on trade by means of caravans. A large proportion of the young men are destroyed by the change of climate to which they are thus exposed, as also by bad nourishment and epidemic fevers. Certain parts of this country, called Dara, Tasilet and Segelmesse, belong to Morocco; to Algiers belongs Wadreag, and to Tunis Tozer. Gademes, Welled-Sidi and Mosselemis are independent. Little is known of the customs, laws, &c., of the inhabitants of B.

Bilin, mineral spring of; a celebrated spring near the town of Bilin, in Bohemia. The water is clear, has a sourish taste, and mantles, particularly if mixed with wine and sugar. The temperature of the spring is 59° Fahrenheit. The water is used with advantage in many complaints.

Bilious Fever. (See *Fever*.)

Bill of Exchange is a written request or order to one person to pay a certain sum of money to another, or to his order, at all events; that is, without any qualification or condition. The person who makes the bill is called the *drawer*; the person to whom it is addressed, the *drawee*, and the person to whom, or whose order, on the face of the bill, it is payable, the *payee*. If the drawee accepts the bill, he thereby becomes the *acceptor*. A *promissory note* differs from a *bill of exchange* in being merely a promise to pay money by the maker, instead of being a request to another person to pay it, to the payee. The expression *promissory note* is not strictly confined to *negotiable notes*, or those payable "to bearer," or to the payee named in it, "or his order," but is more frequently used to denote such instruments; and we shall consider promissory notes in this sense in the present article, since the same rules and principles are, in a great degree, applicable to such notes and to bills of exchange. The maker of the note answers to the acceptor of the bill, since he is the party promising to pay it; whereas the maker or drawer of a bill of exchange does not directly promise, on the face of the instrument, to pay it, but merely requests the drawee to do so: this is, however, construed to be a

virtual promise that the drawee, on the presentment of the bill for acceptance, and demand of payment according to its tenor, will pay it, and a conditional virtual promise, that he, the drawer, will pay it, in case of the drawee's failing either to accept it on due presentment, or to pay it on due demand. *Bank checks* are of a character similar to promissory negotiable notes, as to the rules by which the liabilities and rights of the parties to them are determined, with this difference in their common form, that promissory notes are usually made payable to the payee or "his order," whereas checks, as also bank-notes, are usually made payable to the "bearer," and the right to demand and receive payment of them is transferred from one person to another by mere delivery, without any indorsement or written order by the original payee; while the transfer or assignment of a promissory note or bill of exchange is made by the payee in writing, either by indorsement or otherwise. He usually merely writes his name on the back, whereby he becomes the *indorser*, and the person to whom it is thus indorsed or assigned, who is called the *indorsee*, has a right to fill up this blank indorsement by writing over it an order to pay the contents to himself or to any other person; and any *bona fide* holder of the note or bill has the same right to fill up the indorsement or assignment. Thus a note or bill of exchange, being once indorsed in blank, becomes assignable or transferable, like a check payable to "bearer," merely by delivery of the instrument. It is an essential quality of a negotiable bill, note or check, that it be a promise to pay a certain sum of *money*, and that the promise be absolute; for if no definite amount is fixed, or it be a promise to deliver goods or do any other act than pay money, or if it be conditional, it is not a bill of exchange, or negotiable promissory note, or check. Besides the transfer by indorsement above-mentioned, these instruments are also transferable by assignment, or mere delivery, so as to give the holder all the rights, against the maker or acceptor, that he would have had if he had himself been the payee. Where the transfer is made by mere delivery, the assignor is exempt from all liability to the holder on the paper itself; he makes no promise to pay the money, but still he, in effect, warrants that it is the bill, note or check, which it purports to be; for if it be a forged instrument, if it be not *bona fide* the bill, note or check which it purports to be, he will be liable to indemnify the person to whom he transferred it. But if the transfer be made by an indorsement in writing, without any condition or exception, being an absolute order to pay the money to the indorsee or holder, the indorser in this case becomes in his turn a promiser; for he thereby virtually promises, that, in case the maker of the note or check, or the drawer or acceptor of the bill, does not pay it on due demand, or in case the drawee does not accept it, if it be a bill, on presentment according to its tenor, then he, the indorser, will pay it.—Though the forms of bills of exchange, promissory notes, checks and bank-notes are, respectively, pretty uniform, yet no precise form of words is necessary to constitute either of these instruments. Any words, purporting to be an absolute promise to pay a certain sum of money, or an absolute order for its payment to a particular person or his order, or to the bearer, is either a bill of exchange, promissory note, or check.—Bills of exchange are, in England, either inland, that is, payable in the kingdom, or foreign, that is, payable out of the kingdom. A similar distinction is made in the U. States, where, in most of the states, a bill payable in the state in which it is made is considered to be inland. The material distinction between foreign and inland bills is, that, on inland bills, a protest for non-acceptance or non-payment is not usually necessary, and that less damages can be claimed in consequence of the dishonor of the bill, if, indeed, any can be claimed. Generally, in fact, if not universally, only the face of the bill can, in such case, be recovered of the drawer or indorser. In one respect, foreign bills most generally, and inland bills and promissory notes in many places, differ in construction from the literal import of the terms of the instrument as to the credit or time of payment, being, in fact, payable three days after the time specified; these three days of additional credit being allowed under the name of *grace:* but this additional credit is often expressed in the instrument itself, thus,—"Pay to A. B. or order, in sixty days and *grace*," which is equivalent to sixty-three days. Another mode of expression for the credit to be allowed on a bill is by the word *usance*. Thus a bill is drawn payable at one or two *usances;* and it is necessary, in order to ascertain the time of payment, to know what period is meant by a usance, and this will vary according to the place *at* which, and *on* which, the bill is drawn. Thus a bill drawn in Eng-

land, at one usance, on Amsterdam, Rotterdam, Altona, or any place in France, is payable in one calendar month from the date; on Cadiz, Madrid or Bilboa, in two; on Genoa, Leghorn or Venice, in three months.—If, on presentment of a bill of exchange to the drawee, he refuses to accept it according to its tenor, the holder has an *immediate* cause of action against the drawer and indorsers, and may, on giving them notice of the non-acceptance, forthwith demand the amount of the bill, though it was on a long credit, and, if it had been accepted, he must have waited three or six months for his money. This rule is perfectly equitable, since the drawer and indorsers impliedly agree that the draft shall be accepted on presentment, and, on its not being so, their promise is violated. But the holder must give notice to the drawer, and the other parties to whom he wishes to resort, of the non-acceptance or non-payment of the bill. In case of the dishonor of a bill, the holder has generally the right to recover of the parties liable to him, that is, the drawer and indorsers, not only the amount expressed on the face of the bill, together with the expenses of protest and interest, but something in addition, on account of his disappointment in not having funds at the place on which the bill is drawn, as he had a right to expect. The rate or amount of this damage must, as is evident, be very various, according to the distance of the places, the credit on which the bill was drawn (in case of protest for non-acceptance), and the rise or fall of exchange on the same place after the purchase of the bill. One rule of estimating the damage is the cost of reëxchange, or of another bill on the same place, with the addition of one, two, &c., up to twenty per cent. damages. In other places, no regard is had to reëxchange, but the holder recovers a certain per cent. over the face of the bill, by way of damage, and this rate is the same whether exchange may have risen or fallen from the time of purchasing the bill to that of its being returned dishonored.—Exchange appears to have been known anciently at Tyre, Carthage, Athens, Corinth, Syracuse and Alexandria. The first well-ascertained traces of it, in modern times, are found, subsequently to the 12th century, in some of the provinces of France, particularly at the fair of Champagne. It was brought to perfection in Italy. Its great utility and convenience consist in its negotiability. Suppose, for instance, a number of persons to have, severally, sums of money deposited in various countries. One, whose funds are in South America, wishes to make purchases at St. Petersburg; and one, who is entitled to the proceeds of a cargo at St. Petersburg, wishes to make a purchase at Canton; and another, having funds at Canton, desires to make an importation from South America. By merely making and delivering a slip of paper, each one will, in effect, transfer his funds quite across the globe. Another advantage of exchange is the facility it affords in adjusting balances. Its effect in this respect may be illustrated by the practice of banks and bankers in some particular cities. In London, for instance, the bankers meet at a certain hour every day, to pay and receive payment of each others' checks; but the amount actually paid will bear a very small proportion to the whole amount of the checks, since the greater part is settled by merely cancelling the checks they hold against each other. So where all the banks of a city, as is the practice in many commercial towns, take indiscriminately each other's notes, and settle the balances every day, they all make an exchange of the notes which they hold against each other, and only pay over in specie the balances. Thus, by the payment in specie of a comparatively very small sum, some hundreds of thousands may circulate between these institutions and their respective customers and depositors. In the same manner the balances are adjusted between two commercial countries, or all the commercial countries of the world. Among the various merchants of the United States, for instance, some have sent goods to England, others to France, and others to Holland, and each one may wish to import goods from a country other than that where his funds lie. One, accordingly, sells exchange on Amsterdam, and buys exchange on London, or, which is the same thing in effect, as far as he is concerned, he orders his correspondent at Amsterdam to buy exchange on London, and remit it thither for his (the merchant's) account. If the funds which some merchants have in each foreign place are exactly equal to what is wanted by others in the same place, the whole transaction is only a transfer among themselves of each other's claims, or exchange, and no balance remains; whereas, without this facility, one must order specie home from Amsterdam, which the other would purchase of him to ship it to London; a transaction involving much delay, besides the expense of freight and insur-

ance. But still, all the merchants of the country may wish to invest or pay greater sums abroad than the proceeds of all the exports already made or making from the country amount to, in which case the course of exchange is said to be against the country, and, in this case, as in all others where the quantity of an article wanted is greater than that offered in the market, the price will rise, and foreign exchange will be above par. So, if the quantity of exchange demanded on any particular country is greater than that offered, the rate of exchange, in respect to that particular country, is unfavorable, and rises. This has most generally been the case in the U. States, in respect to England. So, *vice versa*, if the funds belonging to Americans, in any particular foreign country, are greater than the sum wanted by other Americans to make payments or investments there, the rate of exchange with that particular country is favorable, and the price of it falls. And it is to be observed, that what is called a *favorable* rate of exchange is, in fact, *unfavorable* to the person having funds abroad, who wishes to realize them at home; for he must, in that case, sell, at home, his foreign exchange, for a smaller sum than its nominal amount. It is to be borne in mind, therefore, that an unfavorable rate of exchange is not necessarily disadvantageous to a country. To follow out the inquiry, and determine in what circumstances it is actually disadvantageous or indifferent, or in fact advantageous, would occupy more space than we can give to the subject. But we perceive from this operation of the system of exchange, that it is only necessary, at most, to ship abroad, or import from abroad, in specie, the actual balance on the whole aggregate of debts and credits, all the items of which, as far as they offset each other, are adjusted by exchange; and it is by no means always the case that this aggregate balance is paid in specie; for the very circumstance of the rise of exchange on any particular country may make the trade more favorable, and induce shipments, the proceeds of which are drawn for as soon as the shipments are made; so that, in such a case, the unfavorable balance may be actually advantageous, by promoting trade.

Bill of Lading; a memorandum signed by masters of ships, acknowledging the receipt of goods intrusted to them for transportation. There are usually triplicate copies, one for the party sending, another for the party to whom the goods are sent, and the third for the captain.

Bill of Rights, or Declaration of Rights, is the assertion by a people, or recognition by its rulers, "of that residuum of natural liberty, which is not required by the laws of society to be sacrificed to public convenience; or else those civil privileges, which society has engaged to provide, in lieu of those natural liberties so given up by individuals." The houses of lords and commons delivered to the prince of Orange a list of such rights and privileges, February 13, 1688, at the time of his succession to the British throne, concluding with the words "and they do claim, demand, and insist upon, all and singular the premises, as their undoubted rights and privileges." The declaration is usually called *the bill of rights*. A similar declaration was made in the *act of settlement*, whereby the crown was limited to the house of Hanover. Similar bills of rights are prefixed to some of the state constitutions in the United States. But the constitutions of all the states, as well as that of the United States, virtually include in themselves declarations of rights, since they expressly limit the powers of the government. The same is true of the constitutional charters of those European governments which have adopted constitutions, one of the objects of these being to guaranty certain rights and liberties to the people.

Bill in Equity, or Chancery, is the statement of the plaintiff's case in a court of equity, or chancery, corresponding to the declaration in a court of law, and the libel in an ecclesiastical court.

Billiards; a very interesting game, contributing also to health by affording the body moderate exercise. It was invented in France, and is now played by all European nations and their descendants. The rules for the different games of billiards are too numerous to be given here. They are also generally found in billiard rooms. We therefore omit them, although we usually give the rules of games, in order to furnish a means of reference in doubtful cases. They are to be found in Hoyle's Games.

Billington, Elizabeth; the most celebrated English female singer of her day. She was of German origin, but born in England, in 1770, her father, Mr. Weichsell, being a native of Saxony. At an early age, she studied the piano-forte under Schroëter, and attained to an extraordinary proficiency. At 14, she made her first appearance as a singer at Ox-

ford, and two years afterwards married Mr. Billington, a performer on the double-bass, whom she accompanied to Dublin. She made her *début* there in the opera of Orpheus and Euridice. From Ireland she returned to London, where she appeared at Covent-garden, for the first time, as Rosetta, in Arne's Love in a Village, with such success as to secure her an immediate engagement at what was then considered the enormous salary of £1000, for the remainder of the season, besides a benefit; the managers afterwards voluntarily giving her the profits of a second night. While in town, she continued to take lessons of Mortellari, a celebrated Italian master, then in London, and, on the closing of the theatre, repaired to Paris, in order to profit by the instructions of Sacchini. In 1785, she returned to England, and appeared at the concerts of ancient music with madame Mara, whose brilliant performance she, to say the least, fully equalled. From this period till 1793, no music meeting, opera, or concert, of reputation, was considered complete without her. In the last named year, she visited Italy, and performed, accompanied by her brother C. Weichsell, at the theatre of St. Carlos at Naples; Francis Bianchi composing expressly for her his celebrated opera *Inez de Castro*. Her engagement here met with an abrupt and melancholy interruption, her husband dying suddenly of apoplexy, just as she was preparing to set out for the theatre. In 1796, she appeared at Venice, and afterwards at Rome, being every where received with the loudest expressions of applause. In 1799, she married Mr. Felipent, whom she accompanied to Milan. In 1801, her wonderful powers being then in their meridian, she returned to the London stage, appearing alternately at either house, and astonishing the whole musical world by her Mandane—a performance that has never since been equalled in English opera. Engagements now multiplied upon her, and continued incessantly till her final retirement from public life, which took place in 1809. The last exhibition of her powers was in aid of a charitable institution, at Whitehall chapel, the queen, the prince regent, and most of the branches of the royal family, being present. In 1817, she quitted England for ever, and died, after a short illness, at her villa of St. Artien, an estate she had purchased in the Venetian territories.

Bingen; a town on the left shore of the Rhine, where the Nahe joins this river, opposite Rüdesheim, famous for its excellent wine. Lon. 7° 48′ E.; lat. 49° 55′ N. Population, 3300. Near it the Rhine is compressed into a narrow channel, between rocks, so as to make the navigation difficult. This strait is called *Bingenloch* (hole of Bingen). The famous Mäusethurm, or Tower of Mice, where the avaricious bishop Hatto is said to have been eaten by mice, as a punishment for usury, exercised in a time of famine, is situated in the vicinity.

Bingley. This Garrick of the Dutch stage was born at Rotterdam, in 1755, of English parents in good circumstances. On leaving school, he was placed in a counting-house. It was not long, however, before he discovered an invincible inclination for the stage, and, at the age of 18, joined the company under the direction of the celebrated Corver, who was his first instructer. In 1779, in the 24th year of his age, he made his *début* on the stage of Amsterdam. The public odium was then excited against England, on account of its ships having captured vessels under the Dutch flag, without any previous declaration of war, and B. was unfavorably received on account of his English descent. But he soon conquered this prejudice by his performance of Achilles, in the tragedy of the same name; and from that time he continued to be the favorite of the public. He was, also, so well acquainted with the French language, as to appear successfully in the French theatres of Amsterdam and the Hague, by the side of the great French actors, who, while on their tours for the sake of improving themselves, used to visit the Netherlands. In 1796, he was director of a company of actors, who played principally at Rotterdam and the Hague, but, also, visited other cities of Holland. Meanwhile, he was always ready to perform at the theatre in Amsterdam, in such parts as could only be acted by himself. One of his last representations, in which he was assisted by the great actress Wattier Ziesenis, was the part of Farnese, in Lalain's tragedy Maria, acted, in 1818, before the royal family. In the same year, he died at the Hague.

Binnacle, or Bittacle; a case or box, which contains the compass for steering a ship, and lights to show the compass at night. In ships steered by a wheel, it is common to have two binnacles, or a double binnacle, for the convenience of the steersman, on either side of the wheel; but, in this case, the compasses af-

fect each others' direction, and thus render the ship's course uncertain.

Binomial, in algebra; a quantity consisting of two terms, or members, connected by the sign + or —. Binomial coëfficients are the numbers that indicate how often a given power of a binomial, for instance, of $a + b$, contains each of the products of its parts.—The binomial theorem is that celebrated formula, which teaches to find any power of a given binomial $a + b$, by means of the two terms a and b, and of the exponent of the power. This theorem, frequently called the *Newtonian theorem*, on which the system of analysis is principally founded, was known, as far as relates to integral positive exponents, to several mathematicians before Newton. But Newton was the first who taught its application to fractional and negative exponents; and this discovery, one of the most important of those made by that great man, is engraved upon his tomb-stone.

Bioernstaehl, James Jonas, a distinguished traveller, born at Rotarbo, in the Swedish province of Südermannland, in 1731, studied at Upsal, afterwards entered the family of baron Rudbeck, as tutor, and travelled with his son to England and the continent of Europe. While residing in Paris, he studied the Oriental languages. On the return of his pupil to Sweden, B. was appointed, by Gustavus III, to make the tour of Greece, Syria and Egypt, receiving, at the same time, the title of professor at the university of Lund. He now went, at the king's expense, to Constantinople, in 1776, where he remained for some time, to learn the Turkish language. He then proceeded on his travels as far as Saloniki, where he died of the plague, 1779. B. had given an account of his travels, in the form of letters to his friend Gioerwell, who, at first, published them separately in a journal, which appeared in Stockholm, but afterwards by themselves (1783). This work contains learned and profound researches on medals, manuscripts, rare books; and a great many anecdotes, of which the most interesting are those relating to Voltaire, whom B. had visited at Ferney. His remarks and opinions on morals, manners, religion and literature are often destitute of truth and justice. He was possessed of more learning than taste, of more memory than discernment and judgment. His health, naturally strong, and fortified by exercise, enabled him to support constant labor, and to endure the greatest hardships.

Biology and Biometry. (See *Life*.)

Bion; born in Smyrna, or in its neighborhood; a Grecian pastoral poet, of whose life no account is to be found. The elegy, which Moschus, his friend and disciple, composed on the occasion of his death, seems to imply, that he was a contemporary of Theocritus, and died of poison. He probably lived in Sicily or Magna Grecia. Among the few poems written by him, which have descended to our times, his elegy on Adonis is considered as the best. The poems of B., together with those of Moschus, are generally found as an appendix to the idyls of Theocritus. They have been published separately by Fr. Jacobs, Gotha, 1795; Gilbert Wakefield, London, 1795; and J. C. F. Maass, Leipsic, 1807.

Biot, Jean Baptiste, a natural philosopher and astronomer, member of many French, as well as foreign literary societies, and of the legion of honor, born at Paris, in 1774, studied in the college of Louis-le-Grand, then joined the army, and served in the artillery. His love of the sciences soon led him back to Paris, where he continued his studies in the polytechnic school, till he felt himself fit for a professorship at Beauvais. In 1800, he was made professor of physics in the *collége de France*. In 1802, he was appointed a member of the first class of the institute. In 1804, he prevailed on the institute not to vote in favor of Bonaparte's elevation to the throne. In 1806, he was sent with Arago to Spain, to continue the measurement of an arc of the meridian, undertaken to establish the basis for the introduction of a new decimal system (q. v.) in France. Before he departed, he was appointed a member of the board of longitude. His mission was successful. He now devoted himself with unremitted zeal to his studies and lectures. In 1816, he was chosen editor of the department of mathematical science for the *Journal des Savans*. His principal works are, *Traité de Physique expérimentale et mathématique* (1816); the abridgment of the same, in a popular style; *Précis élémentaire de Physique expérimentale*, and *Traité élémentaire d'Astronomie physique*. In 1817, he visited the Orkney islands, to correct some disputed astronomical observations, for the measurement of a degree. B. still communicates important articles to the literary journals, &c.

Birch (*betula alba*) is a forest-tree, easily known by the smooth appearance and silvery color of its bark; by its leaves be-

ing somewhat triangular, but acute, and small in comparison with those of other timber-trees, and by all the small branches being slender and flexible.—Although the birch is considered by no means a valuable timber-tree, yet its wood is used for numerous purposes. Being of white color, and firm and tough in texture, it is variously employed by hoop-benders and wheel-wrights. Turners use it for trenchers, bowls, ladles, and other wooden ware. Ox-yokes, small screws, women's shoe-heels, pattens, and, in France, wooden shoes, are made of it. The North American Indians use the bark of the birch-tree for canoes, boxes, buckets, baskets, kettles, and dishes, curiously joining it together with threads made of roots of the cedar-tree. Birch-trees are not unfrequently planted along with hazels, for the purpose of procuring wood to be converted into charcoal for forges. This charcoal is much esteemed; and the soot, which is formed on burning the wood, constitutes a good black substance for printers' ink. Nearly all the other parts are applicable to useful purposes. The inhabitants of Sweden employ the bark in the tanning of leather, and, after burning it to a certain degree, use it as a cement for broken china and earthen ware. The navigators of the river Volga construct of it portable boats, cradles, &c. It is serviceable in dyeing a yellow color. In Norway, it is dried, ground, mixed with meal, and boiled, with other food, for swine. The houses or huts, in many parts of the north of Europe, are covered with the outward and thicker part of the bark, instead of slates or tiles. It is spun into a coarse kind of ropes, woven into shoes and hats, and, in Kamtschatka, even made into drinking-cups. The Laplanders fasten together large pieces of it to keep off the rain. Abounding in resinous matter, slices of the bark are sometimes tied together, to make torches. During a scarcity of corn, it has, in several instances, been ground with bread corn, and successfully used as food for men. In most parts of England and America, the twigs of this tree are made into brooms. They are also made into the tops of fishing-rods; and, when smeared with bird-lime, are used by bird-catchers. The Norwegians frequently employ them as fodder for their horses. The leaves afford a yellow dye.

Birch, Thomas; an industrious historian and biographer of the 18th century. He was born in London, in 1705; and his father, who was a Quaker, practised the occupation of a coffee-mill maker, to which the son, also, was destined. His early taste for reading induced him to prefer a literary life, which he was permitted to choose, on condition of supporting himself by his own exertions. He, accordingly, after some previous tuition, became usher in three different schools, and then went to Ireland with dean Smedley. Having left the Quakers, he took orders in the church, in 1730, and obtained, in 1732, a living in Essex, through the patronage of the attorney-general, afterwards lord Hardwicke. In 1734, he engaged, with some coadjutors, in writing the General Historical and Critical Dictionary, founded on that of Bayle, and completed, in 10 vols. folio, in 1741. He subsequently obtained various preferments in the church. In January, 1765, he was killed by a fall from his horse, in the road between London and Hampstead. B. had formed very extensive manuscript collections, which, together with his library of printed books, he bequeathed to the British museum. He produced a large number of historical and biographical works in the course of his laborious life. B. was one of the pioneers of literature. He collected fully and faithfully, but without much discrimination, materials relating to the various subjects of his research, which are calculated to afford important assistance to writers possessed of more taste and judgment. Doctor Johnson was repeatedly obliged to B. for literary information: he bestowed on him a Greek epigram, and for many years corresponded with him. The literature of his country is much indebted to the activity and diligence of B.

Bird, Edward (R. A.); an English painter, who died at Bristol, in Nov., 1819. He excelled in comic subjects. The marquis of Stafford patronised him. He was appointed historical painter to the princess Charlotte of Wales.

Bird Island; the name of a very large number of islands in almost all the parts of the world, of which we shall mention only the following:—*B. Islands;* a cluster near the N. E. coast of New Holland, so called by captain Cook. They are almost covered with birds.—*B. I.*, in the S. Pacific ocean; lon. 216° 24′ E.; lat. 17° 48′ S.—*B. I.*, in the gulf of St. Lawrence; lon. 60° 45′ W.; lat. 47° 55′ N —Another, in the S. Pacific ocean; lon 38° 22′ W.; lat. 54° S.—One in the northern part of the same ocean; lon 198° 8′ E.; lat. 23° 6′ N.—*B. Islands;* a

cluster of islands in the Caribbean sea; lon. 66° 50′ W.; lat. 12° N.—The name *Bird island* is as common, and as vague, as that of *Blue mountains*, &c.

Birds. (See *Ornithology.*)

Birds' Nest. The *hirundo esculenta*, or *salangane*, a species of swallow, the nests of which are used as an article of luxury among the Chinese, is found in the Indian seas. They are particularly abundant in Sumatra, especially about Cröe, near the south end of the island. The nest has the shape of a common swallow's nest, is about the size of a goose's egg, is found in caves, particularly on the sea-shore, and has the appearance of fibrous, imperfectly concocted isinglass. More or less of this substance is contained in the nests of all swallows of that region. The manner in which this substance is procured is not ascertained. The most probable suppositions are, that it is the spawn of fish gathered by the bird, or a secretion elaborated in the body of the animal. The Chinese collect the nests, and sell them to all parts of the world. Dissolved in broths, &c., they make a delicious gelly. The finest are those obtained before the nest has been contaminated by the young birds: they are pure white, and are scarce and valuable. The inferior ones are dark, streaked with blood, or mixed with feathers: they are chiefly converted into glue. Some of the caverns, in which they are built, are difficult of access, and dangerous to climb, so that none can collect the nests but persons accustomed to the trade from their youth.

Biren, Ernst John von, duke of Courland, born in 1687, was, as is asserted, the grandson of a groom of James, duke of Courland, and the son of a Courlandish peasant, by the name of Bühren. He studied at Königsberg, and endeavored to conceal the meanness of his origin by raising himself in the favor of the great. His agreeable person and cultivated mind, procured him the highest favor of Anna, duchess of Courland, and niece of the emperor of Russia; but he was unsuccessful in his attempt to obtain admission among the Courlandish nobility. When Anna (q. v.) ascended the Russian throne (1730), B., in spite of the conditions to which the empress had consented (one of which was not to bring him with her to Russia), was loaded by her with honors, and introduced at the Russian court. Here he assumed the name and coat of arms of the dukes of Biron in France, and governed under the name of his mistress. Fierce and haughty by nature, he indulged his hatred against the rivals of his ambition. The princes Dolgorucky were his first victims. He caused 11,000 persons to be put to death, and double that number to be exiled. It is said, that the empress often threw herself at his feet, to induce him to lay aside his severity, but that neither her entreaties nor her tears were able to move him. The firmness of his character, however, introduced vigor and activity into all branches of the administration throughout the great empire. In 1737, Anna forced the Courlanders to choose her favorite (who had, in 1722, married a Courlandish lady of the family of Trotta, by the name of Treyden) for their duke. After having declared prince Ivan her successor, she appointed B., according to his wish, regent. Anna died Oct. 28, 1740. The new regent acted with prudence and moderation. But a secret conspiracy was soon formed against him. Field-marshal Münich, with the consent of the young emperor's mother, caused him to be arrested in his bed, during the night of Nov. 19, 1740, by Manstein, and to be confined in the castle of Schlüsselburg. He was subjected to a trial; but, no proofs of the projects, which he was accused of having formed for the advantage of his family, being discovered, the sentence of death was changed into that of imprisonment for life, and his fortune was declared confiscated. Together with his family, he was transported to Pelim, in Siberia, and thrown into a prison, of which Münich himself had furnished the plan. In the following year, Elisabeth, daughter of Peter the Great, being raised to the Russian throne by a new revolution, B. was recalled, Dec. 20, 1741, and Münich was obliged to occupy his prison. At Kasan, the sledges met; the travellers recognised each other, and proceeded on their way without interchanging a word. The family of B. afterwards lived in a very respectable condition at Jaroslaw.—After a subsequent exile of 22 years, the duke, as well as Münich, was recalled, in 1762, by Peter III. When Catharine II ascended the throne, the duchy of Courland was restored to B., in 1763. He governed with wisdom and lenity, transferred the government to his eldest son, Peter, 1769, and closed his restless life, Dec. 28, 1772.

Birman Empire. The great peninsula east of the bay of Bengal includes Aschem, or Assam, and the Birman empire. The latter extends from 9° to 26° N. lat., is about 1000 miles long and 700 broad; pop-

ulation, according to Symes, in 1795, about 17,000,000. The natives of the peninsula, a handsomer and more athletic race of men than the Hindoos, though not so neat, are warlike and hospitable, have no mendicants among them, and reverence the aged. The Birman empire, according to the reports of missionaries, comprehends the kingdoms of Ava, Pegu, Arracan, and the adjacent states on the north. It is bounded on the north by Thibet, Assam and China; on the west, it is separated from the British possessions by a chain of high mountains and the river Naaf. In the 16th century, the Birmans in Ava made themselves independent of Pegu; but, in 1740, they were subjugated anew by this state. Alompra, one of their leaders, however, with about 100 faithful adherents, almost immediately summoned the people again to arms, and, in 1753, conquered the city of Ava. Defeat and victory succeeded alternately, till Alompra, in 1757, conquered the city of Pegu. This celebrated monarch died in 1760, at the age of 50 years. He labored to make his subjects happy by promoting agriculture, by restricting the arbitrary exercise of power on the part of his officers, and improving the public morals. Every act of the magistrates, in the Birman empire, was required to be public, and every decree to be made known: even commercial treaties, and all relations established with foreign countries, were registered among the laws of the state, and open to the inspection of every one. Namdogee, his eldest son and successor, who died in 1764, inheriting his father's spirit, adopted from other nations whatever was of general utility to his own, and was anxious to do away abuses. Both father and son attended particularly to the administration of the East India company. Shambuan, the emperor's brother, became regent, as guardian for his nephew Mornien; but he usurped the throne himself, and conquered Siam. In 1771, however, this province recovered its independence, while the principal part of the Birman forces were engaged in a war with China. In this war they were victorious, and compelled the Chinese, whom they took prisoners, to intermarry with the Birman females, and to remain in their territory. Fortune continued to attend this prince; and, in 1776, he left his empire, much enlarged, to his son Chengenza. This prince lived in the unrestrained indulgence of every appetite, till, in 1782, he was dethroned and put to death. In consequence of the revolution, Shembuan Menderagan, the fourth son of Alompra, ascended the throne. He ordered his nephew Mornien, who was a state prisoner, to be drowned, and, in 1783, subdued the kingdom of Arracan. He then engaged in a war with Siam, which continued till 1793, and finally compelled it to submission on certain conditions. About this period, some highway robbers fled from the Birman empire, and took refuge in the territory of the East India company. Shembuan demanded that they should be delivered up. His demands were not immediately complied with, and he marched, with a strong force, into the offending country. At the same time, he carried on a friendly negotiation with the government in Calcutta, which resulted in the surrender of the criminals, and the conclusion of a treaty of amity and commerce between the two governments, which agreed to afford each other mutual aid, in case of an invasion from China. It was negotiated by captain Symes. Shembuan was succeeded, in 1819, by his grandson. The last victory of the Birmans was, in 1822, over the northern mountainous province of Assam, at the source of the Burrampooter. The party driven from Assam, together with the Birman rebels, fled to the British territories, whence they intended to invade Birmah. The British government forthwith disarmed the insurgents, but refused to deliver them up or to drive them from the island of Shapuri, which they had occupied. The court at Ummerapoora, therefore, attempted to set the Mahrattas and all Hindostan in arms against the English. At length, the monarch with the golden feet (one of the titles of the sovereign of Birmah) demanded of the government at Calcutta the cession of Northern Bengal, as being a part of Ava; and, in January, 1824, the Birman forces marched into Kadschar, which had deposed its rulers, and put itself under British protection. Lord Amherst, as governor-general of the British East Indies, now declared war against Birmah, and general Archibald Campbell prosecuted it so successfully, that, after the victory at Prome (Dec. 1—3, 1825), he obliged the monarch to conclude a very unequal peace at Palanagh, Dec. 31, 1825. As the treaty was not ratified, on the part of Boa, the Birman emperor, by the time specified (Jan. 18, 1826), Campbell renewed the war, on the 19th, and stormed the fortress of Munnun. Feb. 24, the peace was ratified, and the war concluded. The king of the white elephants ceded to the company the provinces of Arracan, Merguy, Tavoy and

Yea, and paid them a sum amounting to about $4,300,000. Assam was made once more independent, and rajahs were appointed by the company to govern the northern provinces of Munnipore, Assam, Kadschar and Yeahung. The important city of Rangoon was declared a free port. Thus all the western coast of the Birman empire was ceded to the East India company, and the most powerful of the East Indian states was divided and weakened. —Before the rains commence, the heat in the valleys of this, in most respects, healthy country is excessive. Though B. is in general fertile, it contains several vast deserts. In the northern part, it is mountainous, and abounds in gold, silver, precious stones and marble; also in iron, lead, tin, antimony, arsenic, sulphur and petroleum, which issues from the earth in abundance. In the southern districts, owing to the numerous rivers, the soil is marshy and extremely productive. Here grow rice, sugar-cane, fine tobacco, cotton, indigo, and all the tropical fruits. Land is cheap. Timber for ship-building, especially teak or Indian oak, which grows most luxuriantly in a wet soil, on the banks of rivers, is abundant. The price of labor is high. All but the lowest lands produce grain, or serve for pasture. Of manufactured goods, B. exports cotton and silk stuffs, glass, saltpetre, powder, porcelain and marble images of Gaudama, to which the workmen in stone give an exquisite smoothness. The East India company builds vessels even of 1000 tons burthen in the Birman docks; and the shipwrights there (giants in comparison with the puny Hindoos) find constant employment. The Pegu ships, however, are not so well made as those built by the company, in their own territory. The trade of the Birmans is very lively, especially with China, by means of the river Irrawaddy, which extends 1240 miles into the interior, and has populous cities all along its banks. From Barnoo, goods are conveyed through the interior to China, to which the Birmans send many commodities from the eastern archipelago of Asia. The government encourages the increase of the population by favoring the settlement of foreigners, tolerates the religion of every nation in the ports of Rangoon, Negrais and Merguy, and encourages the intermarriage of foreigners with Birman females. Instead of coin, silver and lead in bars are used, and their purity is strictly tested in trade. The forging and stamping of these bars forms a particular branch of business.—Menderagee removed the royal residence to the new city of Ummerapoora (190 leagues east of Calcutta), on a tongue of land which runs up into the lake of Tounzemahn. Ava, once so magnificent a city, about four or five miles distant, now lies in ruins. The buildings among the Birmans are very slight, as the government requires them to be chiefly of wood or bamboo. There are well-organized fire-companies, for the protection of these combustible edifices. The Birman nobles are distinguished from the lower classes by their dress, houses and furniture, and are divided into several ranks. The prince is absolute, but custom obliges him to ask the opinion of the nobility in important state matters: he is not bound, however, by their counsel. The Birmans are all fond of painting both their faces and hands. They slaughter no tame animals, and live simply; for the most part, on vegetables. No Birman can have more than one wife; but he may have as many mistresses as he will. The latter live in the same house with the wife, and are her servants. A foreigner and an adult male Birman may, at any time, leave the empire; but females and children are not allowed this privilege. Females cannot appear before a court of justice. The chief amusement of the Birmans is their theatre, where declamation, dancing and music alternate: the higher classes are fond of dramatic spectacles. The new year is celebrated with all sorts of purification. At this time, young women appear in public with water, and sprinkle every one they please. It is considered improper, however, to sprinkle females first, or those in a state of pregnancy at all. Among the Birmans, the distinguished dead are burned; the poor are interred; the richest are embalmed, commonly in the ancient simple mode, in honey. Every Birman learns arithmetic, reading and writing. The common people write on palm-leaves, with an iron style: the rich have libraries, with books the leaves of which are thin pieces of ivory, with gilt edges. The Birmans, in general, are fond of gilding every thing. Their materia medica is confined to herbs, spices and mercury: with vaccination they have long been acquainted. The English missionaries are tolerated, and serve the East India company as the outposts of their diplomatic system. The literary Birmans translate from the English all important works of science, particularly on astronomy and law. The religion of the country is that of Buddha, whom the people

call *Gaudama*. It enjoins no bloody sacrifices, and is extremely tolerant. The Birmans have no secular clergy, but only a kind of monks dwelling in convents. All the clergy practise celibacy, and eat but once a day. Every carnal indulgence is punished by a disgraceful and public removal from office. The clergy are literary men, and highly esteemed for their piety and knowledge. They are permitted, however, to gild and paint. Formerly, there were priestesses; but this order has been abolished, because it was found injurious to the increase of population. The government has long been struggling to maintain its independence between the British dominions on the Ganges and the Chinese empire. No part of Eastern Asia seems to apprehend an excess of population, and hence no female in China is suffered to emigrate. The Birmans are skilful weavers, smiths, sculptors, workers in gold and silver, joiners, &c. Of this the citizens of London have had ocular evidence, in the great state carriage, devoted to the service of the gods, 19 feet high, 14 long, and 7 wide, which was taken by the British troops, in the war of 1825. In Birmah there are no hereditary offices. Its civil and criminal code is very judicious; general principles are first laid down, and then applied to distinct cases. Robbery is punished with death only when the property stolen is very great, or the offence is aggravated by particular circumstances. Capital punishment is commonly inflicted by decapitation, and extends to those who eat opium freely, and to drunkards in general. The magistrates have a great discretionary power to mitigate the punishments of the law, and few penal laws are executed in all their severity. The standing army is small. Levies are made, in case of war, by way of conscription; and a specified number of houses is required to furnish a soldier completely equipped, or pay a considerable fine. For the crime of insubordination, the conscribed are either punished personally, or their families are made to suffer, however innocent they may be. The principal part of the militia are employed in the war-boats of the crown, which sink about three feet deep, and are provided with ordnance. The revenue is a tenth part of the productions of the soil and of all imported goods. The treasury is rich, and the sovereign regards an active trade among his subjects as the surest basis of national revenue: he calls his great income from customs the *tribute of strangers*. The empire at present consists of seven provinces. The capital, Ummerapoora, contains 175,000 inhabitants. Rangoon, at the mouth of the Irrawaddy (pop. 30,000), is an important trading city, and many Europeans reside in it. The *Voyage du Capit. Hiram Cox, dans l'Empire des Birmans* is better in this French edition, by Chalons d'Ange (Paris, 1824, 2 vols.) than in the original English (London, 1821). (See, also, *Narrative of the Birmese War*, by major Snodgrass London, 1827; and Mrs. Ann H. Judson's *Relation of the American Baptist Mission to the Birman Empire*, Wash., 1823).

Birmingham; a town in Warwickshire, Eng., on a declivity, on the river Rea, which joins the Tame; 62 miles N. W. Oxford, 87 N. Bristol, 109 N. N. W. London; population, in 1821, 85,753; families, 18,165; houses, 16,653. Of the inhabitants, 81,642 consist of families connected with trade and manufactures. B. has long been distinguished for the variety, extent and excellence of its manufactures, particularly in hardware. With perhaps the exception of Manchester, it is the greatest manufacturing town in England. Among the principal manufactures are buttons, in immense variety, buckles and snuff-boxes; toys, trinkets and jewellery; polished steel watch-chains, cork-screws, &c.; plated goods for the dining and tea-table; japanned and enamelled articles; brass work of every description; swords and fire-arms; medals and coins of various kinds; copying machines and pneumatic apparatuses; the more ponderous productions of the casting-furnace and rolling-mill; and, indeed, every hardware commodity that can be considered as curious, useful or ornamental. The manufactories are established upon the largest scale, and with the most astonishing ingenuity. A coining-mill was erected in 1788, which is now capable of striking between 30 and 40,000 pieces of money in an hour. Before the close of the last war, no less than 14,500 stands of arms were delivered per week to the ordnance office. At the pin-works, it is said, 12,000 pins can be cut and pointed, and 50,000 pin-heads can be made from the wire, in an hour.—B. is about two miles in length. The lower part of the town consists chiefly of old buildings, is crowded with workshops and warehouses, and is inhabited principally by manufacturers; but the upper part has a superior appearance, consisting of new and regular streets, and containing a number of elegant buildings. It contains three churches and five chapels of ease, and many places of worship belong-

ing to Dissenters. St. Martin's church has a fine lofty spire, with a peal of 12 bells, and a set of chimes. B. is distinguished for its charitable institutions, and has various schools, and several libraries, one of which contains 10,000 volumes. The town has the benefit of several canals, which enable it to carry on an easy intercourse with foreign countries. It has three weekly markets, and two annual fairs. The soil about the town is dry, and the climate is considered remarkably healthy. The average mortality of B., for six years, ending 1801, was only 1 to 59; of Manchester, 1 to 37; and of London, 1 to 31.

Biron, Charles de Gontaut, duke of; son of marshal Armand de Gontaut, baron Biron, born about 1562. Educated as a Calvinist, he had twice changed his religion before he reached the 16th year of his age. In his 14th year, B. was made colonel of the Swiss regiment, and served Henry IV with much zeal and courage. By the king's favor, he was, in 1592, raised to the rank of admiral of France. Though distinguished at court as well as in the field, always feared and praised, he was violent, obstinate and presumptuous. At the retaking of Amiens, in 1598, B. served under Henry IV, and, in the same year, was made a peer and duke. He thought himself, however, not sufficiently rewarded. The Spanish party, which, after the peace of Vervins, could injure Henry only by secret intrigues, took advantage of the duke's discontent. Henry appointed him his ambassador at the court of Brussels, to receive the oath of the archduke to the peace of Vervins. The Spanish court seized this opportunity to dazzle him with festivals, spectacles and honors; the female arts of seduction were put in practice, and the weak B. promised to join the Catholics, whenever they should rise again. In 1599, he concluded an agreement with the duke of Savoy and the count of Fuentes, by which he pledged himself to take up arms against his benefactor. Meanwhile, war being declared against the duke of Savoy (1600), B. saw himself reduced to the necessity of attacking him. For fear that his understanding with the duke should become visible, he possessed himself of almost all the towns in the duchy, which was the easier because Emanuel had expected some forbearance on his part. Fuentes and the duke ventured to propose to B., that he should deliver the person of the king into their hands; but he refused. Their suggestions, however, were not without effect upon him, and, while engaged in the siege of the fort St. Catherine, in the vicinity of Genoa, having reason to believe that the king would come to inspect the trenches, he sent word to the governor to dispose harquebussiers so as to fire on him at a certain signal. At the decisive moment, however, he prevented the king from going to the fatal spot. In 1601, peace was made with Savoy. So many negotiations had not, however, escaped the eye of the king, nor could he remain ignorant of their object. He therefore interrogated the marshal as to his designs, with promises of pardon. B. made a partial confession, and continued his intrigues as before. Notwithstanding this, Henry sent him, in the same year, to queen Elizabeth of England, to inform her of his marriage with Maria of Medici. In the mean time, B.'s confidant Lafin, having become suspected by the count of Fuentes, and beginning to fear for himself, discovered the whole plot. A frank confession and repentance would have saved B., since Henry was inclined to forgive him. He, however, persevered in his denial, rejected the offers of pardon, and was, therefore, at the urgent entreaties of the queen, at last surrendered to the rigor of the laws. Upon leaving the king's room, he was arrested, carried to the Bastile, tried before the parliament, and beheaded, July 31, 1602.

Birth. (See *Labor.*)

Biscay; a province in Spain, bounded N. by the bay of Biscay, E. by France and Navarre, S. by Burgos, including the three following subdivisions or provinces:

	Sq. M.	*Pop.*	*Capitals.*
B. Proper, .	1375	112,731	Bilboa.
Guipuscoa, .	653	104,479	St. Sebastian.
Alava, ...	1138	71,396	Vittoria.
	3166	288,606	

B. is a mountainous country, containing much wood, and has mines of lead and iron. It abounds in apples, pears, lemons, oranges, figs, nuts and currants, but produces little wine. The air is mild and more temperate than the rest of Spain. The country is well cultivated, and the houses clean and convenient. The inhabitants call themselves *Euscaldunac*, boast of their descent from the ancient Cantabri, and preserve strong traces of the character of that high-spirited and independent people. They are robust, brave, active, industrious; at the same time, haughty and irritable; have open, animated countenances, and handsome persons. Their language is supposed to be

a dialect of the Celtic, and nearly allied to the Armorican. (See *Basques.*)—B. forms a kind of separate state, distinct from the rest of Spain, governed according to its ancient laws and usages. The king of Spain, who is simply styled *lord of Biscay*, has no right to impose taxes; and no custom-houses were allowed, till lately, within the province.

Biscay Proper is bounded N. by the bay of Biscay, E. by Guipuscoa, S. by Alava, and W. by Santander. The coast is inhabited by seafaring people and fishermen; in the interior, great quantities of iron are extracted from the ore, and wrought into different articles. The richest mines are in the vicinity of Bilboa and Somorrosto.

Biscay, bay of; that part of the Atlantic which lies N. of the province of Biscay, between the projecting coasts of France and Spain, extending from Ushant to cape Finisterre.

Biscay, bay of; a large bay on the south coast of Newfoundland, between cape Race and cape Pine; lon. 53° 6′ W.; lat. 46° 50′ N.

Biscay, New, or *Durango;* a province in Mexico, bounded N. by New Mexico, E. by New Leon, S. by Zacatecas, and W. by Culiacan; 600 miles long, and 400 broad; pop. 159,000. The country is, in general, mountainous, and watered by a great number of rivers and brooks: it has some mines of silver and lead. Durango is the capital.

Bischofswerder, John Rudolph von, a Prussian general and minister, born in Saxony, in 1756, entered the university of Halle, was admitted into the Prussian service in 1760, and appointed major in 1779. Under Frederic William II, he exercised an unlimited influence at the court of Berlin. The attachment which he had shown Frederic William, while yet crown-prince, procured him the lasting affection of this short-sighted and prodigal monarch. As plenipotentiary, he took a great part in the congress at Sistova. He afterwards effected the interview with lord Elgin, at Pilnitz. After the king's death, he was dismissed, and died at his country-seat, in the neighborhood of Berlin, 1803. His views, as a statesman and a man, were very limited. His propensity to mysticism had consequences in the highest degree injurious. B. belonged to the society of the Illuminati.

Bishop, in the New Testament, is the instructer and spiritual superior of a Christian congregation. The bishops who were installed by the apostles themselves, or, according to the apostolic idea of the office, chosen by the congregations, were the assistants and successors of the apostles in their labors for the propagation of Christianity. They had the supervision of the whole congregation, and its officers, the presbyters and deacons, but without claiming, in the first century, any preëminence or rights of diocesans, which they afterwards acquired, as the church-government was gradually established. When the system of ecclesiastical rule was matured, the almost absolute authority which they exercised over the clergy of their dioceses; their interference in the secular concerns of governments, to which they soon rendered themselves necessary, by their superior information and their elevated rank; the administration of the church-revenues; the maintenance of their ecclesiastical prerogatives, and their extensive ecclesiastical as well as criminal jurisdiction, occupied them too much to leave them any time or inclination for the discharge of their duties as teachers and spiritual fathers. They therefore reserved to themselves only the most important functions of their spiritual office, as the ordination of the clergy, the confirmation of youth, and the preparation of the holy oil. In the middle ages, they attached to themselves particular vicars, called *suffragans*, bishops *in partibus*, or coadjutors, for the performance even of these functions, which they had reserved to themselves, and for the inspection of all that concerned the church. Bishops who have preached themselves, and attended to the spiritual welfare of their congregations, have been rare since the seventh century. The episcopal office being such as we have described it, the nobility, and even the sons of princes and kings, strove to obtain a dignity which was as honorable as it was profitable; and which, moreover, permitted festivals and sensual enjoyments of every description. These applications, which were aided by rich donations made to the churches, and, in the case of the German bishops, by the influence of the emperor, gave to the bishops of Germany, particularly, a high degree of dignity. The German bishops became princes of the empire, and their influence upon all public affairs was important. The reformation, however, lessened their number, and although, in some of the Protestant countries of the north of Europe, the higher clergy have retained the title of *bishop*, yet they have lost the greater part of their former revenues and privileges. The Swedish bishops constitute one of

the estates of the kingdom, like the English, but have little influence. The English church has left to its bishops more authority than the rest, and, for this reason, has received the name of the *episcopal*. In Protestant Germany, bishoprics were abolished by the reformation, but they have been restored, in Prussia, within the last 10 years. The church of Rome early lost many bishoprics by the conquests of the Mohammedans; hence the great number of titular bishops, whose bishoprics lie *in partibus infidelium*, that is, in countries in possession of the infidels. The Roman see, however, honors with this title only ecclesiastics of a high rank. In consequence of the cession of several German countries to France, 23 bishoprics were abolished; but, by particular agreements with the Roman court, they have been reëstablished in several German states. (See *Concordat*, and *German Church*.) The former subjects of the German bishops remember their mild government with gratitude, and the proverb "It is good to dwell under the crosier" proves that the episcopal power was not prejudicial to the prosperity and happiness of those subject to it. (See *Clergy*, and *Church of England*.)

Bishop's Hood. (See *Mitre*.)

Bishop's Staff. (See *Crosier*.)

Bismark, Frederic William, count; general of cavalry in the service of the king of Würtemberg, and, since July 1825, his ambassador in Dresden, Berlin, Hanover; born at Windheim, in Westphalia, in 1783. He is distinguished as a writer on cavalry, and also as a practical officer. He was esteemed by Napoleon. The reigning king of Würtemberg, on his accession to the throne, purposing an entirely new organization of his army, committed to count B. that of the cavalry. Here he established a new system. It must be confessed that the Würtemberg cavalry acquired, from his rules, much facility in manœuvring. The objections which have been made against his system are refuted by the practical demonstration which B. has given of its utility in his regiment. His views on cavalry are explained at large in his *Vorlesungen über die Taktik der Reiterei* (Lectures on Cavalry Tactics), 1818, which is considered a standard work, and has been translated into French. Of his *Felddienstinstruction für Schützen und Reiter* (Instruction in the Field-service of Riflemen and Cavalry), four editions have been published within the space of two years. He has published, also, several other military works.

Bismuth is a metal called, by artists, *tin glass*, a name obviously derived from the French *étain de glace*. It is found both pure and mineralized by sulphur, oxygen and arsenic.—Native bismuth occurs in the veins of primitive mountains, and is accompanied by ores of lead, silver, and sometimes of cobalt and nickel. It exists in reticulated, lamellar, or amorphous masses; is soft, and of a white color, occasionally tinged with red. Specific gravity, 9. It is found in many countries,—in France, England, Sweden, Bohemia and the U. States,—but its chief locality is at Schneeberg, in Saxony, from whence the supply of bismuth, in commerce, is principally derived. To procure the metal, the ore requires merely to be reduced to convenient fragments, and heated in furnaces, when the bismuth separates from the earthy matter in which it is engaged, and flows out into cast-iron moulds prepared for its reception.—Bismuth, when pure, has a reddish-white color, is harder than lead, and is easily broken under the hammer, by which it may even be reduced to powder. It melts at 470° or 480°, and crystallizes, on cooling, with great regularity, in the form of cubes. When kept in a state of fusion, at a moderate heat, it is covered with an oxyde of a greenish-gray or brown color; at a higher temperature, it enters into a feeble combustion, forming a yellow powder, called *flowers of bismuth*.—It combines, by fusion, with a great number of metals, communicating to them brittleness and fusibility. The mixture discovered by Newton, and produced by melting together 8 oz. bismuth, 5 oz. lead and 3 oz. tin, fuses at 202°. From it are made toy spoons, which melt on being employed to stir very hot tea. A still more fusible compound was invented by Mr. Dalton, composed of 3 parts tin, 5 lead and 10½ bismuth, which melts at 197°. The addition of a little mercury renders it even more fusible, and fits it to be used as a coating to the inside of glass globes. An alloy of equal parts of tin and bismuth melts at 280°; a less proportion of bismuth adds to the hardness of tin, and hence its use in the formation of pewter. Equal parts of tin, bismuth and mercury form the *mosaic gold*, used for various ornamental purposes. 1 part of bismuth, with 5 of lead and 3 of tin, forms *plumbers' solder*, a compound of great importance in the arts. Bismuth is also used by letter-founders in their best type-metal, to obtain a sharp and clear face for their letters. Bismuth combines

with sulphur, and forms a bluish-gray sulphuret, having a metallic lustre. The same compound is found native in small quantity, and is called, in mineralogy, *bismuth glance*.—Nitric acid dissolves bismuth with great readiness. The solution is decomposed on the addition of water, and a white substance, called *magestens of bismuth*, is precipitated, which consists of a hydrated oxyde, united to a small proportion of nitric acid. This precipitation, by the addition of water, being a peculiarity of bismuth, serves as an excellent criterion of this metal. The magestens of bismuth, from its whiteness, is sometimes employed to improve the complexion, as well as the *pearl powder*, a similar preparation, differing only by the mixture of a little muriatic acid with the nitric acid in effecting the solution of the bismuth. The liberal use of either, however, is highly prejudicial to the skin. They are, besides, liable to be turned black by the vapors evolved from nearly all putrefying substances.—The chloride of bismuth, formerly termed *butter of bismuth*, is formed by pouring bismuth, in fine powder, into chlorine gas, or by depriving the muriate of bismuth of its water of crystallization by heat.

Bison (*bos Americanus*, Gmel.); a species of ox found only in North America, peculiarly distinguished by a great hump or projection over its fore shoulders, and by the length and fineness of its woolly hair. The hump is oblong, diminishing in height posteriorly, and gives a considerable obliquity to the outline of the back. The hair over the head, neck and fore part of the body is long and shaggy, forming a beard beneath the lower jaw, and descending below the knee (wrist) in a tuft. The hair on the summit of the head rises in a dense mass nearly to the tips of the horns, and, directly on the front, is curled and matted strongly.—The numbers of this species still existing are surprisingly great, when we consider the immense destruction annually occurring since European weapons have been employed against them. They were once extensively diffused over what is now the territory of the U. States, except that part lying east of Hudson's river and lake Champlain, and narrow strips of coast on the Atlantic and Pacific. At the present day, their range is very different. They are no longer found except in the remote, unsettled regions of the north and west, being rarely seen east of the Mississippi or south of the St. Lawrence. West of lake Winnipeg, they are found as far north as 62°; west of the Rocky mountains, it is probable they do not extend north of the Columbia river.—The bison, on his native plains, is of savage and formidable appearance, uniformly inspiring dread when beheld for the first time. His ponderous head, rendered terrific by its thick, shaggy hair and streaming beard, is supported upon a massive neck and shoulders, whose apparent strength is more imposing from the augmentation produced by the hump and the long fell of hair covering the anterior parts of the body. Nevertheless, the bison is not known to attack man, unless when wounded and at bay. The difference between the summer and winter dress of the bison consists rather in the length than in other qualities of the hair. In summer, from the shoulders backwards, the surface is covered with a very short, fine hair, smooth and soft as velvet. The tail is short, and tufted at the end. Except the long hair on the fore parts, which are, to a certain extent, of a rust color, or yellowish tinge, the color is a uniform dun. Varieties of color are so rare among this species, that the hunters and Indians always regard them as matters of special wonder.—The bison bull is poor, and his flesh disagreeable in the months of August and September. They are much more easily approached and killed than the cows, not being so vigilant, though the cows are preferred both on account of their finer skins and more tender flesh. The cow is much less than the bull, and has not so much of the long hair on the shoulders, &c.; her horns are not so large, nor so much covered by the hair. The sexual season begins towards the end of July, and lasts till near the beginning of September; after this time, the cows separate from the bulls in distinct herds. They calve in April; the calves seldom leave the mother until a year old; cows are sometimes seen with calves of three seasons following them.—Bison beef is rather coarser grained than that of the domestic ox, but is considered by hunters and travellers as superior in tenderness and flavor. The hump, which is highly celebrated for its richness and delicacy, is said, when properly cooked, to resemble marrow. The Indian method of preparing this delicacy is the following:—The hump is cut off the shoulders, the bones removed, and a piece of skin is sewed over the denuded part. The hair is then singed off, and the whole is now ready for the oven. This is a hole in the earth, in and over which a fire has been

burned, and into this heated receptacle the hump is conveyed, and covered, about a foot deep, with earth and ashes. A strong fire is again built over the spot, and, supposing these preparations to be begun on the evening of one day, the hump will be ready for eating by the next day at noon. The tongues and marrow bones are regarded, by the connoisseurs, as next in excellence.—Herds, consisting of thousands of these fine animals, still roam over the far western prairies, led by the fiercest and most powerful of the bulls. During the sexual season, the noise of their roaring resembles thunder, and the males often fight desperate battles with each other. While feeding, they are often scattered over a vast surface; but, when they move forward in mass, they form a dense, impenetrable column, which, once fairly in motion, is scarcely to be turned. They swim large rivers nearly in the same order in which they traverse the plains; and, when flying from pursuit, it is in vain for those in front to halt suddenly, as the rearward throng dash madly forward, and force their leaders on. The Indians sometimes profit by this habit: they lure a herd to the vicinity of a precipice, and, setting the whole in rapid motion, they terrify them, by shouting and other artifices, to rush on to their inevitable destruction. Numerous tribes of Indians are almost wholly dependent on these animals for food, clothing, tents, utensils, &c. Vast multitudes of bisons are slaughtered annually; but it is to be deeply regretted, that the white hunters and traders are in the habit of destroying these valuable beasts in the most wanton and unnecessary manner. It is common for such persons to shoot bisons, even when they have abundance of food, for the sake of the tongue or hump alone, or even because the animals come so near as to present a fair aim. It is, therefore, not to be wondered, that, from all causes of diminution, the bison should become less numerous every year, and remove farther and farther from the haunts of men. The preference always given to the cows, which are too often shot while gravid, operates powerfully in thinning the herds.—The skins of bisons, especially that of the cow, dressed in the Indian fashion, with the hair on, make admirable defences against the cold, and may be used for blankets, &c. They are called *buffalo robes*; the term *buffalo* being generally, but inaccurately, applied to the bison. The wool of the bison has been manufactured into hats, and has also been employed in making coarse cloth. The time cannot be very far distant, when this species, like the Indian tribes which hover near them, will have passed away, and the places which know them now shall know them no more.

Bissago, or Bissaux, or Bissao; an island in the Atlantic ocean, near the western coast of Africa, and the principal of the cluster called *Bissagos*, 100 miles in circumference; lon. 14° 10′ W.; lat. 11° 24′ N. The ground rises imperceptibly to the middle of the island. The soil is cultivated and fertile, abounding with several sorts of trees, particularly fine large orange and mangroves near the shore. The inhabitants are Portuguese and Negroes intermixed. The island is divided into 9 provinces, 8 of which are governed by officers appointed by the sovereign, each bearing the title of king. —There is another cluster of islands of the same name, lon. 15° W., lat. 11° 30′ N., 255 miles south of cape Verd.

Bisset, Robert; a native of Scotland, educated at Edinburgh, for the clerical profession. He took the degree of LL. D., and became a schoolmaster at Chelsea; but, not succeeding in that occupation, he employed himself in writing for the press. His chief productions are, a History of the Reign of George III, 6 vols. 8vo.; the Life of Edmund Burke, 2 vols. 8vo.; and an edition of the Spectator, with lives of the authors, 6 vols. He died in 1805, aged 46.

Bitaubé, Paul Jeremiah; born in Kŏnigsberg, in Prussia, 1732, of French parents. He translated Homer into French. In consequence of this translation, and the recommendation of d'Alembert, he was elected a member of the academy at Berlin. Frederic II, king of Prussia, favored him much, and allowed him to stay a long time in France, to finish several translations from the German into French. Among his translations is one of Göthe's Hermann and Dorothea. Napoleon conferred marks of favor on him. He died in 1808. His works appeared in 9 vols., Paris, 1804.

Bithynia; a country in Asia Minor, lying on the Pontus Euxinus, the Thracian Bosphorus and the Propontis, and bounded on the south by Phrygia. In early times, it was called *Bebrycia*, from the Bebrycians, who inhabited it. Before the time of Crœsus, B. was an independent state, under its own princes. After the death of Prusias I, in the war against Crœsus, it fell into the power of the Lydians, B. C. 560; into that of the Persians,

B. C. 555; and into that of Alexander, B. C. 334. The restorer of the Bithynian throne was Bias or Bas, a native prince, at the court of one of whose successors, Prusias II, Hannibal took refuge, and where he ended his life by poison, 183 B. C. Nicomedes, the last king of this race, bequeathed his kingdom to the Romans, 75 B. C. The famous cities of Nicomedia, Nicæa and Heraclea were in B. In the 11th century, B. was conquered by the Seljuks. In 1298, a new kingdom was founded there by the Ottoman Turks, of which, in 1327, Prusa was the capital.

Bitsch; a city in the department of the Moselle, with 2500 inhabitants, and a citadel on a hill; by its situation and the art of Carmontaigne, one of the strongest places in France.

Bittern. A name commonly applied to several species of heron; *ardea*, L. (See *Heron*.)

Bitumen; the name of a species in mineralogy, the individuals composing which have acquired several distinct names, from their diversity in appearance. This depends chiefly upon their state of aggregation, which forms an uninterrupted series from the perfectly fluid to the solid condition.—*Naphtha*, the most fluid variety, is nearly colorless, or of a yellowish tinge, transparent, and emits a peculiar odor. It swims on water, its specific gravity being from 0.71 to 0.84. It burns with a bluish-white flame and thick smoke, and leaves no residue. It consists of carbon, 82.20, and hydrogen, 14.80; and, being the only fluid destitute of oxygen, it is used to preserve those new metals in, which were discovered by sir H. Davy. It is found in Persia, in the peninsula of Apcheron, upon the western shore of the Caspian sea, where it rises through a marly soil in the form of vapor, and, being made to flow through earthen tubes, is inflamed for the purpose of assisting in the preparation of food. It is collected by sinking pits several yards in depth, into which the naphtha flows. It is burned in lamps, by the Persians, instead of oil. Near the village of Amiano, in the state of Parma, there exists a spring which yields this substance in sufficient quantity to illuminate the city of Genoa, for which purpose it is employed. With certain vegetable oils, naphtha is said to form a good varnish.—The variety *petroleum* is much thicker than naphtha, resembling, in consistence, common tar. It has a strong, disagreeable odor, and a blackish or reddish-brown color. During combustion, it emits a thick, black smoke, and leaves a little residue in the form of a black coal. It is more abundant than the first mentioned variety, from which it does not appear to differ, except in being more inspissated. It occurs, oozing out of rocks, in the vicinity of beds of coal, or floating upon the surface of springs. In the Birman empire, near Rainanghong, is a hill containing coal, into which 520 pits have been sunk for the collection of petroleum; and the annual product of this mine is 400,000 hogsheads. It is used, by the inhabitants of that country, as a lamp-oil, and, when mingled with earth or ashes, as fuel. In the U. States, it is found abundantly in Kentucky, Ohio and New York, where it is known under the name of *Seneca* or *Genesee oil*. It is used as a substitute for tar, and as an external application for the remedy of rheumatism and chilblains.—*Maltha* is a bitumen, still less fluid than petroleum, from which it differs in no other respect. Its principal locality is at Puy de la Pège, in France, where it renders the soil so viscous, that it adheres strongly to the foot of the traveller. It is also found in Persia and in the Hartz. It is employed, like tar and pitch, on cables and in calking vessels: it is used, as well as the petroleum, to protect iron from rusting, and sometimes forms an ingredient in black sealing-wax. —*Elastic bitumen* yields easily to pressure, is flexible and elastic. It emits a strong, bituminous odor, and is about the weight of water. On exposure to the air, it becomes hard, and loses its elasticity. It takes up the traces of crayons in the same manner as the caoutchouc, or Indian rubber, whence it has obtained the name of the *mineral caoutchouc*. It has hitherto been found only in the lead mines of Derbyshire.—*Compact bitumen*, or *asphaltum*, is of a shining black color, solid and brittle, with a conchoidal fracture. Its specific gravity is from 1 to 1.6. Like the former varieties, it burns freely, and leaves but little residue. It is found in Judea, in the Palatinate, in France, in Switzerland, and in large deposits in sandstone in Albania; but no where so largely as in the island of Trinidad, where it forms a lake three miles in circumference, and of a thickness unknown. A gentle heat renders it ductile, and, when mixed with grease or common pitch, it is used for paying the bottoms of ships, and is supposed to protect them from the teredo of the West Indian seas. The ancients employed bitumen in the construction of their buildings. The bricks of which the walls of Babylon were built

were, according to historians, cemented with hot bitumen, which imparted to them great solidity.

Bivouack (from the German *biwacht*); the name given to the modern system, by which the soldiers in service lie in the open air, without tents, in opposition to the old system of camps and cantonments. They remain dressed, in order to be ready, at a moment's warning, to take their places in order of battle. Tents being laid aside, on the continent of Europe, for the sake of diminishing the baggage of an army, large masses of troops are always obliged to bivouack, even if they are not near the enemy. The soldier, however, is permitted to build himself a hut of straw or branches, if circumstances allow it. Frequent bivouacking is very injurious to the health, and is also a great disadvantage to the countries in which it takes place.

Blacas, count; born at Aulps, in Provence (1770); served in La Vendée; accompanied Louis XVIII to Russia, and afterwards to England. On the restoration of the Bourbons, he was made minister of the king's household. After the second restoration, he was sent to Naples to negotiate the marriage of the duke de Berri. He was afterwards ambassador to Rome, where he concluded the famous concordat of 1815, so unpopular in France, that the government did not venture to propose it to the chambers. On the fall of the ultras and the elevation of Decazes, he retired to Rome, and is said to have been secretly employed at the congress of Laybach. He has since been ambassador to Naples, where, as well as at Rome, he has declared himself the protector of the ultramontanists. B. is a thorough ultra-royalist.

Black, Joseph, a distinguished chemist, born at Bordeaux, of Scottish parents, in 1728, studied medicine at Glasgow. Doctor Cullen, his instructer, inspired him with a taste for chemical studies. In 1754, he was made doctor of medicine, at Edinburgh, and delivered an inaugural dissertation, *De Humore acido a Cibis orto et Magnesia alba*, which exhibits the outline of his discoveries relative to carbonic acid and the alkalies. In 1756, he published his Experiments on White Magnesia, Quicklime, and several other Alkaline Substances, in the 2d volume of the Essays, Physical and Literary, of the Edinburgh Society. He demonstrates the existence of an aerial fluid in these substances, which he calls *fixed air*, the presence of which diminishes the corrosive power of the alkalies and the calcarious earths. This discovery may be considered as the basis of all those which have immortalized the names of Cavendish, Priestley, Lavoisier, &c., and given a new form to chemistry. In 1757, B. enriched this science with his doctrine of latent heat, which has led to such important results. In 1756, he was appointed professor of medicine and lecturer on chemistry in the university at Glasgow, in the place of doctor Cullen, and, in 1765, when Cullen left the professor's chair in Edinburgh, he was there, also, succeeded by B. No teacher inspired his disciples with such a zeal for study; his lectures, therefore, contributed much to make the taste for chemical science general in England. He died in 1799, at the age of 71. Upon Lavoisier's proposal, the academy of sciences, in Paris, had appointed him one of its eight foreign members. His habits were simple, his character cold and reserved. Though of eminent ability as a chemist, he injured himself by his long opposition to the reception of the new chemical theory. At length, however, he was convinced of its superior accuracy, and did justice to its merits. There is a paper of his in the Philosophical Transactions of 1774, and another in the Transactions of the Royal Society of Edinburgh, in 1791. Two of his letters on chemical subjects were published by Crell and Lavoisier, and his Lectures on Chemistry, in 1803, in 2 vols. by Robison.

Black Art. (See *Magic*.)

Blackbird; a trivial name, applied to birds of different species, and distinct genera, but properly belonging to a species of the genus *quiscalus*, as restricted by prince C. L. Bonaparte, di Musignano, the latest and most accurate writer on ornithological nomenclature. The true blackbirds are either of a rich, glossy black, showing metallic reflections, purple, or ferruginous; being altogether free from maculation. The kinds improperly called blackbird, such as the *redwing*, *cowbird*, &c., have bright colors, and are species of *icterus* or *troupial*.—All the blackbirds are gregarious and migratory, diffusing themselves in vast flocks from south to north; returning thence as the cold season approaches. They build their nests in trees, socially, and lay about five eggs. The young are unlike the adult birds.—Three species of blackbird are known in the United States; among these, the *great crow-blackbird* (*Q. major*, Viel.), is the largest, and, as its name implies,

strongly resembles, in all respects, the mischievous plunderer of our cornfields. The male is 16 inches long, having a most glossy black plumage; the tail is cuneiform, and, when the wings are folded, they extend nearly five inches beyond it. The female is of a light brown color, whitish beneath, and twelve and a half inches long. This species is found in the Southern States, principally along the sea-coast: it also inhabits Mexico, and is said to be common in the West Indies.—The *rusty grakle*, or *blackbird*, is nine inches long. Its migrations extend from the south, where it winters, to as far north as within the arctic circle, where it breeds. According to Pennant, they arrive in the vicinity of Hudson's bay about the beginning of June, when the ground is sufficiently thawed to allow them access to the grubs and worms, upon which they chiefly feed. They sing finely until they have ceased laying, and when the young are fledged, they again resume their song. Their nests are formed of moss and grass, and placed in trees about eight feet from the ground. They pass through the Middle States, on their northern tour, early in April: in September, they collect in vast flocks, to seek their winter-quarters in the south.—The *purple grakle*, *lesser* or *common crow-blackbird*, (*Q. versicolor*, Viel.), is the most notorious of these sable plunderers. On their first arrival in the Middle States from the south, which is in the latter part of March, they come in scattered flocks, and are most frequent in swamps, meadows, and recently ploughed ground. At this season, they consume an immense number of destructive insects, and, if they continued to feed on such food, they would be among the farmer's chief benefactors. Towards the beginning or middle of April, they begin to build upon the tall pines or cedars nearest to the fields whence they obtain their food. As many as 10 or 15 nests have been found on the same tree. The nests are about five inches in diameter, composed, externally, of long stalks and knotty grass-roots, and are lined with horse-hair, &c. The eggs are of a bluish-olive hue, with large spots, and irregular streaks of dark brown. The period when the green blade of the young Indian corn begins to sprout above the surface of the ground is that in which the common crow-blackbird commences its ravages. Vast flocks, chattering and screaming, as if anticipating the pleasures of the feast, descend upon the soil, and pluck the swelling grain from its recess. In a few hours, the careful husbandman beholds his fair prospect of an ample harvest almost destroyed, and that, too, with but little chance of his being able to remedy the evil. It is true that the guns are commonly put in requisition, and a few volleys, fired among these insolent thieves, destroy a small part of their numbers. But they only change their place to other parts of the field, and return ere long to renew the assault with increased activity. It is not until the month of November that they begin to collect their forces, now renovated and augmented by their young, to seek the genial climate of the south for the winter. When we consider that a very ample quantity of corn is produced, notwithstanding the depredations of these and other birds, and recollect the vast number of insects they consume before their attacks upon the corn begin, we shall be inclined to agree with our great ornithologist, Wilson, that the service they render the cultivator by devouring the insects is quite an adequate compensation for the tax they levy upon the grain. If we extend our observation a little further, and remark that these birds destroy the insects before they have attained their perfect or breeding state, and that a single fly or bug is capable of laying thousands of eggs, the magnitude of the benefit they confer upon mankind may be more accurately appreciated. Nevertheless, it is perfectly right, that, during their ravages upon the grain-field, they should be driven off and destroyed. The extermination of the species is as impossible as the wish to effect it would be ridiculous. If such an event could be brought about, we should speedily be convinced, that the supreme Author of nature had devised all things in wisdom, by discovering, that, without the aid of these seemingly useless creatures, the earth would be despoiled of its vegetation, and the habitations of man become loathsome from the multiplication of voracious and disgusting worms.

Blackfish; a species of *labrus*, caught on various parts of the American coast, especially in the vicinity of Long Island, whence large supplies are obtained for the New York market. For the following particulars concerning this valuable article of food, we are indebted to doctor Mitchell's excellent paper on the fishes of New York, published in the Transactions of the Literary and Philosophical Society. The specific name given by the learned describer is *L. tautog*, in which he has preserved the designation used by the Mohe-

gan Indians for this fish. The common name, *blackfish*, is bestowed on account of the color of its back and sides, which are of a bluish or crow-black; the lips, lower jaw, neck and belly, especially in the males, are white. The mouth is rather small, the lips skinny or fleshy, and the teeth are about twelve in number in each jaw, the two front teeth being largest, and the rest of the respective rows gradually decreasing in size. Within the external ranges are the points of smaller teeth, inserted with rather less regularity: they are sharp, distinct, and covered by the lips. The tongue is white, smooth, lying close, but discoverable by raising; tail entire, and somewhat convex, the middle rays being somewhat more prominent than the upper and lower ones; gill covers smooth, neither scaly, serrated nor rough; extremities of the pectoral fins whitish; eyes rather small. The blackfish is plump in appearance, and is much esteemed for the table. It varies in size, from 2 or 3 to 10 or 12 pounds. Rocks, reefs and rough bottoms of the sea, in the neighborhood of the coasts, are the situations most frequented by the blackfish, which appear to be stationary inhabitants of the salt water, as they do not, like the salmon, herring, &c., desert their haunts to visit the fresh-water rivers. These fish are caught in abundance, along the whole of Long Island sound, Fisher's Island sound, and in Narragansett bay. They are also found in the southern bays of Long Island, and on the ocean banks off Sandy Hook. They were formerly carried over land from Newport and Providence to Boston market, but are now caught in Massachusetts bay in sufficient numbers to render such importation unnecessary.—In catching blackfish, the hand line is generally used, though the angle rod may often be advantageously employed: they seize the bait greedily, at proper seasons, and pull strongly, in proportion to their size and weight. They are occasionally taken in seines. The bait commonly employed is the soft clam (*mya*), the soldier-crab or fiddler (*ocypoda*), or the large finny worm of the salt-water beaches, called *nereis*. As the warmth of spring comes on, the blackfish begin to acquire their appetite, which is suspended during the cold of winter, at which time a membrane is found to form over and close up the vent. They may be caught, as above stated, until the warm weather becomes well advanced, when such an abundance of food is to be procured as to render the bait of the fisherman no longer a temptation. The flowering of the common dog-wood (*cornus florida*) is considered an indication of the beginning of the fishing season; and where this tree is not to be seen, the vegetation of the chestnut-tree is regarded as a similar indication. These fish are brought to Philadelphia market in wagons, from Long Branch, &c., being packed in ice, and frozen as soon as caught.

Black Forest (in German, *Schwarzwald*); a chain of mountains in the grand-duchy of Baden and the kingdom of Würtemberg. It runs almost parallel with the Rhine, from south to north, often only from 15 to 20 miles distant from this river; is about 85 miles long, and, from east to west, in the southern part, about 30 miles wide; in the northern, about 18. The Danube rises in these mountains, as well as many other rivers. Those on the west side run into the Rhine, those on the east side into the Danube. The Black Forest is rather a chain of elevated plains, than of isolated peaks. The highest summit, the Feldberg, measures 4610 German feet. Except from June to September, these mountains are generally covered with snow, and even during this period, are not entirely free from it. Among the many valleys of this chain, the Murgthal is particularly celebrated for its beautiful scenery. The whole chain consists of primitive mountains: its skeleton, throughout, is granite; its higher points are covered with sand-stone, and other layers of less consequence, and are surrounded by heights composed of floetz rocks. On the western side, at the foot, appears gneiss. Porphyry and clay-slate are found on several heights, as, likewise, silver, lead, copper, iron, cobalt and mineral waters. The woods are abundant, and consist mostly of pines and similar species. The raising of cattle is the principal branch of husbandry carried on in this district. The ground is not fertile, and the inhabitants, scattered over the mountains, live extremely frugally, but are very industrious. Their manner of living, building their houses, and cultivating their lands, is very peculiar. Till the 17th century, there was no spirit of trade or industry among them; but the wars of that period developed it, and the manufactures of glass, straw hats, wooden clocks, and other wooden ware, are now very important. They make, annually, more than 180,000 wooden clocks, the value of which amounts to over half a million of guilders. Neustadt and Furtwangen are the central

points of this singular commerce, which embraces all Europe, and extends even to America. Large numbers of these clocks are sent to Spain and Portugal, from whence they go to South America. From the north of Germany, and from Havre, they are exported to the U. States. Of late, the clocks have been much improved, and the correctness of some of them, made of different woods, in order to counteract the influence of the weather, is surprising.—Two passes of the Black Forest became particularly noted in the time of the French revolution—the Kniebis and the Hölle passes. The former, at the foot of the Murg, was taken in 1796 and 1797; the latter is famous for Moreau's skilful retreat through it in 1796.

Blackfriars' Bridge; one of the six fine bridges of London, over the Thames, built between 1760 and 1768, after a design of Mr. Robert Mylne, at an expense of £152,840. There are 9 arches, the centre one being 100 feet wide. The whole length is 995 feet. Over each pier is a recess, supported by Ionic pillars. The bridge is situated at about an equal distance from those of Southwark and Waterloo. It commands a very fine view of St. Paul's cathedral, as well as of both sides of the river, including the tower, the monument, Somerset house, Westminster abbey, and about 30 churches. The constant bustle on this and the London bridge is enormous, and beyond any thing of the kind to be met with in other cities.

Black Lead. (See *Plumbago.*)

Black Rock. (See *Buffalo.*)

Black Sea; with the ancients, known by the name of *Pontus Euxinus* (q. v.); a sea which is situated between Europe and Asia, bounded on the west by Romania and Bulgaria, on the north by the Russian dominions, on the east by Mingrelia and Guriel, on the south by Natolia, being connected with the Mediterranean by the Bosphorus, and, by the Cimmerian Bosphorus, with the sea of Azoph (q. v.), which is, in fact, only a bay of the Black sea. The area of the Black sea and the sea of Azoph amounts to about 297,000 square miles. The water is not so clear as that of the Mediterranean, and, on account of the many large rivers which fall into it,—the Danube, Dniester, Dnieper, Don and Cuban,—being less salt, freezes more readily. The tempests on this sea are tremendous, as the land, which confines its agitated waters, gives to them a kind of whirling motion. In the winter, it is so boisterous, particularly near the coast from the Danube to the Crimea, that it is scarcely navigable, even by the most experienced sailors. The chief current runs from the shallow sea of Azoph, from north to south, to the Thracian Bosphorus and the Hellespont. The Black sea contains no islands; there is one, however, in the Cimmerian Bosphorus. The fisheries in the sea of Azoph and the Black sea are not unimportant, various kinds of valuable fish, both large and small, being taken; among others, several species of sturgeon. Seines are used, in which 60,000 fishes are sometimes caught within six hours; but there are never many large ones among them. Caviare (q. v.) is also made on the coast, as well as fish-glue, fish-oil, and, from the spawn of the sea mullet, botargo; the latter, however, only in small quantity. The salt and smoked mackerel form an important article of the commerce of the Crimea. Raoul-Rochette has published, in Paris, 1822, a work on the remarkable Grecian antiquities on the northern shore of the Pontus, which has been corrected and completed by the Russian counsellor Peter von Köppen, Vienna, 1823. Quite recently, Mr. von Blaramberg, director of the museum established at Odessa and at Kertch, has discovered many interesting remains in this quarter. (See *Crimea.*)

Blackguard. This name was originally given to the scullions and coal-carriers in great houses and palaces, who, in the journeys of the families to which they belonged, usually rode in the carts with the pots and kettles.

Blacklock, Thomas, a poet, remarkable for his literary attainments under the misfortune of a deprivation of sight, was born at Annan, in the county of Dumfries, in 1721. His parents, who were natives of Cumberland, although poor were industrious and well-informed. At the age of six months, he lost his sight by the small-pox; and, as he grew up, his father, with exemplary industry and affection, endeavored to lessen his calamity by reading to him such books as instructed or entertained him, when he always appeared to be particularly pleased with the works of Spenser, Milton, Prior, Pope and Addison. Such was the kindness his peculiar situation and gentle temper excited, that he was seldom without some companion, who aided in his singular course of education, until he had even acquired some knowledge of the Latin tongue. At the age of 12, he began to versify, and his performances at length became the subject of discourse in his

neighborhood. At the age of 20, he lost his father, on which he was invited by doctor Stephenson, a physician in Edinburgh, to visit that metropolis, in order to pursue his studies at the university. He soon became a proficient in Latin, as also in French, which he chiefly acquired by conversation with a French lady, the wife of provost Alexander. He also, in the course of nearly 10 years' study at the university, made a considerable progress in the sciences. In 1754, he published a second edition of his poems, which gained him the patronage of Mr. Spence, who published an account of his life, character and productions, which brought him into general notice; and a quarto edition of his poems being soon afterwards published by subscription, a considerable sum was thereby raised for his benefit. He now devoted himself to the study of theology, and, having passed through the usual course, was licensed, in 1759, by the presbytery of Dumfries. In 1762, he married the daughter of Mr. Johnson, surgeon, of Dumfries; a connexion which proved to him a source of comfort and felicity for the remainder of his life. He was soon after appointed minister of Kirkcudbright, on the presentation of the earl of Selkirk; but, being opposed by his parishioners, after two years' contention, he resigned his living, upon a moderate annuity, and retired to Edinburgh, where he adopted the plan of receiving a few students of the university as boarders, and of assisting them in their studies when desirable. In 1766, he was created D. D.; and, having now taken a respectable station among the literati of Scotland, he maintained it by various publications, until his death, July, 1791, at the age of 70. His private character, according to the testimony of Hume and others, was singularly amiable. Letters and conversation were his solace, to which he joined the practice of music. His poetry is easy, polished and harmonious; and he composed with considerable rapidity. The number of his images from visual objects will surprise those who are not aware of the uniform strain of imitation in common-place poetry. B. wrote, besides his poems, several prose works.

Blackmore, sir Richard, a physician and poet of notoriety, if not of eminence, was the son of an attorney in the county of Wilts. In 1668, he entered the university of Oxford. There he remained 13 years, and, for some time afterwards, appears to have followed the profession of a schoolmaster. At length he turned his attention to physic. In 1697, he had risen to so much eminence in his profession, as to be appointed physician to king William, who knighted him. The preceding year, he had made himself known, as a poet, by the publication of his heroic poem of Prince Arthur, which was soon followed by King Arthur; and, in 1700, he published a paraphrase of the book of Job, in folio; as also a poem entitled a Satire on Wit, being an attempt to retort on the wits by whom he had been very successfully assailed. By the strictness of his whiggish principles, he had incurred the resentment of the tory junto, composed of Swift, Pope, Arbuthnot and others; while something solemn in the complexion of his religion and morality, added to the real absurdity of starting epic after epic in quick succession, insured the raillery of all those to whom his gravity, perseverance and mediocrity afforded so much subject for ridicule. This worthy man and middling poet became the common butt of his day, and for almost two generations, for Pope took up the quarrel which Dryden began. The work which produced him the greatest reputation was the Creation, a poem in seven books, which went through several editions, and was greatly applauded, but is, generally speaking, very tamely elaborate. In 1721, B. published a New Version of the Psalms of David, which, although recommended by authority, has never been adopted. He died, at an advanced age, in 1729, leaving behind him the character of a pious, well-meaning and respectable man, of limited genius and little taste. Besides the epics already mentioned, he wrote Eliza, in 10 books; the Redeemer, in 6 books; King Alfred, in 12 books, &c. He also composed a History of the Conspiracy against King William III, and several medical and theological treatises, especially against the Arians, all of which have quietly reached oblivion. As a physician, he was a strenuous opposer of the new system of inoculation for the small-pox.

Blackstone, sir William, knight and LL. D., a celebrated English lawyer, and the most popular writer on the laws and constitution of his country, was born in London, in 1723. He was the third son of Mr. Charles Blackstone, a silk-mercer, but, being left an orphan, was brought up by his maternal uncle, Mr. Thomas Bigg, surgeon, from whose kindness he received an education, which the narrow circumstances of his father could scarcely have supplied. He was educated on the

foundation of the charter-house, whence, in 1738, he was removed to Pembroke college, Oxford. He was much distinguished, both at school and at the university, and at an early age compiled a work for his own use, entitled the Elements of Architecture, which has been much praised. Having chosen the profession of the law, he was in due time entered at the Middle Temple, and on this occasion published the admired verses, called the Lawyer's Farewell to his Muse, which appeared in Dodsley's Miscellany. In 1743, he was elected fellow of All Souls' college, Oxon., and, in 1746, was called to the bar, and commenced the practice of law. Being deficient in elocution, and not possessed of the popular talents of an advocate, his progress was slow. Having attended the courts of law at Westminster for seven years, without success, he determined to quit the practice of his profession, and retire to his fellowship at Oxford. The system of education in the English universities supplying no provision for teaching the laws and constitution of the country, B. undertook to remedy this defect, by a course of lectures on that important subject; and the manner in which he executed the task has conferred a lasting distinction on Oxford. His first course was delivered in 1753, and was repeated for a series of years with increasing effect and reputation. These lectures doubtless suggested to Mr. Viner the idea of founding, by his will, a liberal establishment in the university of Oxford for the study of the common law; and B. was, with great propriety, chosen the first Vinerian professor. His engagements at Oxford did not prevent his occasional practice as a provincial barrister, and, in 1754, being engaged as counsel in a contested election for the county of Oxford, he was led into considerations on the elective franchise, which produced his work entitled Considerations on Copyholds. In this treatise he denied the right of copyholders to vote as freeholders; which led to a declaratory act of parliament in establishment of that narrow doctrine. In 1759, he published a new edition of the Great Charter and Charter of the Forest, with a historical preface; and, during the same year, the reputation which he had obtained by his lectures induced him to resume his attendance at Westminster hall, when business and the honors of his profession soon crowded in upon him. In 1761, he was elected M. P. for Hindon, made king's counsel and solicitor-general to the queen. About this time, he also married, and, thereby losing his fellowship, was appointed principal of New Inn hall; which office, with the Vinerian professorship, he resigned the next year. In 1765, he also published the first volume of his Commentaries on the Laws of England; a work of greater merit than any which had yet appeared on the subject. In this celebrated production, the author does not confine himself to the humble duty of an expositor, but aspires to the higher character of a philosophical writer on jurisprudence; and, having been preceded by no authors in the same line, his manner of accomplishing his task is entitled to great praise. It must not, however, be regarded as a philosophical investigation into the grounds and merits of the English laws and constitution, so much as an elegant exposition and defence of an existing system. Whatever he found instituted, it was his purpose to support and eulogise; and consequently we are rather made acquainted with the "legal reasons" of what is established, than instructed in the general principles of national legislation. This mode of treating the subject may be, in some degree, useful, by conveying a due notion of the grounds on which government and usage have proceeded, but, of course, will do little to advance the mind of a nation, and often a great deal to nurture prejudices and impede amelioration. Notwithstanding some passages against standing armies, and in exposition of the progress of the influence of the crown, B. is uniformly the advocate of prerogative, and very confined in his notions of toleration. On the latter ground, he was involved, on the publication of his Commentaries, in a controversy with Priestley; and, some years afterwards, his political principles were assailed, with much acuteness, in a publication entitled a Fragment on Government, now known to be the work of Mr. Jeremy Bentham. In the debates which took place on the Middlesex election, in relation to the re-eligibility of an expelled member, he was led to language in parliament, against the tenor of which Mr. James Grenville, with great adroitness, quoted his own book, and he was also warmly attacked for the same inconsistency by Junius. The real merit and talents of B., backed by political tendencies, which are generally favorable to advancement, now made him an object of ministerial favor, and he was offered the post of solicitor-general, in 1770, and, declining it, was made one of the justices of

common pleas, which station he held until his death, in February, 1780, in his 57th year. The private character of B. was exceedingly mild, benevolent and amiable; and he was a most active and intelligent man of business, in which, indeed, he all his life delighted. He left in MS. two volumes of reports, which have been published since his death, and are deemed inadequate to his reputation.

Blackstone Canal leads from Providence, in the state of Rhode Island, to Worcester, in Massachusetts. It is 45 miles in length, and follows, in the greatest part of its course, the valley of the Blackstone or Pawtucket river, from which it is supplied with water. The fall from the summit, at Worcester, to tide-water at Providence, is $451\frac{61}{100}$ feet. There are 48 locks, which are built of hammered stone, laid in water lime, each 80 feet long and 10 feet wide. The canal is 34 feet wide at the surface of the water, 18 feet at the bottom, and 4 feet deep. It was built by an incorporated company, under charters from the legislatures of Rhode Island and Massachusetts, at a cost of about $600,000. It was finished in the autumn of 1828.

Bladensburg; a post-town in Prince George's county, Maryland, on the eastern branch of the Potomac, 6 miles N. E. Washington; lon. 76° 57′ W.; lat. 38° 56′ N. It contains about 100 houses. A battle was fought here, Aug. 24, 1814, between the English and Americans, in which the latter were defeated. This success of the British led the way to the conquest and burning of Washington.

Blair, Hugh, a pulpit orator and author, a grandson of Robert B., who, under Charles I, boldly defended the rights of the Presbyterian church, was born at Edinburgh, in 1718, and prepared himself for the ministry in the university of that city. His teachers, struck by an essay on the Beautiful, encouraged his inclination for belles-lettres. He was made preacher of the high church of Edinburgh in 1758. The office was regarded as the highest dignity of the Presbyterian church of Scotland. About the same time, his literary reputation also commenced. In 1759, he began a course of public lectures on composition, which he delivered with so much reputation, that, in 1762, the king founded a professorship of rhetoric and belles-lettres, which was committed to his charge. We know his theory of rhetoric from his Lectures on Rhetoric and Belles-Letters (1783, 4, 2 vols.), which have been translated into German. The credit of Macpherson's Ossian was zealously supported by Blair, in a dissertation which gained him much reputation. His sermons were considered as models of English pulpit eloquence. Careful and scrupulous as he was in writing them, he only published the best. They are distinguished by a polished style, and a clear, easy and methodical exposition. The first volume of his sermons was not published until his 60th year (1777); the 10th edition was called for in the following year. He subsequently published another collection, which was also often reprinted. B. gave weight to his doctrines by his own example. He labored for the welfare of his church, and was always ready to give counsel and assistance. He was a kind father, an affectionate friend and husband, and, by his tranquil and contented temper, as well as by his simple and regular manner of living, enjoyed the highest degree of human happiness to a great age. He died in 1800.

Blair, John; an eminent chronologist and geographer, a native of Scotland, which country he quitted for London about the middle of the last century. Though he had received a good classical education at Edinburgh, he thought himself fortunate in obtaining the situation of usher in a school in Hedge lane, London. In 1754, the publication of a work in folio, entitled the Chronology and History of the World, from the Creation to A. D. 1753, gained him great reputation. In the composition of this book, he is said to have been materially assisted by his relation, doctor Hugh Blair. In it, he illustrates his subject by 56 tables, 4 of which are introductory, containing the centuries which precede the first Olympiad. He dedicated his work to the lord chancellor Hardwicke, and, in 1757, was appointed chaplain to the princess dowager of Wales, and mathematical tutor to the duke of York, whom he accompanied, in 1763, on a tour to the continent, having already received several ecclesiastical preferments. On his return to England, he published, in 1768, a new edition of his Chronological Tables, with 14 maps of ancient and modern geography annexed. He died June 24, 1782, of an attack of influenza. After his death were published his Course of Lectures on the Canon of the Old Testament, and a duodecimo volume, entitled the History of Geography.

Blair, Robert; a Scottish clergyman and poet, born at Edinburgh, in 1699. He is the author of the Grave, first

printed at London, in 1743. He died in 1746.

Blake, Robert, a celebrated British admiral, was the eldest son of a merchant in the Spanish trade, settled at Bridgewater, where B. was born, in 1599. After attending the grammar-school of his native place, he was sent to Wadham college, Oxford, where he took the degree of B. A. in 1617. On his return to Bridgewater, he lived for some time, in a private manner, on the fortune left him by his father, and was led by the gravity of his own disposition, and by his family connexions, to embrace the principles of the Puritans, by whose interest he was elected member for Bridgewater, in the parliament of 1640. This being soon dissolved, he lost his election for the next, and immediately sought to advance the cause, in a military capacity, in the war which then broke out between the king and parliament. He soon distinguished himself by his activity. In 1649, in the manner of those times, when military men often served on shipboard, he was sent to command the fleet, in conjunction with colonels Deane and Popham, and thus commenced the naval career which has given him so distinguished a place in British history. He immediately sailed to Kinsale in quest of prince Rupert, whom he attempted to block up in that port. The prince, contriving to get his fleet out, escaped to Lisbon, where B. followed him; and, being refused permission to attack him in the Tagus, by the king of Portugal, he took several rich prizes from the Portuguese (against whom the parliament declared war), and followed Rupert to Malaga, where, without asking permission of Spain, he attacked him, and nearly destroyed the whole of his fleet. On his return to England, he was made warden of the Cinque Ports, and soon after reduced the islands of Scilly and Guernsey. In 1659, on the prospect of a Dutch war, he was made sole admiral, and, on the 19th of May, was attacked in the Downs by van Tromp, with a fleet of 45 sail, the force of B. amounting only to 23. He, however, fought so bravely, that van Tromp was obliged to retreat. He then continued his cruise, took a number of Dutch merchantmen, and, after several partial actions, drove the enemy into their harbor, and returned to the Downs. May 29, he was again attacked by van Tromp, whose fleet was now increased to 80 sail. B., who could not bear the thought of a retreat, engaged this vast force with a very inferior number, and an unfavorable wind; but, after every possible exertion, was obliged to retreat into the Thames, on which van Tromp was so much elated, that he sailed through the channel with a broom at his mast head, to signify that he had swept the sea of British ships. In the February following, B., having with great diligence repaired his fleet, put to sea with 60 sail, and soon after met the Dutch admiral, who had 70 sail, and 300 merchantmen under convoy. During three days, a furious running fight up the channel was maintained with obstinate valor on both sides; the result of which was, the loss of 11 men-of-war and 30 merchant-ships by the Dutch, while that of the English was only one man-of-war. It was in April, this year, that Cromwell assumed the sovereignty, on which occasion, B. and his brother admirals issued a declaration, that, notwithstanding this change, they resolved to persist in faithfully performing their duty to the nation. "It is not for us (said B. to his officers) to mind state affairs, but to keep the foreigners from fooling us." June 3, he again engaged van Tromp with dubious success; but, renewing the action the next day, he forced the Dutch to retire, with a considerable loss in ships and men, into their own harbors. On his return, he was received by Cromwell with great respect, and returned member in the new parliament for Bridgewater. Aware of his affection for a republican government, the protector was not displeased at having occasion to send him, with a strong fleet, to enforce a due respect to the English flag in the Mediterranean. He sailed first to Algiers, which submitted, and then demolished the castles of Goletta and Porto Ferino, at Tunis, because the dey refused to deliver up the English captives. A squadron of his ships also blocked up Cadiz, and intercepted a Spanish plate fleet. Being now very sick, he resolved to do one more service to his country before his death, and sailed, with 24 ships, to Santa Cruz, in Teneriffe; and, notwithstanding the strength of the place, burnt the ships of another Spanish plate fleet, which had taken shelter there, and, by a fortunate change of wind, came out without loss. His brother having failed in some part of duty during this service, he immediately removed him from his command. Finding his disorder making rapid progress, he then sailed for England, and, amidst his frequent inquiries for the sight of the English coast, expired while the fleet was entering Plymouth sound, August 27, 1657. His body was

honored with a magnificent public funeral, and interred in Henry VII's chapel, whence it was pitifully removed at the restoration, and buried in St. Margaret's church-yard.—The foregoing detail sufficiently evinces the bravery and talents of this able commander, who first deviated from the old practice of keeping ships and men as much out of danger as possible, and gave the example of bold and spirited achievement. So disinterested was he, that, after all his rich captures and high posts, he scarcely left behind him £500 of acquired property, freely sharing all with his friends and seamen, into whom he infused that intrepidity and spirit of enterprise, by which the British navy has been ever since so highly distinguished.

Blakeley, Johnston, a captain in the U. States navy during the late war, was born in Ireland, in October, 1781. Two years after, his father, Mr. John Blakeley, emigrated to the U. States, and settled in Wilmington, North Carolina. Young B. was placed, in 1796, at the university of North Carolina, being intended for the law. His father died the year after. In the year 1799, circumstances having deprived B. of the means of support, he left college, and, the next year, obtained a midshipman's warrant. In 1813, he was made a master-commandant, and soon after appointed to the command of the Wasp. In this vessel, he fell in with his Britannic majesty's ship Reindeer, in lat. 48° 36′. This ship he took, after an action of 19 minutes. The loss of the Americans was 21 killed and wounded; that of the enemy, 67. The Reindeer was cut to pieces in such a manner as to render it impossible to save her; and she was accordingly set on fire. After this, the Wasp put into L'Orient; from which port she sailed August 27, and, four days afterwards, falling in with 10 sail of merchantmen, under convoy of a ship of the line, she succeeded in cutting off one of the vessels.—The evening of the first of September, 1814, she fell in with four sail, two on each bow, but at considerable distances from each other. The first was the brig-of-war Avon, which struck after a severe action; but captain B. could not take possession, as another enemy was approaching. This enemy, it seems, however, was called off to the assistance of the Avon, which was now sinking. The enemy reported that they had sunk the Wasp by the first broadside; but she was afterwards spoken by a vessel off the Western Isles. After this, we hear of her no more.—In his person, captain B. was rather below the middle stature; his eyes black and expressive, his manners mild, manly and unassuming. Among his brother officers, he was considered as a man of uncommon intellect, courage, and professional skill. He was married, in December, 1813, to a lady of New York; and left an only daughter, who received one of the most affecting tributes of public gratitude, which have occurred in the history of the U. States. The legislature of North Carolina, December 27, 1816, after prescribing the destination of the sword they had voted to captain B., "Resolved, unanimously, that captain Blakeley's child be educated at the expense of this state; and that Mrs. Blakeley be requested to draw on the treasurer of this state, from time to time, for such sums of money as shall be required for the education of the said child."

Blanc, Mont. (See *Mont Blanc*.)

Blanchard, François, one of the first aeronauts, born at Andelys, in the department of the Eure, in 1738, was fond of mechanics from his youth, and, in his 16th year, invented a self-moving carriage, in which he rode a distance of 18 miles. This invention, which he improved in 1778, recommended him to the court of Versailles. He displayed equal ingenuity, by the invention of a hydraulic machine, in the 19th year of his age, and, afterwards, in the construction of a flying ship, which, by means of a counterpoise of six pounds, was raised to more than 20 feet from the ground. He eagerly availed himself of the discoveries of the brothers Montgolfier, and the improvements of the same by professor Charles and Robert in Paris. After having made his first aerostatic voyage, March 4, 1784, he crossed the channel from Dover to Calais, 1785, with doctor Jeffries, a gentleman of Boston, in the U. States. For this exploit, he was rewarded, by the king of France, with a present of 12,000 francs, and a pension of 1200. In the same year, at London, he first made use of a parachute, invented by him, or, according to others, by Etienne Montgolfier. After having performed many aerostatic voyages in foreign countries also, he was accused of propagating revolutionary principles, and imprisoned, 1793, in the fortress of Kufstein, in the Tyrol. Having obtained his liberty, he made his 46th ascent in the city of New York, 1796. In 1798, he ascended, with 16 persons, in a large balloon, at Rouen, and descended at a place 15 miles distant. In 1807, his aerostatic

voyages amounted to more than 66. He died in 1809. Madame Blanchard continued to make aerial voyages. In 1811, she ascended in Rome, and, after going a distance of 60 miles, she rose again to proceed to Naples. In June, 1819, having ascended from Tivoli, in Paris, her balloon took fire, at a considerable height, owing to some fire-works which she carried with her. The gondola fell down in the rue de Provence, and the hapless aeronaut was dashed to pieces.

Blanco, Cape (literally, *White cape*); a name given to a great number of capes by the Spaniards, Portuguese and Italians. It corresponds to the French *cap Blanc*. The name is as common and as unphilosophical as that of White hill, Black river, &c.

Blank Verse, in modern poetry; verses without rhyme; e. g., Milton's Paradise Lost. Only those languages which distinguish long and short syllables can employ it. (See *Verse*.)

Blangini, Giuseppe Marco Maria Felice, born at Turin, 1781, studied under the abbot Ottani, chapel-master in the cathedral there. In his 12th or 13th year, he accompanied the choir of this church on the organ. At the age of 14 years, he executed a mass, with a complete orchestra. In 1799, he went to Paris, gave lessons in singing, and was soon employed as a composer. The completion of the False Duenna, an opera, left unfinished by Della Maria, was intrusted to him; and soon after appeared his *Zelie and Terville*, *Naphthali*, and other operas. His concerts, in which he accompanied his own singing with much taste and expression, were the resort of all musical connoisseurs and amateurs. Having, in 1805, been invited to Münich, he executed an opera there, in consequence of which the king of Bavaria appointed him his chapel-master. In 1806, the princess Borghese appointed him her director of music and master of concerts; and, in 1809, after the departure of Reichardt, the king of Westphalia invited him, in the same capacity, to Cassel. After the expulsion of the Westphalian court, he lived in Münich, where he composed and performed his *Trajan in Dacia*. Some time after, he went to Paris, where he is still living. Besides many comic and heroic operas, we have a collection of pleasing ballads, *notturnos*, Italian airs, and charming duets, composed by him. In Italy, he is called the *Anacreon of music*.

Blasphemy is somewhat variously defined. According to the more general definition, it means the denying the existence of God; assigning to him false attributes, or denying his true attributes; speaking irreverently of the mysteries of religion; and, formerly, in Catholic countries, it also included the speaking contemptuously or disrespectfully of the Holy Virgin or the saints. Public blasphemy has been considered, by the church of Rome, as an unpardonable sin; and it was, formerly, punished with death by the municipal laws. The 77th novel of Justinian assigned this punishment to it; and the capitularies inflicted the same punishment upon such as, knowing of an act of blasphemy, did not denounce the offender. The former laws of France punished this crime with fine, corporeal punishment, the gallows and death, according to the degree and aggravation of the offence. The records of the parliaments supply numerous instances of condemnation for this crime, and many of punishment by death; others of branding and mutilation. A man was, for this offence, condemned to be hanged, and to have his tongue afterwards cut out, and the sentence was executed at Orleans, as late as 1748. But it is very justly remarked by a writer in the French *Encyclopedie Moderne*, that we should form an erroneous opinion, from the present state of society, of the effect of this offence, and the disorders it might introduce in former times; for religion was once so intimately blended with the government and laws, that to treat the received articles of faith or religious ceremonies with disrespect, was, in effect, to attack civil institutions. The French code provides no punishment for blasphemy; but a law has been enacted, since the restoration of the Bourbons, which places it again on the list of criminal offences. By the common law of England, blasphemies of God, as denying his being and providence, all contumelious reproaches of Jesus Christ, &c., are punishable by fine, imprisonment, pillory, &c.; and, by the statute of 9 and 10 William III, ch. 32, if any one shall *deny either of the Persons of the Trinity to be God*, or assert that there are more gods than one, he shall be incapable of holding any office; and, for a second offence, be disabled from suing any action, or being an executor, and suffer three years' imprisonment. By the statute of 53 Geo. III, ch. 160, the words in Italics were omitted. This law was an infringement of the liberty of conscience, and certainly could not now be practically enforced in England, since some of the doctrines of some sects of

Christians, openly and habitually inculcated in their public assemblies, would be violations of it. This was, no doubt, the reason of omitting the part of the statute above referred to. The early legislation of the American colonies followed that of the mother country, and, in some of them, the crime of blasphemy was punished with death; but the penalty was mitigated before the establishment of the independence of the states, and imprisonment, whipping, setting on the gallows, or in the pillory, having the tongue bored with a red-hot iron, &c. were substituted. The statutory provisions of the different states on this subject are very various. In some of them, the offence of blasphemy is distinguished from that of profane swearing; in others, blasphemy is not mentioned as a distinct offence. Several penalties against blasphemy are to be found in the laws of some of the New England States; according to which it is provided that, if any persons shall blaspheme, by denying, cursing, or contumeliously reproaching God, his creation, government, or final judging of the world, or by cursing or reproaching Jesus Christ or the Holy Ghost, or contumeliously reproaching the word of God, consisting of the commonly received books of the Old and New Testament, he is liable to imprisonment for a term not exceeding five years. But the most direct and public violations of these laws are passed over without punishment or prosecution. In many, and, we believe, the greater number of the states, the offence of blasphemy, not being a subject of special statutory provision, is only punishable either as an offence at common law, or a violation of the statute laws against profane swearing. The offence, considered only as a violation of positive statutes, would be liable to a great diversity of punishment in the different states, from a fine of two shillings and six pence, in some, to an imprisonment not exceeding a period of five years in others. Viewing this subject in a philosophical, religious or political view, it would be difficult to lay down any general principles applicable to different states of society; but the prevailing principle on this subject in the U. States, and that to which the laws and opinions of other countries are strongly tending, is, that any one may profess or oppose any doctrine, provided he inculcates his principles, whether orally or in writing, in such manner as not to commit a flagrant violation of decorum: what acts or words will constitute such an outrage must evidently depend upon the state of the society.

Blasting; the technical term for splitting any object by means of gunpowder.

Blazoning, or Blazonry, in heraldry; the deciphering of coats of arms, from the German *blasen*, to blow, because the herald blew a trumpet, and called out the arms of a knight, when he entered the lists at a tournament. (See *Heraldry*.)

Bleaching is the art of whitening linen, wool, cotton, silk, wax, also the materials of which paper is made, and other things. It is shown, by experience, that organic bodies, after being deprived of life, and becoming solid and dry, lose their color, and become white by the influence of the air and the sun-beams. Upon this fact, the manner of bleaching, which was formerly in use, is grounded: since, however, the bleaching in the sun commonly requires a whole summer, Berthollet, in the year 1786, first proposed the use of chlorine. This, it is known, has so little corrosive power, that, if diluted, it may be taken inwardly in a considerable quantity. This method has since been much improved, principally by Watt. It has been found, however, that linen certainly may suffer, if too much acid is applied. In England, this acid, when used to bleach linen, is mixed with one half of muriate of lime dissolved in water. The quantity of this salt requisite for bleaching is very different, according to the different quality of linen. Commonly, the 12th or 20th part of the weight of the linen is employed. In manufactories of linen and cotton goods, the yarn or cloth passes through a number of successive processes, the principal of which are the steeping, in which the goods are fermented in an acescent liquid, at a temperature of about 100 degrees Fahr.; the bucking and boiling, in which a hot alkaline lie is made to percolate through them for some time; the souring, performed with diluted sulphuric acid; the bleaching with chlorine, in which the stuff is exposed to the action of some compound of that substance, usually chloride of lime, called *bleaching salt*. Various mechanical operations, washings and repetitions of the processes are commonly practised to complete the discharge of the color. The fibres of wool and silk are not bleached by chlorine, but, after being deprived of the saponaceous or gummy matter which adheres to them, are exposed to the fumes of burning sulphur to discharge their color.

Blemmyes, or Blemyes; a fabulous people of Ethiopia, without heads, their eyes, mouths, &c. being placed in their breasts. A barbarous tribe of this name

appeared in the 3d century as the ally of the Egyptians against Diocletian. With a view of opposing to the B. a suitable adversary, Diocletian persuaded the Nobatæ, a people of Nubia, to remove from their ancient habitations in the deserts of Libya, and resigned to them an extensive but unprofitable territory, above Syene and the cataracts of the Nile.

Blende. (See *Zinc.*)

Blenheim, or Blindheim; a village situated in the circle of the Upper Danube, in Bavaria, on the Danube. Here was fought, Aug. 13, 1704, the famous battle of Blenheim, or, as it is more commonly called on the European continent, the *battle of Hochstädt*, from another village of this name in the vicinity. Louis XIV, in the war of the Spanish succession, had to contend with Holland, England, Austria, Savoy, Portugal and the German empire. The elector of Bavaria was his only ally; but, as the territories of this prince were contiguous to Austria, which, on that side, was unprotected, he was the more to be feared, especially as he was an active and warlike prince, who took the field himself, and, in case of success, could open the way to Vienna for the French armies. Sept. 20, 1703, he defeated, near Hochstädt, a village in the vicinity of Donawert, the imperial general Styrum, and took the fortress of Passau. But his dissensions with the upright and unyielding French marshal Villars prevented him from reaping, in the same year, all the fruits which this victory might otherwise have afforded him. Villars was ordered to cede the chief command to marshal Tallard, who overcame, on the Rhine, near Spire, the margrave Louis of Baden, and rendered the situation of the hereditary states of Austria very dangerous. Marlborough, however, the soul of this whole war, in the field and in the cabinet, formed the plan of deciding the fate of the contest on the Danube. Italy, Flanders and the Lower Rhine were to be defended only; but the decisive blow was to be struck in the south of Germany, whither the best imperial troops marched, under Eugene, from the Rhine. Marlborough attacked the Bavarian intrenchments, July 2, after a violent combat on the Schellenberg, and made his way over the Danube, in order to be able to occupy the territory of the elector of Bavaria, if circumstances required it. But, for this latter purpose, the gaining of a decisive battle was indispensable, since, without it, the invasion of Bavaria would have been a hazardous enterprise, and a long delay, after the manner of carrying on war in those times, required well-filled and secure magazines. The French and Bavarian armies were drawn into an engagement, Aug. 13, 1704, under the most unfavorable circumstances. Both these armies were posted, under the command of Tallard, Marsin, and the elector of Bavaria himself, between the village of B. and that of Kinzingen, behind the Nebelbach, a small stream emptying into the Danube, which was on their right flank. They amounted to 56,000 men, whilst the forces of Marlborough and Eugene were about 52,000. The first had thrown their troops chiefly into the two villages, which they considered as points of support for their wings, though they were at too great a distance in front of their main position. A large proportion of cavalry was in the centre, since each army, the Bavarian as well as the French, had their horse on their wings, and in this way those of two wings must necessarily join each other. Both the commanders would undoubtedly have perceived and corrected this mistake, as Tallard had in B. alone, 27 battalions of infantry; but they expected so little to be attacked, that when the line of the allies began to move, Aug. 13, at 2 o'clock in the morning, they supposed them to be marching off. The greatest part of their cavalry was sent to forage. Even at 7 o'clock, when the heads of the eight columns, with which Eugene and Marlborough advanced towards the Nebelbach, were to be seen, Tallard thought the whole a stratagem intended to cover the retreat; but he soon saw his error. The dispersed troops were recalled in the greatest hurry, and the cannon were drawn up in line. The French and Bavarians made every exertion to prevent the passage of the enemy over the Nebelbach, and the capture of the two villages, the conquest of which was considered, by Marlborough and Eugene, as decisive. Their line of attack was uncommonly long, about 4½ miles. Marlborough, in order to secure his right wing, attacked B., but without success: he then changed his plan, and threw himself, with his principal forces, into the wide interval between the right wing and the centre of the enemy, leaving only as many troops before B. as were necessary to check the body which occupied this position. At 5 o'clock in the afternoon, he succeeded, after great efforts, in passing the Nebelbach, by which his victory was decided.

The French, in the centre, were obliged to retreat: their example was followed by the Bavarians on the left wing, who, for a long time, had resisted the impetuous attacks of prince Eugene. Marlborough, instead of pursuing the retreating enemy, placed himself between the line of retreat and the position of B., guarded by 18,000 men, who were thus cut off from assistance, and forced to surrender. The cavalry was routed by the fire of the English cannon and musketry; and a large part of the defeated army remained dead on the field of battle (which was covered with more than 11,000 corpses), or were made prisoners. Tallard himself was among the prisoners; his son was killed. The consequences of the battle were decisive. Bavaria, as Marlborough had anticipated, fell into the power of Austria. Fortune deserted Louis XIV, as it did Napoleon after the battle of Leipsic, and, though he was able to continue the war for almost 10 years longer, it was owing to the dissensions among the allies themselves, who contended about the best use of the victory till the opportunity to use it was lost. (See *Marlborough.*)

Blessing, or Benediction. The expression of wishing one well soon gave rise, in early ages, to a solemn act, accompanied, like other solemnities of those periods, by symbolic signs; this was the *blessing* or *benediction.* In the patriarchal times, when the authority of the head of a family included that of the priest and the civil ruler, the blessing of course appertained chiefly to him, on account of his venerable character, and, when the priests began to form a separate class, became, in certain cases, a prerogative of theirs. As the authority of the father, in the infancy of every nation, is extremely great, the idea soon sprung up, that his prayers, invoking the favor of the Deity, were more effectual than those of others, and that whatever he blessed would be likely to receive the favor of God. The same importance was soon attributed to blessings conferred by a priest. The heathens, the Jews, and many Christian sects, have cherished this idea. By the Jewish institutions, certain benedictions were reserved to the priest: the same is the case in the Catholic church, in which different benedictions are appropriated to different degrees of the clergy. We shall mention only a few of them. The Catholic bishops alone can confer those benedictions which are connected with unction, and are called *consecrations*, as, for instance, the consecration of kings and queens, of the cup and *patera*, the church and altar. To them, also, is confined the benediction of abbots and abbesses, of knights, and the holy oil. For the benediction of the holy vestments, &c., they may employ a substitute. Every Catholic clergyman may confer the benediction *fiançiale* (that of betrothment); also, the marriage benediction; may bless the fruits of the earth, and the holy water. The benediction of a bishop is eagerly sought for by a faithful Catholic, as contributing peculiarly to his spiritual welfare; and the Catholic clergy, in general, use the benediction as a salutation, or reward for a service, &c. When the pope rides or walks out, the Catholics kneel to receive his blessing, which he gives by a motion of his hand. In his antechamber are often seen things of different kinds, rosaries, &c., in large quantities, which he blesses in passing by. The Catholic church blesses things animate and inanimate, and this is believed by many to preserve them from sickness, injury, &c. (See *Agnes, St.*) Among several Protestant sects, the benediction, at the close of the sermon, is in the form given by Moses. This is the case with the Lutherans. Catholics, in many cases, use the consecrated water in giving the benediction.

Blight; a general name for various distempers incident to corn and fruit-trees. The term has been used in a very vague and indefinite manner. The origin of the disease has been variously accounted for. There appear to be at least three distinct species of it. The first originates in cold and frosty winds, in spring, which nip and destroy the tender shoots of the plant, by stopping the current of the juices. The leaves wither and fall; the juices burst the vessels, and become the food of numerous insects, which are often mistaken for the cause of the disease, while they are really an effect of it. The second species originates in a sultry and pestilential vapor, and happens in summer, when the grain has attained its full growth. The third originates in *fungi*, which attack the leaves or stem of herbaceous and woody plants; but more generally grasses, and particularly the most useful grains. It generally assumes the appearance of a rusty-looking powder, which soils the finger when touched. There are several sorts of these *fungi*, known to farmers under the names of *red rust*, *red gum*, &c. The only means of preventing the effect of blight is proper

culture. Palliatives are to be found in topical applications.

Blind, the; such as are deprived of their sight. The loss of the noblest sense, by means of which man receives an idea of the world that surrounds him, clothed in light and color, is an event as melancholy as it is frequent. Blindness is different, 1. in its degrees, some persons being partially blind, retaining a slight perception of light, with the power of distinguishing very brilliant colors, and the general outlines of bodies; others being entirely deprived of the faculty of seeing; 2. in its causes: some men are blind from their birth; others have become blind by local diseases of the eyes, for instance, by inflammation, suppuration, cancer of the eye-ball, spots, films, tumors on the cornea (by which its transparency is destroyed), also by closure of the pupil, by a turbid state of the humors, by a debility of the optic nerve, or by general diseases of the body, violent fevers, nervous fevers, plethora and tendency of the blood to the head, erysipelas in the face, small-pox, scarlet fever, &c., or by excessive exertion of the eyes, by which the optic nerve is enfeebled; for which reason, some classes of mechanics and artists, as blacksmiths, laborers in glass and smelting-houses, watch-makers, &c. not unfrequently lose their sight, and, in northern countries, which are covered with snow for a long time, and which dazzle the eyes by the reflection of the sunbeams, as well as in the sandy deserts of Africa, blindness is a frequent complaint. Old age is sometimes accompanied with blindness, occasioned by the drying up of the humors of the eye, or by the opacity of the cornea, the crystalline lens, &c. There are several causes which produce blindness from the birth. Sometimes the eyelids adhere to each other or to the eye-ball itself, or a membrane covers the eyes; sometimes the pupil of the eye is closed, or adheres to the cornea, or is not situated in the right place, so that the rays of light do not fall in the middle of the eye; besides other defects. Those who are born blind have no idea of vision, and are entirely destitute of all the ideas derived from the sense of sight. They cannot, therefore, be sensible of their misfortune in the same degree as those who have lost their sight at a later period. Experience has shown, that those who acquire the power of seeing after being born blind, or having lost their sight in their childhood, form very different ideas of visible objects from other persons. A young man, whom Cheselden couched for a cataract, at the moment he received sight, imagined that all the objects which he saw were in contact with his eyes: he could not distinguish objects, although of very different forms. Those with which he was already familiar by the touch, he examined with great attention, in order to recognise them another time; but, having too many things to notice at once, he soon forgot all that he had observed. He wondered that those persons whom he loved most were not handsomer than others. Before he received his sight, he had expressed a great desire to obtain this sense. The other senses of persons, who have been blind for a long time, become more exquisite, perhaps, because they are not subject to the distraction produced by the sight of so many objects. The blind, therefore, are often distinguished for a remarkable mental activity, and a wonderful developement of the intellectual powers. Their touch and hearing, particularly, become very acute. Thus it is related of a blind man, who lived at Puisaux, in France, and was a chemist and musician, that he could accurately estimate the proportions of objects, could judge of the distance of fire by the degree of heat, determine the quantity of fluid in vessels by the sound it produced while running from one vessel into another, and the proximity of objects by the effect of the air upon his face. He determined very accurately the weights of bodies and the capacities of vessels. The celebrated Saunderson, professor of mathematics at Cambridge, lost his sight in his early youth. He invented several processes to facilitate his studies in arithmetic and geometry. His sense of touch was so acute, that he distinguished spurious coins merely by letting them pass through his fingers, though they were so well executed, that even skilful judges were deceived by them.

Blind, Institutions for the. In the case of persons destitute of sight, it is necessary to have recourse to the other senses to supply the want of the eye. If, for instance, we wish to teach them the arts of reading and writing, letters must be prepared, which will be palpable to the touch, and the hand guided until they are able to copy them. If we wish to communicate to them a knowledge of the surface of the earth, globes and maps must be prepared with the divisions, &c., in relief. Knowledge obtained in this way must, of course, be acquired much

more slowly than that received by the sight. The senses of touch and of sight differ in this respect, that the former ascends by degrees from the perception of parts to the perception of the whole, whilst the latter views the whole at a single glance. It is, therefore, evident, that the blind cannot be instructed in the common schools destined for those who see: in the first place, because the means of instruction by the touch are wanting; and secondly, because the progress of the other children would be retarded by the slow apprehension of the blind pupils. For these reasons, and as the blind form no small part of the population of every country, particular institutions have, in many places, been established for their instruction. In Prussia, they amount to more than 13,000 souls. Zeune, in his Belisar (1821, p. 12 et seq.), has laid down, as a general law, deduced from observation, that the proportion of blind persons decreases from the equator towards the poles. In Egypt, he says, it is as 1 to 100, while in Norway the proportion is 1 to 1000.—The instruction given in the schools for the blind aims, first, at a general cultivation of their intellectual faculties. They are afterwards taught some art which may enable them to provide for their own subsistence. These arts are of two kinds—mechanical employments and music. The instruction of the blind, therefore, embraces three branches —1. mechanical labors; 2. the fine arts; 3. science; because it is impossible to determine, without trial, the peculiar genius of the pupils, whether, for instance, they should be instructed as mechanics, musicians, or mathematicians. The German institutions for the blind, as well as those in Paris, have this comprehensive character, whilst the English aim, more exclusively, to impart instruction in mechanical trades. The first idea of such an institution for blind persons was conceived by Valentin Haüy, brother of the celebrated mineralogist: it was suggested to him by his acquaintance with a blind German lady, the baroness von Paradis, of Vienna, who visited Paris in 1780, and performed on the organ with general applause. Haüy repeatedly visited this ingenious lady, and was much surprised to find in her apartments several contrivances for the instruction of the blind; for instance, embroidered maps and a pocket printing-apparatus, by means of which she corresponded with von Kempelen, in Vienna (the inventor of the chess-player and speaking automaton), and with a learned blind gentleman, named *Weissenburg*, at Manheim. Haüy compared the high cultivation of these two Germans with the degraded state of the blind in France, where, at the annual fair of St. Ovide, an innkeeper had collected 10 poor blind persons, attired in a ridiculous manner, and decorated with asses' ears, peacocks' tails, and spectacles without glasses, to perform a burlesque concert. Nor did the great institution for the blind, or the hospital of the 300 (commonly called *les quinze-vingt*, founded, in 1260, by St. Louis, after his crusade to Egypt, during which so many soldiers became blind by the ophthalmia, prevailing in that country), present to the philanthropic Haüy a pleasing picture of intellectual cultivation; rather a scene of dulness and moral corruption. He, therefore, resolved to do for the blind in France what the abbé de l'Epée had done for the deaf and dumb. In 1784, he opened an institution, in which they were instructed, not only in appropriate mechanical employments, as spinning, knitting, making ropes or fringes, and working in paste-board, but also in music, in reading, writing, ciphering, geography and the sciences. For this purpose, he invented particular means of instruction, resembling those with which he had become acquainted by his intercourse with the two blind Germans Paradis and Weissenburg. For instruction in reading, he procured raised letters of metal, from which, also, impressions may be taken on paper: for writing, he used particular writing-cases, in which a frame, with wires to separate the lines, could be fastened upon the paper: for ciphering, there were movable figures of metal and ciphering-boards, in which the figures could be fixed: for teaching geography, maps were prepared, upon which mountains, rivers, cities, and the borders of countries, were embroidered in various ways, &c. In the beginning, the philanthropic society paid the expenses of 12 blind persons; afterwards, in 1791, the institution was taken under the protection of the state, and united to that for the deaf and dumb; but, as this was found inconvenient, it was, in 1795, separated from the latter, and, in 1801, united to the hospital of the *quinze-vingt*. The mingling of young blind persons here with old soldiers being found very prejudicial to the former, Haüy, full of indignation, went to Petersburg, in 1806, in order to establish a similar institution there. After the restoration, in 1815, the establishment was put upon its original footing, and the

physician doctor Guillié appointed its director.—Next to France, the first institutions for the blind were established in Great Britain, where, however, they are supported only by the contributions of private individuals. In 1790, an institution of this sort was established at Liverpool, in which both males and females are instructed in manual labors, in singing hymns, and playing on the organ. In 1791, a second one was established in Edinburgh, in which the making of baskets and ropes is the principal occupation. Similar institutions have since arisen in other places; one at London, in 1800; also at Dublin, Bristol and Norwich.—In Germany, the first public institution for the blind was established by the king of Prussia at Berlin, in 1806, when Haüy passed through this city. Zeune was appointed director of it. He invented many instruments more simple than those which had formerly been used, and which answered the purpose very well. Among other things, he brought to great perfection maps and globes, destined for the use of the blind; which, in many parts of Europe, are used for the instruction of others also, since they present, by means of elevations and depressions of the surface, proportional elevations and pictures, which strike the mind forcibly. In arithmetic, he directed his attention almost exclusively to mental calculations. The first institutions for the blind in Germany, after that in Berlin, were established in Vienna and Prague, both in 1808, and, in the same year, that in Amsterdam, founded by free-masons. In 1809, the institution in Dresden sprang up—a branch of that in Berlin. In 1810, the institution in Zürich was founded by the auxiliary society. In 1811, a similar establishment was instituted in Copenhagen, after the plan of professor Brorson, by the *society of the chain*, as it is called, (*Verein der Kette*). After the great war for liberty, from 1813 to 15, when the Egyptian ophthalmia raged so dreadfully among the European armies, several institutions for blind soldiers were established, on Zeune's plan, in Prussia. Their object was to instruct soldiers who had become blind, and unable to exercise their former business, in useful labors. These schools were, at first, intended to continue only till all the soldiers received in them had thoroughly learned some trade: two of them, however, those at Breslau and Königsberg, have been put upon a permanent footing. The institution for the blind in Petersburg, which was established by Haüy, but was never in a very prosperous state, seems to have declined greatly, after its founder's return to France, in 1816. The name of its present director is Martin Pilazki. Whether the institution projected at Barcelona, in 1820, has been established, or whether it survived the political storms of that year, or the yellow fever of the succeeding, we do not know. Institutions for the blind are confined almost entirely to Europe, and they appear to be peculiar to Germany, Switzerland, Holland, Denmark, France, England and Russia. Father Charlevoix, indeed, says, that, in Japan, the records of the empire are committed to the memory of the blind; and Golownin estimates their number in the gigantic city of Jeddo, alone, at 36,000; but neither of them mentions that there is any institution established for them. The director of the institution in Vienna, F. W. Klein, has published a good *Lehrbuch zum Unterrichte der Blinden*, &c. *um sie zu bürgerlicher Brauchbarkeit zu bilden* (Elementary Work for the Instruction of the Blind, &c., to render them useful Citizens).—The first, and, as yet, the only institution of the kind in America, was commenced in Boston, in the year 1829. In the beginning of that year, an act of incorporation was granted, by the legislature of Massachusetts, to several gentlemen, authorizing them to establish the New England Asylum for the Blind, for the purpose of educating blind persons. This institution will go into operation as soon as the necessary funds shall be obtained.

Blinds, in operations against fortresses; the name of all preparations which tend to intercept the view of the enemy. There are several species:—1. A fascine placed across the embrasures, to prevent the enemy from observing what passes near the cannon.—2. Blinds before port-holes are shutters made of strong planks, which are placed before the port-holes, as soon as the guns are discharged, to obstruct the enemy's view.—3. Single and double blinds. The former consist of three strong, perpendicular posts, 5 feet in height, between which are planks covered with iron plates on the outside, and thus made shot-proof. This screen is furnished with rollers, to enable the laborers in the trenches to push it before them. The latter consist of large wooden chests, on four block-wheels, which are filled with earth, or bags of sand, and serve likewise in the trenches, &c., to cover the soldiers from the fire of the enemy.—4. Another kind

of blinds used to protect the workmen in the trenches, are the chandeliers. Two square beams of timber are placed parallel, and at a distance of six feet, on the ground, and fastened by two cross beams. Upon the ends, perpendicular posts are erected, and the interval is filled up with fascines, at least to a height of five feet.—5. *Blind* is also the name given to coverings placed over the most exposed parts in the saps or the fortress. These are made of beams, over which hurdles or fascines are spread, that finally receive a sufficiently thick layer of earth as a cover.

Blister; a topical application, which, when applied to the skin, raises the cuticle in the form of a vesicle, filled with serous fluid. The powder of the *cantharis*, or Spanish fly, operates with most certainty and expedition, and is now invariably used for this purpose. Morbid action may often be removed from the system by inducing an action of a different kind in the same or a neighboring part; hence the utility of blisters in local inflammation and spasmodic action. Exciting one pain often relieves another; hence the use of blisters in tooth-ache, and some other painful affections. Lastly, blisters communicate a stimulus to the whole system, and raise the vigor of the circulation; hence, in part, their utility in fevers of the typhoid kind, though, in such cases, they are used with still more advantage to obviate or remove local inflammation.

Bloch, Marcus Eliezer; a naturalist of Jewish descent, born at Anspach, in 1723, of poor parents. In the 19th year of his age, he understood neither German nor Latin, nor had he, with the exception of some rabbinical writings, read any thing. Nevertheless, he became tutor in the house of a Jewish surgeon in Hamburg. Here he learned German and Latin, and, besides, acquired some knowledge of anatomy. His principal work is the *Naturgeschichte der Fische* (Natural History of Fishes), fol., 1785—1799, which is adorned with many colored plates. He enjoyed a well-deserved reputation, and died in 1799.

Blockade is the interception by one belligerent of communication with a place occupied by another. National sovereignty confers the right of declaring war, and the right which nations at war have of destroying or capturing each other's subjects or goods, imposes on neutral nations the obligation not to interfere with the exercise of this right within the rules and limits prescribed by the law of nations. In order to render the communication with a place unlawful to a neutral, a blockading or besieging force must be actually present, investing it, and sufficiently powerful to render a communication with it dangerous to a neutral, and expose him to seizure by the blockading or besieging force. A declaration of siege or blockade is an act of sovereignty, but does not require, in all cases, a direct declaration by the sovereign authority of the besieging belligerent; for its officers may be invested, either expressly, or by implication, with authority to institute such siege or blockade. It must, however, in order to be lawful and obligatory on neutrals, be declared, or sanctioned, either expressly, or by implication, by the sovereign power. It must also be declared or made public, so that neutrals may have notice of it. If a blockade is instituted by a sufficient authority, and maintained by a sufficient force, a neutral is so far affected by it, that, if he attempts to trade with the place invested, either by carrying goods to it or bringing them away, the property so attempted to be carried to, or from the place, is liable to be seized by the investing party, and, in case of being seized, is forfeited.

Blockhouse, in fortification; a house made of beams, joined together crosswise, and often doubled, with a covering and loop-holes, large enough for 25—100 men. In addition to this, it is commonly covered with earth, to render it entirely bomb and fire-proof. It is usually sunk several feet into the ground. Some forts of this kind contain two stories; and they are often fitted up to receive cannon. Blockhouses are generally built in the form of a square or a cross. Their use is to afford a feeble garrison of an important place, which is very much exposed, an opportunity of holding out against the cannonade and assault of the enemy till they are relieved. They also serve for bomb-proof guard-houses, and places of last resort, in the interior of intrenchments, and in the covered passages of fortresses, where the cannon are stationed.

Blocks are pieces of wood in which sheaves or pulleys are placed, for the purpose of forming tackle, purchases, &c., in various operations in naval tactics and architectural constructions. The mechanical power is described in the article *Pulley*. (q. v.) Blocks are single, double, treble, and fourfold, according as the number of sheaves is one, two, three or four. The sheaves are grooved to receive the rope, and have in their centre a

brass *bush*, or triangular piece of brass, to receive the *pin* on which they revolve. The sides of the block are called *cheeks*. A *running* block is attached to the object to be moved; a *standing* block is fixed to some permanent support. Blocks also receive different denominations from their shape, purpose and mode of application, which cannot well be explained without the use of figures. No less than 200 different sorts and sizes are made at Portsmouth, England, for the royal navy, besides which there are various sorts used only in the merchant-ships. The machinery for supplying the royal navy with blocks is the invention of Mr. Brunel, an American artist. It enables 4 men, in a given time, to complete the shells of as many blocks as 50 men could do by the old method.

Bloemart, sometimes also Blom, Abraham, a Dutch painter, born at Gorcum, in 1565, died at Utrecht, in 1647. His paintings are reproached with various faults, yet he is distinguished by the brilliancy of his coloring and the richness of his invention. In the representation of the *chiaro oscuro*, he may be called great. He painted all sorts of objects; but his landscapes are the most esteemed. He had four sons, of whom the youngest, Cornelius, is the most distinguished. He was born at Utrecht, in 1603, and died at Rome, in 1680. He was an engraver, and his engravings are distinguished for purity, elegance and softness. He was the founder of a new school, from which proceeded Baudot, Poilly, Chasteau, Speier, Roullet, &c.

Blois (anciently, *Blesæ*, and *Castrum Blesense*); a city of France, and capital of Loir-and-Cher; 36 miles S. W. Orleans; lon. 1° 20′ E.; lat. 47° 35′ N.; pop., 13,054. Before the revolution, it was a bishop's see, the seat of a lieutenant-general, a grand bailiwick, and capital of the Blaisois, once the abode of the kings of France. B. has been several times conspicuous in French history. There are several fountains in different parts of the town, supplied by an aqueduct, supposed to have been erected by the Romans.

Blomfield, Charles James; doctor of philology, born at Bury St. Edmund's, in Suffolk, in 1786. In 1804, he entered Trinity college, Cambridge, where he distinguished himself, not only in the usual examinations, but also in the public disputations. The university, therefore, granted him, in 1806, one of the scholarships, founded by lord Craven—a high academical honor. In 1808, when he received the bachelor's degree, he was declared *third wrangler*, and obtained the first medal for a prize poem. Not long after, he published a new edition of the *Prometheus* of Æschylus, and, in 1809, was chosen fellow of his college. His literary reputation soon spread; and, in 1810, lord Bristol conferred on him the living of Quarrington, in Lincolnshire. Lord Spencer, one of the first patrons of literature in England, also voluntarily presented him with another at Dunton. There he remained seven years, during which time he published editions of several of the plays of Æschylus, among them the *Prometheus* (which he had printed once before), the *Seven before Thebes*, the *Persæ* and *Agamemnon*; also a new edition of Callimachus, and, afterwards, in connexion with T. Rennel, the *Musæ Cantabrigienses*. In 1812, he edited, with professor Monk, the Posthumous Tracts of Porson. He likewise published, in 1814, the *Adversaria Porsoni*. These works gained him such a reputation, that lord Bristol conferred on him the livings of Great and Little Chesterford, in Essex, on which account, with the permission of his patrons, he exchanged his cure at Dunton for that of Tuddenham, in Suffolk. To the fame which his philological and theological studies procured him, he was also indebted, in 1819, for the office of chaplain to the bishop of London—a choice which always falls on a man of acknowledged ability, it being his duty to examine the candidates, previously to their ordination in this diocese. Places of this sort generally lead to high promotions in the church, and B. soon after received the living of St. Botolph's. Since that time, he has lived in London, visits in the first circles, and supports an establishment suitable to his income, which is said to amount to £8000. Among his latest literary labors, the continuation of his edition of *Æschylus* is the most important.

Blomfield, Edward Valentine, brother of the former, born in 1788, studied in Caius college, at Cambridge, and excited the highest expectations. Among several prizes which he received, we may mention the medal assigned him, in 1809, for his beautiful ode, *In Desiderium Porsoni*. In 1812, a fellowship in Emmanuel college was conferred on him. In 1813, he visited Germany, where he acquired a good knowledge of the German language, and became acquainted with Wolf in Berlin, and Schneider in Breslau. After his return, he wrote in the *Museum criticum*, or Cambridge Classical Researches (Pt. 2),

remarks on German literature, which were received with approbation. The university of Cambridge appointed him one of the preachers at St. Mary's church. He began a translation of Schneider's *Griechisch-deutsches Lexicon*, but did not live to finish it. Matthiæ's *Griechische Grammatik*, however, he translated completely. His translation was published by his brother, and every where well received. He was in Switzerland, in 1816, with his pupil, a young nobleman, and, in his haste to return to Cambridge, on hearing that he was appointed proctor for the following year, the fatigue of rapid travelling occasioned a sickness, of which he died in October, 1816.

Blondel; a confidential servant and instructer in music of Richard Cœur de Lion of England, about the year 1190. While his master was the prisoner of the duke of Austria, B. went through Palestine, and all parts of Germany, in search of him. He understood, it is said, that a prisoner of rank was confined in Lowenstein castle, and hastened thither. Placing himself under a grated tower, he began to sing one of the French lays which he had formerly composed for Richard. Scarcely had he finished the first stanza, when a voice from the dungeon of the tower responded. Thus he discovered his king, delivered him, and gained the name of the *faithful Blondel*. Grétry's fine opera, Richard Cœur de Lion, is founded on this anecdote.

Blood, Thomas (commonly called *colonel Blood*), was a disbanded officer of Oliver Cromwell. He took part in the revolution in various ways, and made an attempt to steal the crown and regalia from the Tower, in which he almost succeeded. Being, however, taken, he confessed his purpose, without showing the least fear of death. Charles II, from idle curiosity, went to see him, and B. persuaded the monarch to pardon him. Charles even bestowed an estate with £500 a year upon him, whilst poor Edwards, the keeper of the jewel-office, who valiantly defended the crown, and was wounded, lived forgotten.

Blood is the red fluid contained in the blood-vessels (q. v.) of animal bodies. It is found in the mammalia, in birds, in reptiles and in fishes. In the last two classes of animals, the temperature of the blood is much lower than in the former, for which reason they are distinguished by the name *cold-blooded*, while the others are termed *warm-blooded* animals. Insects and worms, instead of red blood, have a juice of a whitish color, which is called *white blood*. In the blood, two different substances are contained, which are separated by coagulation—the *serum*, a fluid like the white of an egg, and a thick matter, to which the red color properly belongs, which is much heavier than the former, and is called the *coagulum*. The last may be divided again into two different parts—into the *cruor*, or that part of the blood which is intrinsically red, and coagulable, and *lymph* or *fibrine*, to which the coagulation of the blood must be ascribed. The *fibrine*, in young animals, is much whiter than in older and stronger ones. The blood of the latter contains much more azote than that of the former. If the nourishment of animals is changed, we also find an alteration in the constituent parts of their blood. It is also changed by diseases. In animals that are hunted to death, or killed by lightning, the blood does not coagulate. The blood of birds is more highly colored, and warmer, than that of viviparous animals, and coagulates more easily in the air. That of reptiles and fishes coagulates with difficulty. Aided by magnifying glasses of a strong power, one may observe, in examining the blood of the living animal, or in blood which is newly drawn, that it consists, especially the *cruor*, of little globular bubbles, the *globules* of the blood, as they are called, the diameter of which amounts to about the three hundredth part of a line. In blood that has been drawn some time, although this time may be very short, they are not to be discovered. They are the effect of the life that pervades the blood. The more robust and healthy an animal is, the more globules are perceived. They show, as it were, the transition from the formless liquid to the original form of the first organized matter. The blood is of the greatest importance to the life of an animal, and may be considered as the source of life. As long as the body is living, the blood is in perpetual motion. When it is taken out of the body, a remarkable change soon follows: it begins to coagulate, and then undergoes, first an acetous, and, after a few days, a putrid fermentation. All the blood takes its origin from the chyle, and deposits, by degrees, the nourishing particles requisite to the preservation and growth of the body, by a multitude of vessels adapted thereto. This is done while it is driven from the heart into the remotest parts of the body, and from thence back. The circulation of the blood is, as it were, the principle and first

condition of life. With it, except in cases of fainting, suffocation, &c., life ceases. The heart, the centre of the circulation of the blood, has a two-fold motion, of contraction and dilatation, which constantly alternate. With the heart two kinds of vessels are connected—the arteries and the veins. (See *Blood-Vessels.*) The circulation of the blood proceeds with an astonishing rapidity: did it flow at an equal rate in a straight line, it would run, in the space of one minute, through 149 feet. This swiftness, however, exists only in the larger vessels near the heart; the farther the blood recedes from the heart, the slower its motion becomes. In a grown-up person, in good health, we may reckon the mass of blood at 24—30 pounds.

Blood-Vessels are the tubes or vessels in which the blood circulates. They are divided into two classes,—arteries and veins,—which have two points of union or connexion—the first in the heart, from which they both originate, and the other in the minute vessels or net-work, in which they terminate. The arteries arise from the heart, and convey the blood to all parts of the body; the veins return it to the heart. The arteries distribute throughout the body a pure, red blood, for the purposes of nourishment; while the veins return to the heart a dark-colored blood, more or less loaded with impurities, and deprived of some of its valuable properties. But this is not returned again to the body in the same state. For the heart is wisely divided into two portions or sides, a right and left, one of which receives the impure blood from the veins, and sends it to the lungs to be defecated and freshly supplied with oxygen or vital air, while the other receives the pure red blood from the lungs, and circulates it anew through the arteries. The arteries arise from the left ventricle of the heart by one large trunk, nearly an inch in diameter, which is gradually subdivided into smaller ones, as it proceeds towards the limbs, till they terminate, at last, in vessels so small as to be almost invisible, and in a fine net-work of cells, extending through the whole body, in which the blood is poured out, and nutrition or the increase of the body takes place, and from which the residue is taken up by the small veins, to be returned to the heart. The arteries and veins are widely different in their structure, as well as their uses. The former are composed of very strong, firm, elastic coats or membranes, which are four in number. The external covering and the internal lining of the arteries, although belonging to different classes of membranes, are both very thin and soft. The second coat is very thick, tough and elastic, being that which chiefly gives their peculiar appearance to the arteries. The third is formed of fibres, apparently muscular, arranged in circular rings around the tube of the vessels. It is well known that the pulse of the heart is felt in the arteries alone, although, in the bleeding of a vein, we sometimes see the blood start as if in unison with the beating of the heart. The pulse is produced by the wave or stream of blood, which is driven by the heart through the arteries, distending and slightly elevating them, after which they instantly contract from their elasticity, and thus force the blood into the smaller vessels. The pulse varies in its character with the general state of the health. (See *Pulse.*) When arteries are cut or wounded, the firmness of their coats prevents their closing, and hence arises the fatal nature of wounds of large vessels, which will remain open till they are tied up, or till death is produced.—The veins commence in small capillary tubes in every part of the body, and, by their gradual union, form large trunks, till they at last terminate in two (one ascending from the lower parts of the body, the other descending from the head and arms), which pour their contents into the heart. Their structure is much less firm than that of the arteries. They are very thin and soft, consisting of only two thin coats or membranes. The inner, or lining membrane, is frequently doubled into folds, forming valves, which nearly close the passage in the veins, and thus give very material support to the blood as it is moving up in them towards the heart. These valves are not found in the veins of the bowels, the lungs or the head. The number of the veins is much greater than that of the arteries, an artery being often accompanied by two veins. They differ also in this, that, while the arteries are deeply seated in the flesh, to guard them from injury, the veins are very frequently superficial, and covered only by the skin. The veins, it is well known, are the vessels commonly opened in blood-letting, although, in cases which render it necessary, a small artery is sometimes divided.—There are two portions of the venous system, which do not correspond exactly with our general description; these are the veins of the bowels and of the lungs. The former circulate their blood through the liver before

it returns to the heart, and the latter, the pulmonary veins, convey red blood from the lungs to the heart. (For an account of the circulation of the blood, see *Heart.*) It should also be mentioned, that the large vein, which brings back the blood from the lower part of the body, receives from the lymphatic and lacteal vessels the chyle from the bowels, which supplies the waste of the blood and nourishes the body, and the serous and other watery fluids which are taken up by the absorbents in all parts of the body.

Bloodhound; a variety of the common dog, called *C. sagax* by Linnæus, *chien courant* by Buffon, remarkable for the perfection of its sense of smell. Owing to this circumstance, these hounds were formerly much employed in pursuing criminals escaped from justice, or in tracing out robbers or enemies, whose course was inevitably discovered, when once the bloodhound was placed upon their trail. In the border country of Scotland, they were formerly much employed for such uses, but at present the race has become almost forgotten. In the countries of South America, the Spaniards employed fierce dogs to aid them in conquering the Indians, but it is not certain that the dogs, trained by them to this cruel business, belonged to the present variety. All the varieties of hound, however, have much sagacity, and most of the larger and stronger breeds have great acuteness of scent, and might, without much difficulty, be trained to act as bloodhounds.

Bloomfield, Robert, an English poet, born at Honington, in 1766, the son of a tailor, learned to read at the village school, and, in 1781, was sent to learn the trade of a shoemaker with his brother in London. The visiting of several places of worship, of a debating society, of Covent garden theatre, and the reading of sundry books, called forth his faculties, and he became, almost unconsciously, a poet. Hearing him one day repeat a song which he had composed, his astonished brother prevailed on him to offer it to the London Magazine, and it was accepted. The poem was called the Milk Maid. A second, the Sailor's Return, likewise found a place in that journal. Thomson's Seasons, the Paradise Lost, and other works of this kind, now became the subjects of his constant study. In the country, where he resided for a short time, in 1786, he first conceived the idea of his poem, the Farmer's Boy, which is characterized by a spirit of rural simplicity and innocence. It was written, under the most unfavorable circumstances, by a journeyman shoemaker in a garret. It was first shown to Capel Lofft, in 1798, who was so much pleased with it, that, in conjunction with his friend Hill, he had it printed in 1800. It derives its principal value from its strict adherence to truth and nature. The writer, in fact, has drawn his own portrait in the Farmer's Boy, and described the scenes and events which he actually witnessed. Hence there is a degree of spirit and originality in the poem, which stamps it with the impress of genius, and renders it very pleasing. The versification is uncommonly smooth and correct. B. also wrote a volume entitled Wild Flowers, containing a collection of poetical tales, which was well received, and was not unworthy of his reputation. His latest production was Hazelwood Hall, a village drama, which appeared shortly before his decease, a work of not much merit. B. was patronised by the duke of Grafton, who bestowed on him a small annuity, and made him an under-sealer in the seal-office. This situation he was forced to resign on account of ill health. He then worked again at his trade, as a shoemaker, and employed himself in constructing Æolian harps. Engaging in the book trade, he became a bankrupt, and, in the latter part of his life, was afflicted with violent head-aches, and became nearly blind. He was gradually reduced to such a state of nervous irritability, that apprehensions were entertained of his becoming insane. These fears were terminated by his death, which took place in August, 1823.

Blowing-Machines; the larger instruments or contrivances for producing a strong and continued current of air, such as is necessary in smelting-houses, in large smitheries, &c. (See *Bellows.*)

Blowpipe is the name applied to an instrument, by means of which the flame of a candle or lamp is made to produce an intense heat, capable of being applied to a variety of useful purposes. Its most simple form is that of a tapering tube, about eight inches in length, and curved nearly at right angles, within two inches of its smaller extremity. At its larger end, it is nearly a quarter of an inch in diameter, and at the smaller, only large enough to admit a common-sized pin. It is made of brass or white iron. In using it, the flame of a lamp or candle is turned aside from its vertical to a horizontal direction, by a stream of air impelled upon

it, either from the lungs, or from a double bellows. The flame, in its new direction, assumes a conical shape, and consists of two parts, visible by their different colors; the outer being reddish-brown, and the inner blue. The heat at the apex of the inner cone is the most intense, and is equal to that produced in the best furnaces. It is employed by the jeweller and goldsmith in the operation of soldering, and by other artists who fabricate small objects in metal; by the glass-blower in making thermometers, barometers and other glass instruments; by the enameller, and, indeed, wherever it is required to subject a small body to a strong heat.—The common blowpipe has undergone a variety of improvements in the hands of the chemist, to whose researches it has proved an excellent auxiliary. These consist, principally, in providing its stem with a bowl, or enlargement, where the moisture of the breath may be condensed and detained; in fitting the smaller end so as to receive a variety of little caps, or hollow cones, with orifices of different diameters, so as to be changed according as a flame is required more or less strong; and in rendering the instrument more portable, by constructing it of several pieces, capable of being taken apart and packed up in the space of a pencil-case. With a part, or with the whole of these improvements, it is used by the chemist to make an examination of any doubtful mineral substance, artificial alloy, or pharmaceutical preparation. This he is capable of conducting (with the aid of a charcoal support, and, occasionally, a little borax) in a moment's time, and with the loss of the smallest imaginable quantity of the substance. To the analytical chemist its use is indispensable for enabling him to discover the principal ingredients in a substance, previous to his subsequent operations for ascertaining their relative proportion. (For an account of the blowpipe in which oxygen and hydrogen gases are employed, see *Compound Blowpipe*.)

Blücher, Lebrecht von, of the family of Grossen-Rensow, in Mecklenburg, prince of Wahlstadt, field-marshal of the king of Prussia, and knight of almost all the distinguished military orders of Europe, was born at Rostock, Dec. 16, 1742. When he was 14 years of age, his father, a captain of horse in the service of Hesse-Cassel, sent him to the island of Rügen. Here the sight of some Swedish hussars excited in him the desire of becoming a soldier. His parents and relations in vain attempted to dissuade him from this step; he took service in a Swedish regiment of hussars in the capacity of a cornet. His first campaign was against the Prussians, and he was taken prisoner by the same regiment of hussars, which he afterwards commanded with so much honor. The commander of this regiment, colonel von Belling, induced him to enter into the Prussian service. An exchange was agreed upon with the Swedes, and B. was made lieutenant in Belling's regiment. Discontented at the promotion of other officers over his head, he left the army, devoted himself to agriculture, and, by industry and prudence, acquired an estate. After the death of Frederic II, he became a major in his former regiment, which he commanded with distinction on the Rhine, in 1793 and 1794. Orchies, Luxemburg, Frankenstein, Oppenheim (Jan. 16, 1794), Kirweiler and Edesheim in the Palatinate, bear witness to his achievements. After the battle of Leystadt, Sept. 18, 1794, which added greatly to his reputation, he was appointed major-general of the army of observation stationed on the Lower Rhine. In 1802, in the name of the king of Prussia, he took possession of Erfurt and Muehlhausen. Oct. 14, 1806, he fought at the battle of Auerstädt. He then, with the greater part of the cavalry, followed the retreat of the prince of Hohenlohe to Pomerania. His squadron, moving on the left of the main army, became separated from it so far that a junction was possible only by means of forced marches, both in the day time and at night. The latter, B. thought himself not authorized to venture upon, and the prince of Hohenlohe was forced to surrender at Prenzlau. B., cut off from Stettin by this accident, threw himself into Mecklenburg, where he joined, at Dambeck, the corps of the duke of Weimar, commanded by prince William of Brunswick-Oels. All the troops, however, were too much fatigued to undertake any enterprise. Having the grand-duke of Berg on his left flank, the prince of Ponte-corvo in his front, and marshal Soult on his right, B. was obliged to take post behind the Trave, in order to draw off the three great divisions of the French forces from the Oder as long as possible. With this view, he entered into the territory of the free city of Lübeck. This city was soon stormed by the overwhelming power of the French. Although B., with some troops, escaped out of the city, yet, being deprived of all means of defending him-

self, or continuing his flight, he was obliged to surrender at Ratkau, on the 6th of November. This, however, he would not do, until permission had been granted him to add the following clause to the instrument, that "the capitulation was offered to him by the prince of Pontecorvo, and that he accepted it only from want of ammunition, provisions and forage." B. was now a prisoner of war; but he was soon exchanged for the French general Victor, and, immediately after his arrival at Kőnigsberg, placed at the head of a corps, and sent by water to Swedish Pomerania, to share in the defence of Stralsund, and to assist the efforts of the Swedes. After the peace of Tilsit, he labored in the department of war at Kőnigsberg and Berlin. He then received the chief military command in Pomerania, but, at the instigation of Napoleon, was afterwards, with several other distinguished men, dismissed from the service. In the campaign of 1812, when the Prussians assisted the French, he took no part; but no sooner did Prussia rise against her oppressors, than B., already 70 years old, engaged in the cause with all his former activity. He was appointed commander in chief of the Prussians and the Russian corps under general Winzingerode, which, at a later period, was separated from him. His heroism in the battle of Lűtzen (May 2, 1813) was rewarded by the emperor Alexander with the order of St. George. The battles of Bautzen and Haynau, those on the Katzbach (see *Wahlstadt*) and at Leipsic, added to his glory. On the Katzbach, B. defeated the army of marshal Macdonald, and delivered all Silesia. His army now received the name of the *Silesian*. Napoleon himself endeavored in vain to check the *old general of hussars*, as he called him. Oct. 3, B. crossed the Elbe at Wartenburg. This bold step compelled the great Bohemian army under Schwartzenberg, and the northern army under the crown-prince of Sweden, to act with more spirit. The great battle of Leipsic approached. Oct. 16, he gained a signal advantage over marshal Marmont, at Mőckern, forcing his way as far as the suburbs of Leipsic. On the 18th, in connexion with the crown-prince of Sweden, he contributed greatly to the defeat of the enemy, and, on the 19th, his troops made the first assault upon Leipsic. His promptitude and peculiar manner of attacking had already, in the beginning of the campaign, procured him from the Russians the name of *marshal Forward*. From that time it became his name of honor throughout the whole German territory. Jan. 1, 1814, with the Silesian army, which now consisted of two Prussian, two Russian, one Hessian and one mixed corps, he crossed the Rhine at Kaub, took possession of Nancy on the 17th, gained, Feb. 1, the battle of La Rothière, and pushed forward towards Paris. His detached corps were, however, checked by Napoleon; yet B., though with a great loss, effected his retreat towards Chalons. He then crossed the Aisne at Soissons, joined the northern army, obtained, March 9, a victory over Napoleon at Laon, and, in connexion with Schwartzenberg, at the close of the month, pressed forward to Paris. The day of Montmartre crowned this campaign, and, March 31, B. entered the capital of France. His king, in remembrance of the victory which he had gained near Wahlstadt, made him prince of Wahlstadt, with a suitable income. In England, whither he followed the allied monarchs, in June of the same year, he was received by the people with enthusiasm. The university of Oxford conferred on him the degree of doctor of laws. He afterwards lived on his estates in Silesia till 1815, when the chief command was again committed to him, and he led his army into the Netherlands. June 15, Napoleon threw himself upon him, and B., on the 16th, was defeated at Ligny. In this engagement, his horse was killed, and he was thrown under his body. After this unfortunate, yet honorable day, the true greatness of the field-marshal and his army became apparent. In the battle of the 18th, B. arrived, at the most decisive moment, upon the ground, and, taking Napoleon in the rear and flank, gained, in union with Wellington, the great victory of Belle Alliance, or Waterloo. (q. v.) He refused the proffered armistice, and forced Paris to surrender; opposing, with energy, on this second conquest of the capital, the system of forbearance practised on the former occasion. As he was already a knight of all the military orders of Europe, the king of Prussia, to reward his new services, created a new order expressly for him. After the peace of Paris, the prince retired to his estates. Aug. 26, 1819, the anniversary of the battle on the Katzbach, the hero received at Rostock, his native place, an honor which is seldom bestowed in Germany. The whole body of his countrymen, the inhabitants of Mecklenburg, united to erect a monument commemorating his glory,

executed by Schadow in Berlin. B. died, after a short illness, at his estate of Kriblowitz, in Silesia, Sept. 12, 1819, aged almost 77 years. June 18, 1826, a statue of bronze was erected to him, in Berlin, 12 feet in height, modelled by Rauch, and cast by Le Quine and Reisinger.—B. was not so eminent for military science as for ability in action. He himself often acknowledged this, when he was praising the merits of Gneisenau, to whose assistance he was greatly indebted. In battle, however, he had the eye of a falcon. His simplicity, good-nature and bravery endeared him to his soldiers, who loved him like a father. His addresses and proclamations are distinguished for their brevity, precision and simplicity, forming a striking contrast to the high-sounding French proclamations of the time. (See *Bluecher's Lebensbeschreibung* (Blücher's Life), by Varnhagen von Ense, Berlin, 1827.)

Blue. (See *Color.*)

Blue, Prussian; a coloring matter, of a pure dark-blue color, a dull fracture, inodorous and insipid, insoluble in water, spirits of wine or ether; it is soluble only by the action of corrosive alkalies. The discovery of this color was accidentally made, in 1704, by Diesbach, a manufacturer of colors, who, with the intention of precipitating the coloring matter from cochineal, with which alum and vitriol of iron were dissolved, procured some alkali from the laboratory of Dippel. This alkali, which Dippel had been heating with some animal matter, produced a beautiful blue precipitate. Dippel, discovering that the alkali had acquired this power of forming a blue precipitate of iron on account of its mixture with animal oil, soon learned to prepare it in a more simple way, since all animal substances, and even all vegetables, which contain much azote, will give the same result. It is, however, necessary, that all the materials should be perfectly pure, since the purification would be too expensive. The addition of alum gives to this blue more body and a brighter color. This blue substance is a prussiate of iron (52 parts red oxyde of iron, and 48 of prussic acid). The alumine added amounts to from 20 to 80 per cent.; but the greater the quantity, the poorer is the quality of the blue.

Bluebird (*sylvia sialis*, Wils.; *saxicola sialis*, Bonaparte). This beautiful little bird is one of the earliest messengers of spring, and is occasionally seen as early as the month of February, in mild seasons. The middle of March is the ordinary time of mating, when the male bluebird is observed to be extremely devoted to the female, and shows the ardor of his attachment by every attention in his power, by the rapturous animation of his song, and the angry jealousy with which he repels the approaches of a rival. The nest of the former year is then repaired, and the female begins to lay her eggs, usually five, sometimes six, of a pale-blue color. Two or three broods are raised in a season, the youngest of which are taken care of by the male, while the mother is still attending to the nest. The principal food of this species is insects, especially large beetles, and other hard-wing or coleopterous bugs, to be found about dead or rotting trees: berries, persimmon, and the seeds of various plants, are also discovered in their stomachs. Large and numerous tape-worms infest their bowels, and they are also exceedingly annoyed by vermin externally. Wilson says, that, in this respect, they are more plagued than any other bird, except the woodcock. The spring and summer song of the bluebird is a soft and often-repeated warble: in the month of October, his song changes to a single plaintive note. About the middle of November, the bluebirds disappear, though, occasionally, one or two may be seen during the winter, in mild weather. The manners of this species are so gentle, and they render so much service by the destruction of insects, that they are always regarded with favor by the farmer. The male bluebird is six inches and three quarters long, with very full and broad wings. All the upper parts are of a rich sky-blue, with purple reflections: the bill and legs are black. The female is easily known by the duller cast of the plumage on the back, and by the red on the breast not descending so low as in the male, and being much fainter. The bluebird inhabits the whole of the U. States, also Mexico, Brazil, Guiana and the Bahama islands.—Wilson states that "nothing is more common, in Pennsylvania, than to see large flocks of these birds, in the spring and fall, passing at considerable heights in the air, from the south in the former, and from the north in the latter season. I have seen, in the month of October, about an hour after sunrise, 10 or 15 of them descend from a great height, and settle on the top of a tall, detached tree, appearing, from their silence and sedateness, to be strangers and fatigued. After a pause of a few minutes, they began to dress and arrange their plumage, and continued so employ-

ed for 10 or 15 minutes more; then, on a few warning notes being given, perhaps by the leader of the party, the whole remounted to a vast height, steering in a direct line for the south-west."

Blue Ridge; one of the ranges of the Alleghany or Appalachian mountains, which extends from the river Hudson to Georgia, and intersects the state of Virginia from N. E. to S. W., dividing it into two parts, nearly equal. The great limestone valley extends along the N. W. side of this range. The most elevated summits of the Blue Ridge are the peaks of Otter, in Bedford county, Virginia.

Blue-Stocking; a pedantic female; one who sacrifices the characteristic excellences of her sex to learning. The origin of this name, in England, is thus given by Boswell, in his Life of Johnson: "About this time (1780), it was much the fashion for several ladies to have evening assemblies, where the fair sex might participate in conversation with literary and ingenious men, animated with a desire to please. These societies were denominated *blue-stocking clubs*, the origin of which name was as follows:—One of the most eminent members of these societies was Mr. Stillingfleet, who always wore blue stockings. Such was the excellence of his conversation, that his absence was felt as a great loss, and it used to be said, 'We can do nothing without the blue stockings;' and thus, by degrees, the title was established."—In Germany, *blue-stocking* (*blau-strumpfe*) signifies a traitor, a slanderer, an infamous lover, &c., and the term, in that country, is said to be derived from the blue stockings formerly worn by procurers.

Blumauer, Aloysius, a poet, and famous parodist, born at Steyr, in Austria, above the Ens, in 1755, studied in his native city, entered (1772) into the order of the Jesuits in Vienna, lived there privately, after the abolition of his order, till he was appointed censor, which place he resigned in 1793, and took the establishment of the bookseller Graeffer, in which he had been concerned since 1786. He died in 1798. By his Æneid travestied, he distinguished himself as a burlesque poet. It is a poetical farce, rich in burlesque wit and droll contrasts. These qualities are also to be found in several others of his numerous poems. Some of them are full of animation, and are written in a pure, manly style. At times, his wit is vulgar, his language incorrect and prosaic. A collection of his works appeared at Leipsic, 1801—3, 8 vols.

Blumenbach, John Frederic, doctor. This profound naturalist is, at present, one of the first ornaments of the university at Göttingen, where he has lectured, for 50 years, with unabated industry, on natural history, physiology, osteology, comparative anatomy, pathology, and the history of medical literature, to very numerous audiences. He has written on almost all these sciences with acuteness, method and precision. His works bear the stamp of his peculiar genius, and some of them have been several times published. His masterly, but, at present, somewhat antiquated *Handbuch der Naturgeschichte* (Compendium of Natural History) was published, in 1825, for the 11th time. Of his *Handbuch der Physiologie* (Compendium of Physiology) there is an English translation, the second edition of which (1818) is also remarkable for being the first book ever printed by mechanical power.—B. was born at Gotha, May 11, 1752; studied in Jena and Göttingen, where he received his degree of doctor of medicine, Sept. 19, 1775. In 1776, he was appointed director of the cabinet of natural curiosities belonging to the university, and professor extraordinary of medicine, and, in 1778, ordinary professor of the same. In 1783, he undertook a literary journey to Switzerland, and, at a later period, one to England, where the attentions of the celebrated sir Joseph Banks were particularly serviceable to him. He possesses an excellent collection of books and engravings illustrating natural history, and numerous specimens of natural curiosities. The collection of skulls is not, perhaps, equalled in the world. On this collection is founded his *Collectio Craniorum divers. gent. illustr.*, with engravings, of which six numbers (Göttingen, 1790—1820) have appeared. Schnader called a newly-discovered species of plants after his name, *Blumenbachia insignis*. The 50th anniversary of his professorship in the university of Göttingen was celebrated Feb. 26, 1826.

Boa; the name of a genus of reptiles belonging to Cuvier's tribe of *serpents* proper; having the tympanic bone or pedicle of the lower jaw movable, which is itself almost always suspended to another bone analogous to the mastoid, attached to the skull by muscles and ligaments, which contribute to its mobility. The branches of this jaw are not united, and those of the upper jaw are attached to the intermaxillary bone only by ligaments, so that these animals can dilate

the mouth sufficiently to swallow bodies larger than themselves. Their palatic arches partake of this mobility. In the species of this tribe not possessed of venom, the branches of the upper and lower jaw, throughout their entire length, as well as the palate bones, are armed with pointed, recurved, solid and permanent teeth, forming four nearly equal rows above, and two below.—The genus *boa* comprises all those serpents which, in addition to the preceding characters, have the *scuta* on the under part of the tail single; a hook on each side of the vent; the tail prehensile; the body compressed and largest in the middle, and with small scales, at least on the posterior part of the head.—The species properly belonging to this genus are among the largest of the serpent tribe, some of them, when full grown, being 30 and even 40 feet long. Though destitute of fangs and venom, nature has endowed them with a degree of muscular power which renders them terrible. Happily, they are not common in situations much frequented by mankind, but are chiefly found in the vast marshy regions of Guiana, and other hot parts of the American continent. Although sufficiently active when fasting or hungry, they become very sluggish and inert after having gorged their prey, at which time they are most easily destroyed. In order to obtain their food, the *boæ* of largest size attach themselves to the trunk or branches of a tree, in a situation likely to be visited by quadrupeds for the sake of pasture or water. There the serpent swings about in the air, as if a branch or pendent of the tree, until some luckless animal approaches; then, suddenly relinquishing its position, swift as lightning he seizes the victim, and coils his body spirally round its throat and chest, until, after a few ineffectual cries and struggles, the animal is suffocated, and expires. In producing this effect, the serpent does not merely wreathe itself around its prey, but places fold over fold, as if desirous of adding as much weight as possible to the muscular effort: these folds are then gradually tightened with enormous force, and speedily induce death. The animals thus destroyed by the larger *boæ* are deer, dogs, and even bullocks. The prey is then prepared for being swallowed, which the creature accomplishes by pushing the limbs into the most convenient position, and then covering the surface with a glutinous saliva. The reptile commences the act of deglutition by taking the muzzle of the prey into its mouth, which is capable of vast extension; and, by a succession of wonderful muscular contractions, the rest of the body is gradually drawn in, with a steady and regular motion. As the mass advances in the gullet, the parts through which it has passed resume their former dimensions, though its immediate situation is always betrayed by external protuberance.—As already mentioned, the species of *boa* are peculiar to the hot parts of South America, though nothing is more common than the error of confounding the great serpents of India, Africa, &c., with the proper *boa*. According to the researches of Cuvier, all the *boæ*, at present well determined, are natives of the new continent. The great serpents of the old continent belong to the genus *python* (Daud.), and will be treated of under that title. It is nevertheless true, that Pliny has spoken of the huge serpents of India, and afterwards of large serpents of Italy, which were called *boæ*, thus named from the circumstance of their being at first fed with cow's milk.—Among the most celebrated species is the *boa constrictor* (L.), distinguished by a large chain, formed alternately of large, blackish, irregular hexagonal spots, with pale, oval spots, notched at their two extremities, along the back. This is the largest species, and is usually confounded, by casual observers, with the *python Tigris* of the old world. The *B. cenchris* (L.), and the *B. scytale, et musina* (L.), attain to nearly an equal size with the *constrictor* (from 20 to 30 feet long), and are all natives of the torrid and marshy regions of America. The other species are of smaller size, and some do not much exceed that of the largest common snakes. We cannot reflect upon the natural history of these great reptiles, without being struck with their peculiar adaptation to the situations in which they are commonly most abundant. In regions bordering on great rivers, which, like the Orinoco, &c., annually inundate vast tracts of country, these serpents live securely among the trees with which the soil is covered, and are capable of enduring very protracted hunger without much apparent suffering or diminution of vigor. Noxious as such districts are to human life, they teem with a gigantic and luxuriant vegetation, and are the favorite haunts of numerous animals, preyed upon, and, to a certain degree, restricted in their increase, by the *boæ*. As their prey come within their reach, they require no deadly apparatus of poison to produce their destruction, since nature has endowed them with

muscular strength surpassing that of almost every other creature, in proportion to their size. Once fairly involved in the crushing folds of the *constrictor*, the strength of the strongest man would not prove of the slightest avail; indeed, from the ease with which larger and more powerful creatures are put to death by these serpents, it is evident that any number of unarmed men would act very unwisely to provoke a combat with enemies endowed with powers of such dreadful energy.

Boadicea; queen of the Iceni, in Britain, during the reign of Nero. Having been treated in the most ignominious manner by the Romans, she headed a general insurrection of the Britons, attacked the Roman settlements, reduced London to ashes, and put to the sword all strangers, to the number of 70,000. Suetonius, the Roman general, defeated her in a decisive battle, and B., rather than fall into the hands of her enemies, put an end to her own life by poison.

Boat; properly, a vessel propelled by oars. In a more extensive sense, the word is applied to other small vessels, which differ in construction and name, according to the services in which they are employed. Thus they are light or strong, sharp or flat-bottomed, open or decked, &c., according as they are intended for swiftness or burden, deep or shallow water, &c.—The *barge* is a long, light, narrow boat, employed in harbors, but unfit for sea.—The *long-boat* is the largest boat belonging to a ship, generally furnished with sails, and is employed for cruising short distances, bringing heavy articles on board, &c.—The *launch* is more flat-bottomed than the long-boat, which it has generally superseded.—The *pinnace* resembles a barge, but is smaller.—The *cutters* of a ship are broader and deeper than the barge or pinnace, and are employed in carrying light articles, passengers, &c. on board.—*Yawls* are used for similar purposes, and are smaller than cutters.—A *gig* is a long, narrow boat, used for expedition, and rowed with six or eight oars.—The *jolly-boat* is smaller than a yawl, and is used for going on shore.—A merchant-ship seldom has more than two boats, a long-boat and a yawl.—A *wherry* is a light, sharp boat, used in a river or harbor, for transporting passengers.—A *punt* is a flat-bottomed boat, chiefly used for one person to go on shore from small vessels.—A *skiff* is a small boat, like a yawl, used for passing rivers.—A *Moses* is a flat-bottomed boat, used in the West Indies for carrying hogsheads from the shore to ships in the roads.—A *felucca* is a large passage-boat, used in the Mediterranean, with from 10 to 16 banks of oars.—*Scow* is an American word, signifying a large, flat-bottomed, heavy boat, about 30 feet long, and 12 wide. In some parts of the U. States, it is called a *gondola*. (See *Canoe*, *Galley*, &c.)

Boccaccio, Giovanni, whose name alone, as Mazzuchelli justly says, is equivalent to a thousand encomiums, was the son of a Florentine merchant. His family came, originally, from Certaldo, a village in Tuscany; whence he gives himself the appellation *da Certaldo*. He was the offspring of an illicit connexion which his father formed, while on a visit of business, at Paris, and was born in that city, 1313. He early removed to Florence, where he began his studies, and, even in childhood, discovered a decided fondness for poetry. In his 10th year, his father put him under the care of a merchant, to be educated in his business. With him he returned to Paris, and remained there six years, without acquiring any fondness for his profession. His residence of eight years at Naples was equally ineffectual to this purpose. Instead of attending to trade, he formed the closest intimacy with several learned men of Florence and Naples, who had been drawn thither by that patron of the arts, king Robert. There is nothing to prove that he shared in the favor of the prince; but he enjoyed the particular affection of a natural daughter of his, for whom he composed many pieces in prose and verse, and to whom he often pays homage under the name of *Fiammetta*. Placed in fortunate circumstances, with a lively and cheerful disposition, of a soft and pleasing address, the favored lover of a king's daughter, he regarded with more aversion than ever the station for which he had been intended. The fondness of the princess for poetry; his own intimacy with scientific and literary men; the tomb of Virgil, near Naples, which he used to visit in his walks; the presence of Petrarch, who was received with the highest distinction at the court of Naples, and who went from that city to Rome, to be crowned with the poetic laurel; the intimacy which had arisen between the two poets;—all operated powerfully on B., to strengthen and fix his natural inclination for poetry and literature. After living two years at Florence with his father, he returned to Naples, where he was very graciously received by the queen Joanna. It is thought that

it was no less to gratify the young queen, than his Fiammetta, that he wrote his *Decameron*, which has raised him to the rank of the first Italian prose-writer. On the death of his father, becoming master of his own inclinations, he settled at Florence, where his first work was a description of the plague, which forms the opening of the *Decameron*. He afterwards wrote the life of Dante. He was chosen to inform Petrarch, at Padua, of his recall from exile, and the restoration of the property belonging to his father, who had died during his absence. The friendship of these two men of genius continued for life. When B., some years after, had exhausted his fortune in the purchase of costly books, and in expensive pleasures, he found in Petrarch the most generous assistance: the wise counsels of his friend were now as beneficial to his morals as they had been to his writings; in fact, to him he was indebted for the change which took place in his character. A dying Carthusian had persuaded him to renounce all the pleasures of the world: Petrarch softened his determination, and brought him back to that proper medium which marks the truly wise man. New troubles in Florence induced him to retire to Certaldo, where he owned a small estate. There he prosecuted his labors in tranquillity. He now composed several historical works in Latin. Among these is the first modern work which contains, in a collected form, the mythological notices, which are scattered in the writings of the ancients. He was well versed in Greek, and had, at his own expense, brought Leontius Pilatus of Thessalonica from Venice to Florence, and maintained him three years at his house, in order to learn Greek of him, and to have his assistance in explaining the poems of Homer, and translating them into Latin. He was the first who procured copies of the Iliad and Odyssey from Greece, at his own expense, and spared neither cost nor trouble to obtain good Greek and Latin manuscripts. At the same time, he used all his influence to excite his contemporaries to learn the Greek language, and substitute the study of the ancients for that of the scholastic philosophy. The reputation which he had gained twice procured for him important missions to pope Urban V. Having fulfilled these, he returned to Certaldo, and resumed his studies. Here he was attacked by a severe and lingering disorder, which finally left him in a state of debility as painful as the disease itself. Upon his recovery, he was charged with a difficult, but very flattering trust. Dante had always been the object of his highest admiration. The Florentines, who had once persecuted and banished that illustrious poet, but now did justice to his merits, had resolved, by way of atonement to his memory, to establish a public professorship for the illustration of his poems, which were every day becoming more obscure, as the distance of the time when they were written became greater. This new professorship was conferred upon B., who devoted himself to it with so much ardor, that his health could never be firmly reëstablished. This received a further shock from the death of his instructer and dearest friend Petrarch. He survived him not much more than a year, and died at Certaldo, Dec. 21, 1375. On his tomb was placed this inscription, composed by himself:

Hac sub mole jacent cineres ac ossa Joannis,
Mens sedet ante Deum meritis ornata laborum,
Mortalis vitæ. Genitor Bocchaccius illi,
Patria Certaldum, studium fuit alma poesis.

—B. appears, in all his works, to be a poet of the richest invention, the most lively imagination, and the tenderest and warmest feeling. In prose, he is a perfect master of composition. His *Decameron*, which contains a collection of a hundred tales, partly borrowed from the Provençal poets, is the work on which his fame chiefly rests. In this he painted, as it were, on one vast canvas, men of all ranks, characters and ages, and incidents of every kind, the most extravagant and comical, as well as the most touching and tragic; and improved the Italian language to a degree of excellence never before attained. Of his other works, we will mention only the following: *La Teseide*, the first attempt towards an Italian epic, and written in *ottava rima*, of which B. is considered the inventor; *Amorosa Visione*, a long poem in *terza rima* (the initial letters of which form two sonnets and a canzonet, in praise of the princess Maria, his mistress, whom he here ventures to address by her proper name); *Il Filostrato*, a romantic poem in *ottava rima*; *Ninfale Fiesolano*, in the same measure; *Rime*; (most of his sonnets, canzonets, and other amatory poems, he consigned to the flames, after reading the Italian poems of Petrarch; those which remain appear to have been preserved against his will); *Il Filocopo, ovvero amorosa Fatica*, a hunting romance; *L'amorosa Fiammetta*, a charming tale; *L'Urbano* (thought

by some to be spurious); *L'Ameto ossia Nimfale d'Ameto*, a mixed composition, partly in prose, and partly in verse; *Il Corbaccio, ossia Laberinto d'Amore*, a pungent satire against a lady who had offended him; and, finally, *Origine, vita e Costumi di Dante Alighieri*, a work interesting for the characteristic traits which it records; and his *Commento sopra la Commedia di Dante*, which, however, is carried no farther than the 17th canto of Dante's Hell. His Latin works are, *De Genealogia Deorum, Libri* XV; *De Montium, Lacuum, Sylvarum, Fluviorum, Stagnorum et Marium Nominibus Liber; De Casibus Virorum et Feminarum illustrium, Libri* IV; *De claris Mulieribus;* and *Eclogæ.*—A new critical edition of the *Decameron*, with a historical literary commentary, and the life of B., was published at Paris, 1823, in 5 vols.—In the ducal library at Florence, among the manuscripts collected by the celebrated Magliabecchi, prof. Ciampi lately discovered a memorandum-book of B., containing a record of his studies, and some curious circumstances relating to himself and a number of his distinguished contemporaries. It has been published.

Boccage, Marie Anne du, a celebrated French poetess, member of the academies of Rome, Bologna, Padua, Lyons and Rouen, was born in Rouen, 1710, died 1802. She was educated in Paris, in a nunnery, where she discovered a love of poetry. She became the wife of a receiver of taxes in Dieppe, who died soon after the marriage, leaving her a youthful widow. She concealed her talents, however, till the charms of youth were past, and first published her productions in 1746. The first was a poem on the mutual influence of the fine arts and sciences. This gained the prize from the academy of Rouen. She next attempted an imitation of Paradise Lost, in six cantos; then, of the Death of Abel; next, a tragedy, the Amazons; and a poem in 10 cantos, called the *Columbiad*. Madame du Boccage was praised by her contemporaries with an extravagance, for which only her sex and the charms of her person can account. *Forma Venus, arte Minerva*, was the motto of her admirers, among whom were Voltaire, Fontenelle, and Clairaut. She was always surrounded by distinguished men, and extolled in a multitude of poems, which, if collected, would fill several volumes. There is a great deal of entertaining matter in the letters which she wrote on her travels in England and Holland, and in which one may plainly see the impression she made upon her contemporaries. Her works have been translated into English, Spanish, German and Italian.

Boccherini, Luigi, a celebrated composer of instrumental music, was born in 1740, at Lucca, and received from the abbot Vanucci, music-master of the archbishop, his first instruction in music and on the violoncello. He further improved himself in the art at Rome, and afterwards went, with Filippo Manfredi, his friend and countryman, to Spain, where he was loaded with honors and presents by the king, and was appointed by the academy to furnish nine pieces of his composition annually, which he continued to do till his death, in 1805. The king of Prussia, Frederic William II, who was a great lover of the violoncello, and admired B.'s compositions, settled upon him a considerable pension, on condition of his sending him yearly some of his quartets and quintets. The compositions which B. has published himself consist of symphonies, sextets, quintets, quatuors, trios, duets and sonatas for the violin, violoncello and piano-forte. He never composed any thing for the theatre, and of church compositions we find but one, his *Stabat Mater*. The adagios of B. excited the admiration of the connoisseurs, and the despair of the composers of his time. He may be regarded as the precursor of Haydn, as he was the first who wrote instrumental quartets, of which all the parts are *obligato*, and determined the true character of this species of music. His melodies are more highly esteemed in France and Spain than in Germany.

Bocchetta; a narrow pass of the Apennines, leading from Lombardy to Genoa. It is defended by three fortifications. In the Austrian war of succession (1746 and 1747), and in the French war, towards the end of the 18th century, it was the scene of several important events.

Bochica was the founder of the Indian empire of Cundinamarca. The inhabitants of the valley of Bogotá had a tradition, at the period of the Spanish conquest, that, in remote times, their ancestors, the Muisca Indians, lived without agriculture, laws or religion. At length there appeared among them a venerable old man, of foreign aspect, dress and manners, who taught them the arts of life, and reclaimed them from their savage condition. He was known by three names—*Bochica, Nemqueteba* and *Zuhe*. Accompanying him was a beautiful female, named *Chia*, who, unlike the wife of Manco Ca-

pac, prided herself in thwarting her husband's beneficent purposes. Making the river of Bogotá to overflow by magic, she deluged the whole valley, and reduced the inhabitants to the necessity of fleeing to the mountains for safety. Hereupon Bochica expelled the malevolent Chia from the earth, and she became the moon. Then, tearing asunder the rocks of Tequendama, he gave the waters an exit by these celebrated falls, and freed the valley of Bogotá from inundation. Introducing the worship of the sun, and persuading the inhabitants to cultivate the soil, he laid the foundations of a state, which held the same rank, in this part of America, which Peru did farther to the south. The institutions of this people very strikingly resembled those of the incas, and perhaps had a common origin; but, at the time of the conquest of South America, they constituted a distinct people, and possessed a distinct religion. (See *Bogotá*, *Cundinamarca*, *Muisca*; Compagnoni, America, xix, 107).

Böckh, Augustus, one of the greatest philologists of our times, was born at Carlsruhe, 1785, studied at Halle, and, in 1811, became professor of classical literature at Berlin. Two works will immortalize the name of B. with the students of ancient literature; first, his edition of Pindar, which he announced to the public by his *Specimen Emendationum in Pindari Carmina* (1810), and by *Observationes Criticæ in Pindari, Prim., Olymp., Carm.* (1811; the large Leipsic edition, 1811—1821, is in 3 vols., 4to.). A new arrangement of the Pindaric measures is here proposed, founded on deep and extensive researches into the music of the Greeks. Even those who entirely reject the hypotheses of this philologist cannot but acknowledge his erudition, and admire his acuteness. The other work, to which we have alluded, is on the Political Economy of the Athenians (4 books, Berlin, 1817, 2 vols.). No work has hitherto appeared in Germany, which throws so much light on the political life and public administration of any ancient people, as this of B. It has furnished new means for illustrating the Attic orators and historians. B. has added to this work 21 inscriptions. Of late years, he has been busily engaged in preparing a work under the patronage of the Berlin academy of science, of which he is a member, called *Corpus Inscriptionum Græcarum*, of which the first volume appeared, in 1825, at Berlin, in folio. The smaller writings of this author relate chiefly to Plato (of whose works he promised, some time since, to give a new edition), and to the Platonic philosophers.

Bode, John Elert, an astronomer, born at Hamburg, 1747, early discovered an inclination for mathematical science, in which his father, and, afterwards, the famous J. G. Büsch, instructed him. He gave the first public proof of his knowledge by a short work on the solar eclipse of Aug. 5, 1766. The approbation which this received encouraged him to greater labors, and in 1768 appeared his Introduction to the Knowledge of the Starry Heavens (9th ed. 1822); a familiar treatise on astronomy, which has done much for the extension of correct views upon the subject, and continues to do so, as it has kept pace, in its successive editions, with the progress of the science. In 1772, the Berlin academy chose him their astronomer, and, ten years afterwards, he was made a member of that institution. His best works are his Astronomical Almanac (commencing 1774)—a work indispensable to every astronomer; and his large Celestial Atlas (*Himmelsatlas*), in 20 sheets, in which the industrious editor has given a catalogue of 17,240 stars (12,000 more than in any former charts). B. was released in 1825, at his own wish, from his duties in the academy of science, and the observatory in Berlin. His place was filled by professor Encke, formerly astronomer at Gotha.

Bodin, Jean, a political writer of the 16th century, was born in 1530 or 1529, at Angers; studied law at Toulouse; delivered lectures on jurisprudence there, and afterwards went to Paris and practised. Being unsuccessful in his profession, he turned his talents to literary labors; was invited by Henry III to his court; and afterwards travelled with the king's brother Francis, duke of Alençon and Anjou, to Flanders and England, where he had the gratification of hearing lectures, in Cambridge, on his work *De la République* (originally written in French, but afterwards translated, by B. himself, into Latin). When the duke died, he went to Laon, married there, obtained a judicial office, and was sent, by the third estate in Vermandois, 1576, as deputy, to the estates of Blois. Here he defended the rights of the people, and the liberty of conscience. His conduct made him many enemies at court. He also prevailed on the city of Laon to declare itself for the league, in 1589, representing to the people, that the rising of so many towns and parliaments, in favor of the duke of Guise, was not a rebellion, but rather a powerful

political revolution. He afterwards, however, submitted to Henry IV. He died, 1596, at Laon, of the plague. His great work is that entitled *De la République*, in which he gave the first complete essay towards a scientific treatise on politics, and, guided by his own experience, sought to strike out a middle course between the advocates of monarchy and democracy. His *Démonomanie*, and his *Theatrum Universæ Naturæ* (Lyons, 1596), show how superstition and learning were united in his character; but the charge of atheism, which is grounded particularly on a work entitled *Heptaplomeron*, proceeds from the religious indifference which was noticed in him by his contemporaries.

Bodleian Library. (See *Libraries.*)

Bodley, sir Thomas; the founder of the Bodleian library at Oxford. He was born at Exeter, in 1544, and educated partly at Geneva, whither his parents, who were Protestants, had retired in the reign of queen Mary. On the accession of Elizabeth, they returned home, and he completed his studies at Magdalen college, Oxford. He afterwards became a fellow of Merton college, and read lectures on the Greek language and philosophy. He went to the continent in 1576, and spent four years in travelling. He was afterwards employed in various embassies to Denmark, Germany, France and Holland. In 1597, he returned home, and dedicated the remainder of his life to the reëstablishment and augmentation of the public library at Oxford. This he accomplished, procuring books and manuscripts himself, both at home and abroad, at a great expense, and, by his influence and persuasions, inducing his friends and acquaintance to assist in his undertaking. Sir Robert Cotton, sir Henry Savile, and Thomas Allen, the mathematician, were among the principal contributors on this occasion. The library was so much augmented, that sir Thomas B., who was knighted at the accession of James I, was induced to erect an additional structure for the reception of the increasing quantity of valuable books and manuscripts. He died in London, 1612, and was interred in the chapel of Merton college, in the university. He bequeathed nearly the whole of his property to the support and augmentation of the library, which has been so much enriched by subsequent benefactions, that it is, at present, one of the most magnificent institutions of the kind in Europe. (See *Reliquiæ Bodleianæ*, London, 1703.)

Bodmer, John Jacob; a celebrated German poet and scholar, born at Greifensee near Zurich, July 19, 1698. Although he produced nothing remarkable of his own in poetry, he helped to open the way for the new German literature in this department. He was the antagonist of Gottsched, in Leipsic, who aspired to be the literary dictator of the day, and had embraced the French theory of taste, while B. inclined to the English. He has the honor of having had Klopstock and Wieland among his scholars. B. was, for a long time, professor of history in Switzerland. He was a copious and indefatigable writer, entertained many incorrect views, but was of service, as we have already said, to the German literature, which was then in a low and barbarous state. He died at Zürich, 1783.

Bodoni, Giambatista, superintendent of the royal press at Parma, chief printer of his Catholic majesty, member of several academies of Italy, knight of several high orders, was born, 1740, at Saluzzo, in Piedmont, where his father owned a printing establishment. He began, while yet a boy, to employ himself in engraving on wood. His labors meeting with success, he went, in 1758, to Rome, and was made compositor for the press of the *Propaganda*. By the advice of the superintendent, he made himself acquainted with the Oriental languages, in order to qualify himself for the kind of printing required in them. He thereby enabled himself to be of great service to this press by restoring and putting in place the types of several Oriental alphabets, which had fallen into disorder. The infant don Ferdinand, about 1766, had, with a view of diffusing knowledge, established a printing-house in Parma, after the model of those in Paris, Madrid and Turin. B. was placed at the head of this establishment, which he made the first of the kind in Europe, and gained the reputation of having far surpassed all the splendid and beautiful productions of his predecessors in the art. The beauty of his type, ink and paper, as well as the whole management of the technical part of the work, leaves nothing for us to wish; but the intrinsic value of his editions is seldom equal to their outward splendor. His Homer is a truly admirable and magnificent work; indeed, his Greek letters are the most perfect imitations that have been attempted, in modern times, of Greek manuscript. His splendid editions of Greek, Latin, Italian and French classics are highly prized. He died at Padua, Nov. 29, 1813.

Boëce. (See *Boëthius.*)

Boehme, or Boehm, Jacob; one of the most renowned mystics of modern times; born, in 1575, at Altseidenberg, a village in Upper Lusatia, near Görlitz; was the son of poor peasants; remained to his 10th year without instruction, and employed in tending cattle. The beautiful and sublime objects of nature kindled his imagination, and inspired him with a profound piety. Raised by contemplation above his circumstances, and undisturbed by exterior influences, a strong sense of the spiritual, particularly of the mysterious, was awakened in him, and he saw in all the workings of nature upon his mind a revelation of God, and even imagined himself favored by divine inspirations. The education which he received at school, though very imperfect, consisting only of writing, spelling and reading the Bible, supplied new food for the excited mind of the boy. He became afterwards a shoemaker; and this sedentary life seems to have strengthened his contemplative habits. He was much interested in the disputes which prevailed on the subject of Cryptocalvinism in Saxony; though he never took a personal part in sectarian controversies, and knew no higher delight than to elevate himself, undisturbed, to the contemplation of the infinite. B. withdrew himself more and more from the world. If we take into view his retirement, his piety, his rich and lively imagination, his imperfect education, his philosophical desire for truth, together with his abundance of ideas, and his delusion in considering many of those ideas as immediate communications of the Deity, we have the sources of his doctrine and his works. His writings are very unequal, but always display a profound feeling, and must be judged with indulgence for the causes just mentioned. In 1594, B. became a master shoemaker in Görlitz, married, and continued a shoemaker during his life. Several visions and raptures, that is, moments of strong enthusiasm, led him to take the pen. His first work appeared in 1616, and was called *Aurora.* It contains his revelations on God, man and nature. This gave rise to a prosecution against him; but he was acquitted, and called upon, from all sides, to continue writing. He did not, however, resume his pen until 1619. One of his most important works is, Description of the three Principles of the Divine Being. His works contain profound and lofty ideas, mingled with many absurd and confused notions. He died, after several prosecutions and acquittals, in 1624. Abraham von Frankenberg (who died in 1652), his biographer and admirer, has also published and explained his writings. The first collection of them was made in Holland, in 1675, by Henry Betke; a more complete one, in 1682, by Gichtel (10 vols., Amsterdam); from whom the followers of B., a religious sect highly valued for their silent, virtuous and benevolent life, have received the name *Gichtelians.* Another edition appeared in Amsterdam, in 1730, under the title *Theologia revelata*, 2 vols. 4to.; the most complete, in 6 vols. In England, also, B.'s writings have found many admirers. William Law published an English translation of them, 2 vols., 4to. A sect, taking their name from B., was likewise formed in England, and in 1697, Jane Leade, an enthusiastic admirer of his, established a particular society for the explanation of his writings, under the name of the *Philadelphists.* It is said that such a society still exists. John Pordage, an English physician, is also well known as a commentator on B.

Bœotia; a country of ancient Greece, bounded N. by Phocis and the country of the Opuntian Locrians; E. by the Euripus, or strait of Eubœa; S. by Attica and Megaris; and W. by the Alcyonian sea and Phocis; but the boundaries were not always the same. In the north, it is mountainous and cold, and the air is pure and healthy, but the soil is less fertile than that of the other portion, which, however, is infested by unhealthy vapors. The mountainous part in the north was called, in earlier times, *Aonia.* Among its mountains are several remarkable in history and mythology: Helicon (now *Sagara*), the mountain of the Sphinx, the Taumessus, Libethrus and Petrachus.—The chief occupation of the inhabitants was agriculture and the raising of cattle. It was first occupied by Pelasgian tribes. In the time of Bœotus (son of Itonus and grandson of Amphictyon, from whom it is said to have derived its name), these were subject to the Hellenists. It was divided into small states, until Cadmus the Phœnician founded the government of Thebes. In later times, all Greece worshipped the Hercules of Thebes. After the death of the Theban king Xanthus, most of the cities of B. formed a kind of republic, of which Thebes was the chief city. Epaminondas and Pelopidas raised Thebes, for a short time, to the rank of the most powerful states of Greece. In B. are several celebrated ancient battle-

fields, the former glory of which has been increased by late events, namely, Platæa (now the village *Kokla*), where Pausanias and Aristides established the liberty of Greece by their victory over the 300,000 Persians under Mardonius; Leuctra (now the village *Parapogia*), where Epaminondas checked the ambitious Spartans; Coronea, where the Spartan Agesilaus defeated the Thebans; and Chæronea (now *Capranu*), where Philip founded the Macedonian greatness on the ruins of Grecian liberty. Near Tanagra, the birthplace of Corinna (q. v.), the best wine was produced; here, also, cocks were bred, of remarkable size, beauty and courage, with which the Grecian cities, passionately fond of cock-fighting, were supplied. Refinement and cultivation of mind never made such progress in B. as in Attica. The Bœotians were vigorous, but slow and heavy. Several Thebans, however, were worthy disciples of Socrates, and Epaminondas distinguished himself as much in philosophy as by his military talents. The people were particularly fond of music, and excelled in it. They had also some great poets and artists. Hesiod, Pindar, the poetess Corinna, and Plutarch, were Bœotians.

Boerhaave, Hermann, one of the most celebrated physicians of the 18th century, was born, Dec. 13, 1668, at Woorhout, near Leyden, and received from his father a liberal education. Before he was 11 years old, he was well acquainted with Latin and Greek. An obstinate ulcer on his left thigh, which, for 7 years, resisted all medical remedies, was the means of directing his thoughts and inclinations to the study of medicine. In 1682, he was sent to Leyden to study theology. Here he gave, at the age of 20, the first public proof of his learning and eloquence. He pronounced an academic oration before Gronovius, with whom he studied Greek, *Quâ probatur, bene intellectam a Cicerone, et confutatam esse Sententiam Epicuri de summo Bono* (Leyden, 1690, 4to.) In this, B. attacked the doctrine of Spinoza with so much talent, that the city rewarded him with a gold medal. In 1689, he received the degree of doctor of philosophy, and maintained an inaugural dissertation, *De Distinctione Mentis a Corpore* (Leyden, 1690). He now commenced, at the age of 22, the study of medicine. Drelincourt was his first and only teacher. From him he received only a little instruction; and it is worthy of notice, that B. learned by his own solitary study a science on which he was afterwards to exert so importan an influence. He first studied anatomy, but rather in the works then in vogue, of Vesale, Bartholin, &c., than in the dissecting room. He was present, indeed, at most of the dissections of Nuck, but still the want of a practical study of anatomy is evident in all his writings. The influence which he had in improving anatomy, notwithstanding the defect we have noticed, must be traced to the close connexion of this mechanical science with physiology and medicine. As, in these last, he made use of mechanical illustrations, his example induced the anatomists to apply themselves to an accurate study of the forms of the organs, as may be noticed in all the anatomists of that time—Santorini, Morgagni, Valsalva, Winslow, Albinus, &c. After this preliminary study, which, in fact, is the groundwork of medical science, B. read all the works, ancient and modern, on medicine, in the order of time, proceeding from his contemporaries to Hippocrates, with whose superior excellence and correct method he was forcibly struck in this course of reading. He also studied botany and chemistry, and, although still preparing himself for the clerical profession, was made, in 1693, doctor of medicine at Harderwick. His dissertation was *De Utilitate explorandorum Excrementorum in Ægris, ut Signorum.* After his return to Leyden, some doubts being raised as to his orthodoxy, he finally determined to follow the profession of medicine. In 1701, the university of Leyden chose him, on the death of Drelincourt, to deliver lectures on the theory of medicine; on which occasion, he pronounced his dissertation *De commendando Studio Hippocratico.* In this, with an enthusiasm excited by the study of Hippocrates, he demonstrates the correctness of the method pursued by that great man, and establishes its exclusive superiority: it had been well if he himself had never deviated from it. B. now began to develope those great and peculiar excellences, which make him a pattern to all who undertake the office of instruction. Pupils crowded from all quarters to hear him. In 1703, he delivered another dissertation, *De Usu Ratiocinii mechanici in Medicina*, Leyden, 1703. In this, he began to deviate from the Hippocratic method, and to introduce the first principles of a defective system, to which his eminent talents gave afterwards exclusive currency. In 1709, the university of Leyden was at length enabled to reward

him for his services, by appointing him professor of medicine and botany in Hotton's place. It is remarkable, that, on this occasion, he delivered a dissertation, *Quâ repurgatæ Medicinæ facilis asseritur Simplicitas*, which deserves to be placed by the side of those in which he recommends the study of Hippocrates. In this dissertation, he is for carrying back the science to its original simplicity—to observation and experience—quite contrary to the spirit which guided his own system. The course of instruction, to which B. was now devoted, induced him to publish two works, on which his fame still rests, viz. *Institutiones Medicæ in Usus annuæ Exercitationis domesticos;* and *Aphorismi de cognoscendis et curandis Morbis in Usum Doctrinæ Medicinæ.* In the former, which is a model of comprehensive erudition and clear method, he unfolds his system in its full extent: in the latter, he undertakes the classification of diseases, and discourses separately on their causes, nature and treatment. The professorship of botany, which he also filled, contributed no less to his reputation. He rendered essential services to botany by his two catalogues of plants in the garden of Leyden, the number of which he had very much increased. We are indebted to him for the description and delineation of several new plants, and the introduction of some new species. In 1714, he was made rector of the university, and, at the close of his term of office, delivered an oration, *De comparando certo in Physicis*, one of his best pieces. At the end of this year, he took Bidloo's place in the office of practical instruction, in which he was employed more than 10 years. Anticipating the great advantages of clinical institutions, and wishing to unite practice with theory, he opened an hospital, where he lectured to his pupils twice a week, on the history of the diseases before them, confining himself to the particular phenomena in each case presented to their observation. Busily occupied as he already was, the university conferred on him, at the death of Lemort, the professorship of chemistry, which science he had taught since 1703. On this occasion he delivered his dissertation *De Chemia suos Errores expurgante.* Although the relations which B. supposes to exist between chemistry and medicine are ill-founded, he deserves credit for rendering the science intelligible and familiar in his excellent works on this subject. His Elements of Chemistry is, perhaps, his finest production, and, notwithstanding the entire revolution which has taken place in this branch of science, is still highly valuable. His experiments are remarkable for their accuracy. The part which treats of organic bodies is exceedingly good for that period. So extensive a sphere of action gained for B. a fame that few learned men have enjoyed. People came from all parts of Europe to ask his advice. His property amounted, at his death, to 2,000,000 florins—a very extraordinary fortune for a man of his profession in Europe. Peter the Great visited him on his travels, and a Chinese mandarin wrote to him with the address, "To Boerhaave, the celebrated physician in Europe." In 1722, an attack of the gout, accompanied with a stroke of the apoplexy, obliged him to remit his active pursuits. New returns of his disorder, in 1727 and 1729, compelled him to resign the professorships of chemistry and botany, which he had held for 20 years. In 1730, he was again appointed rector, and, at the close of his term, delivered a celebrated address, *De Honore, Medici Servitute*, perhaps the best of all those essays, in which he represents the physician as the servant of nature, whose activity he is to awaken and direct. In this he returned, in some measure, to the principles of Hippocrates, from which, indeed, he had never departed far in practice. In 1738, his disorder returned with increased violence, and, after a few months, put an end to his life, at the age of 70. The city erected a monument to him in St. Peter's church, with his favorite motto upon it—*Simplex sigillum veri.*

Boëthius, Anicius Manlius Torquatus Severinus, a man celebrated for his virtues, services, honors and tragical end, was born about 470 A. D., in Rome or Milan, of a rich, ancient and respectable family; was educated in Rome, in a manner well calculated to develope his extraordinary abilities; afterwards went to Athens, which was still the centre of taste and science, and studied philosophy under Proclus and others. Returning to Rome, he was graciously received by Theodoric, king of the Ostrogoths, then master of Italy, loaded with marks of favor and esteem, and soon raised to the first offices in the empire. He exerted the best influence on the administration of this monarch, so that the dominion of the Goths promoted the welfare and happiness of the people who were subject to them. He was long the oracle of his sovereign and the idol of the people.

The highest honors were thought inadequate to reward his virtues and services. But Theodoric, as he grew old, became irritable, jealous, and distrustful of those about him. The Goths now indulged in all sorts of oppression and extortion, while B. exerted himself in vain to restrain them. He had already made many enemies by his strict integrity and vigilant justice. These at last succeeded in prejudicing the king against him, and rendering him suspicious of B. The opposition of B. to their unjust measures was construed into a rebellious temper, and he was even accused of a treasonable correspondence with the court of Constantinople. He was arrested, imprisoned and executed, A. D. 524 or 526.—While he was at the helm of state, he found recreation from his toilsome occupations in the study of the sciences, and devoted a part of his leisure to the construction of mathematical and musical instruments, some of which he sent to Clothaire, king of France. He was also much given to the study of the old Greek philosophers and mathematicians, and wrote Latin translations of several of them. His most celebrated work is that composed during his imprisonment, On the Consolations of Philosophy. It is written in prose and verse intermixed. The elevation of thought, the nobleness of feeling, the ease and distinctness of style, which it exhibits, make this composition, short as it is, far superior to any other of the age. (Principal edition, Basil, 1570, folio. A modern one of some value appeared at Glasgow, 1751, 4to.)

Boettcher, John Frederic, the inventor of the Dresden porcelain, born Feb. 5, 1682, at Schleiz, in the Voigtland, in his 15th year went from Magdeburg, where he received his early education, to Berlin, as apprentice of an apothecary. There he devoted his nights to the art of making gold. His want of sleep rendered him so stupid, during the day, as to draw upon him many reproofs, till, at last, he acquired some consideration by showing little pieces of gold, which he pretended to have made. Oct 1, 1701, he changed, as it is said, in the presence of several witnesses, 18 pieces of silver into fine gold. As this was much talked of, the king desired to see him, and B., believing he was to be arrested as an adept (q. v.), fled to Saxony. The king of Saxony gave him large sums of money, which he wasted, still keeping his employer in suspense. His majesty finally became very impatient to see the gold. B., therefore, in 1704, attempted to escape, but was overtaken, and, with the assistance of one Tschirnhausen, who had discovered a kind of porcelain, invented an improved composition of it, with which he hoped to appease the king, who spent immense sums in China ware. In 1705, B. invented the Dresden porcelain, which has since become so famous. He made use of a clay found in the vicinity of Meissen. The king, upon this, made him a baron of the empire and director of the new manufactory of porcelain in Meissen, though he was often treated as a prisoner, lest the secret should be betrayed. He was finally removed from his dignity, on account of his immoral life, and died, March 13, 1719, in the greatest poverty, so that he did not even leave sufficient to pay the expenses of his funeral.

Bogdanowitsch, Hippolyt Federowitsch, the Russian Anacreon, was born in 1743, at Perewolotschna, in White Russia. His father was a physician. He was designed for an engineer; went, for the purpose of studying engineering, to Moscow, in 1754, and entered an academy there; but the sight of a splendid play, and the reading of Lomonossow's poems, turned his inclination to poetry. He wished to become an actor, but the manager of the theatre, Cheraskow, dissuaded him from his purpose. By his advice, he applied himself to the study of the fine arts, and to learning foreign languages. He gained patrons and friends, and, in 1761, was made inspector in the university of Moscow, and afterwards translator in the department of foreign affairs. In 1762, he travelled with count Beloselsky, as secretary of legation, to Dresden, where he devoted his whole attention to the study of the fine arts and of poetry, till 1768. The beautiful pictures in the gallery of that place inspired him to write his Psyche (*Duschenka*), which appeared in 1775, and fixed his fame on a lasting foundation. After this, he devoted himself to music and poetry, in solitary study at Petersburg, till Catharine called him from his retirement. He then wrote, on different occasions, several dramatic and historical pieces. In 1788, he was made president of the imperial archives. In 1795, he took leave of the court, and lived as a private man in Little Russia. Alexander recalled him to Petersburg, where he lived till 1803. He was as remarkable for modesty as for genius, and a man of childlike goodness and vivacity.

Bogotá, at the time of the Spanish

conquest, was the seat of empire of one of the most civilized states of America, that of the Muisca Indians. Owing to the fertility of the great valley of Bogotá, which has been thought capable of sustaining a population of two or three millions, it contained a comparatively dense population of Indians, whose advances in refinement rendered them, in a certain sense, the rivals of the inhabitants of Cuzco. They traced the foundation of their religious and political institutions to Bochica, whose history greatly resembles that of Manco Capac. They were subdued by the Spanish general Gonzalo Ximenez di Quesada. (See *Bochica*, *Cundinamarca*, *Muisca*; Compagnoni, t. xix; Humboldt; Robinson's Bogotá.)

Bogotá, or Santa Fé de Bogotá; a city of South America, the capital of the republic of Colombia, and formerly the capital of the vice-royalty of New Grenada. Lon. 74° 15′ W.; lat. 4° 36′ N. The population has of late been variously stated, from less than 30,000 to 60,000. It is situated in a spacious and luxuriant plain, elevated 8721 feet above the level of the sea, and lies to the east of the principal chain of the Andes. Two small streams flow through the town, which join the river Funza, or Bogotá, at a short distance. The city contains a magnificent cathedral, a university, a mint, an hospital, and various other public buildings. The streets are wide and well paved. The city, by reason of its elevation, enjoys the temperature of perpetual spring; the mean heat being 57.74, and the thermometer having a range of only a few degrees. The plains around Bogotá produce two regular harvests in a year.

Bogotá or Funza river. (See *Tequendama*, *Cataract of*.)

Bohemia, Bœheim, Bojenheim, has its name from the Boii, a Celtic nation, who settled there about 600 B. C., under their leader Segovesus, a nephew of Ambigatus, king of the Bituriges, but were afterwards almost all driven out by the Marcomanni. About the middle of the 4th century, B., then inhabited by German nations, enjoyed a settled and quiet government under its dukes, who were, as yet, but little known. In the middle of the 6th century, a numerous army of Sclavonians (*Czechowe*, *Tschechen*, as the Bohemians still call themselves), who had hitherto inhabited the shores of the Black Sea, invaded B. (as some say, under the command of one Zecko), conquered the country, and put it under cultivation. According to others, Zecko was entirely unconnected with the Sclavonians, and his successors were hard pressed by that people, although his descendants were never quite expelled from the land. The first of them who is known to us by name was Przemislas, a peasant, whom the princess Libussa espoused, 632, and raised to the throne. Although Charlemagne and some of his successors compelled B. to pay tribute, this subjection did not continue long. In 840, B., Silesia and Moravia were free from all foreign dominion, and governed by their own dukes, although still maintaining a sort of confederacy with the German empire. In 1061, Henry IV gave the title of *king* to the duke of B., which was not, however, generally recognised till the time of Wratislaus, in 1086. Afterwards, about 1230, Philip conferred the royal dignity on Przemislas and his successors. It was confirmed by Frederic II, since whose time B. has remained a kingdom. The male descendants of the old kings ceased with Wenzel V, in 1305, on whose death, John of Luxemburg obtained the crown by marriage, in 1310, and left it to his descendants. After this, Charles IV (of the house of Luxemburg, under the name of *Charles I*, who very much improved the kingdom), and his sons, Wenzeslaus and Sigismund (the latter nearly lost B. in the religious war with the Hussites), united the crown of B. to that of the German empire. After Sigismund's death, 1437, B. came into the possession of his son-in-law, Albert of Austria, who died in 1439, and the crown descended to his son Ladislaus, born after his death, 1440 (hence surnamed *Posthumus*), who being at the same time king of Hungary, B. was separated again from the German states. After his death, 1457, the people chose George von Podiebrad, who had been regent, for their king, in 1458, and, in 1469, when he was excommunicated by the pope, they elected the Polish prince Wladislaus, who, however, did not come into possession of the throne till the death of George, in 1471. He was succeeded, 1516, after a reign of 45 years, by his son Louis. These were both also kings of Hungary. Lewis being killed in a battle with the Turks near Mohatz, in 1526, B. fell to the house of Austria. The brother-in-law of Louis, Maximilian's second grandson, the archduke Ferdinand, succeeded to the crown. This prince desired the Bohemians to take up arms in the Smalkaldic war against the elector of Saxony; but, finding them averse to his wishes, and threat-

ening to rebel against him, he conducted towards them with great harshness, after the victory of Charles V, at Mühlberg, and declared B. an absolute monarchy. He was succeeded by his son Maximilian (1564), and he by his sons Rodolph (1576), and Matthias (1612). Towards the close of the reign of the latter prince, in consequence of the infringements upon the religious liberty of the Protestants, troubles arose, which threatened the house of Austria with the loss of B. In 1619, the people invited Frederic V, elector of the Palatinate, to the throne, to the exclusion of Ferdinand II, who had been already crowned king during the life-time of his cousin Matthias. But, when the victory at Prague, Nov. 9, 1620, had decided the war in favor of the emperor, those who had joined in the rebellion were most rigorously dealt with: 27 of them were executed, 16 banished or imprisoned for life, and their goods confiscated. The sentence of confiscation was also extended to those who had already died, and to 29 who had escaped, as well as to 728 wealthy lords and knights, who had voluntarily acknowledged their offence. The Protestant religion, which was held by three fourths of the people, was rooted out; Rodolph's imperial edict was revoked (1627), and B. reduced to an absolute and hereditary monarchy, and the Roman Catholic faith established to the entire exclusion of all others. From this time B. continually declined. History hardly furnishes a parallel instance of such a complete triumph of mere brute force over the spirit of a people. The house of Hapsburg has to answer for this violation of human rights. More than 30,000 families (185 of which were of the rank of lords and knights), all the Protestant ministers and teachers, a multitude of artists, tradesmen and mechanics, who refused to become Catholics, emigrated to Saxony, Brandenburg, Holland, Switzerland, &c. In the mountain and forest villages, however, out of the way of the Jesuits and soldiers, many secret Protestants still remained. Since that period, the Bohemian language has been disused in public transactions. In the 30 years' war, B. was entirely desolated; it lost the best of its strength and wealth. When Ferdinand II died, in 1637, there remained of the 732 towns, 34,700 villages, and 3,000,000 of inhabitants, which B. contained in 1617, only 130 towns, a little more than 6000 villages, and 780,000 inhabitants! After the death of Charles VI (1740), Charles Albert, elector of Bavaria, laid claim to the crown, and the oath of allegiance was taken to him in Prague; but Maria Theresa succeeded in obtaining possession of B., which has remained ever since one of the richest jewels in the Austrian diadem.—The kingdom of Bohemia is bounded on the west by Bavaria, on the east by Moravia and Silesia, on the north by Lusatia and Misnia, and on the south by Austria and Bavaria. It contains 20,200 square miles, and over 3,380,000 inhabitants (of whom 2,170,000 are Czechs, and more than 50,000 Jews), in 286 large towns (*städte*), 275 market-towns, and 11,924 villages. The prevailing religion is the Roman Catholic; other sects, however, are tolerated. The language of the country is Bohemian, a dialect of the Sclavonic; in some districts, and in most of the cities, German is spoken. B. is surrounded on all sides by mountains, is covered with large forests, and considerable ponds. The number of the latter is reckoned at 20,000. Its plains are remarkably fertile. The largest rivers are the Elbe and the Moldau. All sorts of grain, flax, hops (the best in Europe) and fruits are exported. Wine is not abundant, but, in the neighborhood of Melnic, of pretty good quality. The raising of sheep, horses, swine and poultry is carried on to a considerable extent. The mines yield silver (1823, 13,873 marks), copper, excellent tin (1800 cwt.), garnets and other precious stones, iron (200,000 cwt.), cobalt, arsenic, uranium and tungsten, antimony, vitriol, alum, calamine, sulphur, and coal in abundance. There are also numerous mineral springs (150), but little salt. Manufactories of different kinds are established in all parts of the country. The most important of these are the linen, cambric, lace, thread and veil factories, and others of a similar kind. These, in 1801, yielded goods to the value of more than 20,000,000 florins: half of this amount was exported from the country. The woollen manufactories produced an amount of 10,000,000 florins. The woollens have advanced, of late years, both in quantity and quality. The Bohemian glass (there are 78 glass-houses) is the best in Europe, and is carried to Spain, America, Russia and the Levant, to the amount of 2,500,000 florins. Besides these, there are 8 mirror factories. At Turnau there are manufactories of composition-stones, porcelain and earthen ware, &c. Of considerable importance, too, is the manufacture of hats of the finest sort, of paper, of silk stuffs, polished garnets, musical instruments, and many

other articles. B. contains, besides the city of Prague, 16 circles, governed by officers appointed yearly. The most important places are the cities of Buntzlau, Melnik, Turnau, Reichenberg, Trautenau, Kuttenberg, Budweis, Pilsen, Carlsbad (q. v.), Joachimsthal, Teplitz (q. v.), Eger; the fortresses of Königingrätz, Josephstadt, Theresienstadt; the manufacturing town of Rumburg; the villages of Aderbach, Sedlitz, Seidschütz, Püllna, Königswart, Franzensbrunnen (q. v.), Marienbad (q. v.), &c. For internal intercourse, there are excellent highways, extending 1060 miles; and, in 1826, a rail-road was laid to connect the Danube with the Moldau.—The Bohemians of all ranks are distinguished for their public spirit, exerting itself in the most noble and useful plans. In 1822, they had 2996 public establishments for education, a university, 3 theological academies, 26 gymnasiums, 2961 common schools, and a conservatory for music, 6709 teachers, 410,463 pupils; among them, 2055 students in the high schools. (See prof. Schnabel's *Statistical Account of Bohemia.*)

Bohemian Brethren; the name of a Christian sect, which arose in Bohemia, about the middle of the 15th century, from the remains of the stricter sort of Hussites. (q. v.) Dissatisfied with the advances towards popery, by which the Calixtines (q. v.) had made themselves the ruling party in Bohemia, they refused to receive the *compacts*, as they were called, i. e., the articles of agreement between that party and the council at Basil (30th Nov. 1433), and began, about 1457, under the direction of a clergyman, Michael Bradatz, to form themselves into separate parishes, to hold meetings of their own, and to distinguish themselves from the rest of the Hussites by the name of *Brothers*, or *Brothers' Union*; but they were often confounded by their opponents with the Waldenses and Picards, and, on account of their seclusion, were called *Cavern-hunters* (*Grübenheimer*). Amidst the hardships and oppressions which they suffered from the Calixtines and Catholics, without making any resistance, their numbers increased so much, through their constancy in their belief and the purity of their morals, that, in 1500, their parishes amounted to 200, most of which had chapels belonging to them. The peculiarities of their religious belief are seen in their confessions of faith, especially their opinions with regard to the Lord's supper. They rejected the idea of transubstantiation, and admitted only a mystical spiritual presence of Christ in the eucharist. In other points, they took the Scriptures as the ground of their doctrines throughout, and for this, but more especially for the constitution and discipline of their churches, received the approbation of the reformers of the 16th century. This constitution of theirs was framed according to the accounts which remain of the oldest apostolic churches. They aimed to restore the primitive purity of Christianity, by the exclusion of the vicious from their communion, and by making three degrees of excommunication, as well as by the careful separation of the sexes, and the distribution of the members of their society into three classes—the beginners, the proficients and the perfect. Their strict system of superintendence, extending even to the minute details of domestic life, did much towards promoting this object. To carry on their system, they had a multitude of officers, of different degrees: viz. ordaining bishops, seniors and conseniors, presbyters or preachers, deacons, ædiles and acolytes, among whom the management of the ecclesiastical, moral and civil affairs of the community was judiciously distributed. Their first bishop received his ordination from a Waldensian bishop, though their churches held no communion with the Waldenses in Bohemia. They were destined, however, to experience a like fate with that oppressed sect. When, in conformity to their principle not to perform military service, they refused to take up arms in the Smalkaldic war against the Protestants, Ferdinand took their churches from them, and, in 1548, 1000 of their society retired into Poland and Prussia, where they at first settled in Marienwerder. The agreement which they concluded at Sendomir, 14th April, 1570, with the Polish Lutherans and Calvinistic churches, and still more the Dissenters' Peace Act of the Polish convention, 1572, obtained toleration for them in Poland, where they united more closely with the Calvinists under the persecutions of the Swedish Sigismund, and have continued in this connexion to the present day.—Their brethren, who remained in Moravia and Bohemia, recovered a certain degree of liberty under Maximilian II, and had their chief residence at Fulnek, in Moravia, and hence have been called *Moravian Brethren*. The issue of the 30 years' war, which terminated so unfortunately for the Protestants, occasioned the entire destruction of their churches, and their last bishop, Come

nius (q. v.), who had rendered important services in the education of youth, was compelled to fly. From this time, they made frequent emigrations, the most important of which took place in 1722, and occasioned the establishment of the new churches of the Brethren by count Zinzendorf. (For the history of the old churches of this sect, we refer the reader to Cranzen's *History of the Brethren*, and to Schulz *On the Origin and Constitution of the Evangelical Brethren's Church* (Gotha, 1822), a sensible and impartial work.) Although the old Bohemian Brethren must be regarded as now extinct, this society will ever deserve remembrance, as a quiet guardian of Christian truth and piety, in times just emerging from the barbarity of the middle ages; as a promoter of pure morals, such as the reformers of the 16th century were unable to establish in their churches; and as the parent of the esteemed and widely extended association of the United Brethren (q. v.), whose constitution has been modelled after theirs.

Bohemian and Bavarian Forest. From the Fichtelgebirge, southward, towards the confluence of the Ilz and the Danube, extends a ridge of mountains, covered with wood, called the *Bohemian Forest*, in ancient times a part of the *Sylva Hercynia*, the highest peaks of which are the Arber (4320 feet high), Rachel and others. It separates Bavaria and Bohemia. The great abundance of wood has occasioned the establishment of many glass-houses, forges, &c. in this region. The inhabitants have acquired, in their seclusion from the world, many characteristic virtues and vices.

Bohemian Language. The Czechish (Bohemian) dialect was the first of the Sclavonic idioms which was cultivated scientifically. This dialect is spoken in Bohemia, Moravia, with slight variations in Austrian Silesia, in half of Hungary, and in Sclavonia. That the Czechish has been widely spread as a dialect of the Sclavonian, is proved, as well by its antiquity, and its degree of cultivation, as by the size of the countries whose national language it is. We shall consider first the richness of the vocabulary of this language. This richness consists in the number of inflexions of the syllables at the beginning and end of words. Thus from the single radical word *byti* (his) there are more than 110 derivatives; from the radical word *dége se* (*é* read like *ea*), signifying *it happens*, there are more than 95, without reckoning the frequentative verbs, verbal substantives and adjectives. By the simple prefixing of the letters *s*, *w*, *v*, *z*, the verb acquires a different signification; e. g., *s-razyti*, *v-razyti*, *w-razyti*, convey the meanings *to beat down*, *to beat off*, *to beat in*. Hence this language has formed, from native roots, all the scientific terms of theology, jurisprudence and philosophy, and, with every new invention, can be further developed. A proof of its richness is to be found also in the numerous synonymes, as *psyce* (*c* read like the Italian *ce*), *kubka*, *tjsta*, the bitch; *hodmost*, *dustognost*, dignity; *hnug*, *mrwa*, manure; *wes*, *wesnice*, *dédina*, the village.—If one compares the Bohemian radical words with the analogous terms in other languages, he will be astonished at the number of inflexions and derivations by which the language of the Czechi is distinguished. A great part of the facility with which it receives new forms and additions rests upon its manifold declensions and its numerous tenses and participles. In this respect, the language of the Bohemians excels that of all other modern nations, with the exception of the other races of Sclavonic origin. In the variety of declensions, which are terminated almost all with a vowel, are inflected only at the end, and are used without an article (see the *Grammar of Negedly*, Prague, 1821), the Bohemian equals the precise Latin; for instance, *muzi* (*viro*), *zene* (*femina*), (*z* read like the French *ch*), &c. The participles give it a great deal of pliability, as they unite in themselves the advantage of verbs and adjectives, by denoting, as verbal adjectives, at once the quality of the thing and the determination of the time, saving thus the use of the relatives *which*, *who*, *as*, and the prepositions *after*, *since*, &c., by which periods become so dragging: hence its conciseness.—Another advantage of the pliability of the Bohemian language is the means which it affords of compounding words; as, *Samowládce*, he who rules alone; *Hromowládny*, the ruler of the thunder, &c. The Bohemian expresses the compound words of the Greeks and Germans sometimes by a particular form of the adjective, sometimes by particular substantives; as, *kostnic*, the charnel-house; *chmelnice*, the hop-yard; *duha*, the rainbow.—Another peculiarity is the great variety of diminutives, by which not only small, but agreeable and dear objects are designated; as, *panacek*, the little gentleman; *milenka*, the much beloved; *panenka*, the little maid, and many others: also the ways of expressing concisely the frequent

naming of a thing; for instance, *Frantiskowati se* (*s* read as *sch*), to use frequently the name Francis; *macechowati se*, to use frequently the name step-mother. It possesses also the patronymic nouns; for instance, *kralowec*, the king's son. It indicates concisely that an action is completed; as, *dopsati*, to write to an end. It contains the inceptive verbs; for example, *hrbatjm*, I am becoming hunch-backed; and many others.—Secondly, the Bohemian language has much expressiveness and energy, as it is not weakened by a number of articles, auxiliary words, conjunctions and words of transition, but is able to represent the objects of imagination, of passion, and all the higher emotions of the poet and orator, in a quick, vigorous and lively manner, by its brevity, heaping together the most significant words, and arranging the connexion of the parts of speech according to the degree of feeling to be expressed, so as to give the style spirit and energy, or gentleness and equability. The Bohemian designates many objects by the imitation of natural sounds. Thus the names of many animals are taken from their voices; as, *kruta*, the turkey; *kachna*, the duck. Many plants he names from their effects; as, *bolehlaw*, hemlock (from head-ache). The conciseness of the language is increased by the absence of auxiliaries in the greater part of the verbs; as, *dam*, I shall give. The preterites, in the third person, singular and plural, express a meaning still further condensed, as the variation in the last syllable is made to designate the sex; for example, *psal*, *psala*, *psalo*, he, she, it has written; *psali*, *psaly*, *psala*, they have written; *narozen*, *narozena*, *narozeno*, he, she, it has been born. Thus the absence of the personal pronouns in the verbs, of the article in the substantives, and the use of many participles and participial forms, give to this language the expressiveness and power of the Latin. In like manner, the Bohemian saves many prepositions and much circumlocution of other kinds, by the use of the *instrumental*, agreeing with the Latin ablative; for instance, *secenjm mece hlawu mu st' al* (*t* read like *te*), with a blow of the sword he has cut off his head. This language is, therefore, very well fitted for the translation of the Latin classics. By the use of the *part. præt. activi*, the Bohemian can designate, as well as the Greek, who has really performed the action contained in the predicate of the accessary clause, which the Latin, with his ablative absolute, or participle passive, must leave always undefined and dubious; for instance, Πινδαρος Πασικλεα αποδειξας επιτροπον και του παιδος και των χρηματων απηρεν εις Πελοποννησον; *Pindarus vstanowiw Pasiklea za porucnjka syna swého a geho gmenj, táhl do Peloponnesu; Pindarus constituto Pasicle tum filii tum bonorum tutore, in Peloponnesum abiit.* This contributes to the perspicuity and precision of the Bohemian language. Every notion, moreover, is expressed by a peculiar word; for example, the verbs *zjti*, *strjhati*, *krágeti*, *rezati*, denote to cut with the scissors, with the sickle, with the knife, and with the sithe; while most languages use one verb, *to cut*, in all these cases. In the subtilty of grammatical structure, the Bohemian is like the Greek, and has the advantage over the Latin and other languages. In speaking of two hands, two eyes, &c., the dual number is used; e. g., *ruce*, *oci*, &c. The language is also capable of expressing the idea of duration referring to an indefinite past time, like the Greek aorist; for instance, *kupowal dum*, *ale nekaupil ho*, which we have no means of rendering precisely, for *kupowati* means *to buy*, and *kaupiti* means also *to buy:* accordingly the phrase would be, literally, *he bought the house, and bought it not*, which would be a contradiction: *he was about to buy the house, but did not buy it*, would be also an incorrect expression of this idea, for the action was already going on—he was already buying. The language affords several preterite tenses, which are distinguished with great subtilty; as, *præt. sing. unit.* (time which has only past once)—*kaupil*, he has bought once; *plusquamperf. primum—kupowal*, he had purchased for a long time; *plusquamperf. secundum—kupowáwal*, he had purchased formerly several times; *plusquamperf. tertium—kupowáwáwal*, he seldom had purchased in former times; where, by adding the auxiliary verb *byl*, a time still longer passed may be expressed, though this is very seldom used; for instance, *byl kupowawal*, he had purchased in times long past. Another advantage of the language consists in the many future tenses by which the Bohemian denotes not only the time, but also the duration, and the more or less frequent repetition of the action; viz. *futurum simplex—kaupjm*, I shall purchase once; *futurum durativum* —for instance, *budu kupowati*, I shall be purchasing for a long time; *fut. frequentativum—budu kupowáwati*, I shall purchase several times; and *fut. iterativum* —*budu kupowáwati*, I shall be purchasing

very often. Not less manifold in signification, and equally subtile in the determination of time, are the participles and the participial constructions. The determination of the sex and the number by the final syllable of the participle gives the Czechish language no small preference above others. The Bohemian can express himself as elegantly and politely, and at the same time as concisely, as the Greek with his optative; for instance, *nechalo toho*, she may let it go; *vcinil*, let him do it. The small, connective particles of speech, which the Bohemian has, in common with the Greek, must be considered as so many touches and shadings, by which the whole idea and feeling is more distinctly expressed. The Greek ἀλλα μεν, γαρ, δε, τε, &c. agree with the Bohemian *ele pak*, *wsak*, *li*, *z*, *t'*; only the three latter are always affixed to a word. Finally, the free, unrestrained arrangement of the words contributes much to perspicuity, as the Bohemian is less fettered than any of the other modern languages to a particular construction.—By a happy mixture of vowels and consonants, and by a combination of the latter favorable for the pronunciation, the language has also much euphony, though many call it rough on account of the *r* (read *rsh*); but the sound of entire words, not that of the single letters which compose them, determines the roughness or smoothness of their pronunciation; besides, every language, on account of the difference of the feelings which it has to convey,—some gentle, others harsh and violent,—ought to be able to form some harsh sounds. The terminations of the various declensions and conjugations are mostly vowels, or the smoother consonants. In general, the Bohemian has a natural melody, like that of the Greek; for the tongue stops longer on a syllable containing a long vowel, *á*, *é*, *j*, *u*, *y*, than on one containing a short vowel. In the Bohemian alphabet of 42 letters (a number in which it is surpassed only by the Indian, the most copious of known alphabets, and the Russian, which comes next to it), there are to be found all the sounds of the other languages. The English sound of *ts* the Bohemian expresses with *c*, the English *y* with *g*, the *sh* with *ss* or *s*, the Italian *ce* or *ci* with *c*, the French *ge* and *gi* with the *z*, the Italian *u* with the *y*, the *gn* with the *n*, the English *w* with the *w*, particularly at the end of words. Hence his alphabet enables him to write all languages so as to give their correct pronunciation, and to pronounce them easily and well, so as to be considered by Frenchmen, Germans and Italians as their countryman. He never confounds smooth and rough letters; his singing is easy and graceful, and the Bohemian opera pleases, like the Italian, as it suppresses no syllables, but gives a full sound to each word. It is very seldom that combinations of difficult consonants are to be found in the Sclavonic idioms, and these may be softened by the freedom of construction which the language allows. The euphony of the language is also the reason why the Bohemian takes a rank in music inferior only to that of the Italian. Throughout Europe, Bohemian musicians are to be found: the distinguished musicians of Austria are mostly from Bohemia. Taste and feeling for music almost always keep pace with the melody of the language of a nation.

Bohemian Literature has five periods. The first extends from the mythological times to 1409. It is certain, that, among the Sclavonian tribes, the Czechi were the first who cultivated and fixed their language. (See *Sclavonians* and *Sclavonic Language*.) It affords no written documents of remote antiquity, unless we believe the Runic characters to have been in use before the introduction of Christianity. We know, however, that the language of that period was similar to the present, from the names of the gods, dukes, rivers, cities, mountains, which have been preserved, such as Perun, Przemysl, Boriwog, Wltawa, Bila, Praha, Tetin, Krkonose. The Sclavonian apostle Method, and the philosopher Constantine, called *Cyril*, made the Sclavonians in Moravia acquainted with Christianity. From thence it penetrated, under duke Boirwog, to Bohemia, and thus the people of this country received the Græco-Sclavonic ritual in the year 845. The same Constantine invented for the sounds of the Sclavonic language the Cyrillic-Sclavonic alphabet—Az, Buky, Wiedi, Glagol, Dobro, &c., borrowed mostly from the Greek. In later times, the Glagolitic alphabet sprung up, of which, however, less use was made. When the Latin church supplanted the Greek in Moravia, Bohemia and Pannonia, the Latin alphabet came also into use, instead of the Cyrillic. In Bohemia, the Cyrillic character was in use only with the monks of Sazawa, who observed the Sclavonic ritual. King Wratislaus, intending to introduce it again in other places, and asking the permission of pope Gregory VII, received a refusal. As the Latins endeav

ored to annihilate all the writings of the old ritual, and the Sclavonic language was, in many cases, obliged to give way to the Latin, Bohemian literature suffered from popery incalculable injury: hence we possess, from the earlier centuries, but a few insignificant remains in the characters above mentioned. In the 10th century, the Bohemians had a school at Kudet, in which they learnt Latin. Their most ancient relic is the hymn (*Hospodine Pomiluyny*) of bishop Adalbert (Wegtech), a native Bohemian, which is sung to the present day, even by the Russians and Poles. Some think it of still greater antiquity. From the 11th century, we have no complete works; but, in Latin documents, Sclavonic names are frequently found. The 12th and 13th centuries were more fertile. When king Wratislaus issued the summons for the renowned expedition to Milan, all Prague resounded with the songs of the valiant young knights; but none of them has been preserved. Záwis Z. Rozmberka wrote, in 1290, several good poems. The Bohemians possess the remains of a collection of lyric-epic national songs, without rhyme, which seem to have been of great merit; but only two sheets of parchment, in duodecimo, and two small strips, have been preserved. Mr. Hanka, keeper of the Bohemian national museum, discovered these valuable remains in a room in the church at Königinhof, in a pile of neglected papers. The manuscript appears to have been written in the years 1290 and 1310: some of the poems may be still older: the more is the loss of the greater part of them to be regretted. This whole collection consisted of 3 books, as may be concluded from the inscription of the remaining chapters of the 3d book, which are inscribed 26th, 27th, 28th. 14 poems are preserved, which constitute those 3 chapters. (See Rukopi's *Kralodworsky wydany od Wac*, Hanky, 1819.) We cannot determine the subject of the first song, *Boleslaw*, by the part which has come down to us; the second poem, *Wihori Dub*, calls upon duke Udalrich to drive the Poles from Prague (1003); the third, *Benes*, celebrates the repulse of the Saxons who advanced from Görlitz; the fourth relates Jaroslaw Sternberg's victory over the Tartars, near Olmütz, in 1241; and so on. Göthe found these national songs worthy of particular attention. They deserve, perhaps, to be placed by the side of Ossian's poems. A Bohemian psalter, and a legend, in rhyme, on the 12 apostles (the latter only a fragment of 70 verses, at Vienna), have also been preserved; likewise, the Complaint of a Lover on the Banks of the Muldau (Weltawa), in prose; a fragment of a history of the passion of Jesus, in rhyme; the hymn *Swaty Waclawe;* besides a number of poems, songs, fables and satires, in verses of four feet, also in rhyme. The 14th century is more productive. Under the emperor Charles IV, who promoted the cultivation of the Bohemian language, the university of Prague was founded, in 1348. In the golden bull, he commanded the sons of the German electors to learn the Bohemian language. Under his son, the emperor Wenceslaus, all decrees were written in Bohemian, which formerly were in Latin. Prague was then not only the most populous city in Germany, but also, on account of its splendid court and the wealth of its citizens, the centre of the arts and sciences. Dalemil Mezericky wrote a history of Bohemia in verse; Ondreg Z. Dube, a collection of Bohemian laws, in 3 vols.; Warinec Z. Brezowa, a history of the Roman emperors, and translated Mandeville's Travels; Pribik Pulkawa, a Bohemian history; and Benes Z. Horowic, a history of the empire to the time of Wenzel. This period affords, also, many vocabularies, poems and songs; also a translation of the life of Alexander the Great; the life of the emperor and king Charles IV; the description of the heroic feats of Pliehta of Zerotin, and of the battle of Cressy, in 1346, and an account of the death of king John, which celebrates his fame and that of the other Bohemian heroes; a description of the tournament in 1315; the expedition of king John against count Matthias of Trenzcin, &c.—With Huss commenced the second period, from 1409 to 1500, which elevated the character of the Bohemian language and nation. The assembled fathers at Constance and Bâle beheld with astonishment, among the Bohemian nobility and citizens, men not only distinguished for their intrepidity, but able, also, to explain with profound learning the word of God. The Bohemian nobility of those times not only wielded with a vigorous arm the national weapon of their country in defence of the rights of the nation, but stood, also, in the first rank of scientific cultivation. The prevalence of religious disputes caused the Bible to be generally read and understood. Æneas Sylvius, then pope, says, *Pudeat Italiæ sacerdotes, quos ne semel quidem novam legem constat legisse, apud Taboritas vix mulierculam invenies, quæ*

de Novo Testamento et veteri respondere nesciat. (Com. in Dict. Alph. Reg., sec. ii, 17.) Huss of Hussinetz translated Wickliffe's book *Trialogus* into the Bohemian tongue, and sent it to the laymen as presents. The treatise of the six errors he caused to be inscribed, in Bohemian, on the walls of the chapel of Bethlehem. He wrote his first collection of sermons when at the castle of Kozy (1413), besides an appeal to the pope, a commentary on the ten commandments, an explanation of the twelve articles, two sermons on the Antichrist, the Triple Cord, and several excellent hymns. His letters from the dungeon in Constance to the Bohemians were translated by Luther into Latin, accompanied with a preface, and printed at Wittenberg in 1536. He, and Jakobellus and Jerome, improved and distributed the Bohemian Bible, of which several copies have been preserved to our times. How many of his works perished by the hands of the Jesuits is unknown. The cruel execution of the Bohemian martyrs Huss and Jerome, for their faith, was considered by their countrymen as an outrage upon the whole nation, of which they complained bitterly; many satires, also, were written at that time. Of Zisca of Trocnow, one of the greatest generals in history, several letters, and his rules of war, have been preserved. From this period, there have come down to us, also, several war-songs of the Taborites; as

Kdoz gste Bozj bogownjoy a zakona geho,
(Who are you, warriors of God and of his law), &c.
Nuz mniskowé poskakugte,
(Well now, ye monks, be chaste), &c.;

also some songs of Prague. Martin Lupác undertook, with the assistance of some learned men, the labor of translating the whole New Testament, and rendered it, in many places, more correct and plain. The church-service was now performed entirely in the Bohemian language. The bishop of the Taborites, Nicholas of Pelhrimow, wrote a Bohemian and Latin theological tract. Kristan Prachatitzky wrote a book on medicine; Martin Kabátnik, a Journey to Jerusalem; P. Prespole, the mining laws of Kuttenberg and Iglaw, which have since become so famous. Johann Rokycana, H. Litomericky, W. Koranda and others wrote different works on religious subjects. P. Chelcicky gave an explanation of the Lessons of the Gospel for every Sunday; wrote the Net of Faith (*Sit Wjry*), a discourse on the 13th chapter of Revelation, of the beast and its image (*O Selme a Obrazu Gegjm*), and an essay on the love of God. The most famous book of his was one in 40 chapters, which he called *Kopyla* (Last). Many controversial writings of this period might be mentioned. Bohuslaw of Sechtic wrote the work *Zrcadlo wscho Krestanstwa* (Mirror of the whole of Christianity). In this, the difference between the conduct of the apostles and of the Roman bishops is represented by various drawings. Three other drawings represent Huss preaching, and at the stake; besides 16 leaves, upon which the life and the letters of Huss are contained. After two pictures, of which one represents the worship of the Hussites, the other the expedition of the Taborites, comes a satirical letter of Lucifer: another plate represents the blind hero Zisca at the head of his army, under which there are quotations from the Taborite war-song, *Neprátel se nelekeyte—Na koristech se nezastawugme* (Fear not the foes—Stop not for plundering): besides a dialogue, in which the father tells his son how the cup and the law of God had been introduced into Bohemia. The whole consists of 118 leaves, of which 88 have pictures. Stibor of Cimburg and Towacow wrote the very ingenious work on the possessions of the clergy, which he dedicated to king George, in 1467, and the collection of the rights and privileges of the margraviate of Moravia. Walcowsky Z. Knezmosta wrote on the vices and hypocrisy of the clergy; P. Zidek wrote, in 3 vols., the Art of Governing, 1471 (*Zpráwa Królowska*). The first volume treats of the duties of a king with regard to the public welfare; the second, on his personal behavior; the third is a general view of history, from the beginning of the world to the time of the author, wherein frequent hints are given, as to what a king should do, and what avoid. William Cornelius of Wsehrd wrote nine books on the laws, judiciary offices and the register of lands in Bohemia. King George was the author of an ordinance respecting measures, money, weights, &c. V. Mladienowic, who, when notary at Constance, was an eye-witness of the execution of Huss, wrote an account of his life. This used to be read in the Bohemian churches. Procopius continued the rhyming chronicles of Dalemil. J. Lodkowic related his Journey to the Holy Sepulchre. Sasek of Mezyhor wrote Notes and Travels through Germany, England, France, Spain, Portugal and Italy, of the Bohemian baron Loew of Rozmital and Vlatna (whom he accompanied); a contribution

to our knowledge of the manners of the 15th century, which was published by Jos. Edm. Horky, in a German translation printed at Brünn, 1824. M. Gallus, Albjk, Chrislan, Zidek, J. Cerny, J. Blowic and Sindel, wrote on medicine, astrology and agriculture. As early as 1447, we have an anonymous work on the grafting of trees. We have also the rhyming legend of the 10,000 knights, a translation of the fables of Æsop, the council of the beasts and birds, in prose and verse, in 3 vols. (*Placj Rada*). Each lesson, which flows in rhyme from the mouths of the animals, is preceded by the natural history of the animals and the moral. It was printed three times in the Bohemian language, and published at Cracow in Latin verse, 1521, 4to. There is, likewise, a satire, in 132 verses, on the persecution of the priests of the Taborites; the *Maitraum* of Hynek of Podiebrad, the younger son of king George; besides several vocabularies and romances, among which is *Tkadlecek*, which has been published at Vienna, in a German translation. Of the Bible, 14 translations have come down to us, besides 10 of the New Testament. The oldest, of the year 1400, is in Dresden. The typographic art made a rapid progress in Bohemia. The first printed work was the epistle of Huss from Constance, in 1459; the second, the Trojan War, in 1468; the third, a New Testament, in 1474; the whole Bible, in 1488; the first almanac, in 1489.—The third age, from 1500 to 1620, may be called the golden age of the Bohemian language. During those dreadful tumults, in which, not only in this kingdom, but also in the neighboring countries, populous cities became heaps of ashes, and innumerable villages entirely disappeared, the peculiar inclination of the nation to investigation, and their predilection for science and art, developed themselves. The cultivation of learning—in other countries, with only a few exceptions, the monopoly of the clergy—was, in this favoured land, open to the whole nation. All branches of science were elaborated, and brought to an uncommonly high degree of improvement for that time. The purpose of this work does not allow us to enumerate all the authors of this age, since, under Rodolph II alone, there were more than 150. Gregory Hruby of Geleni translated the work of Petrarch, *De Remediis utriusque Fortunæ*. W. Pisecky translated from the Greek the Exhortation of Isocrates to Demonikos. John Amos Comenius wrote 54 works, some of which were very excellent. He published his *Janua* and an *Orbis Pictus*, which were translated, in his lifetime, into 11 languages, have passed through innumerable editions, and are not yet surpassed. In all the north of Europe, Comenius attracted attention by his projects for improving education, which were deliberated upon even by the diet of Sweden and the parliament of England. The hymns of this and the earlier ages, part of which have been translated by Luther, may serve as standards for all languages. In Prague alone, there were, at this period, 18 printing-presses; in the country-towns of B. 7, and in Moravia also 7: many Bohemian books, too, were printed in foreign countries, as in Venice, Nüremberg, Holland, Poland, Dresden, Wittenberg and Leipsic.—The fourth period begins with 1620, and ends with 1774. After the battle at the White mountain, the whole Bohemian nation submitted entirely to the conqueror. The population of most of the cities and of whole districts migrated, in order not to be false to their faith. More than 70,000 men, and almost the whole of the nobility, all the Protestant clergy, scholars and artists, in general, the most cultivated part of the nation, left their native country. Of these emigrants, the greater part formed the flower of the army of count Mansfeld. Hence the 30 years' war depopulated Bohemia more than any other country, since these fugitives endeavored to regain their native country by repeated invasions. Nothing, however, was so disadvantageous to Bohemian literature as the introduction of monks, who were mostly Italians, Spaniards and Southern Germans, who condemned every Bohemian work, as heretical, to the flames, so that individuals boasted of having burnt about 60,000 manuscripts, which they took from the people by force, after searching their houses. Such works as escaped the flames were shut up in monasteries, in carefully-secured rooms, fastened with iron grates, doors, locks, bolts and chains, and often inscribed with the warning title *Hell*. Instead of these excellent remains of the classical times of the country, they gave the Bohemians nonsense of all kinds; accounts of hell and purgatory, the reading of which made many of the populace maniacs; though even this stuff was, in many cases, burnt, and mostly forbidden. The fugitives established at Amsterdam, Dresden, Berlin, Breslau and Halle, printing-presses, and sent to their brethren in

Bohemia, Moravia and Hungary, a number of books, mostly new editions. Some Bohemians, who observed the decay of their language, strove to remedy it; as Pesina Z. Cechorodu; Joh. Beckowsky, who continued the Bohemian history to 1620; W. Weseley, who wrote a work on geometry and trigonometry, &c.; but the decay was too great to admit of being checked; the nobility had become strangers, and the government encouraged only German literature. From this time, therefore, the Bohemians wrote more in the German language.—In the fifth period, from 1774 to 1826, a new ray of hope shone on Bohemian literature; when, under the emperor Joseph II, a deputation of secret Bohemian Protestants, trusting to his liberal views, made him acquainted with the great number of their brethren of the same faith. He perceived the necessity of introducing toleration, and hundreds of thousands of Protestants, in Bohemia and Moravia, came to light: their concealed works were printed anew, their classical language was again acknowledged and cultivated. This is done still more under the present government, who perceive the necessity and utility of the Sclavonian language, which, in the Austrian states, is spoken by 14,000,000 people, and of which the Bohemian is the written dialect. Under this protection, many men of merit, mindful of the fame of their ancestors, have endeavored to cultivate anew all branches of the sciences, and to reach, if possible, their more advanced neighbors. In particular, the members of the Bohemian society of sciences, of the national museum, and of other patriotic societies, above all, count Kollowrath-Liebsteinsky and count Caspar of Sternberg, deserve to be named with high respect.—The Bohemian has natural talents for mathematics, as Copernicus, Vega, Strnad, Wydra, Littrow, &c., may prove. The corps of Austrian artillery, which are recruited in Bohemia and Moravia, have always contained men distinguished for acquaintance with this science. In philology and music, the Bohemians are likewise eminent. The teacher of Mozart was Kluck, a Bohemian. Recently, Adlabert Sedlaczek, canon of a chapter of the Præmonstratenses, has distinguished himself by physical and mathematical compendiums in the Bohemian language.—Compare the *Vollständige Böhmische Literatur* of professor Jungmann (Prague, 1825, 2 vols.).

Boiardo, Matteo Maria, count of Scandiano, was born at a seat belonging to his family near Ferrara, in 1434. From 1488 to 1494, the period of his death, he was commander of the city and castle of Reggio, in the service of his protector, Ercole d'Este, duke of Modena. This accomplished courtier, scholar and knight was particularly distinguished as a poet. His *Orlando Innamorato* (Scandiano, 1496) is continued to the 79th canto, but not completed. He immortalized the names of his own peasants, and the charms of the scenery at Scandiano, in the persons of his heroes and his descriptions of the beauties of nature. In language and versification, he has been since surpassed by Ariosto, whom he equalled in invention, grace, and skilful conduct of complicated episodes. Dominichi, Berni and Agostini new modelled and continued the work of B. without improving it. One continuation, only, will never be forgotten—the immortal *Orlando* of Ariosto. In some of his works, B. was led, by the spirit of his times, to a close imitation of the ancients; e. g., in his *Capitoli;* also, in a comedy borrowed from Lucian's *Timon;* and in his Latin eclogues and translations of Herodotus and Apuleius. In his sonnets and *canzoni* (first printed at Reggio, 1499), he has displayed great talents as a lyric poet.

Boil; to heat a fluid until it bubbles and becomes changed into vapor. If the requisite heat is applied a sufficient time, bubbles continually arise, until the fluid is entirely consumed. A singular circumstance is to be remarked, that the fluid, in open vessels, when it has once begun to boil, receives no increase of heat, even from the hottest fire. The reason is this, that the additional caloric goes to form steam, and ascends with it into the air. The steam itself, when formed, may be raised to a much higher degree of temperature. During the period of boiling, the surface of the fluid exhibits a violent undulating motion, and the stratum of air immediately over it is filled with vapor. The noise which accompanies boiling, arises, without doubt, from the displacing of the steam-bubbles, and varies very much with the nature and situation of the vessel. The vaporization of fluids is, very probably, nothing more than a mechanical union of caloric with the fluid. The degree of heat at which different fluids boil is very different. Spirits boil at the lowest temperature; pure water next; at a still higher temperature, the fixed oils. The degree of heat at which a fluid boils is called its *boiling point.*

This is used as one of the fixed points in the graduation of thermometers. This point is uniform only in case of complete boiling, and under a uniform pressure of the atmosphere. The influence of this pressure appears from experiments. In an exhausted receiver, the heat of the human hand is sufficient to make water boil; while, on the contrary, in Papin's digester, where the confinement prevents evaporation, it may be heated to 300 or 400 degrees without boiling. Under the common pressure of the atmosphere, the boiling point of rain-water is 212° Fahrenheit; that of alcohol, 174°; that of mercury, 660°; that of ether, 98°. From the experiments of prof. Robinson, it appears, that, in a vacuum, all liquids boil about 145° lower than in the open air, under a pressure of 30 inches of mercury; water, therefore, would boil in a vacuum at 67° Ether may be made to boil at the common temperature, by merely exhausting the air from the vessel in which it is contained.

Boileau, Despréaux Nicholas, born in 1636, at Crosne, near Paris, commenced his studies in the *collège d'Harcourt*, and continued them in the *collège de Beauvais*. Even in his early youth, he read with ardor the great poets of antiquity, and tried his own powers in a tragedy, though with little success. After having completed his academical studies, he entered upon the career of the law; but soon left it from disinclination, tried some other pursuits, and resolved, finally, to devote himself entirely to belles-lettres. His first satire, *Les adieux à Paris*, made known his talents. In 1666, he published seven satires, with an introduction, addressed to the king. They met with extraordinary applause; for no one, before him, had written with such elegance of versification. But in this, and in the purity of his language, and the clearness with which he sets forth his luminous principles, consists their chief merit; novel, profound, original ideas, we should look for in vain, though the pieces are not destitute of graceful touches and delicate strokes. They are unequal in merit. The satires *Sur l'Équivoque* and *Sur l'Homme* have undeniable defects. That on Women, which he wrote at a more advanced age, is monotonous, and deficient in humor. His epistles, in which he is the successful rival of Horace, are more esteemed at the present day. They display a graceful versification, a natural and sustained style, vigorous and well connected ideas. These were followed by his *Art Poétique*, in which he describes, with precision and taste, all the different kinds of poetry (with the exception of the apologue), and lays down rules for them. In regularity of plan, happy transitions, and continual elegance of style, this poem is superior to the *Ars Poetica* of Horace. It was long regarded, not only in France, but also in foreign countries, as a poetical code, and has every where had a favorable influence, as it inculcates purity and regularity, and subjects all the productions of poetical genius to a fixed standard. B.'s censures of Tasso and Quinault, with some other equally unfounded opinions, display a narrowness of spirit. He had many opponents, who accused him of want of fertility, invention and variety. To refute them, he wrote his *Lutrin*, a mock-heroic poem, which is still unrivalled in the eyes of the French. A music-stand, which had been removed from its place, had occasioned dissensions in a chapter: this is the subject of B.'s poem, in which his art of making petty details interesting deserves as much praise as the other excellences of his poetry already enumerated. In his life, B. was amiable and generous. Louis XIV gave him the place of historiographer, in connexion with Racine. As he had attacked the academicians in several of his writings, he was not received into their society until 1684, and then only by the interference of the king. He died in 1711, of the dropsy. M. de St. Surin has published *Œuvres de Boileau*, with a commentary, Paris, 1824, 4 vols. The first volume of Daunou's (member of the institute) *Œuvres complètes de Boileau*, with a literary and historical commentary, appeared in Paris, 1825.

Boiler. (See *Steam* and *Steam Engine*.)

Bois-le-Duc (the French name for the Dutch *Hertogenbosh*, also *Im Bosh*); a fortified city in the province of North Brabant, in the kingdom of the Netherlands, with 3770 houses and 13,300 inhabitants, at the confluence of the Dommel and the Aa, which form, by their junction, the Diest. Lon. 5° 9′ E.; lat. 51° 40′ N. It has many manufactories, and much trade in corn, some saltworks, a lyceum, 10 Catholic churches, 4 Calvinistic, 1 Lutheran. Godfrey, duke of Brabant, founded this important military post in 1184. The fortifications now consist of strong walls and seven bastions, but it owes its security, chiefly, to the facility with which the whole country around can be laid under water (the new

canal to Maëstricht has 16 sluices). B. is defended by several forts and a citadel. The city has four gates, and three entrances from the water. The cathedral is one of the finest in the Netherlands. The city suffered much in the religious wars of the 16th century, and fell into the hands of the Dutch in 1629. Sept. 14, 1794, the French defeated the English here; Oct. 9 of the same year, it surrendered to Pichegru. In January, 1814, it was taken by the Prussian general Bülow.

Boisserée. A celebrated gallery of pictures is exhibited in Stuttgart, which was collected by the brothers Sulpice and Melchior Boisserée, and John Bertram, men who, animated by love of the arts, began, at the time of the destruction of the monasteries, during and after the French revolution, to purchase old pictures, and afterwards completed their collection by the addition of many valuable paintings of the old German school. By this collection, the brothers Boisserée, and Bertram, have happily realized the idea of a historical series of old German paintings. It is to their endeavors that we owe the discovery, that Germany possessed, as early as the 13th century, a school of painters of much merit, which, like the Italian, proceeded from the old Byzantine school, but became, in the sequel, distinguished by excellences of its own. We owe to these collectors, also, the restoration to favor of the forgotten Low German masters, and a just estimation of John von Eyck, as the creator of the genuine German style of painting. By this collection, the names of von Eyck, Wilhelm von Köln, Hemling, Goes, Meckenem, Wohlgemuth, Schoen, Mabuse, Schoorel, and many others, have attained deserved honor. The most distinguished connoisseurs and artists, including Göthe, Canova, Dannecker and Thorwaldsen, have strongly expressed their admiration of this collection. The proprietors are publishing a work consisting of excellent lithographic prints from their pictures. In the autumn of 1820, the publication of the splendid engravings, illustrative of the cathedral in Cologne, was resolved on. The plates surpass, in size and execution, every thing which had appeared in the department of architectural delineations, and were partly made in Paris. (See Boisserée's *Geschichte und Beschreibung des Doms von Köln*, Stuttgart, 1823.)

Boissonade, Jean François, born at Paris, 1774, one of the most distinguished Greek scholars in France, was made assistant professor of the Greek language in the university of Paris, in 1809; and, in 1812, after the death of Larcher, whom he succeeded in the institute, principal professor. The king made him a member of the legion of honor in 1814, and, in 1816, member of the academy of inscriptions. Besides valuable contributions to the *Journal des Débats*, to the *Mercure*, to the *Magazin Encyclopédique*, to the *Biographie Universelle*, and to the *Notices et Extraits* (10 vols.), we are indebted to him for an edition of the *Heroica* of Philostratus (1806), and of the Rhetoric of Tiberius (1815). Still more important are his editions of Eunapus' Lives of the Sophists, of Proclus' Commentary on the *Cratylus* of Plato, never before printed; of a Greek romance by Nicetas Eugenianus, &c. He compiled, also, a French dictionary, on the plan of Johnson's.

Bojaca, Battle of, so called, from having been fought near the bridge of the small town of Bojaca, not far from the city of Tunja, between the Spaniards, under Barreyro, and the united forces of Venezuela and New Grenada, commanded by Bolivar. It occurred August 7th, 1819, and was decisive of the independence of New Grenada. Among the republicans, generals Anzuategui, Paez and Santander distinguished themselves; and the Spaniards sustained a total defeat, their general, most of their officers and men who survived the battle, together with all their arms, ammunition and equipments, falling into the hands of Bolivar. So complete was the destruction of the Spanish army, that the viceroy instantly fled from Santa Fé, leaving even the public treasure a prey to the conquerors.

Bole; a fossil of a yellow, brown, or red color, often marked with black dendrites; found in different parts of Bohemia, Silesia and Stiria, also in Lemnos, and at Sienna in Italy. It is made into pipes for smoking, and vessels for cooling water in hot weather. The *terra sigillata* is nothing but bole.

Boleyn, or Bolen, Anne, second wife of Henry VIII of England, was the youngest child of sir Thomas Boleyn and a daughter of the duke of Norfolk. She was born, according to some accounts, in 1507, but, according to other more probable ones, in 1499 or 1500. She attended Mary, sister of Henry, on her marriage with Louis XII, to France, as lady of honor. On the return of that princess, after the king's death, she entered the service of queen Claude, wife of Francis I, and, after her death, that of the duchess

of Alençon, sister of the French king. Young, beautiful, gay and witty, she was an object of great attraction in the gallant court of Francis I. She returned to England about 1525 or 1527, and became lady of honor to the queen, whom she soon supplanted. The king, passionately enamored of her, found an unexpected opposition to his wishes, and Anne firmly declared that she could be had on no terms but those of marriage. She knew that the king already meditated a divorce from his wife, Catharine of Aragon; but she also knew what difficulties the Catholic religion opposed to the execution of this plan. Cranmer offered his services to bring about the accomplishment of the king's wishes, and thus gave the first occasion to the separation of England from the Roman church. But the impetuous Henry did not wait for the ministers of his new religion to confirm his divorce: on the contrary, he privately married Anne, Nov. 14, 1532, having previously created her marchioness of Pembroke. When her pregnancy revealed the secret, Cranmer declared the first marriage void, and the second valid, and Anne was crowned queen at Westminster, with unparalleled splendor. In 1533, she became the mother of the famous Elizabeth. She could not, however, retain the affections of the king, as inconstant as he was tyrannical; and, as she had supplanted her queen, while lady of honor to Catharine, she was now supplanted herself by Jane Seymour, her own lady of honor. Suspicions of infidelity were added to the disgust of Henry, which seem to be not entirely unfounded, although the judicial process instituted against her was wholly irregular. In 1535, she was imprisoned, accused, and brought before a jury of peers. Smeaton, a musician, who was arrested with others, confessed that he had enjoyed the queen's favors, and, May 17, 1536, she was condemned to death by 26 judges. Anne in vain affirmed that she had long before been contracted to the duke of Northumberland, and, therefore, had never been the lawful wife of Henry. Cranmer in vain declared the marriage void. The sentence of death was executed by the command of the inflexible Henry, who esteemed it a great exercise of clemency to substitute the scaffold for the stake. The last day of the life of this unhappy woman, May 19, 1536, presents many interesting moments. She sent for the wife of the lieutenant of the Tower, threw herself upon her knees before her, and said, "Go to the princess Mary (daughter of Catharine) in my name, and, in this position, beg her forgiveness for all the sufferings I have drawn upon her and her mother." "She sent her last message to the king," says Hume, "and acknowledged the obligations which she owed him in uniformly continuing his endeavors for her advancement." "From a private gentlewoman, you have made me, first, a marchioness, then a queen; and, as you can raise me no higher in this world, you are now sending me to be a saint in heaven."

Bolingbroke, Henry St. John, viscount, born in 1672, at Battersea, near London, of an ancient family, the members of which had distinguished themselves in military and civil offices, received an education adapted to his rank, and completed his studies at Oxford, where he early exhibited uncommon talents, and attracted general attention. On entering the world, he displayed a rare union of brilliant parts and elegance of manners, with beauty of person, dignity and affability, and such fascinating eloquence, that, according to the unanimous testimony of his contemporaries, nobody could resist him. Unfortunately, the passions of his youth opposed the developement of his talents; and, in his 23d year, he was distinguished principally as an accomplished libertine. His parents, supposing that marriage would have a salutary influence upon him, proposed to him a lady, the heiress of a million, who united with a charming figure a cultivated mind and noble birth. But the young couple had lived but a short time together, when irreconcilable disputes arose between them, in consequence of which they separated for ever. Another plan was adopted to give a better direction to the impetuous character of B. By the influence of his father, he obtained a seat in the house of commons. Here his eloquence, his acuteness, and the strength of his judgment, attracted universal attention. His former idleness was changed at once into the most incessant activity. In 1704, he was made secretary of war, and came into immediate connexion with the duke of Marlborough, whose talents he discerned, and whose enterprises he supported with all his influence. When, however, the whigs gained the ascendency, B. gave in his resignation. Now followed, as he said himself, the two most active years of his life, in which he devoted himself to study, but by no means neglected public affairs. He continued to maintain a constant intercourse with the queen, who preferred him to her other counsellors.

The whig ministry was overthrown, to the astonishment of all Europe; and B. received the department of foreign affairs, in which post he concluded the peace of Utrecht, of which he was always proud, and which gained him general admiration. In concluding this peace, every thing was unfavorable to him—the whigs, the peers, the bank, the East India society, Marlborough, Eugene, the emperor, Holland, the jealousy of all the European powers, the weakness of his own queen, the irresolution, imprudence, and even the envy of his colleagues. B. afterwards became a prey to the impetuosity of his passions, and exhibited a versatility of conduct that has rendered his loyalty, his patriotism and his whole character suspected. The collision of the whigs and tories produced such a general excitement, that the ministers were attacked, the peace was decried as disastrous, and the Protestant succession was declared in danger. At this moment, a fatal contention broke out between the lord high treasurer (the earl of Oxford) and B., immediately after the conclusion of the peace. Swift, the friend of both, but particularly intimate with the lord high treasurer, accused B. of having principally contributed to the ruin of their party. Be this as it may, queen Anne, provoked to the utmost by Oxford, dismissed him four days before her death, and made B. prime minister. But the death of Anne changed the whole scene. George I of Hanover ascended the throne, and the whigs triumphed more completely than ever. B., who could not impose on the Hanoverian court by his plausible pretences, and who was as much envied as he was hated, was dismissed by king George, while yet in Germany, and fled to France, upon learning that the opposite party intended to bring him to the scaffold. James III, the *Pretender*, as he was called, invited him to Lorraine, and made him his secretary of state. But, when Louis XIV died, B. lost all hope of the success of the Pretender, and repented of having entered into so close a connexion with him. Whatever the feelings and plans of B. may have been, his intentions, with regard to James III, were doubtless honest. Nevertheless, the latter deprived him of his dignity, and transferred it to the duke of Ormond. Thus it was the strange fate of B. to be charged with treachery, both by the king and the Pretender. Offers were made to him by king George, on condition of his revealing the secrets of the Pretender. This proposal he at first declined, but afterwards yielded so far as to promise a decisive blow against the cause of the Pretender, on condition of the total oblivion of what had already passed, and of an entire confidence for the future. Walpole, however, was afraid of B.'s influence in parliament, and opposed his recall. B., in order to forget his situation, applied himself to writing philosophical consolations after the manner of Seneca, but soon found sweeter ones in his marriage with a rich and amiable lady, niece of madame de Maintenon. In 1723, the parliament, which had been so hostile to B., was at length dissolved, and he was permitted to return to England. His estates, however, were not restored until two years after, by a particular act of parliament. On his return, he lived at first retired in the country, maintaining, however, a correspondence with Swift and Pope. But no sooner was the voice of opposition heard in parliament, than he hastened to London, and, as the restoration of his seat in the house of lords was still denied him, attacked the ministry during eight years, in the journals or in pamphlets, with great success. He drew upon himself powerful enemies, against whom he directed his Treatise on Parties, which is considered as his masterpiece. He then returned to France, with the intention, as even Swift supposed, of throwing himself into the arms of the Pretender's party, against which charge Pope defended him, and declared that he had himself advised his noble friend to leave an ungrateful country, by which he was suspected and persecuted. In France, B. wrote, 1735, his Letters upon History, which are admired even at the present day, but in which the individual character of the author appears to the exclusion of general views, and which were blamed, in particular, for attacking revealed religion, which he had once warmly defended. In 1729, in the midst of his contest with Walpole, he had suggested to Pope his Essay on Man, assisted him in the composition, and supplied him with the most important materials. His feelings finally carried him back to his country, where he wrote, 1738, his Idea of a Patriot King, under the eyes of the heir apparent. He died in 1751, in his 80th year, after a long and dreadful disease, during which he composed Considerations on the State of the Nation. He bequeathed his manuscripts to the Scotch poet Mallet, who published them in 1753; but scarcely had they appeared, when a general cry was raised against them, on account of their

revolting attacks on Christianity. They were presented by the grand jury of Westminster as subversive of religion, government and morality. B. was capable of inspiring the warmest friendship and the bitterest enmity. He was accused of immoderate ambition, and of a proud, passionate, envious and implacable temper. His memoirs are useful, as illustrating English history during the first quarter of the 18th century.

Bolivar, Simon, the great military captain of South America, and the most prominent individual yet produced by the revolution in the late Spanish colonies, was born in the city of Caraccas, July 24, 1783. His father was don Juan Vicente Bolivar y Ponte, and his mother, doña Maria Concepcion Palacios y Sojo, both of noble and distinguished families in Venezuela. After acquiring the first elements of a liberal education at home, B. repaired to Europe, in pursuit of more extended means of gaining knowledge, visiting Havana and Mexico on his way. He completed his studies in Madrid, and then spent some time in travelling, chiefly in the south of Europe. He was particularly attracted to the capital of France, where he was an eye-witness of some of the later events of the revolution, and there, probably, conceived the idea of liberating his country from the tyranny of Spain. Returning to Madrid, he married the daughter of don N. Toro, uncle of the marquis of Toro, in Caraccas, and embarked with her for America, intending to dedicate himself, for a while, to domestic life and the superintendence of his large estate. But the premature and sudden death of his wife, who fell a victim to the yellow fever, dispelled his visions of domestic happiness; and he again visited Europe as a relief to his sorrow for her loss. On his return home, he passed through the U. States; and the lesson of liberty was not without its fruits; for, on his arrival in Venezuela, he embarked in the plans and intrigues of the patriots, and pledged himself to the cause of independence. Being one of the chief promoters of the movement in Caraccas of April 19, 1810, which is considered as the beginning of the revolution, he received a colonel's commission from the supreme junta then established, and was associated with don Luis Lopez Mendez, for the purpose of communicating intelligence of the change of government to Great Britain. He took part in the first military operations of the Venezuelan patriots after the declaration of independence, July 5, 1811, serving under Miranda in an expedition against a body of persons in Valencia, who thus early took a stand opposed to the revolution. After the earthquake of March, 1812, the war was commenced in earnest by the advance of Monteverde with the Spanish troops; and the command of the important post of Puerto Cabello was intrusted to B. But, unfortunately, the Spanish prisoners in the castle of San Felipe, which commanded the town, corrupted one of the patriot officers, and obtained possession of the castle; so that B. was compelled to evacuate the place. This mishap contributed greatly to produce the submission of Miranda, which left Venezuela in the full control of Monteverde. Many of those persons, who were deeply committed in the revolution, now sought to leave their country; and B. succeeded in obtaining a passport and escaping to Curaçoa. Unable, however, to remain a cold spectator of the events occurring on the continent, he repaired to Carthagena, in September, 1812, and, with other emigrants from Caraccas, entered into the service of the patriots of New Grenada. They gave him the command in the small town of Baranca, nominally under the orders of Labatut, the republican governor of Santa Marta; but B. could not be content with the obscure part which must have fallen to him had he remained at Baranca. Instead of this, he undertook an expedition against Teneriffe, a town higher up on the river Magdalena, occupied by the Spaniards, captured it, and, gathering forces on the way, he proceeded, on his own responsibility, to Mompox, driving the Spaniards before him from all their posts in the Upper Magdalena, and finally entering the city of Ocaña in triumph, amid the acclamations of the inhabitants, whom he delivered. These happy and successful movements now turned the public attention upon him; and he was invited to march upon Cucutá, and attempt to expel the Spanish division commanded by Correa. This operation, also, he achieved, without any loss, by the celerity and skill of his movements, and now conceived the great and bold project of invading Venezuela with his little army, and delivering it from the powerful forces under Monteverde. The congress of New Grenada gratified him in this respect, and gave him a commission of brigadier; but many obstacles were thrown in his way by colonel Manuel Castillo, commandant-general, under the congress, in the prov-

ince of Pamplona, which led to an irreconcilable difference between them. At length, having overcome a multitude of difficulties which retarded his advance, and driven Correa from the valleys of Cucutá, he commenced his march for Venezuela, with a small force of but little more than 500 men, but accompanied by excellent officers, some of whom afterwards acquired great celebrity, such as Rivas, Jirardot, Urdaneta and d'Eluyar.—Heedless of the accusations of rashness lavished on his enterprise, B. plunged into the province of Merida. The inhabitants of the provincial capital rose upon the Spaniards on learning the news of his approach. He hastily reëstablished the republican authorities there, while his van-guard was proceeding upon Trujillo, under Jirardot. A single engagement took place in Carache, where Jirardot defeated a strong corps of royalists under Cañas, after which the provinces of Merida and Trujillo remained wholly free from the Spaniards. B. had detached from his troops a small body under colonel Briceño for the occupation of Varinas. Briceño was defeated; and, falling into the hands of the Spaniards, was shot in cold blood, with 17 of his companions, and many of the patriots of Varinas, by the Spanish commandant Fiscar. Meanwhile, B. obtained authentic intelligence of the horrid and shameless cruelties and oppressions every where perpetrated in Venezuela by Monteverde and his subordinate officers, analogous to the butcheries of Fiscar. Exasperated by the knowledge of these events, he issued the famous decree of *guerra á muerte*, condemning to death all the Spanish prisoners who might fall into his hands. But he is not of a cruel or sanguinary temper; and this decree seems to have been intended rather to intimidate the royalists than literally to be put in execution. His army increasing daily, he separated it into two divisions, committing one of them to the charge of Rivas, and both rapidly advanced upon Caraccas through the provinces of Trujillo and Varinas. Several engagements ensued, in which the patriots were successful; and, at length, the decisive victory of Lastoguanes, in which the flower of Monteverde's troops were completely defeated, left open the road to Caraccas. Monteverde shut himself up in Puerto Cabello, and B. lost no time in marching upon the capital, which was evacuated by the Spaniards without a struggle, and entered in triumph by B., Aug. 4, 1813. Meantime, Mariño had effected the liberation of the eastern provinces of Venezuela, of which the patriots had regained entire possession, excepting only the fortress of Puerto Cabello.—At this period, the whole authority in Venezuela centred in B., as the commander of the liberating army, and the oppressions of some of his subordinate officers excited loud complaints. Nevertheless, convinced of the necessity of having the resources of the country, at such an emergency, in the hands of a single individual, it was resolved, in a convention of the principal civil and military officers, assembled at Caraccas, Jan. 2, 1814, to confirm the dictatorial powers which circumstances had already thrown upon B. A desperate contest now ensued between the royalist and patriot parties and forces; and to narrate the part which B. took therein, would be to relate the history of the war. Suffice it to say, that, after various vicissitudes of fortune, B. was beaten by Boves, in a battle fought in the plains of La Puerta, near Cura, and compelled to embark for Cumana, with the shattered remnant of his forces; so that Caraccas was retaken by the Spaniards in July, 1814, and, before the end of the year, the royalists were again undisputed masters of Venezuela. Once more, therefore, B. appeared in Carthagena as a fugitive, and proceeded to Tunja, where the congress of New Grenada was sitting, to give an account of his brilliant, but, in the result, disastrous expedition. Notwithstanding his misfortunes, and the efforts of his personal enemies, he was treated with great consideration, and received the applause merited by one who had needed only resources proportionate to his talents to have accomplished the permanent deliverance of his country.—When B. arrived at Tunja, the congress was organizing an expedition against the city of Bogotá, for the purpose of compelling the province of Cundinamarca to accede to the general union of the provinces of New Grenada, and thus put an end to the collision which divided the means and crippled the exertions of the republicans. Every conciliatory measure having failed to effect a union of the provinces, the government had recourse to arms. B. was intrusted with the delicate task of commanding the forces of the union upon this occasion, and marched against Santa Fé early in December, 1814, at the head of nearly 2000 troops. He invested the city, drove in the outposts, obtained possession of the suburbs by storm, and was

preparing to assault the great square, where the dictator Alvarez and the troops of Cundinamarca were posted, when the latter capitulated, December 12, and became subject, thenceforth, to the general government of New Grenada, which was peaceably transferred to Bogotá. The congress passed a vote of thanks to B. for the wisdom and courage with which he had directed the campaign, and brought it so speedily to a happy termination; and the inhabitants of the city themselves expressed their approbation of his personal conduct.—Previous to this time, Santa Marta had fallen into the possession of the royalists, in consequence of the incapacity of Labatut; and the general government justly appreciated the importance of regaining it. B. was accordingly employed upon this service, and was to receive the necessary munitions of war from the citadel of Carthagena; but the rivalry and jealousy of the military commandant Castillo, the origin of which we have already explained, defeated all his plans. Indignant at Castillo's conduct in refusing him the requisite supplies, B., after the season for acting against Santa Marta to advantage had been wasted in ruinous delays, invested Carthagena with his troops, hoping to intimidate Castillo into submission, or, if not, to reduce him to reason by force. But, in the midst of these wretched dissensions, wherein both parties listened too much to resentment, Morillo arrived at the isle of Margarita with an overwhelming force from Spain; and B., aware that all further views upon Santa Marta were hopeless, threw up his command, and, finding that he could not be usefully employed at Carthagena, embarked for Jamaica, in May, 1815, to wait for better times. He remained in Kingston most of the year, whilst Morillo was reducing Carthagena, and overrunning New Grenada. During his residence there, a hireling Spaniard made an attempt upon his life, and would have assassinated him, if it had not happened that another person occupied B.'s bed at the time, who was stabbed to the heart. —From Kingston, B. repaired to Aux Cayes, in the island of Hayti, and, assisted by private individuals, and with a small force furnished by Petion, formed an expedition, in conjunction with commodore Brion, to join Arismendi, who had raised the standard of independence anew in the isle of Margarita. He arrived in safety at Margarita in May, 1816, and, sailing thence, landed on the main land near Cumana, but, in a few months, was encountered by the Spaniards under Morales at Ocumare, and compelled to reembark. Nothing disheartened by this failure, he obtained reënforcements at Aux Cayes, and, in December, 1816, landed once more in Margarita. There he issued a proclamation convoking the representatives of Venezuela in a general congress; and from thence passed over to Barcelona, where he organized a provisional government, and gathered forces to resist Morillo, who was approaching with a powerful division. They encountered each other on the 16th, 17th and 18th of February, in a desperate conflict, which ended in B.'s obtaining the victory. Morillo retreated in disorder, and was met and defeated anew by general Paez, with his irresistible *Llaneros*. B., being now recognised as supreme chief, proceeded in his career of victory, and, before the close of the year 1817, had fixed his head-quarters at Angostura. The sanguinary battles of this period, in the most important of which he was engaged in person, belong rather to the history of Colombia (q. v.) than to B.'s own life. He found time, however, to preside at the opening of the congress of Angostura, February 15th, 1819, and to submit a long and elaborate exposition of his views of government. He also surrendered his authority into the hands of the congress, which required him to resume it, and to retain it until the independence of his country should be fully achieved. B. soon reorganized his forces, and set out from Angostura, with the purpose of crossing the Cordilleras, and effecting a junction with general Santander, who commanded the republican forces in New Grenada, so that the united arms of the two republics might act with the greater efficiency. He succeeded, in July, 1819, in reaching Tunja, which city he entered after a battle on the neighboring heights, and, on the 7th of August, gained the great and splendid victory of Bojaca, which gave him immediate possession of Santa Fé and all New Grenada. The viceroy Samano fled precipitately before him; and he was enthusiastically welcomed in Santa Fé as a deliverer, appointed president and captain-general of the republic, and enabled by the new resources of men, money and munitions of war, which he found there, to prepare for returning into Venezuela with an army sufficient to ensure the complete expulsion of the Spaniards.—B.'s entry into Angostura, after his glorious campaign in New Grenada, was a peculiarly gratify-

ing and affecting spectacle. Its whole population hailed him as the liberator and father of his country. He embraced the favorable moment to obtain the fundamental law of December 17th, 1819, by which the republics of Venezuela and New Grenada were to be thenceforth united in a single state, under the presidency of B., and by the title of the *republic of Colombia*. Meanwhile, the seat of government was transferred provisionally to Rosario de Cucutá; and B. again took the field, at the head of the most formidable army that had been assembled by the independents. After a series of memorable advantages over the Spaniards, an armistice of six months was negotiated at Trujillo, between B. and Morillo, and subscribed November 25th, 1820. Morillo soon afterwards returned to Spain, leaving La Torre in command. At the termination of the armistice, B. made a great effort to finish the war by a decisive blow, and attained his object by vanquishing La Torre, in the famous battle of Carabobo, leaving to the Spaniards only the broken fragments of an army, which took refuge in Puerto Cabello, and there, after a protracted and obstinate struggle of more than two years, surrendered to general Paez.—The battle of Carabobo may be regarded as having put an end to the war in Venezuela. B. entered Caraccas, June 29th, 1820, having now, for the third time, rescued his native city from its oppressors, and was received with transports of joy. By the close of the year, the Spaniards were driven from every part of the country, except Puerto Cabello and Quito; and the time was deemed auspicious for establishing permanent political institutions in Colombia. The present constitution was completed and adopted August 30th, 1821, and B. was elected the first constitutional president, with general Santander for vice-president. Having thus achieved the independence of his own country, B. placed himself at the head of the liberating army destined to expel the Spaniards from Quito and Peru. The fate of Quito was decided by the battle of Pichincha, fought in June, 1822, and gained by the talents and prowess of Sucre. Aware that the southern provinces of Colombia could never be secure while Peru remained subject to Spain, and anxious to extend the blessings of independence to all America, B. resolved to march upon Lima, and assist the Peruvians. The royalists, not being prepared to meet him, evacuated Lima at his approach; and B., entering the capital amid the acclamations of the people, was invested with supreme power as dictator, and authorized to call into action all the resources of the country for its liberation. But, opposed and denounced by some of the factions which distracted Peru, he found himself under the necessity of returning to Trujillo, in Northern Peru, leaving Lima to be retaken by the Spaniards under Canterac.—At length, in June, 1824, the liberating army was completely organized, and soon after, taking the field, routed the vanguard of the enemy. B. was anxious for the opportunity of a decisive engagement, and, in fact, soon obtained a brilliant victory, August 6, on the plains of Junin. Leaving Sucre to follow the royalists in their retreat into Upper Peru, he repaired to Lima, to organize the government; and, during his absence from the army, Sucre gained the splendid victory of Ayacucho. Nothing was now held by the Spaniards in Peru but the castles of Callao; which Rodil maintained for upwards of a year, B. employing all the resources of the government for their reduction, until January, 1826. In June, 1825, B. visited Upper Peru, which detached itself from the government of Buenos Ayres, and was formed into a new republic, named *Bolivia*, in honor of the liberator. The members of the congress of the new republic, assembled in August, 1825, seemed to vie with one another in extravagant resolutions, testifying their gratitude to B. and Sucre. The former was declared perpetual protector of the republic, and requested to prepare for it a constitution of government. Returning to Lima, he occupied himself in performing this task.—We touch now upon a period when B. appears in a new aspect. Hitherto, we have traced his military career, at first uncertain, and abounding in great reverses, but at length splendidly successful. His remarkable fertility in resources, his courage, conduct, and preëminent genius for the art of war, are all undeniable, and are proved not less by his brilliant success, than by the testimony of all the most competent judges. But he now comes before us in the capacity of a lawgiver; and imputations on the purity of his political views arise contemporaneously with his assuming the delicate task of consolidating the governments which his military prowess had created.—In December, 1824, B. issued a decree, convoking a constituent congress to assemble in Lima the ensuing February. This body

assembled accordingly; but, in consideration of the unsettled state of the country, resolved to continue the dictatorial powers of B. another year, without attempting to settle the government permanently. They also urged on B. a grant of a million of dollars, which he, with the liberality of feeling, and contempt of mercenary motives, which have invariably distinguished him, rejected. Congress soon adjourned, and B. remained sole and absolute governor of Peru. Residing partly at Lima, and partly at Magdalena, he directed the acts of the government, and, at this period, proposed the celebrated congress of Panama, for the purpose of establishing a stable alliance between all the independent states of America. Having completed his project of a constitution for Bolivia, he presented it to the congress of that state, with an address, dated May 25th, 1826, wherein he solemnly recorded his opinions of the form of government required by the new republics of the south. Of this famous code, an account will be found in the article *Bolivia*. It is enough to state here, that, among other features which alarmed the friends of liberty, the most exceptionable was a provision for lodging the executive authority in the hands of a president for life, without responsibility, and with power to nominate his successor. When the nature of this constitution became generally known in South America, it excited the liveliest apprehensions, especially among the republicans of Buenos Ayres and Chile, who feared, or pretended to fear, an invasion from B.; and not less in Peru, where he began to be accused of a design to unite permanently Colombia, Peru and Bolivia, and to make himself perpetual dictator of the same.—These imputations received countenance, at least, from the proceedings of B. himself. The surrender of Callao, by completely freeing Peru from the Spaniards, finished the business for which B., and the Colombian troops, had been called into the country. But he manifested no intention of departing, or of resigning his authority. On the contrary, when the deputies for the constituent congress of 1826 assembled, they saw fit, or were induced, for alleged irregularities in their appointment, and for other causes, to decline acting in their legislative capacity. A majority of the deputies published an address, in which they urged B. to continue at the helm another year, and, meantime, to consult the provinces individually as to the form of government which they might desire, and the person who should be placed at its head. Accordingly, circular letters, written in the name of B. and his council of government, and issued from the bureau of his minister Pando, were addressed to the several prefects of departments, commanding them to assemble the electoral colleges, and submit, for their sanction, a form of constitution precisely the same with the Bolivian code, only adapted to Peru. This constitution was adopted by the colleges, who also nominated B. president for life under it, with a unanimity too extraordinary not to have been the result either of intimidation or of management. Before this time, however, events had transpired in Colombia, which demanded the presence of B. in his own country. During his absence, the vice-president, Santander, had administered the government with ability and uprightness. Colombia had been recognised by other countries as an independent state; its territory was divided into departments, and its government regularly organized. But, in April, 1826, general Paez, who commanded in Venezuela, being accused before the Colombian senate of arbitrary conduct in the enrolment of the citizens of Caraccas in the militia, refused obedience to the summons of the senate, and placed himself in open rebellion to the national government and constitution. Taking advantage of this unhappy incident, the disaffected party in the ancient Venezuela, all those opposed to a central form of government, and all those opposed to the existing administrators of the government, united with Paez; and thus the northern departments became virtually separated, for the time being, from the rest of the republic. But all professed a readiness to submit their grievances to the decision of B., and anxiously required his return to Colombia. While these movements were taking place in Venezuela, professedly with a view to obtain a federal, instead of a central form of government, various municipalities in the southern departments, formed from what had been the presidency of Quito, held public meetings, in which they voted to adopt the Bolivian code, and lodged the authority of dictator in the hands of B. Evidence has been adduced, showing that the latter proceedings were in accordance with the wishes of B., and that the meetings were actually summoned by the personal intervention of Leocadio Guzman, an emissary of his, who suggested the resolutions they

should pass; and suspicions have not been wanting, that Paez was either incited, or sustained, by intimations received from the same quarter. On these things it would be premature now to decide. Certain it is, that, to all appearance, the central departments alone, answering to New Grenada, continued faithful to the constitution. These circumstances most imperiously demanded the presence of B., whether as the cause and object of the public distractions, or as the means of composing them. Accordingly, he set out from Lima in September, 1826, committing the government to a council of his own appointment, and responsible to him alone, with general Santa Cruz at its head, and leaving the whole of the Colombian auxiliary army in Peru and Bolivia. B. made all haste to reach Bogotá, which he entered Nov. 14, 1826, and, assuming the extraordinary powers which, by the constitution, the president is authorized to exercise in case of rebellion, he remained only a few days in the capital, and pressed on to stop the effusion of blood in Venezuela. He went, accompanied merely by a small escort, although forces were in readiness to sustain him if requisite, and all the demonstrations of insurrection vanished at his approach. He reached Puerto Cabello December 31st, and immediately issued a decree, dated Jan. 1, 1827, giving assurance of a general amnesty to the insurgents, on their peaceably submitting to his authority, and engaging to call a convention for the reform of the constitution. He had a friendly meeting with Paez, and, soon afterwards, entered Caraccas, where he fixed his head quarters, having the northern departments under his immediate personal authority, and separated from the body of the republic, which proceeded in its ordinary routine. B. and Santander had respectively been reëlected to the offices of president and vice-president, and should have been qualified anew as such in January, 1827. But, in February, B. addressed a letter from Caraccas to the president of the senate, renouncing the presidency of the republic, and expressing a determination to repel the imputations of ambition cast upon him, by retiring to seclusion upon his patrimonial estate. Santander, in reply, urged him to resume his station as constitutional president, convinced that the troubles and agitations of the country, if they were not occasioned by the intrigues of B. himself, might at any moment be quieted by his lending the authority of his name, and his personal influence, to the cause of the constitution. But distrust, suspicion and jealousy of the conduct and intentions of B. now filled all the friends of republican institutions. He had recorded his confession of political faith, to use his own expression, in the anti-republican Bolivian code, and he was believed to be anxious for its introduction into Colombia. When his renunciation of the presidency was submitted to the consideration of the congress, a portion of the members urged that body to accept the renunciation. They publicly accused him of being in concert with Paez; of having designedly thrown the whole nation into discord and confusion, in order to create a false impression of the necessity of bestowing upon himself the dictatorship. But a majority of the members insisted upon his retaining the presidency, and required his presence at Bogotá to take the constitutional oaths. Before he came, however, they had passed a decree of general amnesty; a decree for assembling a national convention at Ocaña, and a decree for re-establishing constitutional order throughout Colombia. His arrival was hastened by unexpected events, touching him personally, which had occurred in Peru and the southern departments. Not long after his departure from Lima, the returns of the electoral colleges were received by the council of government, by which the Bolivian code was pronounced to be the constitution of Peru, and B. the president for life. The constitution was accordingly promulgated officially, and was sworn to, by the public functionaries in Lima, Dec. 9, 1826, the anniversary of the victory of Ayacucho. At this time, the Colombian auxiliary army in Peru was cantoned in three divisions; one stationed in Upper Peru, and two in Lower Peru; one of these at Arequipa, and one in Lima. This third division consisted of veteran companions of B.'s triumphs, and was commanded by his personal friends, generals Lara and Sands. Notwithstanding the attachment of these troops to B., they had lately been growing distrustful of his designs; and, although they did not feel disposed, it would seem, to thwart his views upon Peru, they took fire immediately when they saw cause to believe that he had similar views upon their own native Colombia. The consequence was, that, in the short space of six weeks after the new constitution was solemnly adopted, they came forward, and revolutionized the government of Peru. So well were their measures taken, that, Jan. 26, 1827,

they arrested their general officers without any conflict or opposition; placed themselves under the command of Bustamante, one of their colonels; and announced to the inhabitants of Lima, that their sole object was to relieve the Peruvians from oppression, and to return home to protect their own country against the alleged ambitious schemes of B. The Peruvians immediately abjured the Bolivian code, deposed B.'s council of ministers, and proceeded, in perfect freedom, to organize a provisional government for themselves. Arrangements were speedily made, after this bloodless revolution was effected, to transport the third division to Guayaquil, according to their own desire. They embarked at Callao, March 17, and landed in the southern department of Colombia, in April, part of them proceeding for Guayaquil, and part for Cuença and Quito, uniformly declaring their object to be the restoration of constitutional order, in opposition to any designs upon the republic entertained by B. Intelligence of these events reached B. while he was still in the north of Colombia. Rousing himself instantly from his long-continued inactivity, he made preparations for marching to the other extremity of the republic, and reducing the third division. But these troops, finding the government was in the hands of the regular national executive, had peaceably submitted to general Ovando, who was sent, by the constitutional authorities, for the purpose of taking the command. B. meanwhile signified his consent to be qualified as president, and proceeded, with this intent, to Bogotá, where he arrived Sept. 10, took the oaths prescribed by the constitution, and resumed the functions belonging to his official station. To external appearance, therefore, Colombia was restored to tranquillity, under the rule of her constitutional magistrates. But the nation was divided between two great parties, and agitated to its centre by their opposite views of the political condition of the country. B. had regained the personal confidence of the soldiers and officers of the third division, who expressed the deepest repentance for their distrust of his character, and their entire devotion to his interests. But the republican party, and the friends of the constitution, with Santander at their head, continued to regard his ascendency over the army, and his political movements, with undisguised and not unfounded apprehension, universally accusing or suspecting him of a desire to emulate the career of Napoleon. They looked to the convention of Ocaña, which was to assemble in March, 1828, for a decided expression of the will of the nation in favor of the existing republican forms. The military, on the other hand, did not conceal their conviction that a stronger and more permanent form of government was necessary for the public welfare; that the people were unprepared for purely republican institutions, and that B. ought to be intrusted with discretionary power to administer the affairs of Colombia.—In 1828, B. assumed the supreme power in Colombia, by a decree, dated Bogotá, Aug. 27, which gives him authority to maintain peace at home, and to defend the country against foreign invasions; to have the command of the land and sea forces; to negotiate with foreign powers; to make peace and declare war; to make treaties; to appoint the civil and military officers; to pass decrees, and ordinances of every description; to regulate the administration of justice, &c. The decree provides, however, that he is to be assisted in the exercise of executive power by the council of ministers. If B. is to be the Cæsar of South America, even his enemies admit that, like Cæsar, his purposes are ultimately good. He desires the pure administration of justice, encourages the arts and sciences, fosters all the great national interests, and, if he attains absolute power, will probably use it wisely and nobly. But it is premature to denominate him the *Washington of the South*, before it well appears whether the liberties of his country are safe from his ambition.—In his person, B. is described as being of ordinary stature; ungraceful in his air and movements; thin and spare, but capable of great endurance; of an olive complexion, with black, coarse hair, thin in front; broad, bushy eye-brows overshadowing an eye somewhat sunken, but full of fire and expression. His intellect is undoubtedly of the highest order, and his general character of that ardent, lofty cast, which civil commotions are apt to form, and which qualifies its possessor to ride on the tempest. His ordinary state-papers do not bespeak a very pure taste, nor an understanding ever subjected to any well-directed cultivation, and are frequently conceived in language which even the lofty idiom of his vernacular tongue will hardly sanction. Being now only 46 years of age, he may have a long career of varied fortune yet before him, wherein he may do much, either to fill the friends of republican institutions with sorrow, or to build for himself a durable

monument of glory. (Restrepo's *Colombia*, vols. 3—6; *Columbia*, vol. 2; *Amer. An. Register*, vols. 1 and 2.)—There has lately appeared a work, entitled *Memoirs of Simon Bolivar, and of his principal Generals, with an Introduction*, &c., by general H. L. V. Ducoudray Holstein; Boston, 1829. The book is a violent philippic against B., and evidently colored too highly to be a safe authority. It does not become the biographer to adopt the views of a political partisan, nor to pronounce a decisive judgment until the career of his subject is closed.

Bolivia; the name of a country in South America. It is bounded N. W. by Peru, N. E. and E. by Brazil, S. by Buenos Ayres or the United Provinces of South America, and W. by the Pacific ocean and Peru. It is elevated and mountainous, giving rise to several large tributaries, both of the Amazon and La Plata. It includes lake Titicaca. It contains rich silver mines, of which those of Potosi, that were formerly very productive, are the most celebrated. The town of Chuquisaca, or La Plata, is the capital. Some of the other principal towns are Potosi, Charcas, Oropesa, Oruro, La Paz and Cochabamba. The population has been recently estimated at 1,000,000 or 1,200,000. —This republic dates its origin from the battle of Ayacucho, fought Dec. 9, 1824, in which general Antonio Jose de Sucre, at the head of the Colombian forces, defeated the viceroy La Serna, and insured the independence of the country. It consists of the provinces known under the Spanish government as *Upper Peru*, and then governed as a dependency of the viceroyalty of Buenos Ayres. Olaneta maintained a show of opposition for a short time after the battle of Ayacucho; but Sucre quickly drove him into the province of Salta, where his forces were dispersed by the Buenos Ayrean authorities, in April, 1825. No obstacle now remained to prevent the organization of an independent government. A congress assembled at Chuquisaca, in August, 1825, and resolved to establish a separate republic, independent both of Lower Peru and of Buenos Ayres, to be named *Bolivia*, in honor of the liberator Bolivar. Among other testimonials of their gratitude towards him, they requested him to prepare the draft of a constitution for the republic, lodging the authority of president, meanwhile, in the hands of Sucre. Bolivar accordingly prepared the project of a constitution, which he presented to them May 25, 1826, accompanied by an address, containing his general views upon the subject of government. By this code, the powers of government are distributed into four sections—the electoral, legislative, executive and judicial. The electoral body is composed of persons chosen, for a period of four years, by the citizens at large, at the rate of one elector for every hundred citizens. The legislative power resides in three chambers, the first of tribunes, the next of senators, and the highest of censors. The tribunes are to be chosen for a period of four years, half of the chamber being renewed every second year; and the senators for eight years, half of their body being renewed every fourth year. Between these two bodies, the ordinary duties of legislation are apportioned in a manner peculiarly artificial and inconvenient, together with various other functions of a judicial and executive character. The censors are for life, and their business is to watch over the government, to accuse the executive before the senate, to regulate the press, education, and the arts and sciences, to grant rewards for public services, and to denounce the enemies of the state. The executive power resides in a president for life, a vice-president and four secretaries. The president commands all the military and naval forces, and exercises the whole patronage of the government, nominating all the civil and military servants of the state, officers of the army, navy and treasury, foreign ministers, and the vice-president, who is to be his successor: he is, moreover, without any responsibility for the acts of his administration. The judicial power is regulated so as to secure the due administration of justice; and the private rights of individuals are carefully protected by suitable guarantees. This form of constitution, it is evident, would give the executive such preponderating power, that all the measures of government would, in fact, be subject to his will, and he would be, to all intents and purposes, the elective prince of a monarchy, limited in theory, but absolute in operation. This code was presented to the constituent congress of Bolivia, which assembled at Chuquisaca, in May, 1826, and by that body adopted as the constitution of the republic. The 9th of December, the anniversary of the battle of Ayacucho, being fixed upon as the period when it should be carried into effect, Sucre resigned his discretionary authority into the hands of congress, and solicited them to appoint a native of the country to be his successor. But they resolved

that he should retain the executive power until the election of a constitutional president should take place. Sucre consented to continue in office until that time; requiring, however, that the electoral colleges should present a candidate for the high office of president, previous to the assembling of the constitutional legislature. This resulted in the election of Sucre as president for life under the constitution. Whether the choice was entirely a free one or not is yet uncertain. A large body of Colombian troops remained in Upper Peru, under circumstances analogous to the situation of other troops of the same nation in Lower Peru, and, of course, affording like reason to presume that military influence may have affected the election.—The geographical position of B. being mostly inland, its political condition is less accurately known than that of the neighboring countries, and less an object of general interest. In the natural progress of things, it would seem likely to be reunited to Lower Peru, from which it was arbitrarily severed by the Spanish government. But hitherto the congress of the Rio de la Plata has refused to recognise its independence, insisting that the limits of their republic shall be coextensive with the ancient boundaries of the viceroyalty of Buenos Ayres, and, of course, claiming the provinces of Upper Peru by the same title under which they lay claim to Paraguay and the Banda Oriental. But it is not probable, in any event that can be reasonably anticipated, that Bolivia will again be joined to Buenos Ayres. (*Const. of Bolivia; Amer. An. Reg.* vols. 1 and 2.)

Bollandists; a society of Jesuits in Antwerp, which has published, under the title *Acta Sanctorum* (q. v.), the well-known collection of the traditions of the saints of the Roman Catholic church. They received this name from John Bolland, who first undertook to digest the materials already accumulated by Heribert Roswey.

Bollman, Erich, a man distinguished for knowledge, character and enterprise, born in 1770, at Hoya, in Hanover, went, in 1792, to Paris, to practise as a physician. Here he saved count Narbonne from the Jacobins. In 1794, he resolved to free Lafayette from his prison in Olmütz. By his efforts, and those of Mr. Huger, a gentleman belonging to the U. States, Lafayette was enabled to quit his dungeon, Nov. 8, but was unfortunately retaken soon after. B. was cast into prison, but after a while set at liberty, and banished from the Austrian dominions. He afterwards settled in the U. States, and subsequently went to England.

Bologna (*Bononia Felsinia*); one of the oldest, largest and richest cities of Italy, with colonnades along the sides of the streets for foot-passengers. It is called *la grassa* (the fat); lies at the foot of the Apennines, between the rivers Reno and Savena, and contains 65,300 inhabitants and 8000 houses, with manufactories of cordage, soap, paper, artificial flowers and arms. B. is the capital of the papal delegation of the same name; the secular concerns of which are administered by a cardinal legate, who resides here; whilst the archbishop directs in spiritual affairs. A *gonfaloniere*, chosen every 2 months, with 50 senators and 8 elders from the citizens, form a republican government, which has almost the whole management of the affairs of the city. The people of B. voluntarily submitted to the papal see in 1513, being tired of the party struggles among the nobles, by which the strength of the state was exhausted. B. has an ambassador in Rome, whose duty it is to maintain the limitations of the papal authority, according to the constitution, and who, after every new election of a pope, presents complaints of the encroachments of his predecessor. The city chooses, also, one of the judges composing the high court of appeals at Rome. Her armorial bearings are even now surrounded by the charmed word *Libertas*. The pope, by the constitution, can exact no other tax than the excise on wine. During three centuries, the papal government endeavored to introduce in B. the excise on corn (*annona*), but could not succeed. The rich nobility of the papal states live in B., and are on bad terms with the head of the church.—This city is also the residence of the old Bolognese patrician families, who have given many popes to the church. The most liberal men in the papal dominions are to be found among the learned of this city. In 1816, the nobility, scholars and citizens founded a Socratic society for the promotion of social happiness, which was, however, suspected of Carbonarism. B. was long renowned for its university, founded, according to tradition, by Theodosius the younger, in 425, which, in the centuries of barbarism, spread the light of knowledge over all Europe. It once had 10,000 students, but the number at present is only 300. Here the famous Irnerius taught the civil law in the 11th century; and men like Bulgerus, Marti-

nus, Jacobus and Hugo attracted pupils from every quarter. The university formerly possessed so much influence, that even the coins of the city bore its motto, *Bononia docet.* The law school enjoyed the greatest fame. Its teachers had the reputation of inculcating principles favorable to despotism, and were consequently rewarded by the favor of the emperors and of the Italian sovereigns. During 1400 years, every new discovery in science and the arts found patrons here, and the scientific journals prove that curiosity on these subjects is still awake in B. A citizen of B., general count Fern. Marsigli, founded, in 1709, the *instituto delle scienze*, and gave it a library of almost 200,000 volumes; to which, in 1825, the abbate Mezzofanti, professor of Oriental languages, was appointed librarian. This learned man speaks a large number of living languages correctly and fluently (for instance, German, in several dialects, Russian, Hungarian, Walachian, the language of the Gipsies, &c.), without ever having left B. The foreign troops in Italy gave him opportunities for learning them. Count Marsigli founded and endowed, also, an observatory, an anatomical hall, a botanical garden, and accumulated valuable collections for all branches of science and art. These are at present connected with the *accademia Clementina* of pope Clement XI. In the 16th century, the famous painters and sculptors Caracci, Guido Reni, Domenichino and Albano founded a school, to which their works have given great reputation. (See *Painting.*) There were, even as early as the 12th and 13th centuries, great painters in B. Francesco, called *il Francia*, was famous in the 15th century. The chief place of the city is adorned by several venerable buildings: among them are the senate hall (which contains a number of excellent pictures and statues, and the 200 folio volumes of the famous natural philosopher Ulysses Aldrovandus, written with his own hand, as materials for future works), the palace of justice of the *podestà*, and the cathedral of St. Petronio, with its unfinished front and the meridian of Cassini drawn upon a copper plate in the floor. Among the 73 other churches, the following are distinguished: S. Pietro, S. Salvatore, S. Domenicho, S. Giovanni in Monte, S. Giacomo maggiore, all possessed of rich treasures of art. The collections of works of art are numerous: they are part of rich family fortunes, transmitted in trust, and are continually increased by each generation. The galleries Sampieri and Zambeccari formerly excelled all others, but are now surpassed by those of Marescalchi and Ercolani. The collection of the academy of painting, endowed, in modern times, by the municipality, principally with the treasures of abolished churches and monasteries, is rich, and full of historical interest. The admired fountain of the market is deficient in nothing but water. It is adorned with a Neptune in bronze, by John of Bologna. The towers degli Asinelli and Garisenda were formerly objects of admiration; the former for its slenderness, which gave it the appearance of an Oriental minaret; the latter for its inclination from the perpendicular, which amounted to 14 feet. It has since, however, been reduced to one third of its former height, from precaution. B. has always been famous for cheap living, and has been chosen as a residence by many literary men. Gourmands praise it as the native country of excellent maccaroni, sausages, liquors and preserved fruits. The schools for training animals enjoy, likewise, some reputation. The pilgrimage to the Madonna di S. Lucca, whose church is situated at the foot of the Apennines, half a league distant from B., and to which an arcade of 640 arches leads, annually attracts a great number of people from all parts of Italy.

Bomb; a large, hollow, iron ball or shell, formerly often made of cannon-metal, and sometimes of an oval form, with a hole in which a wooden fuse is cemented, and with two little handles. Bombs are thrown from mortars. They are filled with powder and combustible matter (which consists of equal parts of sulphur and nitre, mixed with some mealed powder), and are used for setting fire to houses, blowing up magazines, &c. The charge in bombs of 74 pounds contains from 5 to 8 pounds of powder, and 1 pound of the other composition abovementioned. In bombs of 10 pounds, it amounts to 1 pound of powder and from 2 to 3 ounces of the mixture. The fuse, which is hollow, and filled with powder and other inflammable ingredients, sets fire to the charge. The length and the composition of the fuse must be calculated in such a way that the bomb shall burst the moment it arrives at the destined place. Bomb-shells are generally cast somewhat thicker at the bottom than above, that they may not fall upon the fuse and extinguish the fire; yet they are, at present, often cast of an equal thickness in every part, because it has been found

that the fuse remains at the top, notwithstanding.—As early as the 7th century, balls, filled with burning matter, were thrown from vessels of clay, then from machines called *blydes* or *manges*, or with hand-slings made of a small net of iron wire. In 1238, James I, king of Arragon, used, at the siege of Valencia, a kind of large rockets, made of four parchment skins, which burst in falling. Afterwards, large iron balls, heated red hot, came into use. In the middle of the 15th century, prince Rimini Sigismund Pandulf Malatesta invented mortars and bombs. They consisted, at first, of two hollow hemispheres of metal, filled with powder, and held together by chains. By degrees, they received their present shape. An English engineer, Malthus, whom Louis XIII took into his service, introduced them into France, and used them first (1634) at the siege of Lamotte, in Lorraine.—The *grenades*, which are thrown from howitzers, are easily distinguished from the *bombs*, which are cast from mortars. The first are used only in the field, the latter in sieges. The Prussian general von Tempelhoff has in vain attempted to bring 10 pound mortars into the field.—In order to make a wall bomb-proof, it should be three feet and a half thick.

Bombast, in composition; an attempt, by strained description, to raise a low or familiar subject beyond its rank, which, instead of being sublime, becomes ridiculous. Its original signification was, a stuff of soft, loose texture, used to swell out garments.

Bombay; a presidency, island and city in British India; lat. 18° 56′ N.; lon. 72° 7′ E. The island was formerly subdivided into several smaller ones, but many thousand acres, once entirely under water, have been recovered, and the two ranges of hills which cross the island have thus been united by a line of fertile valleys. It is of little importance as regards its internal resources, but in a commercial point of view is of great value. Its proximity to the main land gives it a facility of communication with all the different points of that long line of coast, as well as with the shores of Persia and Arabia. The island is easily defended, and the rise of the tide is sufficient to allow the construction of docks on a large scale. The surface is either naked rock or low ground exposed to inundation: the quantity of grain, which it is capable of producing, is, therefore, very small. The causeway which connects it with Salsette, an island lying between B. and the coast of Malabar, affords, however, an easy way of introducing provisions. When first known to Europeans, it was considered a very unhealthy place; but it has been improved by draining and embankments. The population, in 1816, was 161,550, of whom 104,000 were Hindoos, 28,000 Mohammedans, 11,000 native Christians, and 4300 English. There were also about 13,000 Parsees, who here found an asylum from the persecutions of the Mohammedans, and are almost the exclusive proprietors of the island. On a narrow neck of land, near the south-eastern extremity of the island, stands the city, which is about a mile in length and a quarter of a mile in breadth. It is surrounded by fortifications, which have been gradually improved, in proportion to the growing importance of the place. It is the seat of government for the south-western part of the British possessions in India. In front of the fort is an esplanade: at the commencement of the hot season, those Europeans, who are obliged to have their principal residences within the fort, erect *bungalows* on this spot, which are, many of them, elegant buildings, but unfit to resist the violence of the monsoons. As soon as the rains begin, they are taken down, and preserved for another year. There are three government residencies in the island. The one within the fort is used principally for holding councils, and for despatching business. It is a spacious, dismal-looking building, like many of the other large houses in B. The European society here is neither so numerous nor so expensive as that in the other presidencies; but, if not rivals in splendor, they are quite equal in comfort and hospitality to their countrymen in Calcutta or Madras.—As this place is the emporium of all the north-western coast of the peninsula, and of the Persian and Arabian gulfs, its trade is very considerable. To China it sends a large quantity of cotton. Pepper, sandal-wood, gums, drugs, pearls, ivory, gems, sharks' fins, edible birds' nests, form the remainder of the cargoes for Canton. Hemp, coffee, barilla, manufactured goods from Surat, and other articles, are sent to Europe. The trade to America is inconsiderable.—The company's marine establishment consists of 18 cruisers, besides boats: the military and marine corps amount to less than 3000 men. Besides the governor and council, stationed at the city, there are magistrates and commercial residents in the chief towns of the

different provinces subject to their government. There is one supreme court of judicature, held under a single judge, called the *recorder*.—Since 1814, B. has been a station of the American board of commissioners for foreign missions, and, in 1828, they had 4 missionaries and a printing press employed here and in the vicinity; with 16 schools for boys, containing 1049 pupils, and 10 for girls, containing 577.—B. was obtained by the Portuguese, in 1530, from an Indian chief at Salsette; by them it was ceded to Great Britain, in 1661, and, in 1668, it was transferred, by the king, to the East India company. From the commencement of the last century, it has gradually increased in importance, and has now attained a high degree of prosperity. It is difficult to fix, with precision, the extent of the territories included within the presidency of B., as some districts belonging to the native powers are intermingled with them. They may be calculated at about 10,000 square miles, with a population of 2,500,000.

Bombelles, Louis, marquis de; born 1780, at Ratisbon, where his father was French ambassador at the diet. His mother had been governess in the royal family (*des enfans de France*), and an intimate friend of the virtuous Elizabeth, sister of Louis XVI. The son inherited a feeling of devotion for the family of Bourbon. Under the protection of prince Metternich, he was sent, in a diplomatic capacity, to Berlin, and when, in 1813, the king left this city to declare himself against Napoleon, he carried the archives of the Austrian embassy, in the absence of the ambassador, to Silesia. In 1814, at the entry of the allies into Paris, he was appointed, by the emperor of Austria, to carry to the count of Artois the white cockade, and was repeatedly sent to Denmark. In 1816, he went to Dresden, as Austrian ambassador, and married Ida Brun, the daughter of the poetess of this name. Since 1821, he has been Austrian ambassador in Florence, Modena and Lucca.

Bomb-Ketch; a vessel built for the use of mortars at sea, and furnished with all the apparatus necessary for a vigorous bombardment. Bomb-ketches are built remarkably strong, to sustain the violent shock produced by the discharge of the mortars. The modern bomb-vessels generally carry two 10 inch mortars, four 68 pounders, and six 18 pound carronades; and the mortars may be fired at as low an angle as 20 degrees; their principal purpose, at these low angles, being to cover the landing of troops, and protect the coast and harbors. A bomb-ketch is generally from 60 to 70 feet long, from stem to stern, and draws 8 or 9 feet of water, carrying 2 masts, and is usually of 100 to 150 tons burden. The tender is generally a brig, on board of which the party of artillery remain till their services are required on board the bomb-vessels.

Bona (the *Aphrodisium* of Ptolemy); a seaport of Algiers, 66 miles N. N. E. Constantina; lon. 7° 36′ E.; lat. 36° 32′ N. Pop. 8000. This town is built above a mile south of the ancient Hippo, or Hippona. The harbor, which is situated to the east of the town, is capacious, and a considerable trade is carried on here in corn, wool, hides and wax. The situation is good, being near the mouth of the Seibouse, and, with proper care, it might be made one of the most flourishing towns in Barbary.

Bona Dea; a name given to Ops, Vesta, Cybele, Rhea, by the Greeks, and by the Latins to Fauna or Fatua. She was so chaste that no man saw her, after her marriage, but her husband; for which reason, her festivals were celebrated by night, in private houses, and all statues of men were veiled during the ceremony.

Bonald, Louis Gabriel Ambroise, viscount de, member of the French chamber of deputies, is one of the first speakers of the ultramontanist party. He emigrated in 1791, and wrote, in Heidelberg, after the dissolution of the corps of the emigrants, in which he had served, his well-known *Théorie du Pouvoir, politique et religieux* (3 vols. 1796). The character of this, and of his later political writings, is that of metaphysical abstraction, which is by no means popular among the French. After he returned to France, he succeeded in insinuating himself into the favor of Napoleon and of his brothers. The emperor made him a counsellor at the university, with a salary of 10,000 francs. Louis proposed to him to undertake the education of his son, then crown-prince of Holland, but B. declined the offer. He was closely connected with Chateaubriand, and assisted in the editing of the *Mercure de France*. After the restoration of the Bourbons, he was chosen, in 1815, member of the chamber of deputies. He voted, in this *chambre introuvable* (q. v.), with the majority. In 1816, he was admitted into the French academy. His most important work is the *Legislation primitive* (3 vols. 1802).

Bonaparte is the name of an ancient Italian family, which, Louis Bonaparte

says, in his *Documens historiques sur le Gouvernement de la Hollande*, was settled in Treviso as early as 1272, when a Nardilius Bonaparte gained renown as *podestà* of Parma and knight of St. Maria or Gaudentius. An author of this name, James Bonaparte, a Tuscan nobleman, who lived about 1527, remarks that his family held important offices in the republic of San Miniato, in the Tuscan territory, and had been distinguished in the wars of Florence. A branch of it existed at Sarzana, in the Genoese dominions, and, during the contests of the Guelphs and Ghibellines, settled at Ajaccio, in Corsica. From this branch sprung the father of Napoleon, Charles Bonaparte, who at first fought with Paoli for the independence of Corsica, and in company with him left the island, but eventually returned, at the invitation of Louis XV. In 1776, Corsica chose him one of the deputies of the nobility who were to be sent to the king of France. Before the French revolution, he wrote his name *di Bonaparte*. On account of his health, he subsequently retired to Montpellier, where he died in 1785, 40 years old.—His wife, the beautiful Maria Letitia, born at Ajaccio, Aug. 24, 1750, was descended from the house of Ramolini, which was of Italian origin. She bore him the following children, whose names are cited in the order of birth:—Giuseppe, Napolione, Luciano, Luigi, Mariana, Carletta, Annunziada and Girolamo. Left a young widow, destitute of property, she sought and obtained friends among the powerful. Her acquaintance with the count of Marbœuf was the foundation of the fortune of her family. The Corsicans maintained that they were all nobles, and refused, therefore, to pay taxes. Louis XV, in consequence, commanded the governor to select 400 families, who were alone to be considered as noble. In this list Marbœuf inserted the Bonapartes. When the English conquered Corsica, in 1793, madame Letitia, whose second husband was captain Francis Fesch, of Bâle (see *Fesch, Joseph, cardinal*), fled, with her daughters, to Marseilles. Soon after the 18th Brumaire (9th November), 1799, she went to Paris; but not till after Napoleon's elevation to the imperial dignity, was homage paid to *madame Mère*, who, in pronunciation and language, was half Italian, half French. She maintained a separate household, and was appointed, by Napoleon, *protectrice générale des établissemens de charité*. Her benevolence, at this period, was much praised. Some persons, however, deemed her avaricious. She was not dazzled by the greatness which surrounded her. Of her children, she entertained the greatest affection for Louis, the ex-king of Holland. In 1814, she went to live at Rome, with her brother-in-law, cardinal Fesch. Napoleon seems to have always had much affection for her. She resided at Rome in the year 1829.—By the treaty of Paris, of Nov. 20, 1815, the whole family of Bonaparte was banished from France; and, in the edict of amnesty issued by Louis XVIII, Jan. 6, 1816, all Napoleon Bonaparte's relations were excepted. They were to remain in banishment, hold no possessions in France, and dispose of all their property there within six months. The royal ordinance of May 22, 1816, decreed, that the property and income of the members of the Bonaparte family who had come back on Napoleon's return from Elba, which had been confiscated by the law of Jan. 12, 1816, should be appropriated to the support of meritorious soldiers and such donees as had lost their donations in foreign countries.—For accounts of *Joseph, Napoleon, Lucien, Louis* and *Jerome Bonaparte*, see these heads; for information respecting *Mariana*, afterwards called *Elisa*, we refer the reader to the article *Bacciochi*; respecting *Carletta*, afterwards called *Marie Pauline*, to the article *Borghese*; respecting *Annunziada*, afterwards called *Annonciade Caroline*, to the article *Murat*. See, moreover, *Fesch, Eugene* (whose sister, *Hortensia*, is mentioned in the article *Louis Bonaparte*), and *Maria Louisa* (*Leopoldine Caroline*). —The members of the family of Napoleon live retired and much respected, manifesting great taste for the fine arts and the sciences. Almost all have appeared as authors, with more or less success, as will be seen under the different heads.

Bonaventura, John of Fidanza; one of the most renowned scholastic philosophers; born, 1221, in Tuscany; became, in 1243, a Franciscan monk; in 1255, teacher of theology at Paris, where he had studied; in 1256, general of his order, which he ruled with a prudent mixture of gentleness and firmness. He died in 1274, at the age of 53. At this time, he was a cardinal and papal legate at the council of Lyons. His death was hastened by his ascetic severities. On account of his blameless conduct from his earliest youth, and of some miracles ascribed to him, he enjoyed, during his life, the greatest veneration, and was canonized by pope Six-

tus IV. The elevation of thought in his writings, and his dignity as general of the Seraphic order, procured him the name *doctor Seraphicus*. The Franciscans opposed him as their hero to the Dominican scholastic Thomas Aquinas. He wrote for the honor and improvement of his order, for the promotion of the worship of the virgin, on celibacy, transubstantiation and other doctrines. He is frequently obscure by his attempts to support the creed of the church with arguments drawn from the Aristotelian and new Platonic philosophy, and by his mystical views in treating of the moral and intellectual perfection of the human character. Yet he is distinguished from other scholastics by perspicuity, avoidance of useless subtleties, and greater warmth of religious feeling. Among his writings are, *Itinerarium Mentis in Deum; Reductio Artium in Theologiam; Centiloquium*, and *Breviloquium*. The whole was published 1588—96, at Rome, 7 vols. folio. But many pieces in that collection are not genuine.

Bond, in law, is a deed whereby the party obliges himself, his executors or administrators (and, if the deed so express it, his heirs also), to pay a certain sum of money to another at a day appointed. If this be all, the bond is called a simple one (*simplex obligatio*). But there is generally a condition added, that, if the obligor does some particular act, the obligation shall be void, or else shall remain in full force; as payment of rent, performance of covenants in a deed, or repayment of a principal sum of money borrowed of the obligee, with interest; which principal sum is usually one half of the penal sum specified in the bond. In case this condition is not performed, the bond becomes forfeited, or absolute at law, and charges the obligor while living, and, after his death, his personal representatives, and his heirs, if the heirs be named in the bond. In case of a failure to perform the condition of the bond, the obligee can recover only his principal, interest and expenses, if the bond were given to secure the payment of money, or, if it were given to secure the performance of a covenant, he can recover only reasonable damages for the breach.

Bondage. (See *Villenage*.)

Bondi, Clemente, abbate, one of the most esteemed modern poets of Italy, born at Mantua, or, according to some accounts, at Parma, entered the order of the Jesuits a few years before its abolition. After his talents became known to the archduke Ferdinand, governor of Milan, and his lady, Maria Beatrice of Este, a princess worthy of that name, which has been immortalized by Ariosto and Tasso, he was appointed tutor of their children, and appeared successively as a lyric, descriptive, satirical and elegiac poet; often, also, as a poetical translator. By the elegance, flow and harmony of his versification, and by the nobleness of his style, disfigured neither by extravagance nor by affectation, he became a favorite in Italy. We possess all the poetry of B. in an elegant edition (1808, 3 vols. by Degen, Vienna). The first volume contains the longer poems, *La Conversazione; La Felicità; Il Governo Pacifico; La Moda*, and *La Giornata Villereccia*. The second and third contain sonnets, epistles, elegies, *canzoni*, *cantatas*, and other small poems. The third concludes with the translation of Virgil's Georgics.

Bondy, Taillepied, count of; born at Paris, 1766, of an ancient family. In 1792, he was made director of the manufactory of assignats. August 10th of this year, he retired from public office until 1805, when Napoleon made him a chamberlain, and afterwards prefect of the department of the Rhone, where he conducted with mildness, and promoted the public works in his district. In 1812, he was very useful to Lyons by his care to prevent a scarcity of food in the city. In 1814, he maintained the city for a long time against the allies. In 1815, he was appointed, by Napoleon, prefect of the Seine, with a vote in the council of state. Here he spoke, usually, with great frankness to Napoleon, on the necessity of a constitutional system of government. July 3d, 1815, he was one of the three commissioners of the government for concluding with the generals of the allies the terms for the surrender of the capital. In 1816 and 18, he was deputy for the department of the Indre, and advocated the principles of the left side.

Bone. The bones are the hardest and most solid parts of animals; they constitute the frame, serve as points of attachment to the muscles, and afford support to the softer solids. They are the instruments, as muscles are the organs, of motion.—In the *mammalia*, birds, fish and reptiles, the whole system of bones united by the vertebral column is called the *skeleton*.—In the fœtus, they are first a vascular, gelatinous substance, in different points of which earthy matter is gradually deposited. This process is perceptible towards the end of the second month,

and, at the time of maturity, the bone is completely formed. After birth, the bones become gradually more solid, and, in the temperate zones, reach their perfection in men between the ages of 15 and 20. From this age till 50, they change but slightly; after that period, they grow thinner, lighter, and more brittle. Those of the two first classes of animals are harder on their exterior than they are internally. Their material, except in the teeth, is nearly the same throughout. Their structure is vascular, and they are traversed by the blood-vessels and the absorbents. They are hardest at the surface, which is formed by a firm membrane, called the *periosteum;* the internal parts are cellular, containing a substance called *marrow*. The use of the marrow is to prevent the too great dryness and brittleness of the bones.—Chemistry decomposes bone into gelatin, fat, cartilage and earthy salts. A fresh bone boiled in water, or exposed to the action of an acid, gives out its gelatin; if boiled in water, on cooling the decoction, a jelly is formed, which makes a good portable soup. A pound of bone yields twice as much as the same quantity of flesh. The earth of bones is obtained by calcination; that is, by exposing them to a red heat, by which they are deprived of the soft substances.—That part of anatomy which treats of the bones is called *osteology*.

Boner, Ulrich, the most ancient German fabulist, was a Dominican friar at Berne, in the first half of the 14th century. He lived when the age of minstrelsy and chivalrous poetry was in its decline, and has published a collection of fables, under the title *Der Edelstein* (The Gem), which is distinguished by purity of language and picturesque simplicity of description. The first editions of these fables were by Bodmer and Eschenburg. Benecke in Göttingen has published a very good edition more recently, and added a vocabulary (Berlin, 1816).

Boneset. The herb known by the name of *boneset* or thoroughwort (*eupatorium perfoliatum*) is a very useful annual plant, indigenous to the United States. It is easily distinguished, in the autumn, in marshy grounds, by its tall stem, four or five feet in height, passing through the middle of a large, double, hairy leaf, which is perforated by the stalk, and surmounted by a broad, flat head of light-purple flowers.—It is much used as a medicine, throughout the country, in the form of an infusion of the heads of the flowers, and part of the remainder of the plant, in boiling water, which is allowed to stand a few minutes upon the fire. It is one of the best domestic articles for breaking up and throwing off a violent cold, for which purpose, from a half pint to a pint of the above infusion may be drank cold, at bed-time, which will be found to purge by morning; or it may be taken warm before eating, in the morning, when it will generally operate as an emetic and purgative. Smaller quantities of the infusion, taken warm through the day, in bed, and in combination with other medicines, will be found highly serviceable in rheumatism and rheumatic fevers. As a safe and valuable family medicine, it cannot be too highly recommended.

Boniface; the name of several popes. B. I, elected, 418, by a party of the clergy, and confirmed by the emperor Honorius, who declared the antipope Eulalius a usurper. B. persecuted the Pelagians, and extended his authority by prudent measures. A decree of the emperor Theodosius deprived him, in 421, of the spiritual sovereignty over Eastern Illyria. He died 422. His history proves the Roman bishop to have been, in his time, dependent on the secular power.—B. II, elected 530. The death of his rival, the antipope Dioscorus, a few days after his election, left him in quiet possession of the papal chair. He acknowledged the supremacy of the secular sovereign, in a council held at Rome.—B. III, chosen 607, died nine months after his election.—B. IV, elected 608. He consecrated the Pantheon (q. v.) to the virgin and all the saints.—B. V, a Neapolitan, was pope from 619 to 625. He confirmed the inviolability of the asylums, and endeavored to diffuse Christianity among the English.—B. VI, a Roman, elected 896, died of the gout a fortnight after.—B. VII, antipope, elected 974, during the lifetime of Benedict VI, whose death he was suspected of having caused. Expelled from Rome, he returned on the death of Benedict VII, and found the chair occupied by John XIV, whom he deposed and threw into prison, where he allowed him to die of hunger. B. died 11 months after his return.—B. VIII, see the article.—B. IX, Pietro Tomacelli of Naples, succeeded Urban VI at Rome, during the schism in the church, while Clement VII resided at Avignon. He was distinguished for the beauty of his person, and the elegance of his manners, rather than for a profound knowledge of theology and canon law. Even the counsel of his experienced cardinals could not save him

from the commission of gross blunders. He was more skilled in the arts of simony and extortion. He sold the same benefice repeatedly, established the annates in 1372, and lavished the treasures thus procured on his relations, or in costly edifices; the fortification of the castle of St. Angelo, for instance, and the capitol.—He supported the pretensions of Ladislaus to the throne of Naples, and, during the greatest part of his pontificate, was engaged in negotiations with his rivals at Avignon, Clement VII and Benedict XIII. He died in 1404.

Boniface VIII, Benedict Cajetan; born at Anagni, of an ancient Catalonian family; elected pope Dec. 24th, 1294. He received a careful education, studied jurisprudence, was a canon at Paris and Lyons, advocate of the consistory, and prothonotary of the pope at Rome. After Martin IV had elevated him to the dignity of a cardinal (1251), he went as legate to Sicily and Portugal, and was intrusted with embassies at several courts; in particular, with the charge of reconciling the king of Sicily with Alphonso of Arragon, and Philip the Fair with Edward I of England. After Cœlestine V had resigned the papal dignity, at Naples, in 1294, at the instigation of B., the latter was chosen pope. He met with opposition from the cardinals of the family Colonna, and revenged himself by excommunicating them. His induction was magnificent. The kings of Hungary and Sicily held his bridle on his way to the Lateran, and served him, at table, with their crowns on their heads. B., however, was not successful in his first efforts for the increase of his power. The sovereignty of Sicily was denied him, and Frederic II was crowned king there in spite of his excommunication. He was equally unsuccessful in his attempt to arbitrate between England and France. The bulls which he issued, at this time, against king Philip the Fair of France, obtained no consideration. This was also the case with the interdict which he pronounced against him at the council of Rome, in 1302. Supported by the states and the clergy of France, Philip defended his royal rights against the encroachments of the pope. The pope was accused of duplicity, of simony, of usurpation, of heresy, of unchastity; and it was resolved to condemn and depose him at a general council at Lyons. Philip went still further: he sent Nogaret to Italy, in order to seize his person, and bring him to Lyons. Nogaret united himself, for this purpose, with Sciarra Colonna, who, with his whole family, had been oppressed by B., and was, in consequence, his enemy. B. fled to Anagni, where Nogaret and Colonna surprised him. B., on this occasion, acted with spirit. "Since I am betrayed," said he, "as Jesus Christ was betrayed, I will die at least as a pope." He assumed the pontifical robes and the tiara, took the keys and the cross in his hand, and seated himself in the papal chair. But the insignia of his holy office did not save him from arrest. Nay, Colonna went so far as to use personal violence. B. remained in a disagreeable confinement for two days, when the Anagnese took up arms, and delivered him. After this, he departed to Rome, where he died, a month later, in 1303. From fear of poison, he had not taken any food during his captivity. This abstinence brought on a fever, which terminated fatally. Boldness in his views, and perseverance in his resolutions, cannot be denied to B.; but these qualities were stained by ambition, vanity, a spirit of revenge, and a mean pliability. Dante assigns to him, as guilty of simony, a place in hell, between Nicholas III and Clement V. B. founded, in 1300, the centennial jubilee, and enriched his treasury by the frequent sale of indulgences. He was an accomplished man, for the times in which he lived.

Boniface, St.; the apostle of Germany, who first preached Christianity, and spread civilization among the Germans. He was born in England (680), and his original name was Winfrid. In his 30th year, he was consecrated a priest. A great part of Europe, at this period, was inhabited by heathens, and several missionaries set out from England to convert them. Gallus, in 614, went to Allemania; Emmeran, who died 652, to Bavaria; Kilian, who died 689, to Franconia; Willibrord, who died 696, to Friesland; Sigfrid to Sweden; Swidvert to Friesland. In 716, B. conceived the plan of preaching Christianity among the Frieslanders; but was prevented by the war between Charles Martel and the king of Friesland, Radbod. He therefore returned to England, where he was chosen abbot. In 718, he went to Rome, where Gregory II authorized him to preach the gospel to all the nations of Germany. He commenced his labors in Thuringia and Bavaria, passed three years in Friesland, and journeyed through Hesse in Saxony, baptizing every where, and converting the pagan temples to Christian churches. In 723, he was invited to Rome, made a

bishop, by Gregory II, and recommended to Charles Martel and all princes and bishops. His name Winfrid he changed to B. In 724, he destroyed the oak sacred to Thor, near Geismar, in Hesse, founded churches and monasteries, invited from England priests, monks and nuns, and sent them to Saxony, Friesland and Bavaria. In 732, Gregory III made him archbishop and primate of all Germany, and authorized him to establish bishoprics, the only existing bishopric being the one at Passau. He founded those of Freisingen, Ratisbon, Erfurt, Barabourg (transferred afterwards to Paderborn), Würtzburg and Aichstadt. In 739, he restored the episcopal see of St. Rupert, at Salzburg. After the death of Charles Martel, he consecrated Pepin the Short king of the Franks, in Soissons, by whom he was made bishop of Mentz. He held eight ecclesiastical councils in Germany, founded the famous abbey of Fulda, and undertook, in 754, new journeys for the conversion of the infidels. He was killed at Dockum, in West Friesland, by some barbarians, in 755, in his 75th year. In Fulda, a copy of the Gospels, in his own handwriting, is to be seen. At the place where B. built, in 724, the first Christian church in North Germany, near the village of Altenburg, in the Thuringian forest, a monument has been erected to his memory, consisting of a *candelabrum*, 30 feet high. The most complete collection of the letters of B. was published at Mentz, 1789, folio.

Bonn; capital of the Prussian government of Cologne, formerly the residence of the elector of Cologne, on the left bank of the Rhine, with 1109 houses, four Catholic, and, since 1817, one Protestant church. It contains 10,600 inhabitants, among whom are 200 Jews, who dwell in a particular street. B. was formerly fortified: the works were demolished in 1717. A lyceum was instituted here in 1802. An academy had been established in 1777, and, in 1786, erected into a university. This institution was superseded by the lyceum. The manufactures are not important. The commerce is chiefly in the hands of the Jews. A walk, with four rows of trees, and 1200 paces in length, leads to the beautiful palace of Clemensruhe, near the village of Poppelsdorf. B. contains the university of the Rhine, the charter of which was given, Oct. 18, 1818, at Aix-la-Chapelle, by the king of Prussia, who, at the same time, endowed it with an annual income of 80,000 Prussian dollars, 16,000 of which are appropriated to the botanical garden. The former residence of the elector of Cologne was bestowed on the university. It has been fitted up at great expense, and is surpassed, in extent and beauty, by no university buildings in Europe. It contains all the lecture halls, a library of more than 50,000 volumes, a museum of antiquities, a collection of casts of the principal ancient statues, a cabinet for natural philosophy, clinical institutions of uncommon extent and order, to which will be added a Catholic theological seminary, and a *convictorium* (refectory). The paintings in the *aula minor* (among others, the great allegorical picture, the *Christian Church*) were executed by some pupils of Cornelius. To the liberality of the king, the university owes also an anatomical hall, a new riding-school, and an edifice, once a royal palace, in Poppelsdorf, ten minutes' walk from the city, which contains the mineralogical and zoological collections, and before which lies the botanical garden. Adjoining it are lands and buildings for the use of the agricultural institute. The tower of the old custom-house, which commands a fine view, is destined for an observatory. The king has also established here a printing press for Sanscrit, under the inspection of A. W. von Schlegel. The museum of German and Roman antiquities is under the direction of the same distinguished scholar. The teachers of the five faculties, of which the university consists, are more than fifty. Particular advantages are afforded for the education of young men intended for instructers. Many men distinguished in various branches of science are connected with the university. The historian Niebuhr has lately repaired thither to deliver lectures. The exertions of the government to collect in B. all the means of instruction, united with the charms of the place and the beauties of the scenery, have made the university in a short time very much frequented. In 1826, it contained 931 students, among whom were 110 foreigners.

Bonn, Andrew, an anatomist, born at Amsterdam, in 1738, studied and received his degree at Leyden. His dissertation was the excellent treatise *De Continuitatibus Membranarum*, of which two famous physicians, Bichat and Wrisberg, have made use in their works. He finished his studies at Paris. In 1771, he returned to Amsterdam, where he delivered lectures. He had the three first numbers of the *Thesaurus Hovianus Ossium Morbo-*

sorum engraved at his own expense. He died in 1818. His long life was devoted to the relief of the suffering, and to the education of skilful physicians and surgeons. As president of the Monnikhof institution for the investigation of the best remedies against the different kinds of hernia, he has likewise accomplished a great deal.

Bonner, Edmund, an English prelate of infamous notoriety, was the son of a peasant at Hanley in Worcestershire. He was educated at Pembroke college, Oxford, where he was made doctor of common law, in 1525. For his skill in business, he was patronised by cardinal Wolsey, from whom he received several clerical preferments. On the death of Wolsey, he acquired the favor of Henry VIII, who made him one of his chaplains, and sent him to Rome to advocate his divorce from queen Catharine. Here he conducted with so much intemperance, that the pope is said to have threatened to throw him into a caldron of boiling lead, on which he thought proper to return. In 1538, he was nominated bishop of Hereford, being then ambassador at Paris; but, before his consecration, he was translated to the see of London. At the time of the death of Henry, he was ambassador to the emperor Charles V, but returned the same year, when, refusing to take the oath of supremacy, he was deprived of his bishopric, to which, however, he was restored, on making submission. Still continuing to act with contumacy, he was, after a long trial, once more deprived of his see, and committed to the Marshalsea; from which prison, on the accession of Mary, he was released, and once more restored by commission. During this reign, B. distinguished himself by a most sanguinary persecution of the Protestants, 200 of whom he was instrumental in bringing to the stake, whipping and torturing several of them with his own hands. When Elizabeth succeeded, he went, with the rest of the bishops, to meet her at Highgate, but, at the sight of him, she averted her countenance with an expression of horror. He remained, however, unmolested, until his refusal to take the oath of supremacy; on which he was once more committed to the Marshalsea, where he remained a prisoner for nearly 10 years, until his death, in 1569. He was buried at midnight, to avoid any disturbance on the part of the populace, to whom he was extremely obnoxious. B. was well versed in the canon law, and was an able diplomatist. He cannot, says a Catholic writer, be defended from the charge of extreme rigor and cruelty; yet he deserves credit for his firmness of principle, for his courage when in disgrace, and for the calmness and resignation with which he supported a long imprisonment.

Bonnet, in fortification; an elevation of the parapet in the salient angles of a field retrenchment, or of a fortification, designed to prevent the enfilading of the front of the work, at the end of which it is situated. The bonnet accomplishes, however, only part of this object, and is subject, at least in field retrenchments, to the disadvantage, that the men destined for its defence are too much exposed to be taken in flank by the fire of the enemy, on account of the necessary elevation of the banquette (q. v.)—a fault which cannot occur in the works of a fortress which are well laid out.

Bonnet, Charles, a natural philosopher and metaphysician, born at Geneva, in 1720, exchanged the study of the laws for that of natural history. His essay On Aphides, in which he proved that they propagated without coition, procured him, in his 20th year, the place of a corresponding member of the academy of sciences at Paris. Soon afterwards, he partook in the discoveries of Trembley respecting the polypus, and made interesting observations on the respiration of caterpillars and butterflies, and on the structure of the tape-worm. An active correspondence with many learned men in his own country and abroad, and too continued perseverance in labor, brought on an inflammation in his eyes, which prevented him from writing for more than two years. His active spirit employed this interval in meditating on the source of our ideas, on the nature of the soul, and on other mysteries of metaphysics. From 1752 till 1768, he was a member of the great council of his native city. He afterwards retired to his country-seat (Genthod), on the banks of the lake of Geneva, where he led a retired life, devoting his time to the investigation of nature, to the conversation of learned men, and to an extensive correspondence, till his death, in 1793. B. was a close and exact observer. He carried religious contemplations into the study of nature. In his views of the human soul, many traces of materialism are to be found; for instance, the derivation of all ideas from the movements of the nervous fibres. Of his works on natural history and metaphysics, there are two collections; one in 9 vols., 4to., the other in 18

vols., 8vo., Neufchatel, 1779. The most celebrated are, *Traité d'Insectologie; Recherches sur l'Usage des Feuilles dans les Plantes; Considérations sur les Corps organisés; Contemplation de la Nature; Essai analytique sur les Facultés de l'Ame; Palingénésie Philosophique*, and *Essai de Psychologie*.

Bonnet; advocate, and *bâtonnier* (president) of the advocates in Paris. During the revolution, he was zealous in defending many unfortunate persons who were dragged before the revolutionary tribunal. He displayed his brilliant eloquence in the defence of general Moreau. In later times, he has been blamed for having yielded too much to the vindictive spirit of the French state attorneys: since 1815, particularly, he has been considered too compliant towards the *procureur-général* Bellart. We have reason to suppose that much of the reproach which has been cast upon him is unfounded, as he is known to have exposed his life and liberty, in former times, to save the accused. B. belongs to the extreme right side in the chamber of deputies, and has thus lost his popularity.

Bonneval, Claude Alexander, count of, or Achmet Pacha, born 1672, at Coussac, in Limousin, of an illustrious French family, entered, in his 16th year, the body-guard of the king, but showed an extravagant propensity for pleasure. In war, he was an able and successful partisan, beloved by those under his command. He enjoyed the esteem of the marshal of Luxembourg. In the war of the Spanish succession, he obtained a regiment, with which he marched to Italy, and distinguished himself by his valor as well as by his excesses. On his return, he was obliged to fly, in consequence of some violent expressions against the minister and madame de Maintenon. He was, in 1706, appointed major-general by prince Eugene, and fought against his native country. At the peace of Rastadt, in 1714, by the interference of prince Eugene, the process against him for high treason was withdrawn, and he was allowed to return to his estates. In 1716, he was lieutenant field-marshal of the Austrian infantry, and distinguished himself by his valor against the Turks at Peterwardein (1716). In 1718, B. was made a member of the imperial council of war, but his licentiousness and indiscretion induced prince Eugene to get rid of him, by appointing him, in 1723, master-general of the ordnance in the Netherlands. To revenge himself on Eugene, he sent complaints to Vienna against the governor, the marquis of Prie; but the latter, who, on his side, had not been inactive, received an order to arrest B., and to imprison him in the citadel of Antwerp. B., being afterwards ordered to appear at Vienna, and give an explanation of his conduct, spent a month at the Hague before he chose to comply with the summons. He was therefore confined in the castle of Spielberg, near Brünn, and condemned to death by the imperial council of war; but the sentence was changed, by the emperor, into one year's imprisonment and exile. B. now went to Constantinople, where the fame of his deeds, and his humanity towards the Turkish prisoners of war, procured him a kind reception. He consented to change his religion, received instruction in Mohammedanism from the mufti, submitted to circumcision, and received the name *Achmet Pacha*, with a large salary. He was made a pacha of three tails, commanded a large army, defeated the Austrians on the Danube, and quelled an insurrection in Arabia Petræa. His exertions, as commander of the bombardiers, to improve the Turkish artillery, were opposed by the jealousy of powerful pachas, the irresolution of Mohammed V, and the dislike of the Turkish troops to all European institutions. He enjoyed, however, the pleasures of his situation. He died in 1747. His *Mémoires* were published by Desherbiers (Paris, 1806, 2 vols.) In the second volume of the Memoirs of Casanova are to be found some notices of B.

Bonnycastle, John, professor of mathematics at the royal military academy at Woolwich, was born in Buckinghamshire. Though his education was not neglected, yet he was chiefly indebted to his own exertions for the various and extensive knowledge which he acquired. While young, he became private tutor to the two sons of the earl of Pomfret. After two years, he quitted that situation on being appointed one of the mathematical masters at Woolwich. Here, for more than 40 years, he devoted his time to the duties of his profession, and to the composition of elementary mathematical works. His first production was the Scholar's Guide to Arithmetic, which has passed through many editions. His guides to algebra and mensuration are useful school-books. He likewise wrote a Treatise upon Astronomy, 8vo.; the Elements of Geometry, 8vo.; a Treatise on Plane and Spherical Trigonometry,

8vo.; a Treatise on Algebra, 2 vols. 8vo.; and various articles in the early part of the last edition of doctor Rees's Cyclopædia. He died at Woolwich, May 15, 1821.

Bonpland, Aimé, educated at the medical school and the botanical garden in Paris, accompanied Alexander von Humboldt to America in 1799, and discovered above 6000 new species of plants. After his return, he was made, in 1804, superintendent of the garden at Malmaison, which he has described (Paris, 1813—1817, 11 numbers, folio, with copperplates). He was also co-editor of the Travels and Voyages in the Equinoctial Regions of the New Continent, from 1799 to 1804, by Alex. Humboldt and A. Bonpland; published in French in Paris, and in German, by Cotta, in Tübingen (1818). In 1818, he went, as professor of natural history, to Buenos Ayres. There, Oct. 1, 1820, he undertook a journey along the Parana, to explore the interior of Paraguay. At Santa Ana, however, on the eastern bank of the Parana, where he had laid out plantations of tea, and had founded a colony of Indians, he was surprised, on the territory of Buenos Ayres, by 800 soldiers of doctor Francia, dictator of Paraguay, who destroyed his plantations, and carried him off prisoner, together with most of the Indians. Francia sent him, as physician, to the garrison of a fort, and employed him in laying out a commercial road. B. lived till within a few years in Santa Maria. There is no other reason for his captivity, than his success in planting the Paraguay tea. Alex. Humboldt wrote to doctor Francia to persuade him to liberate his friend, and he was supported in his request by the English minister Canning, and the British consul in Buenos Ayres, Mr. Parish, but without success. A late French mission to South America has in view his liberation. From the manuscripts of B., Kunth arranged the large work, *Nova Genera et Species Plantarum*, which B. and Alex. Humboldt had collected and described on their travels in the tropical countries of the new world. (Paris, 1815—1825, 7 vols., fol., with copperplates, in 35 numbers, 1240 francs.)

Bonstetten, Charles von; born at Berne, 1745, of an ancient and noble family, in the canton of Zürich. His father, Charles Emanuel, was treasurer of Berne. He was educated, till his 19th year, at Yverdun, then in Geneva, where he improved himself in the society of Bonnet, Stanhope, Voltaire, Saussure and other learned men. He studied at Leyden, afterwards with Gray at Cambridge, then at Paris, and travelled in Italy. In 1775, he became a member of the supreme council at Berne, and, in 1787, *landvoigt* in Nyon. Here Matthisson, Salis and Frederica Brun lived with him; here John Müller wrote on the history of his native country. By his endeavors to improve education, and other useful efforts, he promoted the welfare of his native country. During the revolutionary times, he lived with his friend Frederica Brun, in Copenhagen. On his return, in 1802, he chose Geneva for his residence. The results of a journey to Italy, in which he had made interesting investigations on the depopulation of the campagna at Rome by the *mal' aria*, appeared under the title *Voyage sur la Scène du dernier Livre de l'Enéide, suivi de quelques Observations sur le Latium Moderne* (Geneva, 1813). In 1807, appeared his *Recherches sur la Nature et les Lois de l'Imagination*, 2 vols. He afterwards published *Pensées Diverses sur divers Objets du Bien Public* (Geneva, 1815); *Etudes ou Recherches sur les Facultés de Sentir et de Penser* (1821, 2 vols.); and *L'Homme du Midi et du Nord* (Geneva, 1824). These works indicate a philosophical spirit of observation.

Bonzaniga, Giuseppe; royal sculptor at Turin. By a persevering application of 40 years, he raised the art of carving in wood and ivory to a high degree of perfection, and founded an establishment, from which numerous works of art have been produced, that are much sought for in all Italy, and valued by connoisseurs. He died Dec. 18, 1820.

Bonzes; the name given by Europeans to the priests of the religion of Fo, in Eastern Asia, particularly in China, Birmah, Tonquin, Cochin-China and Japan. As these priests live together in monasteries, unmarried, they have much resemblance to the monks of the Christian church: the system of their hierarchy and of their worship also agrees, in many respects, with that of the Catholics. They do penance, and pray for the sins of the laity, who secure them from want by endowments and alms. The female bonzes may be compared to the Christian nuns; as the religion of Fo suffers no priestesses, but admits the social union of pious virgins and widows, under monastic vows, for the performance of religious exercises. The bonzes are commonly acquainted only with the external forms of worship and the idols, without understanding the meaning of their religious symbols. They endeavor to keep up the

superstition by which they are supported.

Book-keeping is a mercantile term, used to denote the method of keeping commercial accounts, of all kinds, in such a manner, that a man may thereby know, at any time, the true state of his affairs, with clearness and expedition. Book-keeping rests, like commerce in general, on the notions of debtor and creditor, or on the notions of that which we possess or are to receive, and that which we are to pay, and is divided into *single*, and *double* or Italian book-keeping. In the first, the posts of debtor and creditor are separated from each other, and entered in such a way, that each one appears singly; while, in the latter, creditor and debtor are in continual mutual connexion, to which end all the posts are entered doubly, once on the debtor and once on the creditor side, by which every error or mistake is prevented. This mode of double book-keeping sprung up in Italy, in the 15th century; yet it had been practised already in Spain in the 14th century, according to a legal ordinance. The principle of this system is, that all money and articles received become debtors to him from whom they are received, and, on the other hand, all those who receive money or goods from us become debtors to cash or to the goods. The books which the merchant wants are principally a *waste-book*, in which all his dealings are recorded without particular order; a *journal*, in which the contents of the waste-book are separated every month, and entered on the debtor and creditor sides; and a *leger*, in which the posts entered in the journal are placed under particular accounts, and from which, every year, the balance is drawn.

Book-Trade, Booksellers. Before the invention of typography, those who copied books carried on the trade in them. In Greece, in Alexandria, and in Rome, there were booksellers who kept a number of transcribers. In the middle ages, there were booksellers, called *stationarii*, at the universities of Bologna and Paris, who loaned single manuscripts at high prices. In Paris, after 1342, no one could deal in books without the permission of the university, who had particular officers to examine the manuscripts and fix the price. After the invention of printing, the printers were also the booksellers. Faustus, the first bookseller, carried his printed Bibles for sale to France. Those who had formerly been employed in copying now acted as agents of the printers, and carried the printed copies into the monasteries for sale. Towards the end of the 15th century, there were such book traders in Ulm, Nordlingen and Augsburg. The first bookseller who purchased manuscripts from the authors, and had them printed by others, without possessing a press of his own, was John Otto, in Nuremburg (1516). In Leipsic, there were, for the first time, in 1545, two booksellers of this kind—Steiger and Boskopf. The books were carried to Frankfort on the Maine to the fair. The book-fair at Leipsic did not become important until a later period: in 1667, it was attended by 19 foreign booksellers. The Leipsic catalogue of books appeared as early as 1600. The booksellers of the present day may be divided into printers who sell their own publications (they have become rare), booksellers who sell the books which have been printed at their expense by others, and those who keep for sale the publications of others. The last have, usually, at the same time, publications of their own, which they sell or exchange with others. This trade is promoted, in Germany, chiefly by the book-fairs at Leipsic, of which the Easter fair is frequented by all the booksellers of Germany, and by those of some of the neighboring countries, as of France, Switzerland, Denmark, Livonia, in order to settle their mutual accounts, and to form new connexions. The German publisher sends his publications to the keeper of assortments, *à condition*, that is, on commission for a certain time, after which the latter pays for what have been sold, and can return what have not been sold. This is not so favorable for the publisher as the custom in the French book-trade, where the keeper of assortments takes the quantity he wants at a fixed rate. In the German book-trade, it is the practice for almost every house, either in the country or abroad, which publishes or sells German books, to have its agent at Leipsic, who receives and distributes its publications. A., in Riga, who publishes a book calculated for the German trade, has his agent, B., in Leipsic, to whom he sends, free of expense, a number of copies of his publication, that he may distribute the new work to all the booksellers with whom he is connected, from Vienna to Hamburg, and from Strasburg to Königsberg, each of whom has his agent in Leipsic. Instructions are also given as to the number of copies to be sent to each. B. delivers those copies in Leipsic to the agents, who send them

every week, or more or less frequently, by the post, or by carriers, at the expense of the receiver. C., in Strasburg, who finds that he has not received copies enough, writes for an additional number of copies to his agent, D., in Leipsic. D. gives this order to B., who delivers the number wanted to D., to be transmitted to C. This arrangement is advantageous to the German book-trade as well as to Leipsic. The dealer receives every thing free to Leipsic, and, as a great number of packets, with books from all parts of Germany, arrive there for him every week, he can have them packed together and sent at once. The freight is thus much less than if the packets were sent to him separately from the different places, and the whole business is simplified. The booksellers are also enabled to agree with greater ease on a certain discount per cent. In other European countries, for instance, in England and France, no such connexion of the booksellers has yet been formed. Paris is the central place of the French book-trade. In Great Britain, Edinburgh rivals London. In the Netherlands, the most important repositories of books are at Amsterdam, Utrecht, Leyden and Haerlem. In Brussels and Liege, many French works are reprinted. In Germany, several houses rarely unite for the publication of great works, as is done in France and England. In 1802, the booksellers of the U. States established a fair at New York, and rules for its regulation. In Spain and Portugal, the price of every book is regulated by the government.

Books, Catalogues of. Catalogues of books are interesting if the libraries they describe contain a great number of works (*Bibliotheca Thottiana*, Copenhagen, 1789—95, 7 parts, in 12 vols.; *Bibliotheca Firmiana*, Milan, 1783, 6 vols.; *Catalogue du Duc de la Vallière*, Paris, 1783—88, 9 vols.), or are distinguished by well-selected, by rare and costly works (*Cat. Bibl. Harleianæ*, by Michael Maittaire, London, 1743—45, 5 vols.), or by scarce books merely (Catalogue of Sam. Engel, Bern, 1743, and Dan. Salthen, Königsberg, 1751), by old editions (J. F. Dibdin, *Biblioth. Spenceriana*, London, 1814, 4 vols.; Ferd. Fossii, *Cat. Codd. Sec.* 15 *Impressor. Bibl. Magliabecchianæ*, Florence, 1793, 3 vols. fol.), by beautiful copies, particularly on parchment (*Cat. de la Bibl. de McCarthy*, Paris, 1815, 2 vols.), or by being very rich in some particular department. For natural history, the most important catalogues are those of sir Jos. Banks (London, 1796, 5 vols.), and of Cobres (Augsburg, 1782, 2 vols.); for Hungarian history, that of count Szecheny (*Sopronii*, 1799 et seq.); for classical literature, those of count Rewiczky (Berlin, 1794), and of Askew (London, 1775), with some others; for French literature, the second part of the catalogue of Vallière; for Italian literature, the catalogues of Capponi (Rome, 1747, 4 vols.), Floncel (Paris, 1774, 2 vols.), and Ginguené (Paris, 1817); for the German language, that of Adelung (Dresden, 1807). Catalogues acquire their true value and utility by judicious arrangement and accuracy of detail. For this purpose, besides perfect exactness in the material statements which must prevail throughout, and especially with regard to uncommon works, a notice of the printer, number of pages, signatures, catchwords, &c., and, in engravings, an account of the number and quality of the impressions, and the artist's name, are necessary. Above all, a clear arrangement of the books is requisite, that they may be easily consulted. In this department, the French took the lead. Gabriel Naudé opened the way by the *Catalogus Bibliothecæ Cordesianæ* (Paris, 1643, 4 vols.): he was followed by Ishmael Bullialdus and Jos. Quesnel, in the *Cat. Bib. Thuanæ* (Paris, 1679). Gabriel Martin, a bookseller at Paris, distinguished himself, in the 18th century, by a further attention to the method of arrangement, and, at the same time, by bibliographical accuracy, (Catalogues of Bulteau, 1711, du Fay, 1725, Brochard, 1729, count Hoym, 1738). On the foundation laid by Martin, Debure built, in the catalogue of Gaignat, 1769; and, in the preparation of the first part of Vallière's catalogue, as well as in the arrangement of the second part, the bookseller Nyon followed him with success. About this time, Jac. Morelli, in Venice, published a catalogue of the excellent library of Maffeo Pinelli (Venice, 1787, 6 vols.), distinguished by similar merits. All these catalogues, however, were prepared only to facilitate the sale of the books enumerated, and aspired to nothing higher. The earlier catalogues of the Bodleian (Oxford, 1738, 2 vols. fol.) and Parisian libraries (1739, 6 vols. fol.) are very defective. John Michael Francke, in his catalogue of the library of Bunau (Leipsic, 1750, 7 vols. 4to.), and Audiffredi, in the alphabetical catalogue of the library of Casanati (Rome, 1761, 4 vols. fol.), have distinguished themselves as scientific bibliothecarians. Both works, though incomplete, are excellent models. *Catalogus Biblioth. Aca-*

demiæ Theresianæ, by Joseph de Sartori (Vienna, 1801, 13 vols. 4to.), is full of errors and defects, and is by no means to be compared to the former of the above-mentioned works. There are, lastly, critical catalogues (*cat. raisonnés*) which contain more minute information and opinions, descriptions of uncommon and remarkable books, and sometimes accounts of their prices. Besides the few generally interesting works of this nature by John Fabricius (Wolfenb., 1717, 6 vols. 4to.), Jac. Fred. Reimmann (Hildesh., 1731, 2 vols.), Gotlieb Stolle (Jena, 1733, 18 vols. 4to.), and others, the catalogues of Crevenna (Amsterdam, 1778, 6 vols. 4to.), Serna Santander (Brussels, 1803, 5 vols.), and lord Spencer (see above), and Denis's Memorabilia of the Library of Garelli (Vienna, 1780, 4to.) are very valuable.

Books, Censorship of. Unless we consider the burning of condemned books under the Roman emperors as a censorship, the establishment of this institution must be attributed to the popes; but it cannot be denied, that it would have sprung up in a thousand other places, even if it had not existed in their dominions. Soon after the invention of printing, the popes perceived the influence which this art exerted over the diffusion of knowledge. It was, besides, doubly dangerous at a time when the authority of the church had been assailed, and was shaking under the load of its abuses. They endeavored, therefore, to prohibit first the reading, and secondly the printing, of certain literary works. They enforced the ancient decrees of the church against the reading of heretical books, and introduced an ecclesiastical superintendency of the press in 1479 and 1496, which was more completely established by a bull of Leo X, in 1515. In this, the bishops and inquisitors were required to examine all works before they were printed, and thus to prevent the publication of heretical opinions. They went still further: as this papal decree could not be carried into execution in all countries, on account of the reformation, they prepared an index of books which nobody was allowed to read under penalty of the censure of the church. This index was commenced by the council of Trent, in the fourth session of which (1546), the decree of the censorship was renewed; but it was not executed, and was finally left to the popes (25th session of 1563), by whom several such *Indices Librorum prohibitorum* have been published. Even in recent times, in 1758, such an augmented index was issued. Works of an established character, which could not well be prohibited, it was determined to expurgate. The duke of Alva caused such an *Index expurgatorius* to be prepared in the Netherlands; another was drawn up at Rome, in 1607, which, however, with the exception of some fragments, has remained secret. This censorship was soon afterwards adopted by the secular authority, and, in some respects, extended still further. In Germany, the politico-theological controversies gave the first occasion for the introduction of this institution, as they were carried on with the greatest violence on both sides. The decree of the German diet, in 1524, prohibited them. By the diet of 1530, a more severe superintendence of the press was established; and this was confirmed by later laws of the empire, in 1541, 1548, 1567, and 1577, &c. It was also provided, at the peace of Westphalia, 1648 (*Osnabr. Instr.*, chapter v, § 50), that the states should not suffer attacks on religious parties: From that time, the emperors have promised, in their elective capitulations, to watch strictly over the fulfilment of this article. In the capitulations of the emperor Leopold II, 1790, and of the emperor Francis II, it was further added (art. vi, § 8), "that no work should be printed, which could not be reconciled with the symbolical books of both Catholics and Protestants, and with good morals, or which might produce the ruin of the existing constitution, or the disturbance of public peace. It was, however, not difficult, in most Protestant countries, for individual authors or literary journals to obtain an exemption from the censorship; and many institutions, academies, universities, &c., were privileged in this way, as far as concerned their regular professors. The governments sometimes protected their subjects with great energy; as, for instance, that of Hanover, in the case of Putter and Schloezer. In France, the censorship belonged to the department of the chancellor, and was administered by royal censors. It was first abolished in England. It was formerly exercised by the well-known star-chamber, and, after the abolition of this court, in 1641, by the parliament. In 1662, it was regulated by a particular statute, but only for a certain number of years. This statute was renewed in 1679, and again, in 1692, for two years more. In 1694, the right of the crown to render the printing of writings, journals, &c. dependent on its permission, that is, the

censorship, ceased entirely. In Holland, and even in the Austrian Netherlands, a great liberty, if not an entire freedom of the press, prevailed. All that was not permitted to be printed in France appeared in the Netherlands or in Switzerland, at Lausanne and Geneva, to the great advantage of the Dutch and Swiss book-trade. In Sweden, by an edict of 1766, and accordingly under the aristocratical constitution, the abolition of the censorship was ordered; yet Gustavus III, personally a friend to the liberty of the press, was obliged to retain the censorship, and even to execute it with severity, during the aristocratical machinations which disturbed his reign, and which were but imperfectly counteracted in the revolution of 1771. Gustavus IV issued an edict soon after he ascended the throne, by which the censorship was retained only in matters of religion, and was administered by the consistories. This, however, was not permanent: at first, penalties were enacted, and, in 1802, the censorship was entirely reëstablished, committed to the chancellor of the court, and executed with severity. French and German books were prohibited. King Charles XIII, immediately after his ascension to the throne, abolished it entirely by a provisional order of April 12, 1809, which was confirmed, as an article of the constitution (§ 86), June 6, 1809. In Denmark, by a royal rescript of Sept. 14, 1770 (under the minister Struensee), the censorship was wholly abolished; neither has it been restored, though the laws by which the liberty of the press has been regulated have been changing, and have sometimes been very oppressive. In France, the censorship, like so many other institutions, was annihilated by the revolution. All the constitutions, from 1791 to the *Charte Constitutionelle* of 1814, declare the liberty of the press one of the fundamental laws. During the republic, there was no censorship, but the revolutionary tribunals took its place. Napoleon restored it, in another form, by the decree of Feb. 5, 1810 (*Direction de l'Imprimerie*). Since the restoration, it has also undergone various changes. Books of more than 20 sheets have always remained free, but the censorship has been exercised over pamphlets and journals at different periods; for the last time, Aug. 15, 1824, just before the death of Louis XVIII: it was, however, abolished again by the present king, Sept. 29 of the same year. For the establishment of new political journals, the permission of the government must be obtained, and bonds must be given by the editors. What changes will yet be made in France remains to be seen. The introduction of the censorship is demanded by one side, even in respect to books already published. In the kingdom of the Netherlands, the censorship is abolished by a fundamental statute of Aug. 24, 1815, art. 226. Even in the kingdom of Poland, this was formerly the case (constitution of Nov. 27, 1815, art. 16), but it has been restored by a decree of June 16, 1819. In the German states, the liberty of the press was much restrained till 1806, the state-attorney having till then had control over it. After 1814, several states abolished the censorship—Nassau (decree of May 4, 1814), Weimar (in the constitution, May 5, 1816), Würtemberg (decree of Jan. 30, 1817), Bavaria (May 26, 1818), grand-duchy of Hesse (constitution of Dec. 17, 1820, § 35), though with very different provisions as to the responsibility of authors, printers and booksellers. (See *Press, Laws of the.*) In accordance with the unhappy decrees of Carlsbad, 1819, and the resolutions of the German diet of Sept. 20, 1819, the censorship in all the states of the German confederation has become one of the conditions of union, but only with regard to books of less than 20 sheets, and journals. These measures were, at first, adopted only for five years, but are, at present, continued indefinitely. In Russia and Austria, there is naturally a despotic censorship. In the U. States, a censorship has never existed. Besides the different degrees of severity with which the censorship is exercised in different countries, it may be divided into different kinds, according to the field which it embraces. 1. A general censorship of the book-trade and of the press, under which even foreign books cannot be sold without the consent of the censors, exists in Russia, Austria, Spain, &c. (Austria has, in the censorship of foreign books, four formulas: A. *admittitur*, entirely free; B. *transeat*, free, but without public advertisements for sale; C. *erga schedam*, to be sold only to public officers and literary men, on the delivery of a receipt; D. *damnatur*, entirely forbidden.) 2. A general censorship of the press, extending only to books printed in the country, exists in Prussia (edict of Sept. 19, 1788; order of the cabinet of Dec. 28, 1824), where, however, a case once took place, in which the publications of a foreign bookseller, Brockhaus of Leipsic, were prohibited. 3. A limited censor-

ship, only over works of less than 20 sheets, and journals, is at present the law in the states of the German confederation. (See *Press, Liberty of the.*)

Boone, Daniel, one of the first adventurers who penetrated into the wilds of Kentucky, was born in Virginia. He was, almost from his infancy, addicted to hunting in the woods. He emigrated early to North Carolina, then recently settled. Having determined to cross the wilderness bordering on the Cumberland mountains, in quest of the region of Kentucky, then little known, he set out on his expedition, with five companions, May 1, 1769. June 7, they arrived at Red river, north of the Kentucky. A short time afterwards, B. and one of his companions, John Stewart, were captured by a party of savages. They soon escaped, but could discover no traces of their friends, who had returned home. B. and Stewart would have been constrained to follow them, had not Squire B., the brother of Daniel, pursued their track from North Carolina, and relieved them with a few necessaries. Shortly afterwards, Stewart was killed by the Indians, and the two Boones were left the only white men in the wilderness. They passed the winter in a cabin. In May, 1770, B.'s brother returned home. In July of the same year, however, he came back, according to agreement. They then traversed the country to the Cumberland river, and, the following year, returned to their families, with a determination of removing with them to Kentucky. In September, 1773, B. commenced his removal to Kentucky, with his own, and five other families, and was joined by 40 men, who placed themselves under his guidance. Being attacked by the Indians, 6 of his men were slain, and the cattle belonging to the party dispersed. The survivors returned, in consequence, to the settlements on Clinch river, about 40 miles from the scene of action. A company of North Carolina, having formed a plan of purchasing the lands on the south side of the Kentucky river from the southern Indians, employed B. to buy a tract of country, the limits of which were described to him. He performed the service, and, soon after, made a road from the settlements on the Holston to the Kentucky river, notwithstanding the incessant attacks of the Indians, in which 4 of his men were killed and 5 wounded. In Apr., 1775, he built a fort at a salt-spring, on the southern bank of the Kentucky, where Boonesborough is now situated. It consisted of a block-house and several cabins, enclosed with palisades. In 1777, he sustained two sieges in Boonesborough from the Indians, but repulsed them. In the following year, however, Feb. 7, B. was taken prisoner by the savages, while hunting, with a number of his men. In May, they were conducted to Detroit, where they experienced great kindness from governor Hamilton, the British commander of that post. He even offered the Indians £100 for their prisoner, in order that he might liberate him on parole, but they would not part with him, having conceived for him sentiments of great affection and respect. On his return, he was adopted by one of the principal chiefs at Chilicothe, and might have been happy in this situation, had not the thoughts of his wife and children continually kept alive the desire of escape. This he effected one morning, having risen at the usual hunting hour, and departed, apparently for the woods, but in reality for Boonesborough. He arrived there on the 20th of June, after a journey of 160 miles, which he performed in 4 days, having eaten, it is said, but one meal during that time. On the 8th of August, a body of savages, to the number of 450, commanded by Canadian Frenchmen and some of their own chiefs, invested the fort, with British colors flying. B. was summoned to surrender, but announced his determination, and that of the garrison, who amounted to but 50 men, "to defend the fort as long as a man of them was alive." The enemy then resolved to obtain it by stratagem, and requested that nine of the principal persons of the garrison would come out and treat with them, promising terms so favorable, that the invitation was accepted. After the articles of the treaty had been signed, B. and his companions were told that it was customary, upon such occasions, among the Indians, for two of them to shake each white man by the hand, in order to evince the sincerity of their friendship. This was also agreed to; and, accordingly, two Indians approached each of the nine, and, taking his hand, grappled him, with the intent of making him prisoner. Their object being then immediately perceived, B. and his party extricated themselves, and retreated into the fort, amid a heavy fire from the savages. An attack was then quickly commenced, and continued until the 20th of August, when the enemy abandoned the siege. This was the last attempt of the Indians to possess themselves of Boonesborough. In October, as B. was

returning from the Blue Licks, with his brother, the latter was slain, and B. pursued by a party of Indians for three miles, by the aid of a dog; but, having killed the animal, he escaped. In 1782, the depredations of the savages increasing to an intolerable extent, B., with other militia officers, collected 176 men, and went in pursuit of a large body, who had marched beyond the Blue Licks to a bend of the main fork of the Licking river, 40 miles from Lexington. They overtook them August 19, but, being much inferior in numbers, were obliged to retreat. General Clark, then at the falls of the Ohio, immediately assembled a considerable number of men, and commenced the pursuit of the savages, accompanied by B. From that time until 1798, B. resided alternately in Kentucky and in Virginia. In that year, he removed to Upper Louisiana, where he received a grant from the Spanish authorities of 2000 acres of land. His children, friends and followers were also presented with 800 acres each. He settled with them on the Missouri river, at Charette, some distance beyond the inhabited parts of the country, where he followed his usual course of life—hunting, and trapping for bears—until Sept., 1822, when he died, at the residence of his son, major A. Boone, in Montgomery county, in the 85th year of his age. He had been gradually declining for some years previous to his decease. It is related, that, some time before that event, he had two coffins made out of a favorite cherry-tree, the first of which, not fitting, he gave to a son-in-law; in the second he was buried, having bestowed on it a fine polish by a course of rubbing for several years. His sons and daughters still reside in Missouri.

Boors. The peasants of Russia are divided into two classes—*free boors* and *vassal boors*. The former cannot be alienated or sold. The latter are mere slaves, not being capable of possessing property, but, with their families, being at the disposal of their lords. They are of three sorts—the *crown boors*, the *mine boors* and the *private boors*. The *crown boors* are, some of them, considered as absolute property; others are attached to the mines or soil, while many are only obliged to perform a certain quantity of labor, or to pay a certain proportion of the produce of it. Their condition is superior to that of the other two classes, as they usually pay an annual *abrock*, or rent, of about five rubles each, and enjoy the rest of their earnings undisturbed. They are allowed also to purchase from noblemen lands or villages, with the vassals belonging to them. The *mine boors* are unalienably attached to particular mines, and may be transferred with them to different masters. The third sort, or *private boors*, are those belonging to the nobles. Their condition depends on the character of their masters: it is sometimes very comfortable, but often most wretched. In the richest provinces, according to the testimony of doctor Clarke, you may find them dying of hunger, or pining from bad food. Pastures, covered with cattle, yield no milk for them. The harvest supplies no bread for their children. The lord claims all the produce. Some attempts were made by Alexander (q. v.) to alleviate their condition, but private interests interfered with the benevolent intentions of the government.

Bootan; an extensive region of Northern Hindostan, lying between Bengal and Thibet. It is about 250 miles from east to west, and 90 from north to south; but its eastern boundaries are imperfectly known. It forms a portion of the declivity of that stupendous Alpine chain, of which Thibet occupies the table land. Notwithstanding it is mountainous, and, in many parts, extremely cold, the country is productive, and highly cultivated, the slope of the mountains being cut into terraces for this purpose. As it is situated without the tropics, it is free from periodical rains; and the climate is, in general, moderate, calculated to bring forth both European and Asiatic fruits and vegetables. Thus we find the trees and shrubs of Northern Europe, in sight of the large forests, and a rank vegetation of plants strictly tropical. The Deb Rajah, who resides at Tassisudon, is the prince of the country, but is tributary to the grand lama of Thibet. The inhabitants are robust, active and ferocious. They have the Tartar features. They are of the Boodh religion, and leave most of the labor to the women. Their houses are, in general, of only one story, but the palace of the rajah is a lofty pile. From the precipitous nature of the country, they are obliged to use numerous bridges, many of which are constructed with ropes and iron chains. B. produces a hardy breed of horses, about 13 hands high, called *tangans*. A caravan is sent annually by the prince Deb Rajah, who is the only merchant in the dominions, to Rungpore, in Bengal. The goods which are carried by the tangans are coarse woollen cloths, cow-tails from Thibet, bees-wax,

ivory, musk, gold dust, silver ingots, with silks, tea, paper and knives from China, with which B. has a close intercourse. The current coin is the Narainy rupee of Couch Behar, worth about 20 cents. The customs of the inhabitants resemble those of the Birmans or inhabitants of Ava, more than they do those of their nearer neighbors of Thibet or Assam.

Boötes; a northern constellation, called, also, by the Greeks, *Arctophylax*, and, by the English, *Charles's Wain*. Arcturus was placed, by the ancients, on his breast; by the moderns, on the skirt of his coat. Fable relates that Philomelus, son of Ceres and Jasion, having been robbed by his brother Plutus, invented the plough, yoked two bulls to it, and thus supported himself by cultivating the ground. Ceres, to reward his ingenuity, transferred him, with his cattle, under the name of *Boötes*, to the heavens.

Booth, Barton, an actor of great celebrity in the reigns of queen Anne and George I, was born in 1681, and placed, under doctor Busby, at Westminster school. An early attachment for the drama was fostered by the applause he met with while performing a part in one of Terence's plays, at the annual exhibition in that seminary. He eloped from school at the age of 17, and joined Ashbury's company of strolling players, with whom he went to Dublin. After performing three years in the Irish capital with great applause, he returned, in 1701, to London, and, engaging with Betterton, met with similar success. On the death of that manager, he joined the Drury lane company, and, on the production of Cato, in 1712, raised his reputation as a tragedian to the highest pitch, by his performance of the principal character. It was on this occasion that lord Bolingbroke presented him from the stage-box with 50 guineas—an example which was immediately followed by that nobleman's political opponents. Declamation, rather than passion, appears to have been his forte, though Cibber speaks of his Othello as his finest character. He became a patentee and manager of the theatre in 1713, in conjunction with Wilks, Cibber and Doggett, and died May, 1733. He was buried in Westminster abbey, where there is a monument to his memory. He was the author of Dido and Æneas, a mask, various songs, &c., and the translator of several odes of Horace.

Bopp, Francis, born in 1791, at Mentz, went to Paris, in the autumn of 1812, in order to become acquainted with the Oriental, and, in particular, with the Indian language and literature. While studying these, he did not neglect Arabian and Persian, and found in Elmina von Chezy and Sylvestre de Sacy, as well as in Augustus William von Schlegel, friends who willingly assisted him in his investigations. With a small pension from the king of Bavaria, he lived five years in Paris, afterwards in London, then in Göttingen, devoted to his favorite studies with the greatest perseverance. He was now made professor of the Oriental languages in Berlin. He wrote on the system of conjugation in the Sanscrit language, compared with that of the Greek, Latin, Persian and German tongues, and accompanied his remarks with translations of extracts from Indian poems (Frankfort on the Maine, 1816). He also published works with the following titles: *Srimahâbharate Nalopakhajanam. Nalas, carmen Sanscritum, e Mahabharato, edidit, Latine vertit et adnot. illust., Fr. Bopp*, London, Paris and Berlin; Complete System of the Sanscrit Language; *Indralokagamânan*, Voyage of Ardschura to the Sky of Indra; together with other Episodes of Masabsarah, published for the first Time in the original Language, and translated in Metre, with a Commentary.

Bora, Catharine von, wife of Luther, was born in 1499. Her birth-place is not known, and of her parents we only know that her mother, Anna, was descended from one of the most ancient families of Germany, that of Hugewitz (Haugewitz). The daughter took the veil, very early, in the nunnery of Nimptschen, near Grimma. Notwithstanding her devout disposition, she soon felt very unhappy in her situation, and, as her relations would not listen to her, applied, with eight other nuns, to Luther, whose fame had reached them. Luther gained over a citizen of Torgau, by the name of Leonard Koppe, who, in union with some other citizens, undertook to deliver the nine nuns from their convent. This was done the night after Good Friday, April 4, 1523. He brought them to Torgau, and from thence to Wittenberg, where Luther provided them a decent abode. At the same time, to anticipate the charges of his enemies, he published a letter to Koppe, in which he frankly confessed that he was the author of this enterprise, and had persuaded Koppe to its execution; that he had done so in the confident hope that Jesus Christ, who had restored his gospel, and destroyed the kingdom of Antichrist, would be their protector, though it might cost them

even life. He also exhorted the parents and relations of the nine virgins to admit them again into their houses. Some of them were received by citizens of Wittenberg; others, who were not yet too old, Luther advised to marry. Among the latter was Catharine, whom Philip Reichenbach, at that time mayor of the city, had taken into his house. Luther proposed to her (by his friend Nicholas von Amsdorf, minister in Wittenberg) doctor Kaspar Glaz and others in marriage. She declined these proposals, but declared her willingness to bestow her hand on Nicholas von Amsdorf, or on Luther himself. Luther, who, in 1524, had laid aside the cowl, was not averse to matrimony, yet appears to have been led to the resolution of marrying by reason rather than by passion. Besides, he was not then favorably inclined towards Catharine, because he suspected her of worldly vanity. He says, however, that he found in her a pious and faithful wife. There could be no want of disadvantageous rumors on this occasion, some of them as shameful as they were unfounded. The domestic peace of the pair was also drawn into question, and Catharine, in particular, was accused of being peevish and domineering, so that her husband was often obliged to correct her. Although this last story is without foundation, yet Luther seems not to have been fully satisfied with her; for he speaks with great sincerity of the sufferings, as well as of the happiness, of his marriage. When, after Luther's death, in 1547, Charles V entered Wittenberg in triumph, Catharine saw herself obliged to leave this place, and to remove to Leipsic, where she was compelled to take boarders for her support. She afterwards returned to Wittenberg, and lived there till 1552 in want. When the plague broke out in this place, and the university was removed to Torgau, she went thither also, arrived there sick, and died soon after (Dec. 27, 1552). In the church of Torgau her tomb-stone is still to be seen, on which is her image, of the natural size.

Boracic Acid, uncombined, exists in several small lakes in Tuscany, at Volcano, one of the Lipari islands, and in the hot springs near Sasso, in the Florentine territory, from whose waters it is deposited by natural evaporation. It is easily obtained also from borax, a native salt, composed of this acid and soda, by dissolving it in boiling water, and gradually adding sulphuric acid to engage the soda: the boracic acid is in this manner set at liberty, and is deposited in crystals on the cooling of the liquid: these, when washed with cold water and dried, are perfectly pure. In this state, it presents the form of brilliant, white, hexagonal scales, soft and greasy to the touch, and having a specific gravity of 1.479. Its taste, when first taken into the mouth, is sourish; afterwards it becomes bitter, and finally leaves a sweetish impression upon the tongue. It is slightly soluble in water, and much more so in alcohol, to which, when burning, it communicates a green color. It contains 43 per cent. of water, which it parts with, on being heated to redness, when it melts into a transparent glass, and is called *calcined boracic acid*.—Boracic acid was discovered by sir H. Davy to be a compound of a peculiar base, which he called *boron*, and oxygen, in the proportion of 8 parts of the former to 16 of the latter. Its principles are separated both by means of galvanism and by the action of potassium. Boron is a tasteless and inodorous substance, in the form of a greenish-brown powder. It is insoluble in water, ether, alcohol and oils; nor does it fuse when subjected to the strongest heats. By exposure to common air, it gradually becomes oxygenated, and, when heated in oxygen gas, burns vividly, and is converted into boracic acid. —Boracic acid is sometimes employed in the analysis of minerals, and for soldering metals in the arts; and, since its discovery in such abundance in the Italian springs and lakes, it has also been used in the manufacture of borax, being united with soda.—The most important combination formed by boracic acid is that with soda, commonly called *borax*. It is brought into Europe, in an impure state, from the East Indies, under the name of *tincal*, and is understood to occur principally in certain lakes, from whence it is obtained by evaporation. It is also reported to be dug from the earth in Thibet, and to exist in the mines of Riquintipa and Escapa, in South America. A knowledge of its manufacture was, for a long time, confined to the Venetians and Hollanders. This is now known to consist in boiling carbonate of soda with the calcined tincal, in order to saturate its excess of acid: 12 pounds of carbonate of soda are requisite for every 100 pounds of washed tincal, in the water: the lie is left to cool gradually and crystallize. The French nation manufacture their borax (of which they consume about 25 tons annually) from the boracic acid found in the Italian lakes; in consequence of which the price of this

article has fallen in France from five shillings and ten pence the pound, to two shillings and two pence. The process which they adopt is to dissolve 1200 pounds of carbonate of soda in 1000 pounds of water, to which is added, by 20 pounds at a time, 600 pounds of Tuscan boracic acid. This is done in a leaden boiler, of double the capacity requisite to contain the materials, in order to provide for the effervescence which takes place. The heat is kept up for 30 hours, when the clean liquid is drawn off into leaden coolers, a foot in depth, where the first crop of crystals deposits itself in three days. 100 pounds of the best Tuscan boracic acid produce about 150 of borax.—Borax appears in crystalline masses of a moderate size, or in distinct hexagonal prisms, terminated by three or six-sided pyramids; is of a white color, and transparent. It requires 20 parts of cold and 6 of boiling water for its solution. Exposed to heat, it swells up, boils, loses its water of crystallization, and becomes converted into a porous, white, opaque mass, commonly called *calcined borax*. A stronger heat brings it to the form of a vitreous transparent substance, in which state it is known under the name of *glass of borax*. Borax forms one of the best fluxes known. It is used in the analysis of minerals by the blow-pipe, in melting the precious metals, in forming artificial gems, and in soldering.—Another native combination of boracic acid is that with magnesia, known, in mineralogy, under the name of *boracite*. It is found in small crystals, imbedded in gypsum, near Lunenburg, in Lower Saxony, and at Segeborg, in Holstein. Their form is that of a cube, with the edges and four of the solid angles truncated. They are remarkable for their electric properties, becoming, when heated, negatively electrified at their perfect angles, and positively so at their truncated angles.

Borak Al. (See *Alborak.*)

Borda, Jean Charles; born at Dax, in the department of Landes, in 1733; an engineer, and afterwards a captain in the French marine, famous for his mathematical talents. In 1756, he was chosen a member of the academy of sciences, and occupied himself in making experiments on the resistance of fluids, the velocity of motion, and other topics relating to dynamical science. In 1767, he published a dissertation on hydraulic wheels, and afterwards one on the construction of hydraulic machinery. In 1771, with Verdune and Pingré, he made a voyage to America, to determine the longitude and latitude of several coasts, isles and shoals, and to try the utility of several astronomical instruments. In 1774, he visited the Azores, the cape Verde islands, and the coast of Africa, for the same purpose. In the American war, he was very useful to the count d'Estaing, by his knowledge of navigation. In later times, he visited a second time the Azores, the cape Verde islands, and the coast of Africa; but the observations which he made in this voyage have not been published. B. was the founder of the schools of naval architecture in France. He invented an instrument, of a very small diameter, which measures angles with the greatest accuracy, and which has been used in measuring the meridian; the reflecting circle, which has made his name immortal; besides an instrument for measuring the inclination of the compass needle, and many others. On the establishment of the national institute, he became one of its members, and was occupied, with other men of science, in framing the new system of weights and measures adopted in France under the republican government. Among the latest of his labors was a series of experiments to discover the length of a pendulum which should vibrate seconds, in the latitude of Paris. Among his writings are *Recherches sur la Résistance des Fluides; Nouvelle Méthode pour observer la Longueur du Pendule; Nouveau Système de Poids et Mesures, adopté par les États Généraux*, &c. The principal are his *Voyage*, published in 2 vols, in 1778, and his *Tables Trigonometriques Décimales*, which have been edited by Delambre. B. died at Paris, in 1799.

Bordeaux. (See *Bourdeaux.*)

Bordelais Wines. The finer red wines of the Bordelais (country round Bourdeaux) are the best which France produces. They contain but little alcohol, keep well, and even improve by removal. As the original fermentation is complete, they are, if judiciously managed, less subject to disorder and acidity than the Burgundy wines. None of the very best quality, however, is exported pure: a bottle of the best *Châteaux-Margaux*, or *Haut-Brion*, is a rarity hardly to be procured in Bourdeaux itself, at the rate of six or seven francs a bottle. For export, the secondary growths of Médoc are mingled with the rough Palus. The red wines of the Bordelais are known in England and North America under the name of *claret*. They have less aroma and spirit, but more astringency, than the Bur-

gundy wines. The Bordelais are the safest wines for daily use, as they are among the most perfect of the light wines, and do not easily excite intoxication. They have been accused of producing the gout, but without reason. Persons who drench themselves with Madeira, Port, &c., and indulge in an occasional debauch of claret, may, indeed, be visited in that way; because a transition from the strong brandied wines to the lighter is always followed by a derangement of the digestive organs. The principal vineyards are those of Médoc, Graves, Palus and Vignes Blanches; after these, those of Entre-deux-Mers, St. Emilion and the Bourgeais are the most important. The first growth of Médoc are the famous wines of Chateaux-Margaux, Lafitte and Latour. The *Lafitte* is characterized by its silky softness on the palate, and a perfume partaking of violet and raspberry. The *Latour* is fuller, has more aroma, but less softness. The *Chateaux-Margaux* is lighter than the *Latour*, and delicate, like the *Lafitte*, but has not so high a flavor. Of the second growth, we may mention the Rauran and the Leoville. The average produce of the first growth is 100 *tonneau* (of 217 gallons each). The soil of Médoc is a sandy and calcarious loam. The gravelly lands (*les Graves*), to the south and west of Bourdeaux, produce the *Graves*. The first growth of the red *Graves* is the Haut-Brion, which rivals the first growth of Médoc; it has more color and body, but is inferior in aroma and taste. The principal white *Graves* are St. Bris and Carbonieux. The best Médoc ought to be kept three or four years before removal; the *Graves* five or six. The wines of Palus, which is a bed of rich alluvial deposits, are inferior to the preceding; they are stronger and more deeply colored than those of Médoc. Being hard and rough, they are improved by a voyage, and are principally sent to the East Indies and America as *vins de cargaison*, or are mixed with Médoc, which is intended for exportation. By the voyage, they become more light and delicate, but are not to be compared with the growths of Médoc and the *Graves*. The best are Queyries and Mt. Ferrand. The former are deeply colored, and have much body. Age gives them an agreeable aroma, resembling that of a raspberry. Among the white Bordelais wines, besides those already mentioned, the finest growths are Sauternes, Preignac, Barsac and Bommes. Martillac and St. Medard are of a good quality, and have lightness and body. Dariste, formerly *Dulamon*, is equal to St. Bris and Carbonieux. Among other red wines are the Bourgeais, which are of a fine color, and acquire by age lightness and an agreeable almond aroma: of all the Bordelais wines, they most resemble the Burgundy wines. The first growths are Debosquet, Chateau-Rousset, Tajac and Falfax. The Bourgeais wines were formerly preferred to Médoc. The wines of St. Emilion have been much esteemed. The Fronsac and Canon are the best. Those of Entre-deux-Mers become agreeable with age. The *vins de Côtes* are good *vins ordinaires:* they are generally *fermes* and hard, and improve by age. The best are those of Bassens and Cenon. Those of St. Gervais, Cadillac and St. Romain are soft and agreeable. (For further information, see *Le Guide ou Conducteur de l'Étranger a Bordeaux;* 2d ed., Bourdeaux, 1827, which contains a minute account of the wines raised in the neighborhood of Bourdeaux. See, also, A. Henderson's *History of the Ancient and Modern Wines*, 4to., London, 1824.) The light wines of Bourdeaux might be very advantageously substituted, in the U. States, for the strong liquors too generally drank in this country.

Bordentown, in New Jersey; on the east side of the Delaware, 26 miles N. E. of Philadelphia. It is a small, pleasant town, and now the residence of Joseph Bonaparte.

Bordone, Paris, a celebrated painter of the Venetian school, born at Treviso, in 1500, died in 1570. Under Titian, he made rapid progress in painting. The execution of many works for his native city and for Venice spread his fame as far as France, whither he was invited by the king. The galleries of Dresden and Vienna possess several of his pieces. His most famous picture is the *Old Gondolier presenting a Ring to the Doge;* it is painted in oil, and now to be seen at Venice.

Boreal; northern.

Boreas; the north wind, worshipped by the Greeks as a deity, residing in Thrace, and represented with wings, which, as well as his hair and beard, were full of flakes of snow; instead of feet, he had the tails of serpents, and, with the train of his garment, he stirred up clouds of dust. Boreas was the son of Astreus and of Aurora. When Apollo and his favorite Hyacinthus were once playing at quoits, he blew the quoit of the former, of whom he was jealous, upon the head of the youth, who was killed by

the blow. By Orithya, daughter of Erectheus of Athens, he was father of Cleopatra, Chione, Calais and Zetes. The last two partook in the Argonautic expedition.

Borghese; a Roman family, which derives its origin from Sienna. They have held the highest offices in this republic, from the middle of the 15th century. Pope Paul V, who belonged to this family, and ascended the papal chair in 1605, loaded his relations with honors and riches. In 1607, he appointed his brother, Francesco B., leader of the troops sent against Venice to maintain the papal claims; bestowed the principality of Sulmone on Marco Antonio B., the son of his brother Giovanni Battista; granted him a revenue of 150,000 dollars, and obtained for him the title of a grandee of Spain. Another of his nephews, Scipione Caffarelli, he created cardinal, and made him adopt the name of B. From Marco Antonio B., prince of Sulmone, is descended the rich family of B., which is continued in the prince Camillo B. and his brother Francesco, prince B. Aldobrandini. (See *Cenci*.)

Borghese, Camillo Philip Louis, prince; formerly duke of Guastalla, prince of France, &c.; born 1775, at Rome; son of Marco Antonio B. When the French invaded Italy, he entered their service, showed great attachment to the cause of France, in particular to general Bonaparte; went, in 1803, to Paris, and married the second sister of Napoleon, Pauline, widow of general Leclerc. In 1804, he became a French prince, and grand cross of the legion of honor, and, at the breaking out of the war against Austria, in 1805, commander of a squadron of the imperial guard. After its termination, his wife received the duchy of Guastalla, and he was created duke of Guastalla. After having served, in 1806, in the campaign against the Prussians and Russians, and after having been sent to Warsaw, to prepare the Poles for a revolt, the emperor appointed him governor-general of the provinces beyond the Alps. He fixed his court at Turin, and became very popular among the Piedmontese. After the abdication of Napoleon, he broke up all connexion with the Bonaparte family, and separated from his wife. The prince sold to the French government, for the sum of 8,000,000 francs, 322 works of art, which ornamented the palace of his ancestors, known under the name of the *villa Borghese*. (See *Rome*.) Among them were several masterpieces; e. g., the *Borghese Gladiator*, the *Hermaphrodite*, the *Silenus*, the *Dying Seneca*, *Amor and Psyche*. Bonaparte provided for the payment out of the national domains in Piedmont, which the king of Sardinia confiscated in 1815; at the same time, in consequence of the second invasion of France, the prince received back part of these treasures of art. He now lives in Florence. In 1818, he sold Lucedio, in Savoy, for 3,000,000 livres. In the kingdom of Naples, he possesses the principalities Sulmone and Rosano. He is one of the richest Italian princes. During his residence in Rome, in 1826, Leo XII treated him with great distinction, and the establishment of some pious institutions was expected from him.

Borghese, Marie Pauline, princess, originally *Bonaparte*, sister of Napoleon, born at Ajaccio, Oct. 20, 1780, went, when the English occupied Corsica, in 1793, to Marseilles, where she was on the point of marrying Fréron, a member of the convention, and son of that critic whom Voltaire made famous, when another lady laid claim to his hand. The beautiful Pauline was then intended for general Duphot, who was afterwards murdered at Rome, in December, 1797; but she bestowed her hand, from choice, on general Leclerc, then at Milan, who had been, in 1795, chief of the general staff of a division at Marseilles, and had there fallen in love with her. When Leclerc was sent to St. Domingo, with the rank of captain-general, Napoleon ordered her to accompany her husband with her son. She embarked, in December, 1801, at Brest, and was called, by the poets of the fleet, the *Galatea of the Greeks*, the *Venus marina*. Her statue, in marble, has since been made by Canova, at Rome—a successful image of the goddess of beauty. She was no less courageous than beautiful, for when the Negroes, under Christophe, stormed Cape François, where she resided, and Leclerc, who could no longer resist the assailants, ordered his lady and child to be carried on shipboard, she yielded only to force. After the death of her husband, Nov. 23, 1802, she married, at Morfontaine, Nov. 6, 1803, the prince Camillo Borghese. (q. v.) Her son died at Rome, soon after. With Napoleon, who loved her tenderly, she had many disputes, and as many reconciliations; for she would not always follow the caprices of his policy. Yet even the proud style in which she demanded what her brothers begged, made her the more attractive to her brother. Once, however, when she

forgot herself towards the empress, whom she never liked, she was obliged to leave the court. She was yet in disgrace, at Nice, when Napoleon resigned his crown in 1814; upon which occasion she immediately acted as a tender sister. Instead of remaining at her palace in Rome, she set out for Elba, to join her brother, and acted the part of mediatrix between him and the other members of his family. When Napoleon landed in France, she went to Naples, to see her sister Caroline, and afterwards returned to Rome. Before the battle of Waterloo, she placed all her diamonds, which were of great value, at the disposal of her brother. They were in his carriage, which was taken in that battle, and was shown publicly at London. He intended to have returned them to her. She lived, afterwards, separated from her husband, at Rome, where she occupied part of the palace Borghese, and where she possessed, from 1816, the villa Sciarra. Her house, in which taste and love of the fine arts prevailed, was the centre of the most splendid society at Rome. She often saw her mother, her brothers Lucien and Louis, and her uncle Fesch. When she heard of the sickness of her brother Napoleon, she repeatedly requested permission to go to him at St. Helena. She finally obtained her request, but the news of his death arrived immediately after. She died, June 9, 1825, at Florence. She left many legacies, and a donation, by the interest of which two young men of Ajaccio will be enabled to study medicine and surgery. The rest of her property she left to her brothers, the count of St. Leu and the prince of Montfort. Her whole property amounted to 2,000,000 francs.

Borgia, Cæsar; the natural son of an ecclesiastic, who afterwards became pope Alexander VI, and of a Roman lady, named Vanozza. At a time when the court of Rome was a school of falsehood and licentiousness, and compacts and oaths afforded no security, he reduced crime to a system. Other princes have shed more blood, have exercised more atrocious cruelty; but his name is stigmatized with the greatest infamy; for with B. all was calculated with cool reflection. He profaned whatever was most holy for the attainment of his purposes. His father, who had become pope in 1492, invested him with the purple. When Charles VIII of France made his entry into Rome, Alexander was obliged to treat with him, and delivered Cæsar B. into his hands as a hostage, who escaped, however, after a few days, from the camp of the king. In 1497, Alexander bestowed the duchy of Benevento, together with the counties of Terracina and Ponte-corvo, on his eldest son, who had already received from the king of Spain the duchy of Gandia. Cæsar became jealous of his elevation, and, when the duke of Gandia was murdered, a week after his investiture, public opinion accused his brother Cæsar of the deed. His father permitted him to lay aside the purple, and devote himself to the profession of arms, and sent him to France, to carry to Louis XII the bull for divorce and dispensation for marriage which he had long desired to obtain. Louis rewarded B., for the compliance of his father, with the duchy of Valentinois, a body-guard of 100 men, and 20,000 livres a year, and promised to aid him in his projects of conquest. In 1499, Cæsar married a daughter of king John of Navarre, and accompanied Louis XII to Italy. He first undertook the conquest of Romagna, expelled the lawful possessors of the land, caused them to be treacherously murdered, and himself to be appointed, by his father, duke of Romagna, in 1501. In the same year, he wrested the principality of Piombino from Jacopo d'Apiano. He also endeavored, though in vain, to make himself duke of Bologna and Florence. In 1502, he announced that he was about to attack Camerino, and demanded, for that purpose, soldiers and artillery from Guidobaldo of Montefeltro, duke of Urbino. Camerino was taken by storm, and Julius of Barona, the lord of the city, with both his sons, was strangled at the command of B. This fate he prepared for all whom he had robbed. Those who did not fall into his hands, he pursued with poison or the dagger. Meanwhile, all the petty princes had united, and collected the soldiery for their defence; but Cæsar B. terrified some by means of 3000 Swiss, whom he called to Italy, and gained over others by advantageous offers. Thus he dissolved their alliance, seized their lands, and saw no further obstacle to his being made, by his father, king of Romagna, of the March, and of Umbria, when Alexander VI died, Aug. 17, 1503. At the same time, Cæsar B. was attacked by a severe disease, at a moment when his whole activity and presence of mind were needed. He found means, indeed, to get the treasures of his father into his possession, assembled his troops in Rome, and formed a closer alliance with France; but enemies rose against him on all sides, one of the

most bitter of whom was the new pope, Julius II. B. was arrested and carried to Spain, where he remained for two years in prison. He at length made his escape to his brother-in-law the king of Navarre, went with him to the war against Castile, and was killed by a shot before the castle of Biano, March 12, 1507.—Cæsar B. was temperate and sober, loved and protected the sciences, wrote verses himself, and possessed so much eloquence, that he seduced even those who were most on their guard against his treacherous designs.

Borgia, Stefano, cardinal, superintendent of the *Propaganda*, one of the noblest protectors of science in the 18th century, was born at Velletri, in 1731, and died November 23, 1804, in Lyons. His life was affected, in various ways, by the political revolutions of Europe. The dictatorship of Rome was intrusted to him, together with two other cardinals, by Pius VI, when the French attacked the city. His *Memorie istoriche della Città di Benevento del Secolo VIII al XVIII* (3 vols., 1763, 4to.), show his ability as a historian and antiquary.

Borgne ; a bay or gulf (improperly called *lake*) in Louisiana, east of lake Pontchartrain. It communicates with the gulf of Mexico and lake Pontchartrain, and is 40 miles long and about 15 broad.

Boring is a species of circular cutting, in which a cylindrical portion of a substance is gradually removed. When tubes of metal are to be formed, a cast is, in some cases, made in solid metal, and the whole of the bore is produced by the boring machine: in others, the cast is made hollow at first, and the borer is only used to give uniformity and finish to the inside of the tube. In boring cannon, the tool is at rest while the cannon revolves. By this arrangement the bore is formed with more accuracy than by the old method of putting the borer in motion. The tool is kept pressed against the cannon by a regular force. Cylinders of steam-engines are cast hollow, and afterwards bored ; but, in this case, the borer revolves, and the cylinder remains at rest. In either case, the axis of the borer and that of the cylindrical material should coincide ; for otherwise, if the borer revolve, it will perforate obliquely ; if the material revolve, the perforation will be conical. The instruments used are gimlets, augers, centrebits, drills, &c. Drills are made to turn rapidly, either in one direction by means of a lathe-wheel and pulley, or alternately in opposite directions by a spiral cord, which coils and uncoils itself successively upon the drill, and is aided by a weight or fly.—*Boring for water* has been, of late, successfully employed in obtaining a supply without sinking a well. In the progress of the boring, frequent veins of water are passed through, but the operation should be continued until a main spring is struck, which, if from a sufficiently elevated source, will flow up to the surface ; otherwise a well must be sunk to the level of the source, and the water must be raised by a pump. To exclude mineral waters, land-springs, &c., the hole is generally cased with a metallic pipe.

Borneo, next to New Holland, the largest island in the world, is about 800 miles long and 700 broad, with a population estimated at from 3,000,000 to 5,000,000. Lon. 109° to 119° E.; lat. 7° N. to 4° 20′ S. Its central parts have never been explored by Europeans, and the insalubrity of its climate has prevented them from frequenting its shores. On this account, the geography of Borneo is very imperfect. The principal chain of mountains is called the *Crystal mountain*, from the numerous crystals they contain. The island is often devastated by volcanoes and earthquakes. The coast, for 10 or 20 miles inland, is marshy, and a considerable portion is a moving bog. Though situated under the equator, the heat is not excessive, being moderated by the sea and mountain breezes, and by the rains, which are incessant from November till May. Some of the rivers are large. The principal are the Borneo, the Banjarmassing and Passmir. Gold is found in large quantities. Diamonds, which are found no where else but in Hindostan and Brazil, are confined to the south and west coasts. The best are obtained from Landak. The miners are the aboriginal savages. The petty prince of Maltan is in possession of one of the largest diamonds in the world. It is valued at 1,200,000 dollars, which is 150,000 dollars less than the Russian, and 500,000 more than the Pitt diamond. The other minerals are iron, copper and tin. Pearl and mother of pearl are found on the north coast. Rice, yams and betel, with all the fruit-trees of India, excellent ship-timber, groves of nutmeg and clove-trees, pepper, ginger and cotton, are produced on the island. The camphor differs from that of Japan, and is found only in Sumatra and Borneo. Benzoin, a species of resin, is produced in great abundance. B. produces the pongo, the largest of the

monkey tribe, which grows to the size of a man; the oran-outang, which bears the strongest resemblance to the human species in look, manners, and gait; two species of wild buffalo, wild boars, elephants and tigers. The species of birds are innumerable, and most of them different from those of Europe. The salangane or swallow, which constructs edible nests, is numerous. Wild bees supply wax, which is exported in great quantity. The coasts are inhabited by Malays, Javanese, Bugis or natives of Celebes, and some descendants of Arabs, who are all subject to despotic princes called *sultans*. Mohammedanism is the prevailing religion. The princes and nobles live in a style of barbarous pomp. The interior is peopled by a race of Malay colonists, who have been longer established on the island than those of the coasts. They are called *Biajoos* or *Viajas*. The natives are called *Dejakkese* or *Idaan*. They are fairer than the Malays, tall, robust and ferocious. They extract some of the front teeth, and insert pieces of gold in their stead. Their bodies are painted, and their only clothing is a girdle round the middle. The Biajoos hang up the skulls of their enemies at the doors of their huts. The Harafooras, a race of the interior, differ from the Idaans in having darker complexions and longer ears. Their dancing girls are much admired by Europeans for their activity and grace. The forests of the central region are occupied by Papuans. Several European nations have attempted to form settlements on the island. The Dutch alone have succeeded in forming permanent establishments. Their chief profits are derived from pepper and diamonds. On the north-west part of the island, 10 miles from the sea, on a fine river, is situated the town of Borneo. It contains 3000 houses, and is the seat of a sultan who formerly reigned over the whole island. The houses are often built on rafts, moored to the shore, so as to rise and fall with the tide: the chief communication is by means of boats. The inhabitants carry on considerable trade with China: they are said to be intelligent, and faithful to their contracts, but, in other cases, prone to treachery, and the crews of vessels trading here cannot be too much on their guard against them.

Bornholm; an island belonging to Denmark, in the Baltic sea, nearly surrounded with rocks; lon. 15° E.; lat. 55° 10′ N.; pop., 18,902. It is about 28 miles long, and 18 broad. Square miles, 218. The soil is stony, but fertile, with excellent pastures. Oats, butter and fish constitute the principal riches of the inhabitants. There are mines of coal and quarries of marble in the island.

Bornou, a kingdom of Central Africa, lying between 15° and 10° N. lat., and 12° and 18° E. lon., is bounded N. by Kanem and the Desert, E. by lake Tchad, S. by Mandara, and W. by Soudan. The first Europeans by whom it was visited, major Denham and captain Clapperton, furnish us with the most authentic information concerning this country (*Travels in Northern and Central Africa, in* 1822, 23 *and* 24; London, 1826). From March to July, the heat is extreme, the thermometer rising to 107°, and rarely falling below 86° Fahr.: during this time, scorching winds from the south prevail. As in other tropical countries, the seasons are divided into the dry and rainy: the latter continues from March to October, when the air becomes milder and fresher. The country is populous, containing 13 principal towns. These are generally large and well built, with walls 40 feet high and about 20 feet thick. The houses consist of several court-yards, with apartments for slaves, habitations for the different wives, and several turrets connected by terraces, forming the apartments of the owner. The Shouaas are Arabians: they are deceitful, arrogant and cunning. The Bornou people, or Kanowry, have Negro features: they are peaceable and quiet, but cowardly, and addicted to pilfering. The government, until lately, has been an elective absolute monarchy, under a sultan. The sultanship is now but a name, the real power being in the hands of El Kanemy, sheikh of the Coran, an able, warlike and popular chief. His force is chiefly cavalry, and is estimated at about 30,000 men, armed with spears, shields and daggers. The chiefs wear jackets of chain armor, cuirasses, or coats of mail. Indian corn, cotton and indigo are the most valuable productions of the soil. Very few fruits or vegetables are raised, and agriculture is in a wretched state. The domestic animals are asses, camels, horses, dogs, sheep, goats, cows, and innumerable herds of oxen. Lions, panthers, leopards, hyenas, jackals, elephants (in herds of from 50 to 400) and buffaloes crowd the forests. The crocodile and hippopotamus are considered a luxury. A Shouaa belle, arrayed for conquests, her hair streaming with fat, a black rim of kohol round her eyes, sits *jambe deçà jambe delà* on her favorite bullock, who is guided by a thong passed through the cartilage of his nose. The

ostrich, pelican, crane and Guinea fowl abound. The air is filled with locusts, which are devoured by the natives, both roasted and boiled, and formed into balls of a sort of paste. The mineral productions are unimportant. The principal return which the Moorish merchants obtain for their goods is slaves. The currency of the country consists of strips of cotton, about three inches wide and a yard long, called *gubbuk*, four or five of which make a *rottala*.

Borodino. (See *Moscow, Battle of.*)

Borough; originally, a fortified town. In England, the term was early restricted to those towns which sent burgesses to parliament. This burden, as it was once considered, was probably imposed on the largest and wealthiest towns, or on those which had placed themselves under the protection of some baron. The number of boroughs in Great Britain, represented in parliament, is 222, sending 396 burgesses: of these, 171 are in England, and are represented by 339 burgesses. Several centuries have elapsed since the distribution of representatives among the towns was fixed. Many places, formerly populous, and entitled to be represented, now contain not more than two or three houses, and yet retain their original privilege. These are called *rotten boroughs*. (See *Parliament.*)

Borromei Islands (*Isole dei Conigli*, on account of the many rabbits there); four small islands in the Lago Maggiore, in Upper Italy, which is 30 miles in length and 7 or 8 in breadth. The greater part belongs to Piedmont, the rest to the kingdom of Lombardy. Its banks are formed of a beautiful Alpine country, with many villages, villas, vineyards, gardens and chestnut groves. The islands have their name from the family of Borromeo, which, for centuries, was in possession of the richest estates in the vicinity of the Lago Maggiore. Vitelliano Borromeo, in 1671, caused garden-soil to be spread over three naked rocks in this lake, and terraces to be walled up. Thus arose the Isola Bella, Isola Madre, L'Isolino and Isola dei Pescatori, the two first famous for their beautiful garden-grounds. The Isola Madre, abounding in pheasants, lies in the middle of the lake. It consists of seven terraces, with a kitchen-garden, cypresses, laurels, chestnuts and myrtles. The Isola Bella is loaded with artificial ornament. It contains a handsome palace of four stories, which lies near the shore, and is occupied, for some months in the year, by the count Borromeo. By means of the Grotte Terrene, it communicates with the gardens, which are laid out in the French taste, upon 10 terraces, rising above each other, and narrowing in proportion to their elevation. The whole has the appearance of a truncated pyramid, on the top of which stands a colossal unicorn, the armorial ensign of the Borromei. Orange, citron and lemon-trees, united by fine hedges, or forming arbors, breathe their fragrance; lofty laurels form a little grove; myrtles and cypresses are to be seen, together with pomegranate-trees, the fruit of which ripens here; for the mountains which crown the lake serve as a shelter against the cold winds. The climate of the Isola Madre, however, is milder than that of the Isola Bella. In the latter, the orange and citron-trees, &c. must be secured, in winter, by boards laid over them, and, in extreme cold, by applying charcoal-pans underneath. The inhabitants of the Isola dei Pescatori carry on a trade in fish to Milan and Piedmont, and are engaged in smuggling.

Borromeo, Carlo, count, of an ancient Milanese family, born, Oct. 2, 1538, at Arona, on Lago Maggiore, the family-seat of his virtuous and pious parents, was, at the age of 12, a commendatory abbot; studied the law at Pavia; was, in 1559, made doctor, and, in 1560, was successively appointed, by his uncle, Pius IV, apostolical prothonotary, referendary, cardinal, and archbishop of Milan. From his earliest youth, grave, pious and severe towards himself, the young ecclesiastic, at the age of 22, devoted himself to the duties of government with a conscientious zeal. As legate over Romagna, the march of Ancona and Bologna, he had a great share in the civil government: as protector of Portugal, of the Netherlands, of Switzerland, of the Franciscans, Carmelites, and of the knights of Malta, he administered several important branches of the spiritual government of the pope, who created him his grand penitentiary, and did nothing of importance without his advice. The re-opening and the results of the council of Trent, so advantageous to the papal authority, were chiefly effected by the great influence of B., which was felt during the whole sitting of the council. He did much for the embellishment of the papal buildings, employing even his own fortune for that purpose, and established many good institutions, as archbishop of Milan; improved the discipline of the clergy, founded schools, seminaries, a regular order of secular divines, libraries, hospitals, and was indefatigable

in doing good. All his virtues, however, could not save him from persecution and calumny; he was even severely attacked by the government, but no charge could be proved against him. He died, Nov. 3, 1584, at the age of 46, exhausted by mental sufferings, the accusations of his enemies, and his monastical penances. Miracles were immediately wrought at his tomb, and his canonization took place in 1616. Posterity will venerate the purity of his life, the energy and grandeur of his character, his exemplary administration, and the noble works which he accomplished; and, in spite of the bigotry which is to be attributed to the spirit of his age, and to his clerical relations, must acknowledge his truly Christian and apostolic character.

Borstell, Louis George Leopold von; lieutenant-general in the Prussian service, born in 1773. In the campaign against the French, in 1813, he commanded two brigades, and decided the battles of Grossbeeren and of Dennewitz; the latter, by hastening from Kropstädt to the field of battle, and, in opposition to the orders of the crown-prince of Sweden, joining the left wing of Bülow, in order to take Gehlsdorf, the key of the enemy's position. General B. was very active through the whole war, and, in 1815, had the command of the 2d Prussian corps. While he was occupied with its organization in Namur, some battalions of Saxon guards and grenadiers in Liege, excited by the news of the partition of their country, and by some incautious expressions, as well as by the measures which had been taken to gain over the Saxon officers and soldiers, broke the windows in the lodgings of prince Blücher, and committed other excesses. It was necessary that they should be punished in the most severe manner, as many thousand soldiers, formerly in the French and Westphalian service, but now united under Prussian, English, Belgian and other colors (many of them yet attached to Napoleon), were on the French borders, almost in sight of the enemy, and there was danger of a repetition of these scenes, if they were treated with clemency. Blücher therefore sent the guilty battalions to Namur, with orders to B. to disarm them, to burn their colors, and to shoot the ring-leaders. B. considered the order too severe: accustomed to expose his person and life for his own colors, he felt that such a disgrace must be worse than death; and he adopted the determination of not obeying the command, although pronounced in the most decided manner, and confirmed by a refusal to listen to his remonstrances. Blücher felt obliged to suspend him from his command, and to report his behavior to the king. Borstell returned into his country, and a court-martial condemned him to several years' confinement in a fortress. In the year 1815, he was pardoned and reinstated in his command by the king.

Bory-de-Saint-Vincent, J. B. G. M., born at Agen, 1772, displayed, from his earliest youth, an excessive ardor both on literary and political subjects. As a youth, he was full of zeal for natural history, and, as a man, his political views, though often erroneous, were always marked with genius. This is the character of the essays which he wrote in the *Nain Jaune*, and *Aristarque*, and of the defence of his principles, published in Aix-la-Chapelle. His *Essai sur les Isles Fortunés de l'Antique Atlantide ou Précis de l'Histoire générale de l'Archipel des Canaries*, and his treatise on the cryptogamic plants, are full of original views. He accompanied captain Baudin, in 1798, in his voyage round the coasts of New Holland, examined closely the volcanoes of the island of Bourbon, and was led to form many geological hypotheses. When military intendant of the general staff of marshal Soult, he showed much severity towards the commissaries. In 1815, he served as colonel in the campaign under Napoleon. After the battle of Waterloo, he proposed, July 1, to his colleagues of the chamber of representatives, not to submit voluntarily to the Bourbons. In consequence of the royal decree of Jan. 17, 1816, he emigrated, and lived in Aix-la-Chapelle and Halberstadt, and, afterwards, in Brussels, where, with van Mons, he edited a journal dedicated to natural science, which is at present continued in Paris. He wrote, also, an excellent work on the subterranean quarries in the lime mountains near Maestricht. After his return, in 1820, he was engaged in many of the journals of the liberal party. He reported the sittings of the deputies in the *Courier Français*, and assisted in Courtin's *Encyclopédie*.

Bos, Lambert, a profound philologist, was born at Worcum, in Friesland, 1670, and died in 1717. He studied in the university at Franeker, where his rapid and brilliant progress obtained for him the Greek professorship in 1704. His *Ellipses Græcæ* is a standard work, and has been often printed. The edition of Schäffer (Leipsic, 1808) is the best. The *Antiquit. Græc. Descriptio* has also passed through

numerous editions. His *Vet. Test. ex Versione LXX* is highly esteemed. He was also the author of several other valuable philological works.

Bosc, Louis Antoine Guillaume; superintendent of the French establishments for breeding sheep; member of several learned societies in France, &c.; born at Paris, in 1759, where his father was physician to the king; made himself known, from 1784 to 1788, as editor of the *Journal de Physique*. Proscribed in the reign of terror, in 1793, he took refuge in the forest of Montmorency; and, though daily exposed to the danger of being taken and executed, he occupied himself with labors in natural history. In 1796, the directory sent him to the U. States, as consul at Wilmington, and afterwards at New York; but the American government doubted whether the French directory was entitled to be represented by a consul. Thus exempt from official duties, he travelled through the U. States, collecting botanical and zoological specimens, and contributing to the advancement of his favorite studies. In 1799, B. was made *administrateur des hospices*. From that time, he has been actively engaged in researches in natural history. His brother, Etienne Bosc, an orator and author, combines a profound knowledge of natural history with an extensive acquaintance with political economy.

Boscan, Almogaver, Juan, a Spanish poet, born towards the close of the 15th century, at Barcelona, died about 1540. His parents, who belonged to the most ancient nobility, gave him a careful education. He followed the court of Charles V, and, in 1526, was attached to it for some time in Grenada. His noble manners and character gained him the favor of the emperor. The education of the duke of Alva was committed to him, and his instructions developed the great qualities which the duke afterwards displayed. After his marriage, B. lived at Barcelona, occupied in publishing his works, together with those of his deceased friend Garcilaso, in which he was employed at the time of his death. B. was persuaded to attempt Italian measures in Spanish, by Antonio Navagero, an Italian scholar and ambassador of the republic of Venice at the court of the emperor. Thus he became the creator of the Spanish sonnet, and, with Garcilaso, first used the *terzine* in his poetical epistles and elegies. In general, he distinguished himself by introducing Italian forms into Spanish poetry, which met with great opposition, and not less applause. The poems of B. are still esteemed. His other literary works, mostly translations, are forgotten.

Boscawen, Hon. Edward, a British admiral of the last century, was born in 1711, and distinguished himself at Porto Bello and at Carthagena, where he stormed a battery at the head of a part of his crew. In 1744, he was promoted to the Dreadnought, a sixty gun ship, in which he took the Media. Three years afterwards, he signalized himself under Anson, at the battle of cape Finisterre. Towards the close of this year, he was raised to the rank of rear-admiral, and despatched with a squadron to the East Indies. Though he failed in an attempt on Pondicherry, he succeeded in making himself master of Madras, and returned to England, where he obtained a seat at the admiralty board. In 1755, he again sailed for North America, and, in an action with a French squadron, two ships of the line fell into his hands. In 1758, in conjunction with lord Amherst, who commanded the land forces, he succeeded in reducing Louisbourg and cape Breton, and, the year following, having then the command in the Mediterranean, pursued the Toulon fleet, under De la Clue, through the straits of Gibraltar, and, coming up with it in Lagos bay, completely defeated it, burning two ships and taking three. For these services, he received the thanks of parliament and £3000 a year, with the rank of general of marines, in 1760. He died in the following year. He sat in the parliament of 1743, as member for Truro, in his native county.

Boscovich, Roger Joseph, an astronomer and geometrician of distinguished eminence in the 18th century, was a native of Ragusa, in Dalmatia. He was educated among the Jesuits, and, entering into their order, was appointed professor of mathematics in the Roman college, before he had entirely completed the course of his studies. He was employed by pope Benedict XIV in various undertakings, and, in 1750, began the measurement of a degree of the meridian in the Ecclesiastical States, which operation occupied him for two years. He afterwards visited the Pontine marsh, to give advice respecting the draining of it. He was then intrusted, by the republic of Lucca, with the defence of its interests, in a dispute about boundaries with the government of Tuscany. This affair obliged him to go to Vienna, and, having terminated it with success, he visited Paris and London. He was elected a fellow of the

royal society, and dedicated to this body a Latin poem on eclipses. Returning to Italy, he was appointed mathematical professor in the university of Pavia; whence, in 1770, he removed to Milan, and there erected the celebrated observatory at the college of Brera. On the suppression of the order of Jesuits, he accepted an invitation to France from Louis XV, who gave him a pension of 8000 livres, with the office of director of optics for the navy. This appointment induced him to pay particular attention to that part of optical science which treats of the theory of achromatic telescopes, on which subject he wrote a treatise of considerable extent. He was obliged to leave Paris, in 1783, on account of ill health, when he retired to Milan, where he died Feb. 12, 1787. An edition of the works of father B. was published by himself, in 5 vols., 4to., 1785. His *Theoria Philosophiæ Naturalis reducta ad unicam Legem Virium in Natura existentium*, first published in 1758, is a curious production, containing speculations of which doctor Priestley availed himself in his writings in favor of materialism.

Boshmen, Bosjesmen, or Bushmen. (See *Hottentots.*)

Boshuanas. (See *Bushwanas.*)

Bosio, N.; the most celebrated of living French sculptors. His *Hercules*, exhibited in 1814, has been particularly admired. In the following year, he produced another excellent statue, his *Hermaphrodite*. The artist received from Napoleon the cross of the legion of honor in 1815. The royal government has since honored him with important commissions, and confirmed the choice of the academy of the fine arts, which elected him a member. Since 1823, his statue of Henry IV, as a child, met with public admiration. His statue of Louis XIV was destined for the *place des victoires* at Paris. The execution is excellent; but the transfer of the support of the horse to its tail might be objected to as contrary to modern taste.

Bosjesmen. (See *Hottentots.*)

Bosnia; a Turkish province, with the title of a kingdom, which comprehends, besides the ancient B., part of Croatia (Sanjiak Bielogrod), between the rivers Unna and Verbas, a tract of Dalmatia and Herzogovina, and is bounded N. by Sclavonia, W. by Croatia, S. by Dalmatia and the Adriatic sea, and E. by Servia. B. contains 22,500 square miles, with 850,000 inhabitants, mostly of Sclavonian origin, Bosniacs and Morlacs, among whom are 50,000 Turkish militia. The inhabitants are two thirds Christians, mostly of the Greek church, and one third Turks, who possess nearly all the territorial property as allodiums or feuds, besides Jews and Gipsies. The country is level towards the north; in the south, mountainous and woody. Its chief rivers are the Save, the Verbas, the Bosna, Rama and Drina. B. contains fertile fields, orchards and vineyards: the breed of cattle is excelient, and the mountains furnish good iron, of which a great part is manufactured in the country into guns and blades. The other articles manufactured are leather, morocco, and coarse woollen cloths. In the 12th and 13th centuries, B. belonged to Hungary. In 1339, it fell into the hands of Stephen, king of Servia. After his death, it remained independent, and the Ban Twartko took the title of king in 1370. In 1401, it became tributary to the Turks, and, since 1463, has been a Turkish province. It is divided into the southern and northern parts, or Upper and Lower B. The former is called sometimes *Herzogovina*, or the *duchy of Saba*, because the emperor Frederic III bestowed the title of duke on the ruler of this district in 1440. Travnik is the residence of the pacha of B. The capital of the country is Bosna-Serai, or Saraievo (in Italian, *Seraglio*), at the confluence of the Migliazza with the Bosna, with 15,000 mostly miserable houses, and 60,000 inhabitants, including the garrison of 10,000 janizaries. The citadel lies at some distance from the town. The taxes of Saraievo are an appanage of the mother of the sultan. Zwornick, Banjaluka and Turkish Gradiska are also important in historical and statistical points of view. The fear of losing their property is the chief cause of the adherence of the Bosniacs to the Turkish government, since, in case of the conquest of B. by the Christians, they expect the same treatment which the Christians formerly experienced, when it was conquered by the Turks.

Bosphorus. The strait which leads from the Black sea into the Propontis, or sea of Marmora, was formerly so called, either because Io, after being metamorphosed into a cow, passed over at this place, or because the strait is so narrow that an ox can swim across. When other straits were afterwards called by the same name, this was called *B. Thracicus*. Over this channel (5 stadia, about 3300 feet wide) Darius constructed a bridge of boats, on his expedition against the Scythians. *Bosphorus Cimmericus* was the name given by the ancients to the strait that leads

from the Black sea into the sea of Azof. The Italians, who formerly traded in these regions, called it *bocca di S. Giovanni*, or *estretto di Caffa*. There was also anciently a kingdom of the name of B., so called from the straits, on both sides of which it was situated. In Panticapæum (at present, *Kertsch*, q. v.) a Milesian colony in the Tauric Chersonese, the Archæanaktides established this kingdom, B. C. 479, and reigned till B. C. 437. Spartacus was the first king. Under his successor, Satyrus, the kingdom was extended to the coast of Asia, and his son Leucon acquired Theodosia, B. C. 300. He improved the commerce of the country (in particular by the exportation of corn to Athens, also of fishes, fur, skins, bees-wax and slaves). From him his descendants were called *Leuconides*. Leucanor became tributary to the Scythians 290 B. C., and the tribute was finally so oppressive, that Parisades, the last of the Leuconides, preferred to submit to Mithridates, the king of Pontus, who vanquished the Scythians under Scilurus, 116 B. C., and made his son king of B. The latter killed himself. At the death of Mithridates, the Romans gave the country, B. C. 64, to his second son, Pharnaces, who was afterwards murdered. The Romans placed different princes successively upon the throne, who all pretended to be descendants of Mithridates. When this family became extinct, A. D. 259, the Sarmatians took possession of the kingdom, from whom it was taken by the Chersonides, in 344. The Tauric Chersonese then belonged to the Eastern empire, till it was seized by the Chazars, and afterwards by the Tartars, under the Mongol princes. (See *Tauria*.)

Bossi, Charles Aurele, baron de, born at Turin, 1758, son of count Bossi de Sainte-Agathe, is a lyric poet of reputation. In his 18th year, he published two tragedies—the *Circassians* and *Rhea Sylvia*. His great poem on the French revolution, entitled *L'Oromasia*, and a complete collection of his poems, appeared in London, 1814. Only a few copies were struck off. His present life, in Paris, is that of a scholar and a private man. His former political life placed him in difficult situations, and has exposed his conduct to reproach.

Bossuet, Jacques Benigne, bishop of Meaux, born at Dijon, 1627, was six years old when his father became member of the parliament at Metz. The son remained at Dijon, in the college of the Jesuits. By chance, the boy got possession of a Latin Bible, which made an indelible impression upon him. At the age of 15, he was sent to Paris, where he entered the college of Navarre, the president of which, Nicholas Cornet, took pleasure in forming his mind. B., under the direction of this worthy teacher, studied Greek and the Holy Scriptures, read the ancient classics, and investigated the Cartesian philosophy. He was made doctor of the Sorbonne and canon in Metz. Here he edified his hearers by his preaching and example; was commissioned by his bishop to refute the catechism of the Protestant minister Paul Ferry, and did it in such a way, that even his antagonists were obliged to respect him. The queen mother (Anne of Austria) was induced, by this work, to employ B. in the conversion of the Protestants in the diocese of Metz. This business often called him to Paris, where his sermons met with great approbation. The sermon which he delivered in 1668, on the occasion of marshal Turenne's joining the Catholic church, procured him the bishopric of Condom. In 1670, the king charged him with the education of the dauphin. In consequence of this appointment, he resigned his bishopric in 1671, because he thought it inconsistent with his duty to retain it during a continual absence from his diocese. At this time, he delivered his sermon at the funeral of madame, the duchess of Orleans, a princess, who, in the midst of a brilliant court, of which she was the ornament, died suddenly in the bloom of youth. His last sermon of this kind (that at the tomb of the great Condé) is considered as a masterpiece. The manly vigor which characterized his orations is seen also in the *Discours sur l'Histoire Universelle*, designed for the instruction of his royal pupil. The care which he took of the education of this prince was rewarded, in 1680, by the office of the first almoner of the dauphin; in 1681, by the bishopric of Meaux; in 1697, he obtained the dignity of a counsellor of state, and, a year afterwards, that of the first almoner of the duchess of Burgundy. His practice and his doctrine were equally severe. All his time was divided between his studies and the execution of his official duties; he seldom allowed himself any recreation. The last years of his life he passed among his flock, in the midst of whom he died, in 1704. The learned Benedictines of the brotherhood of St. Maur have lately published a complete edition of all the works of B. The style of B. is full of

energy, but not without defects: his Latin style is hard. The French academy consider him among their most renowned members. His life has been written by M. de Bausset. (For his dispute with the archbishop of Cambray, Fenelon, see *Fenelon* and *Quietism*.)

Bostangi (*gardeners*); the guard of the sultans in the seraglio, whose overseer is called *bostangi baschi*, and has the superintendence over the gardens of the seraglio, over the channel of the Black sea, and the imperial summer residences. The *bostangi baschi* accompanies the sultan in all his rides, and has the privilege of wearing a beard. The *bostangi* are also the boatmen and executioners of the sultan.

Boston (anciently *Botolph's Town*); a town of England, in Lincoln; 34 miles S. S. E. Lincoln, 115 N. London; lon. 0° 2′ W.; lat. 52° 48′ N. Population in 1801, 5926; in 1811, 8113. It is nearly surrounded by fens, on the Witham, which is navigable, and forms a port, well frequented, and much assisted by navigable canals. It has four annual fairs, and markets on Wednesday and Saturday. It has a flourishing trade with the Baltic for hemp, tar, timber, &c. In former periods, it stood high as a commercial town. The church is a handsome structure, and serves as a mark to seamen.

Boston, the capital of Massachusetts and the largest city in New England, lies 14 miles S. W. Salem, 40 N. N. E. Providence, 56 S. W. Portsmouth, 100 E. N. E. Hartford, 210 N. E. New York, 300 S. S. E. Montreal, 300 N. E. Philadelphia, 436 N. Washington; lon. 71° 4′ W.; lat. 42° 22′ N. Pop. in 1765, 15,520; in 1790, 18,038; in 1800, 24,937; in 1810, 33,250; in 1820, 43,298; in 1825, 48,281. Its population, in 1829, amounted to 58,281. It is situated at the bottom of Massachusetts bay, at the mouth of Charles river. It stands principally on a small peninsula of elevated ground, two miles and three quarters in length and one in breadth, and is connected with the continent by a narrow neck of land, and by seven bridges. Including South Boston, which is without the peninsula, its whole extent is nearly three square miles. It has a capacious harbor, of sufficient depth of water for the largest ships of war to enter safely and lie at anchor, protected from storms by a great number of islands, on several of which are fortifications. The bridges, with one exception, are of wood. That which leads from B. to Cambridge is 3483 feet in length, and is supported by 180 piers. The *western avenue*, so called, leading across the bay, from the western part of the city to Roxbury, is 8000 feet in length, and is formed of solid earth, supported on each side by walls of stone. It serves the double purpose of a bridge and a dam, by means of which and a cross dam, two large basins are formed, one of which is filled at every flood-tide, and the other is emptied at every ebb, whereby a perpetual water-power is created for carrying mills and machinery. This dam was built at a cost exceeding $600,000. One of the bridges is free; all the others are toll bridges. The streets are mostly narrow and irregular, and some of them are crooked. The wharves are, in general, spacious, and afford ample accommodation to shipping, and store-houses for merchandise. Long wharf is 1650 feet in length; Central wharf, 1240 feet long and 150 wide. The wharves and many of the streets have been made by raising the ground formerly covered by the tide. The number of dwelling-houses is about 10,000, besides a great number of store-houses and shops. A great part of the buildings are of brick, four stories in height. Many of them are of hammered granite and sienite. These are excellent building materials, of a beautiful gray color, hard and durable, splitting easily, and readily wrought into the required form. Many of the dwelling houses are large and well built. The principal public buildings are the state-house, which is of brick, is situated on the highest part of the city, and commands a view of the country and bay for many miles round; the county court-house, which is of stone; Faneuil hall, in which town-meetings and public assemblies for political discussions are held; the Massachusetts general hospital, and the Faneuil hall market, two handsome buildings of granite, the latter two stories in height, 540 feet in length and 50 feet in width; about 40 churches; 10 public school-houses; a house of industry; a house of correction; a county jail; and two theatres. Among the best specimens of architecture are the market-house, Trinity church, the general hospital, several of the bank buildings, and the Tremont house, the front of which is built of gray sienite, and is ornamented with a handsome portico of the Doric order, with fluted pillars. This last-named building is finely situated, and is the most elegant and commodious hotel in the U. States. The city is divided into 12 wards. The municipal government is vested in a

mayor, 8 aldermen, and a common council of 48 members. The executive powers are exercised by the mayor and aldermen, and measures of a legislative character are adopted by a concurrent act of that board and of the common council. These officers are chosen annually by the citizens, voting in the wards in which they reside. Ward officers are also chosen annually to superintend the elections. The city, with the small town of Chelsea, forms the county of Suffolk. The county is represented in the senate of the state by six senators. Until the year 1821, the municipal affairs of the town were superintended by a board of seven select-men, annually chosen; and all measures for raising and granting money, establishing schools, and making municipal regulations, were adopted in town-meeting, or assembly of the qualified voters, held in Faneuil hall. All public officers were chosen in town-meeting. There is a police court of three justices, for examining all criminal charges and the trial of minor offences; and a municipal court, held by a single judge, which has jurisdiction of all criminal causes not capital, which are tried by jury. The annual expenditures of the city amount to about $300,000; of which sum $53,000 are expended for the support of schools; $50,000 for paving, repairing and widening streets; $30,000 for the support and relief of the poor, &c. The public schools are, a Latin grammar school, open to all boys between the ages of 9 and 15; a high school, in which are taught the various branches of mathematics and other branches of English education; 8 grammar and writing schools, 7 of which have 2 masters each—a grammar and a writing master, who teach, alternately, boys and girls, at different hours; one African school; and 57 primary schools, which are kept by women, and in which children from four to seven years of age are taught to read, spell and write. The schools are under the direction of a school committee, consisting of the mayor and aldermen and 12 members, annually elected. The principal literary institution in the vicinity, Harvard university, is situated at Cambridge, three miles from the city. The medical branch of this institution is established in Boston, where the professors reside. The Boston athenæum has two large buildings; one containing a library, and the other a picture gallery, a hall for public lectures, and other rooms for scientific purposes. The library consists of about 24,000 volumes. There are many literary, scientific and charitable societies in B. Among the former are the American academy of arts and sciences, which has published four volumes of memoirs; the historical society, which has published 22 volumes; the Massachusetts medical society; the mechanic institution, under whose patronage courses of lectures for mechanics are delivered annually. Among the latter are the humane society; the Boston dispensary, by which the poor are furnished with medical attendance and medicine free of expense; the female asylum, for the maintenance of female orphans; the boys' asylum, and several others. The pursuits of the inhabitants are in a great measure mercantile. They carry on an extensive foreign trade, and own many ships, which are employed not only in the importing, exporting and coasting trade, but in trade between foreign markets. B. is the second commercial town in the U. States. The value of the annual imports is about $13,000,000, and that of the exports $9,000,000. The amount of shipping owned in B., at the commencement of 1828, was 161,583 tons. Many kinds of manufactures are carried on here. The capitalists of B. are also the principal proprietors in the joint stock manufacturing companies established in Lowell, Waltham, and other towns in Massachusetts and some of the neighboring states. Great improvements have been made, within a few years, in the appearance of the city by the widening and repaving of streets, the erection of new and elegant buildings, and the embellishment of the public grounds. The principal public square is the common, which, with the mall, a gravelled walk which surrounds it, covers a surface of about 50 acres. It is a handsome piece of ground, has a sloping and undulating surface, is partly shaded with elms, and is surrounded by some of the most elegant buildings in the city. There are six newspapers published daily, three semi-weekly, several weekly, and a number of other periodical journals, some of which are conducted with great ability, and are extensively circulated. Among these are the North American Review and the Christian Examiner. B. was founded in August, 1630. It received the name of B. from a borough of the same name in Lincolnshire, England (from which a part of the inhabitants emigrated), by a vote of the court of assistants, September 7, and, on the 19th of October of the same year, the general court of the colony was held there. This general court was not com-

posed of representatives, but of the proprietors under the charter, acting in their own right. The first church was built in 1632. The Middlesex canal, leading from Boston harbor to the Merrimack river, forms with this river a navigable channel to Concord in New Hampshire. There are no other means of transportation to and from the interior, except such as are afforded by the common roads. In this respect, B. is behind the other principal cities of the U. States, and its inland trade is much less than it would otherwise have been. Projects are now before the public for remedying this inconvenience by the construction of rail-roads. The population has doubled from the year 1783 once in about 23 years. Previously to that date, the population of the town had been, for 100 years, nearly stationary, and for 50 years entirely so; its trade, and that of the colony, having been subjected to severe restraints and heavy burdens In the reign of Charles II, the inhabitants of the colony fell under the royal displeasure, and, in 1683, a writ of *quo warranto* was issued against the charter of the colony. A legal town-meeting of the freemen of B. was held, and the question was put to vote, whether it was their wish that the general court should resign the charter and the privileges therein granted, and it was resolved in the negative unanimously. The charter, however, was declared forfeited by a decree of the court of chancery, and, soon after, sir Edmund Andros was appointed the first royal governor. His administration, which endured for two or three years, was arbitrary and oppressive. In April, 1689, the people of B. took forcible possession of the fort in B., and the castle in the harbor, turned the guns upon the frigate Rose, and compelled her to surrender, seized the governor, and held him a close prisoner under guard in the castle. A little more than a month afterwards, news was received of the revolution in England, and the event was celebrated with great rejoicings. In 1765, after the passage of the stamp act, the person appointed distributor of stamps was compelled, by threats of violence, to decline the acceptance of the office, and the house of the lieutenant-governor was destroyed by a mob. A large military and naval force was stationed at B. for the purpose of overawing the people. On the evening of March 5, 1770, a sergeant's guard fired upon a crowd of people, who were surrounding them, and pelting them with snow-balls, and killed five men. Dec. 16, 1773, on the arrival of three ships loaded with tea, after various unsuccessful attempts had been made by public meetings of the citizens, to prevent its being landed and sold, in violation of the non-importation resolves of the people, a number of men, disguised as Indians, went on board the ships, and threw all the tea overboard. In the following spring, the port of B. was closed by an act of parliament (Boston Port-bill), and the landing and shipping of goods within the harbor was ordered to be discontinued. The session of the general court was removed to Salem, and additional bodies of troops and a military governor were ordered to B. In 1775, the war commenced with the battles of Lexington and Bunker hill, and the town of B., in which the British troops were encamped to the number of 10,000 men, was besieged by the American army. The siege continued until the March following, when the British troops evacuated the town and castle, embarked on board their own ships, and withdrew to another part of the country. The inhabitants were among the earliest and most ardent assertors of the rights of the people, and among the earliest advocates and active supporters of independence. During the revolutionary struggle, popular meetings were frequent. These meetings were usually held in Faneuil hall. Benjamin Franklin was born in B., Jan. 17, 1706.

Boswell, James, the friend and biographer of Johnson, born at Edinburgh, in 1740, studied in his native city, in Glasgow, and in the Dutch university of Utrecht. He afterwards resided several times in London, and cultivated the acquaintance of the most distinguished men of his time. Here he became acquainted with Johnson—a circumstance which he himself calls the most important event of his life. He afterwards visited Voltaire at Ferney, Rousseau at Neufchatel, and Paoli in Corsica, with whom he became intimate. He then returned by the way of Paris to Scotland, and devoted himself to the bar. In 1768, when Corsica attracted so much attention, he published his valuable Account of Corsica, with Memoirs of Paoli. At a later period, he settled at London, where he lived in the closest intimacy with Johnson. In 1773, he accompanied him on a tour to the Scottish Highlands and Hebrides, and published an account of the excursion after their return. After the death of Johnson, he became his biographer. The minuteness and accuracy of his account, and the store of literary anecdote which

it contains, render this work very valuable. It was published in 2 vols. 4to., in 1790, and has been repeatedly reprinted. B. died in 1795.

Bosworth; a small town in the county of Leicester, England, about three miles from which is Bosworth field, where was fought, in 1458, the memorable battle between Richard III and the earl of Richmond, afterwards Henry VII. This battle, in which Richard lost his life, put a period to the long and bloody wars of the roses, between the houses of York and Lancaster.

Botanical Gardens; establishments in which plants from all climates, and all parts of the world, are cultivated in the open air, in green-houses and hot-houses. The object of such an establishment is partly information and the improvement of science, partly pleasure and luxury. Theophrastus seems to have instituted the first botanical garden. He bequeathed it to his scholars. Attalus Philometor, king of Pergamus, and Mithridates Eupator of Pontus, vied with each other in the establishment of gardens, where they cultivated poisons and antidotes. Pliny mentions a botanical garden which was laid out in Italy by Antonius Castor, son-in-law of king Dejotarus. In the middle ages, Charlemagne exerted a favorable influence, by establishing gardens near the imperial palaces and castles, specifying even the single shrubs, which were to be planted. In the beginning of the 14th century, Matthæus Sylvaticus, at Salerno, founded the first *botanical garden*, properly so called. The republic of Venice, soon afterwards, in 1333, instituted a public medical garden, and had the plants painted by Amadei. The paintings are still preserved. After the time of the revival of learning, the first botanical gardens, which contained, however, for the greater part, merely medicinal plants, were laid out in Italy. Duke Alfonso of Este was the founder of an excellent institution of this kind in Ferrara; then followed the gardens in Padua, Pisa and Pavia. Montpellier, in France, first imitated his example. The academical garden in Leyden was instituted in 1577; that of Paris, in 1633; and about the same time the first botanical gardens in Germany and England were founded. At present, the largest and most renowned in Germany are the imperial Austrian, at Schönbrunn, under the inspection of Jacquin; the royal Prussian, near Berlin, under Link and Otto; that of Weimar, in Belvedere; that of the grand duke of Baden, at Schwetzingen; and the royal Hanoverian, in Herrnhausen. In Great Britain, the royal garden at Kew; the Chelsea garden, founded for the London apothecaries; and that at Liverpool, under the superintendence of Shepherd, are the most celebrated scientific institutions, to say nothing of the extensive gardens where plants are raised for sale. In France, the royal garden in Paris, under the inspection of Desfontaines and Thouin, is the principal. Formerly, that of Malmaison, founded by the empress Josephine, was the most famous (see *Bonpland*). In Italy, the garden of the university at Turin, superintended by Capelli, is, perhaps, the best; in Spain, the royal garden at Madrid, under Mariano Lagasca; in Denmark, the garden of the university at Copenhagen, under the superintendence of Hornemann. In Russia, the excellent institution of the count Alexis Rasumowsky, at Corinka, near Moscow, deserves to be placed by the side of the most celebrated establishments. The principal botanical gardens in the U. States are in New York, in Philadelphia and Cambridge. In Asia, the garden of the East India company at Calcutta is the most important.—At present, almost all universities and learned academies, as well as many rich private proprietors, have botanical gardens.

Botany, the science of plants, may be divided into two parts, one of which describes their external appearance, and is sometimes called *phytography;* the other treats of their internal structure and organic action, and may be termed *philosophical botany* or *phytonomy*. The former requires a perfect knowledge of terminology, the latter a thorough knowledge of the plants themselves, with a view to a systematic classification of them, according to fixed principles. The necessity of such a classification must have been felt as soon as the number of known plants became great, and their relations and analogies obvious. At the time of the revival of letters, hardly 1500 plants were known from the descriptions of the ancients. At present, at a moderate estimation, more than 50,000 have been described. It is obviously impossible to introduce order into this infinite chaos, or to acquire any distinct knowledge, without the aid of general principles. Even in the 16th and 17th centuries, the founders of botanical science perceived that in plants, as well as in all other natural bodies, the essential and necessary parts must be distinguished from the accidental, and that a

scientific classification must be founded on the former alone. Now it was obvious that the production of fruit and seed is the ultimate object of vegetation, and, accordingly, in the first attempts at classification, the relations and component parts of the seed and of the fruit were made the foundation of the arrangement. This arrangement was confirmed by an observation of the uniformity of nature in the formation of those parts in plants of similar kinds. But it was found, also, that uniformity in these formations prevailed in too great a number of plants to allow them alone to be made the distinguishing characteristics. It became, therefore, necessary to have recourse to other parts. The flower was first chosen, as it presents a great variety of forms, and, at the same time, a uniformity of structure. But the limits to this uniformity, and the absence of flowers in innumerable plants, with the consideration that they are not essential, suggested to the immortal founder of modern scientific botany the idea that the sexual parts are most intimately related to the growth of the fruit, and that they are, therefore, of the greatest importance, and furnish better grounds of classification than the flower. A general principle was thus established, fertile in consequences, excellently adapted to facilitate the diffusion and extend the sphere of the science. The Linnæan system was founded exclusively on the relations of the sexual parts. Linnæus divided all known plants into two general divisions, one of which has visible sexual parts (*phanerogamous*), while in the other they are invisible or wanting (*cryptogamous*). The first division comprehends the 23 first classes of his system, which are distinguished according to the situation of the sexual parts in the same or in separate flowers, their number, their length, &c. If any system has introduced order in the midst of variety, and shed light on the immense diversities of nature, it is that of Linnæus. Hence, even those who have departed from it in their writings have considered it necessary for elementary instruction. Many objections, however, are brought against it. It has been made a question whether it is fitted for the investigation and classification of unknown plants. It is said that the sexual parts may be very different in similar plants; that he never will have a complete idea of nature, who proceeds only on one principle. It has, therefore, been thought necessary to find a more natural arrangement. (See *Plants.*) In order to follow nature, we must look at every part; at the internal structure, as well as the external relations, analogies and differences. This can be done only by a profound and toilsome investigation, of which the mere follower of a system has hardly a notion. Seed is considered as the ultimate object of vegetation. Its parts, their formation, situation, and other relations, must be critically examined. The most perfect natural system, in modern times, is that of Jussieu, particularly as enlarged by Decandolle. (See Decandolle's *Regni vegetabilis Systema naturale*, his *Théorie elémentaire de la Botanique*, and his *Prodromus Systematis naturalis Regni vegetabilis;* also the *Nouveaux Elémens de la Botanique*, by Richard.)

The second general division of this science begins with the investigation of the internal structure, or the anatomy of plants. This study has been recently cultivated, by the Germans, to an extent, which, 30 years ago, could hardly have been conceived. It is closely connected with the first division, if the plants are studied in their natural order. Without good microscopes, and the aid of the best works in this branch, a distinct knowledge of the structure of plants cannot easily be obtained. Chemical botany must be connected with the anatomy of plants. Their constituent parts, their various changes, and the different combinations of their liquid and solid parts, are to be examined. From those, at last, we ascend to the laws of vegetable life, which are, in general, the same as those of animal life. Animal physiology must, therefore, be intimately united with the physiology of plants. Connected with the latter are two branches of knowledge, which the botanist cannot well dispense with, since they offer the most important conclusions on the economy of nature, on the history of the earth, and on the application of science to the arts. These are, first, the science of the deformities and diseases of plants, which can be made certain only by correct physiological views, and which is of great value in gardening, agriculture, and the cultivation of woods; and, second, a knowledge of the mode in which plants have been spread over the earth. If we study the forms of vegetation which have come to us from distant ages, in the *flötz* formations, this observation affords the most interesting discoveries in relation to the history of our earth. If we trace the laws by which vegetation seems to have been distributed, we extend our knowledge of the general action of nature, and arrive at conclusions which may be of

great practical utility. The work of Sprengel on the structure and nature of plants, is, perhaps, the most complete. Separate parts of the anatomy of plants have been treated of by Link, Treviranus and Moldenhawer; vegetable chemistry by Senebier, Saussure and Schrader.

History of the Science. Of the two general divisions of botany, the physiological or philosophical is the elder. Before the Greek philosophers attempted to distinguish classes and species of plants, they examined the laws of vegetable life, the difference of plants from animals, and, as far as it could be done with the naked eye, their structure. Theophrastus of Eresus is the creator of philosophical botany, which he treated on a great and original plan. From the writings of the Alexandrians, and from original observations, Dioscorides of Anazarba, in the first century of the Christian era, compiled a work, which contains imperfect descriptions of about 1200 plants, the medical qualities of which were more attended to by the author than the description of their characteristics or their philosophical classification. This work continued, for 15 centuries, the only source of botanical knowledge. The Persian and Arabian physicians added about 200 plants, which were unknown to the Greeks, and, consequently, the number of known plants, at the time of the revival of letters, was about 1400. Germany has the merit of having founded historical botany. The obvious imperfections of Dioscorides, when the plants of Germany came to be investigated, and the extravagances into which those persons fell, who attempted to apply his descriptions to German plants, impelled Hieronymus of Brunswick, Otho Braunfelsius, Leon. Fuchsius, Hieron. Tragus and Conrad Gesner, to examine the vegetable productions of their country, independently of Dioscorides, and to represent them in wood-cuts. Gesner first started the idea that the parts of fructification were the most essential, and that plants must be classified with reference to them. They were followed, in the 16th century, by the Italians, Peter Matthiolus, Andr. Cæsalpinus, Prosp. Alpinus and Fab. Columna; the Belgians, Dodonæus, Clusius and Lobelius. Among the botanists of this period, who extended the science by their labors in collecting specimens, are the French Da'echamp, the English Gerard, the German Joach. Camerarius, Tabernæmontanus and John Bauhin, whose brother Gaspard not only increased the number of known plants by numerous discoveries, but endeavored to reform the nomenclature, which had become much confused by the multiplication of names of the same plant. These are the fathers of botany, whose standard works still reward examination. By the exertions of these men, the number of known plants, at the beginning of the 17th century, amounted to 5500. The necessity of classification increased with the quantity of materials. Lobelius and John Bauhin adopted the natural division of trees, grasses, &c., without reference to any general principle. Andreas Cæsalpinus, by the advice of Conrad Gesner, fixed upon the fruit and the seed as the foundation of a classification, which is still retained by many of his followers, who are called *fructists*. In the 17th century, new methods were introduced by Robert Morison and John Ray; the latter of whom attended to the structure of the corolla and its parts, while Rivinus considered only the regularity or irregularity of its shape, and Tournefort its resemblance to other objects. The number of known plants was increased by Morison, Plukenet, Barrelier, Boccone, van Rheede, Petiver and Plumier. In the 17th century, the foundation of *botanical anatomy* was laid by Grew and Malpighi; *botanical chemistry* was founded by Homberg, Dodart and Mariotte; and the difference of sex was discovered by Grew, Morland and Rud. Jak. Camerarius. This discovery Micheli attempted to extend even to the lower degrees of organization, moss, lichens and sponges. To such predecessors, and to the great collectors of herbariums, Rumphius, Parkinson, Sloane, Flacourt, Sommelyn, Buxbaum, Ammann and Feuillée, the immortal Linnæus was indebted, in part, for the idea on which his system was founded, and for his great stores of botanical knowledge. When the first edition of his *Species Plantarum* was published, he was acquainted with 7300 species; in the second edition, with 8800. If we consider that a moderate herbarium now contains from 11,000 to 12,000 species, we must be astonished at the increase in the number of known plants in 60 years. The two sexes of Linnæus were afterwards extended, by Dillenius, Schmidel and Hedwig, to the imperfect vegetables. This system was opposed by Adanson, Alston and Haller; it was extended still farther by Schreber Scopoli, Crantz and Jacquin. In the 18th century, numerous discoveries in the vegetable world were made by John Burmann, J. G. Gmelin, Pallas, Forskål, For-

ster, Hasselquist, Browne, Jacquin, Aublet, Sommerson, Stahl, Swartz, Aiton. Vegetable physiology was enlarged and enriched with new discoveries by Bonnet, Du Hamel, Hill, Koelreuter and Sennebier, and thus botany approached its present degree of improvement. (See Sprengel's *History of Botany*, 2 vols., Leipsic, 1818.) An outline of the Linnæan system is to be found in the article *Plants*.

Botany Bay. (See *New South Wales*.)

Both, John and Andrew; born at Utrecht, in 1610, the sons of a glass painter, who instructed them in the rudiments of drawing. They afterwards made further progress in the school of Abraham Bloemaert, and went, at an early age, together to Italy. John, attracted by the works of Claude Lorraine, chose him for his model; Andrew preferred the painting of the human figure, and imitated the style of Bamboccio. But, although their inclinations led them in different directions, their mutual friendship often united their talents in the same works. Thus Andrew painted the figures in the landscapes of his brother; and their labors harmonized so well, that their pictures could not be suspected of coming from different hands. The ease and fine coloring, in the beautiful figures of John, cannot be overlooked, in spite of the excess of yellow, sometimes found in them. His fame has been confirmed by time, and his merit, as well as his residence in Italy, has procured him the name of *Both of Italy*. Andrew was drowned at Venice, in 1650. John, inconsolable for his loss, abandoned Italy, and returned to Utrecht, where he died shortly after. The plates which John Both has himself etched from his principal works are much valued.

Bothnia, East, a province formerly belonging to Sweden, but ceded to Russia in 1809, situated on the E. side of the gulf of Bothnia, bounded N. by Lapland, E. by the Russian government of Archangel and Olonetz, S. by Finland, and W. by the gulf of Bothnia, is about 300 miles in length, and from 60 to 210 in breadth. Towards the south, and on the sea-coast, the land is low and marshy. The summers are often so cold as to destroy a great part of the crops. Population, about 70,000. The cattle are small, and bears are numerous. The salmon fishery is abundant, and that of pearls often successful. The principal exports are timber, butter, whale-oil, pitch, tar, &c. The principal towns are Cajana, or Cajaneborg, Ulea, Christinestadt, &c.

Bothnia, West; a province of Sweden, situated on the W. side of the gulf of Bothnia, bounded N. and W. by Lapland, S. by Angermania, and E. by the gulf of Bothnia. The country is tolerably fertile, but sudden frosts, in the month of July, often destroy the laborer's hopes. There are mines of copper and iron. The principal towns are Umea, Pithea and Lulea. Population, about 56,000.

Bothnia, Gulf of; the northern part of the Baltic sea, which separates Sweden from Finland. It commences at the island of Aland, 61° N. lat., and extends to 66°: its length is about 360 miles, its breadth from 90 to 130, and its depth from 20 to 50 fathoms. It freezes over in the winter, so as to be passed by sledges and carriages. Its water contains only one third of the proportion of salt found in other sea-water. It abounds in salmon and in seals, which furnish great quantities of train-oil.—This gulf is gradually decreasing in extent.

Bothwell; a village of Scotland, on the Clyde, nine miles from Glasgow. At Bothwell bridge, a decisive battle was fought, in 1679, between the Scottish covenanters, commanded principally by their clergy, and the royal forces, commanded by the duke of Monmouth, in which the former were totally routed.

Bothwell, James Hepburn, earl, is known in Scotch history by his marriage with queen Mary. It is supposed, by some historians, that he was deeply concerned in the murder of the unfortunate Darnley, Mary's husband, and that he was even supported by the deluded queen. He was charged with the crime, and tried, but acquitted. After the death of Darnley, he seized the queen at Edinburgh, and, carrying her a prisoner to Dunbar castle, prevailed upon her to marry him, after he had divorced his own wife. Though seemingly secure in the possession of power, and though created earl of Orkney by the unfortunate queen, he soon found that his conduct had roused the indignation of the kingdom. Mary found not in him the fond husband she expected: he became unkind and brutal. A confederacy was formed against him by the barons, the queen was liberated from his power, and he escaped to the Orkneys, and afterwards to Denmark, where he died, 1577. In his last moments, it is said, that, with an agonizing conscience, he confessed his own guilt, and the queen's innocence, of the murder of Darnley.

Botocudes, savages of Brazil, received their name from the large wooden pegs,

with which they ornament their ears and lips. A small part of these savages is now somewhat civilized. Most of the tribes are still in a completely barbarous state, continually at war among themselves, and accustomed to eat the flesh of their enemies. A more particular, though incomplete, account of them is to be found in the Travels of the Prince of Neuwied and others in Brazil. With the view of promoting their civilization, three Indian villages were laid out, in 1824, by order of the emperor.

Botta, Carlo Giuseppe Guglielmo, member of the academy of sciences at Turin, a poet and historian, born, 1766, at S. Giorgio, in Piedmont, studied medicine and botany at Turin. In 1794, he was a physician in the French army which passed the Alps. This service carried him to Corfu. In 1799, he was a member of the provisory government of Piedmont, and was one of those who favored the incorporation of Piedmont with France. After the battle of Marengo, he was a member of the Piedmontese *consultà*. In the *corps legislatif*, he displeased Napoleon, because he openly censured the despotism of his administration. In 1814, he was one of the members of the *corps legislatif*, which pronounced that Napoleon had forfeited his throne. After the restoration, he was struck out of the list of members of the legislative body, because he was a foreigner, and not naturalized. In 1815, Napoleon appointed him director of the academy at Nancy. At the restoration, he resigned this post, and lives now as a private individual. His most important works are his Description of the Island of Corfu (2 vols.); his translation of Born's (*Joannis physiophili*) *Specimen monachologiæ;* Memoir on the Theory of Brown; Recollections of a Journey in Dalmatia; On Tones and Sound; Short History of the Royal House of Savoy and Piedmont; History of the North American Revolutionary War; *Il Camillo o Veja conquistata*, a much-esteemed epic poem, in 12 cantos, published in 1816; *Storia d'Italia dal* 1789 *al* 1814 (4 vols. 4to.), in 1824, somewhat rhetorical, but a good picture of the state of this unhappy country; *Histoire des Peuples d'Italie* (Paris, 1825, 3 vols.), in which he denies to the Christian religion and to philosophy the merit of having civilized Europe, and attributes this effect to the revival of learning.

Bottles, by the ancients, were made of skins and leather: they are now chiefly made of thick glass, of the cheapest kind, and formed of the most ordinary materials. It is composed of sand, with lime, and sometimes clay, and alkaline ashes of any kind, such as kelp, barilla, or even wood ashes. The green color is owing partly to the impurities in the ashes, but chiefly to oxyde of iron. This glass is strong, hard and well vitrified. It is less subject to corrosion by acids than flint-glass, and is superior to any cheap material for the purposes to which it is applied.

Bottomry is the hypothecation or pledge of a vessel for the payment of a debt. The creditor has no right to take possession of the ship, until the expiration of the time for which the loan is made, and then (under a bottomry contract in the usual form) only by the intervention of an admiralty court. If the loan is not repaid at the stipulated time, the lender applies to an admiralty court, which (the truth of the claim being established) decrees a sale of the ship to satisfy the debt. The conditions of such a contract usually are, that, if the ship is not lost or destroyed by those risks which the lender agrees to run, the debt is to become absolute. The risks assumed by the lender are usually the same as are enumerated in a common policy of insurance. If the ship is wholly lost in consequence of these risks, the lender loses his loan. In case of a partial damage, the bottomry bond usually provides that this damage shall be borne by the lender in the proportion of the amount loaned to the value of the ship. If this amount is equal to one half of the value of the ship, the lender is to bear one half of the amount of such loss, &c. As the lender thus assumes a certain risk, he is justly entitled to a greater interest than if he did not thus take the hazard of the loss of the whole loan; and this is called *marine interest*. He is entitled to the usual rate of interest on his loan, in addition to the usual premium of insurance for the same voyage or period. The stipulation for such a rate of marine interest is not a violation of the laws against usury, for it is not merely a compensation for the use of the money loaned, but also for the risk assumed. The ship-owner may borrow money on bottomry, whether his vessel be in port or at sea. But the captain of the ship, as such, cannot so borrow when in the port where the owner resides, or near enough to consult him on any emergency. In any other port, he may pledge the ship on bottomry for the purpose of raising money necessary for repairing, supplying and

navigating her, if he can obtain it in no other way. If he borrow thus without necessity, the bond is void, and the lender can look only to the personal responsibility of the captain.

Bots. (See *Œstrus.*)

Botzen, or Bolzano; a town in Tyrol, at the confluence of the Eisack and the Adige, containing 8100 inhabitants, and 1000 houses. It has four annual fairs. The rivers of the town, the former privileges of the bishop of Trent, and the intersection of the main roads leading to Germany, Italy and Switzerland, at this place, on account of the chains of mountains and the courses of the streams, afforded it great advantages for commerce, which yet continue, in some degree. Its commerce, however, is much injured by the smuggling over lake Como, and also from Switzerland, into Lombardy. B. lies in a valley, enclosed by high mountains; it is, therefore, excessively hot in summer, and sometimes even visited by the sirocco. The finest fruits of Upper Italy (*agrumi*) are produced here, if protected by a covering in winter on the east side of the mountain. Autumn is here the most beautiful season in the year. The winter is generally short. On the declivities of the mountains is produced a peculiar kind of red wine. In the valleys, mulberry-trees flourish. B. is, therefore, the best place for silk-worms in the Austrian dominions.

Bouchardon, Edmund, born, in 1698, at Chaumont-en-Basigni, son of a sculptor and architect, applied himself early to drawing and painting. He made many copies, without, however, giving up the study of nature. In order to devote himself to statuary, he went to Paris, and entered the school of the younger Coustou. He soon gained the highest prize, and was made royal pensioner at Rome. He studied his art partly in the works of antiquity, and partly in those of Raphael and Domenichino. He executed several busts, and was to have erected the tomb of Clement XI, but the orders of the king recalled him to Paris in 1732. Here, among other works, he made a large group in stone, representing an athlete overcoming a bear. This stood for a long time in the garden of Grosbois. Afterwards, he assisted in repairing the fountain of Neptune at Versailles. He executed ten statues, which adorn the church of St. Sulpice. A monument to the duchess of Lauraguais, made by him, is also in that church. The fountain in the *rue de Grenelle*, which the city of Paris ordered to be constructed in 1739, was made by him, and is considered his masterpiece. A Cupid which he made for the king was unsuccessful. For the *Traité des Pierres gravées*, B. furnished designs, from which the plates were copied. The execution of the greatest monument of that period, the equestrian statue of Louis XV, which was erected by order of the city of Paris, was committed to him. He labored 12 years on this, with inconceivable perseverance, and has left, in the horse, a model which may be ranked with any work of antiquity. He died in 1762. His designs are great and accurate. His pieces bear the character of simple grandeur. He put more spirit and expression into his sketches than into the marble. In general, more fire is to be desired in his sculpture. The paintings which he executed at Rome are bold and powerful. Afterwards he adopted a more polished, delicate manner, to suit the taste of the age. Among his scholars, Louis-Claude Vassé, who died in 1772, is distinguished. Caylus has written his life.

Boucher, Alexander, or, as he was accustomed to call himself, from the title given him in a French journal, *L'Alexandre du violon*, one of the most remarkable but eccentric violinists, was born at Paris in 1770. At the age of six, he played before the dauphin, and at eight he played in public. He was in unfortunate circumstances in early life, until he obtained a place in Spain, under Charles IV, who was himself a very good violinist. In 1814, he went to England. At Dover, the custom-house officers were about to seize his instrument, but B. suddenly struck up "God save the King," with variations, and was suffered to pass unmolested. He is as remarkable for eccentricity as for his musical powers. He is now established at Berlin. B. has attracted much attention by his resemblance to Napoleon, whose gait, demeanor and look he can perfectly imitate. Every one fancies he sees the ex-emperor when B. folds his arms. He declares this resemblance to have been disadvantageous to him at the time of the restoration of the Bourbons.

Boucher, Francis; painter to the king, and director of the academy of painters; born at Paris, 1704, died 1770. While a pupil of the celebrated Lemoine, he gained, at the age of 19, the first prize of the academy. After studying at Rome for a short time, he returned to Paris, and was styled the *painter of the graces*—a title which he did not merit. He would, per-

haps, have risen to excellence, had he not yielded to the corrupt taste of his age, and had devoted himself more completely to his studies. The ease with which he executed made him careless. His drawing is faulty; his coloring does not harmonize, especially in his naked pieces, which are so glaring, that they appear as if the light was reflected on them from a red curtain. In a word, he is looked upon as the corrupter of the French school. He was neither envious nor avaricious, but encouraged younger artists as much as was in his power. The great number of his paintings and sketches show with what rapidity he produced them. The latter alone amounted to more than 10,000. He has also etched some plates, and many of his paintings have been engraved.

Bouches-du-Rhône (*mouths of the Rhone*); a department in the south of France, in the ancient government of Provence. Chief town, Marseilles. Pop. in 1827, 326,302. (See *Departments.*)

Boudinot, Elias, was born in Philadelphia, May 2, 1740. He was descended from one of the Huguenots, who sought refuge in America from religious persecution in France. He studied the law, and became eminent in that profession. At an early period of the revolutionary war, he was appointed, by congress, commissary-general of prisoners. In the year 1777, he was chosen a member of congress, and, in 1782, was made president of that body. After the adoption of the constitution, he entered the house of representatives, where he continued six years. He then succeeded Rittenhouse as director of the mint of the U. States, an office which he resigned in the course of a few years, and lived, from that time, at Burlington, New Jersey. He devoted himself earnestly to Biblical literature, and, being possessed of an ample fortune, made munificent donations to various charitable and theological institutions. The American Bible society, of which he became president, was particularly an object of his bounty. He died at the age of 82, in October, 1821.

Boudoir; a small room, simply and gracefully fitted up, destined for retirement (from *bouder*, to pout, to be sulky). It may be indebted for its name to an angry husband, whose wife, when inclined to pout, shut herself up in her chamber. The boudoir is the peculiar property of the lady—her *sanctum sanctorum*. To this she flies for peace and solitude from the bustle of society.

Boufflers, marshal de, born 1644, died 1711, may be considered one of the most celebrated generals of his age. He was an *élevè* of the great Condé, of Turenne, Crequi, Luxembourg and Catinat. His defence of Namur, in 1695, and of Lille, in 1708, are famous. The siege of the former place was conducted by king William in person, and cost the allies more than 20,000 men. The latter was conducted by prince Eugene. An order was sent from Louis XIV, signed by his own hand, commanding B. to surrender; but he kept it secret, until all means of defence were exhausted. The retreat of the French after the defeat at Malplaquet, under the direction of B., was more like a triumph than a defeat.

Boufflers, Stanislaus, chevalier de, member of the French academy, son of the marchioness of B., mistress of Stanislaus, king of Poland, born at Luneville, 1737, was considered one of the most ingenious men of his time, and was distinguished for the elegance of his manners and conversation. He was destined for the church, but declared that his love of pleasure would interfere with the duties of this profession. He entered the military career, was soon appointed governor of Senegal, and, while in this office, made many useful regulations. After his return, he devoted himself to that light kind of literature which distinguished the age of Louis XV. He was much admired by the ladies, and in the higher circles of the capital, as well as in the foreign courts which he visited. His reputation gave him a seat in the states-general, where he was esteemed for his moderation and his good intentions. After Aug. 10, 1792, he left France, and met with a friendly reception from prince Henry of Prussia, at Reinsberg, and Frederic William II. A large grant was made to him in Poland for establishing a colony of French emigrants. In 1800, he returned to Paris, where he devoted himself to literary pursuits, which, in 1804, procured him a seat in the French institute. He died Jan. 18, 1815. He lies buried near the abbé Delille, and on his tomb is this inscription, written by himself, and characteristic of his lively disposition: *Mes amis, croyez que je dors.* His works were published in 8 vols. 12mo. 1815. His mother was long the ornament of the court of Stanislaus, during its residence at Luneville, by the graces of her mind and beauty of her person. Voltaire addressed to her a madrigal which finishes thus:—

Si' vous eussiez vécu du temps de Gabrielle
Je ne sais pas ce qu'on eût dit de vous,
Mais on n'aurait point parlé d'elle.

She died 1787.

Bougainville, Louis Antoine de, count of the empire, senator, and member of the institute in 1796, born, 1729, at Paris, died at the same place, 1811. At first a lawyer, afterwards a distinguished soldier, diplomatist and scholar, he was always remarkable for his energy of character. He fought bravely in Canada, under the marquis of Montcalm, and it was principally owing to his exertions, in 1758, that a body of 5000 French withstood successfully an English army of 16,000 men. Towards the conclusion of the battle, he received a shot in the head. The governor of Canada, finding himself unable to defend the colony, sent B. to France for reënforcements. He set off in Nov., 1758, and returned Jan., 1759, after the king had made him colonel and knight of St. Louis. After the battle of Sept. 13, 1759, in which Montcalm was killed, and the fate of the colony decided, B. returned to France, and served with distinction under Choiseul Stainville, in the campaign of 1761, in Germany. After the peace, he entered the navy, and became one of the greatest naval officers in France. He persuaded the inhabitants of St. Malo to fit out an expedition for the purpose of establishing a colony in the Falkland islands, and undertook the command of the expedition himself. The king appointed him captain, and B. set sail, with his little fleet, in 1763. But, as the Spaniards had a prior claim to the islands, France was obliged to surrender them, and B., having returned to France, was commissioned to carry the surrender into execution, on receiving from Spain a remuneration for his expenses. For this purpose, he set sail, with one frigate and a merchant ship, from St. Malo, Dec. 15, 1766. After the immediate object of his voyage was accomplished, he circumnavigated the world, and returned to St. Malo, March 16, 1769. He enriched the science of geography by a number of new discoveries. In the American war, he commanded several ships of the line, with great honor; was, in 1779, *chef d'escadre*, and, in the following year, field-marshal in the land forces. After 1790, he devoted himself to science. He was a man of the most engaging manners, obliging, liberal, and, in every respect, worthy of the greatest esteem. He retained the natural liveliness of his disposition to a very advanced age.

Bouillé, Francis Claude Amour, marquis de, one of the most celebrated of the generals of Louis XVI, born 1739, at Auvergne, early entered on a military life. He distinguished himself in the seven years' war, and was appointed governor of Guadaloupe in 1768, and conquered Dominica, St. Eustatia, Tobago, St. Christopher, Nevis and Montserrat. After the peace of 1783, he returned to Paris, and was appointed lieutenant-general. He afterwards travelled in England, through Holland and a great part of Germany, until he was made chief of the province Trois-Évêchés. In the assembly of notables (1787—88), he declared for the proposed reforms of Calonne, which, however, were defeated by cardinal Brienne. He was opposed to the plan of Necker for the union of the provinces. At the breaking out of the revolution, he supported the existing government, both in his former province and in Lorraine, Alsace and Franche-Comté. It was only at the urgent desire of the king, that he swore allegiance to the constitution of 1791. He repressed, in 1790, the rebellion of the garrisons of Metz and Nancy; and, although the national assembly decreed him a vote of thanks for the bravery and ability he had displayed on this occasion, still the revolutionists distrusted him. Shortly afterwards, he made preparations to assist Louis XVI in his escape. B. had made his arrangements well, and, had not the king forbidden any bloodshed, he would certainly have rescued him. Being thus compelled to leave the king at Varennes to his fate, he fled from the dangers to which he himself was exposed by the attacks of the revolutionists. From Luxembourg, he wrote a threatening letter to the national assembly, and then exerted himself to excite the foreign powers against the republic. He succeeded well at Vienna, gained over Gustavus III, and obtained the promise of 30,000 men from the empress Catharine II, to be put under the command of the king of Sweden and the French general. But Gustavus was murdered, the empress forgot her promises, and B. went over to England in 1796. Here he wrote his Memoirs of the Revolution, which appeared in an English translation (London, 1797), and, after his death, in the original. B. died at London in 1800.

Bouillon; a large district in Ardennes, 9 miles wide and 18 long, on the borders of Luxembourg and Liege. This woody and mountainous tract consists of the

town of B. with 1980 inhabitants, and 21 villages with 16,000 inhabitants. The town, which is the capital of a canton, within the *arrondissement* of Sedan, department of Ardennes, lies in the midst of hills, on the left bank of the Semois, which abounds with fish, 40 miles from Liege and 18 from Ivoix. It has a strong castle upon a rock, which, however, is commanded by the neighboring mountains. Godfrey of B. once possessed the dukedom of this name. He was duke of Lower Lorraine, and B. was bestowed upon him as belonging properly to the county of Ardenne. In order to supply himself with funds for his expedition to the Holy Land, Godfrey mortgaged his duchy of B., in 1095, to the bishop Albert of Liege. After the estate had been held for many years by the bishopric, the houses of La Marc and La Tour d'Auvergne laid claims to B., but, in 1641, relinquished their pretensions to the bishop of Liege for 150,000 Brabant guilders. In the war of 1672, France conquered B., and Louis XIV gave it, in 1678, to the chevalier La Tour d'Auvergne, his chamberlain. After this time, it belonged to the house of La Tour until the revolution, when it was taken from them, in 1792. The last possessor, Godfrey Charles Henry de la Tour d'Auvergne, died Dec., 1812. By the peace of Paris, in 1814, the dukedom was included in that of Luxembourg, which had fallen to the king of the Netherlands. The title of prince of B. was assumed, in 1792, by Philip d'Auvergne, captain in the British navy, and he continued to bear it till his death, in 1816. The congress which met at Vienna in 1815 appointed commissioners to investigate the comparative claims of this nobleman and prince Charles of Rohan. They decided in favor of the latter.

Bouilly, J. N., a popular French writer, born of a respectable family at Tours, applied himself, at first, to the law; but this study did not prevent him from devoting himself to literature. In the revolution, in which his whole heart was engaged, he united himself with Mirabeau and Barnave. About this time, he wrote his opera Peter the Great, which Grétry set to music. At Tours, where he was president of the department, judge of the civil tribunal, and public prosecutor, his sense of justice prevented him from misusing his power to the detriment of the opposite party. Neither the excesses of the Vendeans nor the fury of the revolutionary tribunal were experienced in his government. With La Chabeaussière, he contributed much to the introduction of primary schools. When the direction of public instruction passed from the hands of the committee of organization into those of the police, he left his office, and devoted himself to the drama. On account of the prolixity of his style, the critic d'Arnaud says, he suffers from *embonpoint du sentiment*. His *L'Abbé de l'Epée* met with much success. He also wrote *Madame de Sévigné*, a comedy; for the royal academy of music he wrote *Les Jeux Floreaux*, and some other pieces; for the Vaudeville theatres, *Haine aux Femmes*; for the *opera comique*, *Fanchon*, and *Une Folie*. His works on education are very popular, and have been often published. These are *Les Contes à ma Fille*, *Les Conseils à ma Fille*, and some others.

Boulevards. (See *Paris*.)

Boulogne; an old seaport town on the coast of Picardy, now chief town of an *arrondissement* of 388 square miles, with 74,676 inhabitants, in the department Pas de Calais, at the mouth of the Liane; lat. 50° 43′ 33″ N.; lon. 1° 36′ 59″ E. It consists of the upper and lower town; the latter of which is called *Boulogne sur Mer*, and is far superior to the former in the beauty of its houses and streets. Both parts contain together over 16,000 inhabitants, and about 1600 houses, and a harbor, which is too shallow for large vessels of war, but the largest merchant vessels can go in and out, at high tide, without danger. With a favorable wind, vessels can reach the coasts of England in two or three hours from this place. Bonaparte, therefore, ordered the harbor to be made deeper, and a number of vessels to be built, in order to transport the army intended for the invasion of England, and some small forts and batteries to be erected, in order to strengthen the harbor and the town. A large army remained here for many months in a camp, which almost resembled a town, waiting to embark; when, upon the breaking out of hostilities with Austria, 1805, they were called to other places. B. is a bishopric, contains 6 churches, an hospital, an exchange, a maritime court, a society for the promotion of agriculture, commerce and the arts, a school for instruction in navigation, sea baths, manufactories of soap, earthen-ware, linen and woollen cloths. Herring and mackerel, large quantities of which are caught off the coast, Champagne and Burgundy wines, coal, corn, butter, linen and woollen stuffs, are the

articles of export. Four steam-boats run from this place to England.

Boulogne, Wood of; a pleasant grove near the gates of Paris, mentioned in all the French romances. The greatest part of the old trees were destroyed during the revolution. When Napoleon chose St. Cloud for a summer residence, he ordered young trees to be planted, had the place enclosed with a wall, and the wood stocked with game, so that it became more a place of resort than before. From July, 1815, to September, the English troops under lord Wellington were stationed in it, and cut down the most beautiful trees, old and young, for barracks. For a long time, it has been the duel-ground of the Parisians. Here was many a *partie fine*; and gay equipages and horsemen often enlivened the place. Through the principal walk the pious world made pilgrimages to Longchamps. Here *Montgolfiers* (balloons) were first raised.—Cuvier discovered, by geological investigations, that the soil of the wood is alluvial. Petrified trunks of trees are found in it at a great depth, as are also the bones of elephants, oxen, elks, and other *mammalia*. The wild plants of the place are only those which prefer a rich alluvial soil. The little castles of Madrid and Bagatelle lie near the wood, which no traveller should omit seeing.

Boulton, Matthew, a celebrated engineer, was born at Birmingham in 1728. After being educated at a grammar-school, he was instructed in drawing by Worlidge, and he also studied mathematics. He engaged in business as a manufacturer of hardware, and, as early as 1745, he is said to have invented, and brought to great perfection, inlaid steel buckles, buttons, watch-chains, &c., of which large quantities were exported to France, whence they were repurchased with avidity by the English, as "the offspring of French ingenuity." In 1762, B., finding his manufactory at Birmingham too confined for his purposes, purchased a lease of the Soho, about two miles distant, in the county of Stafford. This spot, then a barren heath, was gradually converted into an extensive manufactory and school of the mechanical arts, where ingenious men found ample employment for their talents from the liberal patronage of the patriotic proprietor. The introduction of that important machine the steam-engine, at Soho, led to a connexion between B. and James Watt, of Glasgow, who became partners in trade in 1769. Among the many great undertakings in which these gentlemen were engaged, one of the most useful and important was the improvement of the coinage. In beauty and accuracy of execution, the coins struck at the Soho manufactory have rarely been surpassed; and the reform thus effected in the state of the English national currency confers the highest honor on those with whom it originated. About the year 1773, was invented, at the establishment of Boulton and Watt, a method of copying, by a mechanical process, paintings in oil, so as to produce fac-similes of the originals, sufficiently accurate to deceive a practised connoisseur. The various mechanical inventions and improvements which originated, more or less directly, from the genius and application of B., are too numerous to admit of specification. His long life was almost uninterruptedly devoted to the advancement of the useful arts, and the promotion of the commercial interests of his country. He died at Soho, Aug. 17, 1809, and was interred in the parish-church of Handsworth. 600 of his workmen attended his funeral, each of whom had a silver medal presented to him, which had been struck for the occasion. He was a fellow of the royal societies of London and Edinburgh, and an associate of several scientific institutions abroad. His manners and conversation are said to have been highly fascinating, and his private character was extremely respectable. He left an only son, who succeeded him in his establishment at Soho.—(See his *Memoirs*, published at Birmingham, 8vo.)

Bounty, in political economy, is a reward or premium granted to particular species of trade or production. The general subject of encouragement of domestic, in competition with foreign, industry or trade (which is one species of industry), will be treated of under other heads, and only those circumstances mentioned, in this place, which distinguish bounties from other species of encouragement. And it is to be observed, in the first place, that the general principle is the same, whether the encouragement is given to a particular species of education, as that in the clerical profession, which has been the subject of encouragement, direct or indirect, time immemorial; or education in general; or a particular kind of literary productions, as the best poetical composition; or a treatise on some scientific subject, as one on light and heat (for which count Rumford has provided a premium, in the funds left by him to the American academy of arts and sciences); or to some

agricultural or manufactured product, as in the case of the premiums formerly granted by England on the exportation of wheat, and those given by agricultural societies in the U. States, for the greatest production of any kind of grain on a given extent of land, or the best threshing or winnowing machine, &c. In all these instances, the general doctrine is assumed and presupposed, that the successful direction of talent or industry to the species of art or mode of production indicated will be beneficial to the public. The utility of the bounty will depend upon the correctness of this assumption. All bounties or premiums are not offered for the encouragement of domestic talent and industry to the exclusion of foreign competition. Many of those offered by the British and French governments, and by private associations, are held out to all competitors indiscriminately; and, where the object is universal improvement, this is one of the appropriate modes of encouragement, though others concur with it, such as the monopolies of copyrights and patents, and the honors and distinctions conferred on those who make any important improvement. But if the object be to favor the domestic production of any article which is consumed in great quantities, and the supply of which will employ many hands, bounties are only the first steps in promoting it; for, when the species of production is once introduced to an extent sufficient for the supply of the consumption, or so far introduced that it can readily be pushed to the limits of the national demand, the production is more usually, and may be more economically, sustained by a tax or prohibition of the foreign substitute. It was, for instance, a very expensive mode of encouraging the domestic production of grain in Great Britain, to offer a bounty upon the exportation, for it was buying a place in the foreign market; and though the bounty went to the subjects of the kingdom, namely, the British landholders, yet experience abundantly shows that a government may oppress, derange, and, possibly, paralyze, its industry, by pensions, rewards and gratuities to its own subjects. The object of the bounty was to encourage the home production, by guarantying that the domestic should be generally higher than the foreign market price, by the excess of the amount of the bounty over that of the freight paid on the exportation. If the government had, at the same time, imposed an additional land-tax, proportional to the enhancement of rents occasioned by the corn-bounty, it would thus have derived a great revenue. If the land-tax could, in this case, have been exactly proportioned, on each estate, to the enhancement of the rents in consequence of the bounty, the bounty and land-tax would have constituted a tax on the consumption of wheat, without affecting the value or rent of land. But no tax on land seems to have been levied as a counterpart to the bounty; one object of which seems to have been to promote the culture of grain, in order to provide adequate supplies of so necessary an article, for which, in time of war, it would be dangerous to depend upon foreign sources. The other object was, probably, to raise or sustain rents; at least, as that was its tendency, the agricultural interest would favor the measure on this ground. But the result was the payment of a tax, by the nation, for the advantage of the export trade in corn; and the question then arose, whether the advantages, direct and incidental, of that trade, were sufficient to compensate for the tax; and, after a long experiment, the nation finally became convinced that they were not so, and the bounty was abolished. But they secured its objects, in some degree, by a prohibition of the importation of grain, except at times when the prices in the home market rose to an unusual height, which was specified in these acts, which have since been so modified, that, at a certain price in the home market, the importation becomes allowable at a certain duty, and, at a higher rate of prices, the duty is less. The supply of the home market is thus secured to the agriculturists, within certain limits of price, and they are previously certain of no other than domestic competition below those prices: in short, they have the monopoly of the home market as long as they throw into it a quantity sufficient to supply the consumption, and foreign grain is introduced only in case of a rise of price apparently indicating an inadequate stock in the country. The only way of making up the deficiency of scant crops is by importation. If an ordinary crop supplies a large export trade, a blight would leave a smaller, or perhaps no deficiency of the home production for the home consumption. But no regulation, except the public granary system, would provide against an occasional resort to foreign supplies. If the present regulations secure a production commensurate with the consumption, in ordinary years, it will be attended with nearly all the advantages of the

bounty system, without being liable to its objections, which arise from the direct purchase of a foreign export trade, without any means of making that particular trade reimburse the expenditure. This shows us one of the objections to the bounty system, which is a more cumbrous and burthensome one than even that of monopolies, when applied directly and permanently to the supply of foreign markets. It can be advantageously applied only at the opening of such a trade, to meet a part of the expense of the experiment; and this is one of the proper objects of this species of encouragement. One other class of cases may, properly enough, be made the subjects of bounties or premiums; namely, the productions of extraordinary efforts of ingenuity and skill. A competition is in this way excited, by which none suffers, and all the effects of which are beneficial to a community. There is one other class of cases in which nations have offered bounties; namely, to species of industry in the prosecution of which the national security is supposed to be, in some measure, involved. The support of the British navy, for instance, is supposed to depend, in some degree, upon the fisheries, since these are considered to be one of the great schools of seamen. The British government, therefore, encourages this species of industry by bounties. This kind of bounties has the effect of reducing the price of fish in the British market. If the reduction of the cost of this article increases the consumption, and creates a large export, then the bounty has the effect of training more seamen in this branch of business than would otherwise resort to it. The advantages, however, obtained by the bounty, over what would result from the prohibition of foreign fish, are, probably, inconsiderable, and are purchased at a high price. Bounties are a more expensive mode of encouragement than duties and prohibitions, as the money must be first collected by a tax, and then distributed in bounties—a process in which a loss of from 2 to 20 per cent. is sustained—that is, a bounty of 100 dollars costs the nation from 102 to 120 dollars, according as the collection and distribution of the revenue is more or less expensive.

Bourbon. The founder of this family, which has governed France, Spain, the Two Sicilies, Lucca and Parma (q. v.), is Robert the Strong, who, in 861, became duke of Neustria, and, in 866, lost his life in a battle against the Normans. Some trace his descent from Pepin of Heristel, others from a natural son of Charlemagne, and others from the kings of Lombardy. It is certain that the two sons of this Robert were kings of France. The elder named Eudes, ascended the throne in 888, and died in 898; the younger, Robert, in 922, and died 923. The eldest son of this Robert was Hugh the Great, duke of the Isle of France, and count of Paris and Orleans. Hugh Capet, son of Hugh the Great (great grandson of Robert the Strong), founded the third French dynasty, in 987. (See *Capet*.) One of his descendants, named Robert, was the root of the elder line of the dukes of Burgundy, which became extinct in 1361. A descendant of this Robert, Henry of Burgundy, was first regent of Portugal in 1095, where his legitimate descendants became extinct in 1383. Pierre de Courtenay, a descendant of Hugh Capet in the fifth generation, was father and ancestor of many emperors of Constantinople. The house of Anjou, which was descended from Hugh Capet in the eighth generation, possessed the throne of Naples for two centuries, and, for some time, that of Hungary. Another descendant of Hugh Capet, in the tenth degree, founded the house of Navarre, which continued from 1328 to 1425. A second family of Anjou, descended from Hugh Capet in the 13th degree, gave some distinguished princes to Provence. In the same degree, the younger line of the powerful dukes of Burgundy derived its origin from him. This line became extinct with the death of Charles the Bold, in 1477, whose successor, Maria, married Maximilian, archduke of Austria, and became grandmother of Charles V. All these lines, with the exception of that of Burgundy, are descended from Anna Jaroslawna, a Russian princess, wife of Henry I, in 1051. Robert, earl of Clermont, second son of St. Louis, married Beatrice, duchess of B. In this way, the city of B. l'Archambaud, or B. les Bains, in the department of Alliér (formerly *Bourbonnais*), became the birthplace of the house of B., and Louis I, duke of B., son of Robert and Beatrice, its founder. Two branches took their origin from the two sons of this Louis duke of B., who died in 1341. The elder line was that of the dukes of B., which became extinct at the death of the constable of B., in 1527, in the assault of the city of Rome. The younger was that of the counts of La Marche, afterwards counts and dukes of Vendôme. Of these, Charles duke of Vendôme, who died in 1537, had two sons, who became the

founders of the following lines. Anthony of Navarre, father of Henry IV, is the origin of the royal house of B.; the elder line of which governs France, and branches of the same rule in Spain (since 1701), in the Two Sicilies (where a branch of the Spanish Bourbons was established in 1735), and in Lucca (Parma was ceded to the last branch in 1748); the younger line is the ducal house of Orleans. From the other son, Louis, is derived the ducal family of Condé, which is divided into the houses of Condé and of Conti. The French revolution overthrew the house of Capet from 1792 to 1814 in France; from 1808 to 1814 in Spain; from 1806 to 1815 in Naples; from 1801 to 1817 in Parma; and also in Etruria, where a Bourbon ruled, by means of Napoleon, from 1801 to 1807. The throne of Ferdinand IV alone was upheld by the English at Palermo. After the fall of Napoleon, in 1814, the Bourbons succeeded again to the throne of France. The history of the Bourbon race is connected with a great part of the history of Europe.

We shall here give a general view of the family of B. After the death of Charles IV the Fair, the last of the old branch of the Capets, in 1328, the house of Valois came to the throne in the person of Philip IV. This house became extinct, in 1589, by the murder of Henry III. Henry IV of B. (king of Navarre), a descendant of Louis I, duke of B., in the eighth degree, succeeded to the throne by right of inheritance, and maintained his power by his own personal greatness. His father, Anthony, had obtained the kingdom of Navarre through his wife, who inherited it, and Henry now added it to the French dominions. Anthony's younger brother, Louis, prince of Condé, was the founder of the line of Condé. There were, therefore, two chief branches of the Bourbons—the royal, and that of Condé. The royal branch was divided by the two sons of Louis XIII, the elder of whom, Louis XIV, continued the chief branch, which, under his descendants Louis (the dauphin) and Philip V, was separated into the elder or royal French branch, and the younger or royal Spanish branch; whilst the younger, Philip I, founded the house of Orleans, when he received the duchy of Orleans from Louis XIV. The kings of the elder or French line of the house of B. run in this way:—Henry IV, Louis XIII, XIV, XV, XVI, XVII, XVIII, and Charles X. (For the kings of the younger royal branch, see *Spain*.)—The house of B. consisted, in 1826, of the following branches and members:—*A.* The royal French line. 1. Charles X (q. v.); 2. his son, Louis Anthony, dauphin, duke of Angoulême (q. v.); 3. the dauphiness, daughter of Louis XVI, Maria Theresa Charlotte, born Dec. 19, 1778; 4. Caroline Ferdinande Louise, born 1793, widow of the duke of Berri, second son of the present king Charles X, murdered in 1820, has a daughter, Louise, *mademoiselle de France*, born Sept. 21, 1819, and a son, Henry, duke of Bourdeaux, born Sept. 29, 1820, *petit-fils de France*, heir apparent, by whose birth the house of Orleans have lost their chance of succeeding to the throne of France. In 1826, Charles X appointed the duke of Rivière his governor, the bishop of Strasburg, Tharin, a friend of the Jesuits, his instructer, and the counts Maupas and Barbançois assistant instructers.—*B.* The house of Bourbon in Spain, and its branch in Italy, founded by Philip V, second grandson of Louis XIV. (This line, by compact, stands, in the order of succession to the throne of France, next after that of Orleans.) I. The children of Charles IV, king of Spain (died at Naples, Jan. 19, 1819), and his wife, Maria Louisa of Parma (died at Rome, Jan. 2, 1819). These are as follows: 1. Charlotte, born 1775, queen-dowager of Portugal, whose son, Peter of Alcantara, now emperor of Brazil, married Leopoldine, second daughter of Francis I, emperor of Austria; 2. the son of his daughter Maria Louisa, queen-dowager of Etruria (died March 13, 1824), Charles Louis, born at Madrid, 1799, duke of Lucca (afterwards of Parma), who married the second daughter of Victor Emanuel, former king of Sardinia, and by her had a son, Ferdinand, Jan. 14, 1823; 3. Ferdinand VII (q. v.), king of Spain; 4. Charles, infant of Spain, born 1788, lives at Madrid, married Maria Francisca, third daughter of the late king of Portugal, who has borne him two sons—Charles, born Jan. 31, 1818, and Ferdinand, Oct. 19, 1824; 5. Isabella, born 1789, second wife of Francis I, king of the Sicilies, had five sons and six daughters; 6. Francis of Paula, infant of Spain, born at Madrid, 1794, married, in 1819, his niece, Louisa, second daughter of Francis I, king of the Two Sicilies, by his second wife, Isabella; he has had two sons—Francis, duke of Cadiz, born at Madrid, May 18, 1822, and Charles, duke of Seville, born June 12, 1824. II. Brothers of Charles IV. 1. Ferdinand I, king of the Two Sicilies

(q. v.), died Jan. 4, 1825. His children by his first wife, Caroline of Austria, are, *a.* the present king, Francis I, whose daughter, by his first marriage with Clementina of Austria, is Caroline, widow of the duke of Berri and mother of the duke of Bourdeaux; *b.* Christina, wife of Charles Felix, who became king of Sardinia in 1821; *c.* Amalie, wife of the duke of Orleans, Louis Philip, mother of nine living children; *d.* Leopold, prince of Salerno, married Maria Clementina, third daughter of the emperor Francis I. 2. Gabriel Anthony Francis Xaver, infant of Spain, died in 1788; his son Peter married Theresa, eldest daughter of the king of Portugal, died in 1812, at Rio Janeiro, leaving a son, Sebastian Maria, infant of Spain, born in 1811. From the marriage of the brother of Charles III, Louis Anthony Jacob, with Theresa of Ballabriga and Drummond, duchess of Chinchon, daughter of an Arragonian captain of infantry, have sprung, don Louis Maria of Bourbon, archbishop of Toledo; Caroline Josephine Antoine, wife of don Manuel Godoy, prince of peace; and Maria Louisa of Bourbon, who married, in 1817, the duke of San Fernando, grandee of Spain. —*C.* The collateral branch of the royal French line of Bourbon-Orleans, which, by the revolution, lost the peerage of that name, and which derives its origin from Philip I, brother of Louis XIV, is the following: 1. Louis Philip, duke of Bourbon-Orleans, born 1773 (see *Orleans*); 2. Eugenie Adelaide Louise, *mademoiselle d'Orleans*, sister of the duke of Orleans, born 1777.—*D.* Of the line of Condé, second branch of the house of B., the following individuals, of the branch of Bourbon-Condé, were living in 1826:— Louis Henry Joseph, duke of B., son of Louis Joseph, duke of B., prince of Condé (see *Condé*), who died in 1818. (His sister Louise Adelaide, princess of Condé, born in 1757, lived in England, in a convent at Norfolk; in 1768, was abbess at Remiremont; entered a convent at Turin in 1795; became, in December, 1816, directress of a convent at Paris, and died March 10, 1824.) Charles Charolois, prince of Condé, had two natural daughters, afterwards legitimated, one of whom, Charlotte Margaret Elisabeth, *mademoiselle de Bourbon*, married the count of Löwendahl, now Danish major-general. The second branch, Bourbon-Conti, became extinct by the death of Louis Francis Joseph of B., prince of Conti, March 13, 1814. In 1815, Louis XVIII granted his two natural sons, the lords of Hattonville and Removille, permission to assume the name and arms of Bourbon-Conti. The countess of Mont-Cair-Zaim, Gabrielle Louisa, is considered as the natural daughter of prince Louis of Bourbon-Conti. She was a knight of the order of the Holy Ghost, belonged to the legion of honor, and died at Paris, 70 years of age, March 29, 1825. She served in a regiment of dragoons with honor for some time. Göthe has taken the materials for his Eugenia, the Natural Daughter, from the biography of this lady, published in 1798. (See *Histoire du Bourbonnais et des Bourbons*, by Coiffier Demoret, member of the chamber of deputies, Paris, 1818, 2 vols.; and Achaintre's *Histoire chronologique et généalogique de la Maison royale de Bourbon*, Paris, 1824, 2 vols.) The *Memoires relatifs a la Famille royale de France pendant la Revolution, publiés d'aprés le Journal, &c. de la Princesse de Lamballe* (Paris, 1826, 2 vols.), is, throughout, a miserable work.

Bourbon, Charles, duke of, or *constable of Bourbon*, son of Gilbert, count of Montpensier, and Clara of Gonzaga, was born in 1489; received from Francis I, in the 26th year of his age, the sword of constable. By the coolness with which he faced death in posts of the greatest hazard, he excited the admiration of his fellow-soldiers. When viceroy of Milan, he won all hearts by his frankness and affability. His fame was not yet tarnished, when the injustice of his king deprived him of his offices, banished him from France, and brought the family of Bourbon into disgrace, in which state it continued until the conclusion of the reign of Henry III. Some historians declare, that the duchess of Angoulême, mother of Francis I, had fallen in love with the young constable, and could not endure the contempt with which he treated her passion: others relate, that, influenced by avaricious motives, she laid claim to the estates of Charles of B., and obtained possession of them by a judicial process. Whatever may be the true cause of her conduct, it is certain that she strove to invalidate a formal donation of Louis XII. The constable, enraged at seeing himself deprived of his estates by the mother of the king whom he had served with so much fidelity and zeal, listened to the proposals made him by Charles V and the king of England. He experienced the usual fate of deserters: he was well received while his services were needed, but narrowly watched to secure his fidelity. Exposed as he was to the contempt

of the Spanish nobility, and the jealousy of the generals of Charles V, nothing remained to him but his courage and repentance. His ability, however, induced the emperor to bestow upon him the command of an army, and to treat him with honor. He was already beyond the confines of France, when Francis I sent to demand the sword which he bore as constable, and the badge of his order. His answer displays the anguish of his heart—"The king took from me my sword at Valenciennes, when he gave to d'Alençon the command of the vanguard, which belonged to me: the badge of my order I left under my pillow at Chantelles." His flight was a misfortune to France; the expedition of Francis into Italy was arrested. Having been appointed to the command of the imperial troops, he made an unsuccessful attack upon Marseilles, but contributed greatly to the victory of Pavia. When Francis was carried a prisoner to Madrid, he went there in person, that he might not be forgotten in the treaties between the two monarchs; but Charles V delayed concluding them, and B. discovered that he could not trust the emperor, who had even promised him his sister in marriage. Compelled to smother his resentment, he returned to Milan, maintained possession of Italy by the terror of his arms, and obtained so much authority as to become an object of suspicion to the emperor, who, in order to weaken him, refused to grant him the necessary supplies. In order to prevent the dispersion of his army, he led the soldiers to the siege of Rome, the plunder of which city he promised them. He was the first to mount the breach, and was killed, May 6, 1527, by a ball, shot, it is said, by Benvenuto Cellini. He died excommunicated, without issue, in the 38th year of his age. His body being conveyed to Gaeta, his soldiers erected over it a splendid monument, which was afterwards destroyed.

Bourbon, Louis, cardinal and archbishop of Toledo; born 1777; son of the infant Louis, brother of king Charles III of Spain, and the duchess of Chinchon. The marriage was concluded with the royal assent: nevertheless, it was doubted, after the death of Charles III, whether the prince would be lawful heir to the throne, if a male descendant of the old line should be wanting. He therefore entered the church, and a cardinal's hat was given to him in 1800. After the imprisonment of Ferdinand VII at Valençay, he joined the party of the cortes, and became very influential. He offered, in 1814, the constitution of the cortes to Ferdinand VII for his signature; and, the king having altered his determination, B. lost his favor, and was deprived of the archbishopric of Seville. After the events which took place on the insurrection of the army at the island of Leon, he engaged in the revolution, and was president of the provisional junta before which the king swore, at Madrid, March 9, 1820, to abide by the constitution of the cortes of 1812. He died March 19, 1823.

Bourbon, Isle of; situated in the Indian ocean, about 400 miles east of Madagascar; lat. 20° 51′ S.; lon. 55° 20′ E. It is 48 miles long and 36 broad. It was discovered by Mascarenhas, a Portuguese, in 1545, who called it by his own name. The French took possession of it in 1649, and gave it the name of B. At different periods of the revolution, it was called *Réunion* and *Bonaparte*. It was captured by the English in 1810, and restored to France in 1815. The population consists of 17,000 whites, 6,000 free Negroes, and 60,000 slaves. Its commerce is impeded by the want of good harbors. The principal articles of export are coffee, sugar, rice, tobacco, spices, indigo, pepper, maize, &c. The coffee was brought from Mocha, and is of an excellent quality. The capital is St. Denis, a pretty town, with about 8000 inhabitants. The heat is excessive from November to April; the evenings, however, are refreshed by the sea-breezes, and the mornings by the land-breezes. The island is of volcanic origin, and seems to be composed of two enormous volcanic mountains, in one of which the fire is extinct: the other is still in activity. The loftiest summit, *le Piton de Neige*, or the Snowy Spike, is about 10,000 feet above the level of the sea.

Bourbonnais; a province and government of Old France, with the title, first of a *county*, and afterwards of a *duchy*, lying between the Nivernais, Berry and Burgundy. It now forms the department of the Allier. It derived its name from the small town of Bourbon l'Archambaud, from which the reigning family of France and the dukes of Bourbon also received their title. (See *Bourbon*.)

Bourdaloue, Louis, the reformer of the pulpit, and founder of genuine pulpit eloquence in France, was born at Bourges, in 1632, and was 16 years old when he entered the society of Jesuits. His instructers successively intrusted to him the chairs of polite letters, rhetoric, philosophy and moral theology. In 1669, he entered the pulpit, and extended his rep-

utation by attacking, with a powerful and religious eloquence, free from the bad taste of the age, the passions, vices and errors of mankind. The dignity of his delivery and the fire of his language made him distinguished amidst the victories of Turenne and the feasts of Versailles, among the master-spirits of the arts and of literature, in the time of Corneille and Racine. Louis XIV invited him, at the time of Advent, in 1670, to preach before the court, and B. acquitted himself with so much success, that he afterwards received invitations at 10 different times. After the repeal of the edict of Nantes, he was sent to Languedoc, in order to explain to the Protestants the doctrines of the Catholic faith, and he succeeded in this difficult business in reconciling the dignity of his office with the rights of mankind. In his latter days, he renounced the pulpit, and devoted himself to the care of hospitals, prisons and religious institutions. He well knew how to accommodate his manner to the capacity of those to whom he gave instruction, advice or consolation. With the simple, he was simple; with the learned, he was a scholar; with free-thinkers, he was a logician; and came off successful in all those contests in which the love of his neighbor, religious zeal, and the duties of his office, involved him. Beloved alike by all, he exercised authority over the minds of all; and no consideration could make him give up his openness and integrity of character. He died in 1704. His sermons have been translated into several languages.

Bourdeaux (lon. 0° 34′ W.; lat. 44° 50′ 14″ N.), in the Bordelais district of the ancient Guyenne or Aquitania, the metropolis of trade and chief city in the department of the Gironde, and the head of an *arrondissement* containing 13 cantons, 1632 square miles, and 223,863 inhabitants, lies on the left bank of the Garonne, and is connected with the opposite side by the new bridge erected by Louis XVIII, 700 feet long, and supported by 17 arches, 16 leagues from the mouth of the river. It numbers 7800 houses and 100,000 inhabitants. It is an antique and gloomy city, having 19 gates, 12 of which lead to the river, and 7 to the adjacent country; also 2 suburbs (Les Chartrons and St. Severin), splendid public places, delightful promenades, 46 Catholic churches and 1 Protestant. Among the buildings deserving of mention are the cathedrals, the council-house of Lambrière (in which the ancient dukes of Guyenne resided, and the parliament afterwards held its sessions), the exchange, the *hôtel des fermes*, the theatre, the Vauxhall, the palace built by Bonaparte in 1810, and a newly invented mill, with 24 sets of stones, put in motion wholly by the ebb and flow of the tide. B. is encircled by walls and strong towers. The small fortifications of Haa and St. Louis, or St. Croix, and the stronger works of the *château Trompette*, protect the harbor, which is entered without difficulty by the largest merchant-vessels during the flow of the tide, which sometimes rises to the height of 12 feet; but it has been unfortunately injured by the accumulation of sand. B. has more than 900 merchantships. It exports, on an average, 100,000 hogsheads of wine, and 20,000 of French brandy. Other articles of export are vinegar, dried fruits, ham, firewood, turpentine, glass bottles, cork, honey, &c. Among the articles of import are colonial wares, British tin, lead, copper and coal, dye-stuffs, timber, pitch, hemp, leather, herrings, salted meat, cheese, &c. B. has the greatest share of any city in France, except Nantes, in the French and American trade. It contains a bank, an insurance company, &c. Its fairs, in March and October, are of the utmost importance to all the west of France. Its merchants carry on the whale and cod fisheries through the harbors of Bayonne, St. Jean de Luce, and St. Malo. B. is the seat of an archbishop, a Protestant consistory, a prefect, and of the commander-in-chief of the 11th division of the militia. It has a royal court of justice, a chamber of commerce, a commercial court, a university (established in 1441), an academy of sciences (instituted in 1712, which has a library of more than 55,000 volumes), an academy of fine arts (founded in 1670, and renewed in 1768), a museum, a lyceum, a Linnæan society, an institution for the education of the deaf and dumb, a school of trade and navigation, &c. The most important manufactories are 14 sugar-houses, several glass-houses, potteries, manufactories of woollen and lace. B. is the *Burdigala* of the Romans. In the 5th century, it was in the possession of the Goths, and at length pillaged and burnt by the Normans. By the marriage of Eleonora, daughter of William X, the last duke of Guyenne, to Louis VII, it fell into the hands of France. But, in 1152, the princess was repudiated by her husband, and afterwards united in marriage with the duke of Normandy, who ascended the

throne of England, and transferred B. to that crown. After the battle of Poictiers, Edward, the black prince, carried John, king of France, prisoner to B., where he resided 11 years. Under Charles VII, in 1451, it was restored again to France. In 1548, the citizens rebelled on account of a tax on salt, and the governor De Morems was put to death, for which the constable of Montmorency inflicted severe punishment on the city. During the revolution, it was devastated as the rendezvous of the Girondists, by the terrorists, almost as completely as Lyons and Marseilles. The oppressiveness of the continental system to the trade of B. made the inhabitants disaffected to the government of Napoleon, so that they were the first to declare for the house of Bourbon, March 12th, 1814. The Roman poet Ausonius was a native of B. Montaigne and Montesquieu were born in the neighboring country, and the latter lies buried there in the church of St. Bernard. (For the wines of Bourdeaux, see *Bordelais*.)

Bourdon, Sebastian; a celebrated French painter, born at Montpellier, in 1616. Being poor and without occupation, he enlisted as a soldier. After receiving his dismission, he visited Italy, and studied under Sacchi and Claude Lorraine. In 1652, he was driven from the French kingdom by the religious troubles. He afterwards became distinguished in his own country by many great works, among which are the following:—the *Dead Christ*, the *Adulteress*, the *Old Kings of Burgundy in the Senate-house at Aix*. He had no peculiar manner, but he imitated others. He was a good engraver on copper. He died in 1671, while engaged in painting the ceiling of the Tuileries.

Bourges; a city of France, formerly the capital of the province of Berri, now of the department of the Cher, with a population of 16,350 inhabitants. The cathedral is one of the finest Gothic structures in France. The pragmatic sanction (q. v.) was published at B. by Charles VII. Louis XI was born there, and founded its university in 1465. It now contains one of the 26 academies of the university of France. There are some manufactures of silk, woollen stuffs, cottons and stockings in the city and its neighborhood, which are disposed of at its annual fairs. The inhabitants are principally supported by the nobility and students who reside in the town. It was anciently called *Avaricum*, and afterwards *Biturigæ*, and was one of the most ancient and best fortified cities of Gaul. It lies 155 miles S. of Paris; lat. 47° 5′ N.; lon. 2° 23′ E.

Bourgogne. (See *Burgundy*.)

Bourignon, Antoinette; a celebrated religious fanatic, born in 1616, at Lille, daughter of a merchant. At her birth, she was so deformed, that a consultation was held whether it would not be proper to destroy her as a monster. She made herself famous by her restless manner of life, her wanderings through France, Germany and Denmark, and by her fanaticism. A collection of her authentic works, in which she displays an animated eloquence, was published at Amsterdam, in 1686, in 21 volumes.

Boursault, Edme, was born in 1638, at Muci-l'Évêque, in the province of Burgundy, grew up without education, and went, in 1651, to Paris, without understanding any thing but his own provincial *patois*. Here he learned to speak and write French, and improved so fast, that the composition of a book for the instruction of the dauphin was committed to him. This work, *La Véritable Étude des Souverains*, pleased the king so much, that he appointed B. assistant instructer of his son. B. declined the office, and also refused to offer himself as a candidate for admission into the academy, on account of his ignorance of Latin. In his youth, he undertook a poetical gazette, with which the king and court were so much pleased, that an annuity of 2000 livres was granted him. But, happening to satirize, in this work, a ludicrous adventure, which had befallen a Capuchin, the confessor of the queen caused the journal to be suppressed, and B. himself escaped the Bastile only by the influence of the prince of Condé. Another journal of his was suppressed soon after, on account of a satirical couplet on king William, with whom the French court then wished to negotiate. He was more fortunate in his writings for the stage, and many of his pieces met with permanent success; among others, *Ésope à la Ville*, and *Ésope à la Cour*, which still continue on the stage. His two tragedies *Marie Stuart* and *Germanicus* are forgotten. B. had the misfortune to quarrel with Molière and Boileau. He wrote a severe criticism on the *Ecole des Femmes*, under the title of *Le Portrait du Peintre*. Moliere chastised him in his *Impromptu de Versailles*. To revenge himself on Boileau, who had ridiculed him in his satires, he wrote a comedy called *Satyre des Satyres*; but Boileau prevented its performance.

B. afterwards took a noble revenge. He heard that Boileau was at the baths of Bourbonne entirely destitute: he hastened to him, and compelled him to accept a loan of 200 louis d'ors. Touched by this generous conduct, Boileau struck his name from his satires. B. died at Montluçon, in 1701.

Boustrophedon; a kind of writing which is found on Greek coins and in inscriptions of the remotest antiquity. The lines do not run in a uniform direction from the left to the right, or from the right to the left; but the first begins at the left, and terminates at the right; the second runs in an opposite direction, from the right to the left; the third, again, from the left, and so on alternately. It is called *boustrophedon* (that is, *turning back like oxen*) because the lines written in this way succeed each other like furrows in a ploughed field. The laws of Solon were cut in tables in this manner.

Bouterwek, Frederic, professor of moral philosophy at Göttingen, a man of much merit as an academical instructer and a writer on literature, was born April 15, 1766, at Oker, a village not far from Goslar, in North Germany. After applying himself to many departments of learning, jurisprudence, poetry, &c., he at last became entirely devoted to philosophy and literary history. He was at first a follower of Kant, but finally attached himself to Jacobi. His *Idee einer Apodiktik* was the immediate fruit of his intimate acquaintance with the philosophical views of Fr. H. Jacobi. This work was published in two volumes, 1799. It was afterwards completed by the Manual of Philosophical Knowledge (two volumes, 1813; 2d edition, 1820), and by the Religion of Reason (Göttingen, 1824). In this work, as well as in his *Asthetik*, two vols., 1806 and 1824, he had to contend with many powerful antagonists. B. has gained a permanent reputation by his History of Modern Poetry and Eloquence, published 1801—1821, a work which, though unequal in some respects, and in parts, especially in the first volume, partial and superficial, is an excellent collection of notices and original observations, and may be considered one of the best works of the kind in German literature. Among his minor productions, a selection of which he published in 1818, are many essays, which are superior to the best of his larger speculative works; for instance, the introduction to the History, in which he gives an account of his literary labors until that period, with great candor, and with almost excessive severity against himself. B. died in 1828. His history of Spanish literature has been translated into Spanish, French and English.

Bouts Rimés (*French*); words or syllables which rhyme, arranged in a particular order, and given to a poet with a subject, on which he must write verses ending in the same rhymes, disposed in the same order. Ménage gives the following account of the origin of this ridiculous conceit, which may be classed with the eggs and axes, the echoes, acrostics, and other equally ingenious devices of learned triflers. "Dulot (a poet of the 17th century) was one day complaining, in a large company, that 300 sonnets had been stolen from him. One of the company expressing his astonishment at the number, 'Oh,' said he, 'they are blank sonnets, or rhymes (*bouts rimés*) of all the sonnets I may have occasion to write.' This ludicrous statement produced such an effect, that it became a fashionable amusement to compose blank sonnets, and, in 1648, a 4to. volume of *bouts rimés* was published." Sarrazin's *Dulot Vaincu, ou la Défaite des Bouts Rimés*, is an amusing performance.

Bow; the name of one of the most ancient and universal weapons of offence. It is made of steel, wood, horn or other elastic substance, which, after being bent by means of a string fastened to its two ends, in returning to its natural state, throws out an arrow with great force. The figure of the bow is nearly the same in all countries, having generally two inflexions, between which, in the place where the arrow is fixed, is a right line. The Grecian bow was nearly in the form of the letter Σ: in drawing it, the hand was brought back to the right breast, and not to the ear. The Scythian bow was distinguished for its remarkable curvature, which was nearly semicircular; that of the modern Tartars is similar to it. The materials of bows have been different in different countries. The Persians and Indians made them of reeds. The Lycian bows were made of the cornel-tree; those of the Ethiopians, of the palm-tree. That of Pandarus (Il. iv, 104) was made from the horn of a mountain goat, 16 palms in length: the string was an ox-hide thong. The horn of the antelope is still used for the same purpose in the East. The long-bow was the favorite national weapon in England. The battles of Cressy (1346), Poictiers (1356) and Agincourt (1415) were won by this

weapon. It was made of yew, ash, &c., of the height of the archer. The arrow being usually half the length of the bow, the *cloth-yard* was only employed by a man six feet high. The arbalist, or cross-bow, was a popular weapon with the Italians, and was introduced into England in the 13th century. The arrows shot from it were called *quarrels*. The *bolt* was used with both kinds of bows. Of the power of the bow, and the distance to which it will carry, some remarkable anecdotes are related. Xenophon mentions an Arcadian whose head was shot through by a Carduchian archer. Stuart (*Ath. Ant.* i.) mentions a random shot of a Turk, which he found to be 584 yards; and Mr. Strutt saw the Turkish ambassador shoot 480 yards in the archery ground near Bedford square. Lord Bacon speaks of a Turkish bow which has been known to pierce a steel target, or a piece of brass, two inches thick. In the journal of king Edward VI, it is mentioned, that 100 archers of the king's guard shot at an inch board, and that some of the arrows passed through this and into another board behind it, although the wood was extremely solid and firm. It has been the custom of many savage nations to poison their arrows. This practice is mentioned by Homer and the ancient historians; and we have many similar accounts of modern travellers and navigators from almost every part of the world. Some of these stories are of doubtful authority, but others are well authenticated. Some poison, obtained by Condamine from South American savages, produced instantaneous death in animals inoculated with it. The poisoned arrows used in Guiana are not shot from a bow, but blown through a tube. They are made of the hard substance of the cokarito-tree, and are about a foot long, and of the size of a knitting-needle. One end is sharply pointed, and dipped in the poison of wooraia: the other is adjusted to the cavity of the reed, from which it is to be blown, by a roll of cotton. The reed is several feet in length. A single breath carries the arrow 30 or 40 yards. (See Bancroft's *History of Guiana.*)

Bow, in music, is the name of that well known implement by the means of which the tone is produced from viols, violins and other instruments of that kind. It is made of a thin staff of elastic wood, tapering slightly till it reaches the lower end, to which the hairs (about 80 or 100 horse-hairs) are fastened, and with which the bow is strung. At the upper end is an ornamented piece of wood or ivory, called the *nut*, and fastened with a screw, which serves to regulate the tension of the hairs. It is evident that the size and construction of the bow must correspond with the size of the species of viol-instruments from which the tone is to be produced.

Bow Instruments are all the instruments strung with cat-gut or goat-gut, from which the tones are produced by means of the bow. The most usual are the double bass (*violono* or *contrabasso*); the small bass, or *violoncello;* the tenor (*viola di braccio*); and the violin proper (*violino*, from *violon*). In reference to their construction, the several parts are alike: the difference is in the size. (See *Violin* and *Quartett.*)

Bowdich, Thomas Edward; an ingenious and enterprising man; one of the victims of the attempts to explore the interior of the African continent. He was born at Bristol, in June, 1793, and was sent to Oxford, but was never regularly matriculated. At an early age, he married, and engaged in trade at Bristol. Finding the details of business irksome, he obtained the appointment of writer in the service of the African company. In 1816, he arrived at Cape Coast Castle. It being thought desirable to send an embassy to the Negro king of Ashantee, B. was chosen to conduct it; and he executed with success the duties of his situation. After remaining two years in Africa, he returned home, and soon after published his Mission to Ashantee, with a Statistical Account of that Kingdom, and Geographical Notices of other Parts of the Interior of Africa (1819, 4to.) Having offended the company in whose service he had been engaged, and having therefore no prospect of further employment, yet wishing ardently to return to Africa for the purpose of visiting its hitherto unexplored regions, B. resolved to make the attempt with such assistance as he could obtain from private individuals. He, however, previously went to Paris, to improve his acquaintance with physical and mathematical science. His reception from the French literati was extremely flattering. A public eulogium was pronounced on him at a meeting of the institute, and an advantageous appointment was offered him by the French government. To obtain funds for the prosecution of his favorite project, B. also published a translation of Mollier's Travels to the Sources of the Senegal and Gambia, and other works; by the sale of which

he was enabled, with a little assistance from other persons, to make preparations for his second African expedition. He sailed from Havre in August, 1822, and arrived in safety in the river Gambia. A disease, occasioned by fatigue and anxiety of mind, here put an end to his life, Jan. 10, 1824. B. is said to have been a profound classic and linguist, an excellent mathematician, well versed in most of the physical sciences, in ancient and modern history, and in polite literature. He was a member of several literary societies in England and abroad.

Bowdoin, James, a governor of Massachusetts, born, in the year 1727, at Boston, was the son of an eminent merchant. He was graduated, in 1745, at Cambridge (N. E.). In 1753, he was elected a representative to the general court, and, in 1756, became a member of the council. In this situation he continued until 1769, when he was negatived by governor Bernard, on account of his decided whig principles, but afterwards accepted by Hutchinson, because he thought his influence more prejudicial "in the house of representatives than at the council board." In consequence of his being a member of the committee who prepared the answer to the governor's speeches, which asserted the right of Great Britain to tax the colonies, he was negatived by governor Gage, in the year 1774. In the same year, he was elected a delegate to the first congress, which was to meet at Philadelphia, but was prevented from attending by the state of his health. His place was afterwards filled by Mr. Hancock. In 1775, he was moderator of the meeting in which the inhabitants consented to deliver up their arms to general Gage, on condition of receiving permission to depart from the city unmolested, which agreement, however, was violated by the British commanders. Shortly after, he was appointed chief of the Massachusetts council, and, in 1778, was chosen president of the convention which formed the constitution of that state. In 1785, he was appointed governor of Massachusetts, and had the good fortune to crush, without a single execution, an insurrectionary movement against the government. Governor B. was a member of the convention of Massachusetts assembled to deliberate on the adoption of the constitution of the U. States, and exerted himself in its favor. He was ever an ardent lover of learning and science, and a benefactor to others of the same character. The university of Edinburgh honored him with the degree of doctor of laws, and the royal societies of Dublin and London, with several other foreign societies, admitted him among their members. He was the first president of the academy of arts and sciences, which was established, in 1780, at Boston, in a great measure through his influence and exertions, and to which he contributed several papers, printed in the first volume of their Transactions. His letters to doctor Franklin have likewise been published. He died at Boston, in 1790.

Bower. (See *Anchor.*)

Box-tree. The box-tree (*buxus-sempervirens*) is a shrubby evergreen-tree, 12 or 15 feet high, which has small, oval and opposite leaves, and grows wild in several parts of Britain. It has been remarked, that this tree was formerly so common in some parts of England, as to have given name to several places, particularly to Box-hill in Surry, and Boxley in Kent; and, in 1815, there were cut down, at Box-hill, as many trees of this sort as produced upwards of £10,000. This tree was much admired by the ancient Romans, and has been much cultivated, in later times, on account of its being easily clipped into the form of animals and other fantastic shapes. The wood is of a yellowish color, close-grained, very hard and heavy, and admits of a beautiful polish. On these accounts, it is much used by turners, by engravers on wood, carvers, and mathematical instrument makers. Flutes and other wind-instruments are formed of it; and furniture, made of box-wood, would be valuable were it not too heavy, as it would not only be very beautiful, but its bitter quality would secure it from the attacks of insects. In France, it is much in demand for combs, knife-handles and button-moulds; and it has been stated that the quantity annually sent from Spain to Paris is alone estimated at more than 10,000 livres. An oil distilled from the shavings of box-wood has been found to relieve the tooth-ache, and to be useful in other complaints; and the powdered leaves destroy worms.

Boxing. (See *Gymnastics.*)

Boydell, John, born at Dorington, 1719, deserves a place in the history of the arts in England, on account of the influence which his enterprises had upon the advancement of the arts in that country. He was an engraver on copper; afterwards, a collector and seller of engravings. His greatest undertaking is his Shakspeare Gallery, for which he em-

ployed most of the great painters and engravers of his time. He made some other collections of prints, among which the Houghton Gallery is conspicuous, which was bought by the empress Catharine. To him we owe a work of high interest, *Liber Veritatis*, a copy of that precious volume in which Claude Lorraine sketched the designs of all his paintings. The original is owned by the duke of Devonshire. Of his Collection of Prints engraved after the best Paintings in England (19 parts), the two first volumes are excellent. B. enjoyed much respect. He was an alderman and lord mayor of London. He died in 1804.

Boyeldieu, Adrian; one of the most celebrated opera composers of France. He was born at Rouen, in 1775, and, at seven years of age, studied music with Broche, the organist of the cathedral of that place. About 1795, he went to Paris, and soon made himself known and esteemed by the composition and execution of his ballads. He was soon appointed professor of the piano-forte at the conservatory. At this time, he wrote several operas, among which *Ma tante Aurore* and the *Calife de Bagdad* are the most celebrated. In 1803, he went to St. Petersburg. His reputation obtained him a favorable reception, and the emperor Alexander appointed him his chapel-master. For the theatre of the hermitage at St. Petersburg, he wrote his Aline, Queen of Golconda, and the opera *Telemachus*, which is considered by some as his masterpiece. In 1811, he returned to Paris, and, political events retaining him in France, he devoted his talents entirely to the *theâtre Feydeau*. The most esteemed operas which he has since composed are, *La dot de Susette*, *Jean de Paris* (1812), which has had the greatest success of all his pieces; *Le nouveau Seigneur de Village* (1813); and *La Fête du Village Voisin* (1816). A later opera, *Le Chaperon Rouge*, has lively music, but is not equal to John of Paris in originality. His latest opera, *La Dame Blanche* (1825), has met with great applause. A sweet and natural melody, simple but agreeable accompaniments, an expressive gayety and great variety, are the characteristic excellences of B.

Boyer, Alexis; baron; one of the first surgeons in Europe, clinical professor in Paris, and *chirurgien en chef adjoint* at the hospital of charity. Surgery is indebted to him for many instruments which he has either invented or improved. He was born in 1760, at D'Uzerche, in the Limosin, became a pupil of the celebrated Desault, and, as early as 1787, delivered lectures. He accompanied Napoleon on his campaigns as chief surgeon. His *Traité complet d'Anatomie* (four vols.) has gone through four editions. His *Traité des Maladies chirurgicales et des Opérations qui leur conviennent* is not yet finished. He explains diseases and their remedies very circumstantially. Without relating what others have done, he describes his own mode of treatment, and the advantages of it. He was for a long time fellow-laborer with Roux and Corvisart in the *Journal de Médicine Chirurgie et Pharmacie*. He also wrote many surgical articles for the *Dictionnaire des Sciences médicales*. When the king wished for an official statement of the circumstances of the medical and surgical colleges in the kingdom, in 1815, drawn up by the most learned physicians and surgeons, B. was a member of the committee of inquiry.

Boyer, Jean Pierre, president of the island of Hayti, was born at Port au Prince, in that island, about the year 1780. He is a mulatto, although somewhat darker than most persons of that *cast*. His father was a shop-keeper and tailor of good repute and some property in the city of Port au Prince, and his mother a Negress from Congo in Africa, who had been a slave in the neighborhood. He joined the cause of the French commissioners Santhonax and Polverel, in whose company, after the arrival of the English, he withdrew to Jacquemel. Here he attached himself to Rigaud, set out with him for France, and was captured on his passage by the Americans, during the war between France and the U. States. After the conclusion of the war, being released, he resumed his voyage to France, where he remained until Le Clerc's expedition against St. Domingo was organized. Like many other persons of color, he took part in that expedition; but, on the death of Le Clerc, he joined Petion's party, and continued attached to that chieftain until his death. He rose, in the service of Petion, from the rank of his aid and private secretary to be general of the *arrondissement* of Port au Prince, and was finally named by Petion to be his successor in the presidency. Petion died March 29th, 1818, and B. was immediately installed in his office, and assumed the functions of government. When the revolution broke out in the northern part of the island, in 1820, he was invited by the insurgents to

place himself at their head; and, upon Christophe's death, the north and south parts of the island were united, under his administration, into one government, by the name of the *republic of Hayti*. In the course of the succeeding year, a similar revolution took place in the eastern or Spanish part, the inhabitants of which voluntarily placed themselves under the government of B., who thus became, in the course of a few years, by mere good fortune, and without any merit on his part, undisputed master of the whole island. Had his wisdom corresponded to his fortune, he might, by fostering the agricultural interests of the island, and strengthening its friendly relations with the U. States and Great Britain, have accomplished much towards establishing the prosperity of the republic on a stable foundation. But he is represented as a vain and weak man; and, although more amiable in his temper than Christophe, is destitute of the energy of character and comprehensive views, by which that despot's policy was directed. The consequence has been the gradual decline of the agriculture, commerce and wealth of Hayti, and, finally, its total prostration, by the absurd arrangement concluded by B. with France in 1825. He foolishly agreed to pay to France an indemnity of 150,000,000 of francs in five equal annual instalments, in consideration of which, France merely recognised the actual government of Hayti; and the absolute inability of B. to make good his engagements places him at the mercy of France.—Franklin's *Present State of Hayti*. (See *Hayti*.)

Boyle, Robert; a celebrated natural philosopher; born at Lismore, in Ireland, 1627, 7th son of Richard, the great earl of Cork. In 1658, he went to Geneva, under the care of a learned French gentleman, where he continued to pursue his studies for several years. In 1641, he made a journey to Italy. In 1642, he was left at Marseilles destitute of money, on account of the breaking out of the Irish rebellion. This circumstance did not allow him to return to England until 1644. During this period his father had died, leaving him considerable property. He now went to his estate at Stallbridge, where he devoted himself to the study of physics and chemistry. He was one of the first members of a learned society, founded in 1645, which at first went under the name of the *philosophical college*. On account of the political disturbances, this society retired to Oxford, but was revived after the restoration, under the name of the *royal society*. B. occupied himself, at Oxford, in making improvements in the air-pump. Like Bacon, he esteemed observation the only road to truth. He attributed to matter merely mechanical properties. Every year of his life was marked by new experiments. We are indebted to him for the first certain knowledge of the absorption of air in calcination and combustion, and of the increase of weight which metals gain by oxydation. He first studied the chemical phenomena of the atmosphere, and was thus the predecessor of Mayow, Hales, Cavendish and Priestley. In all his philosophical inquiries, he displayed an accurate and methodical mind, relying wholly upon experiments. At the same time, his imagination was warm and lively, and inclined to romantic notions, which were first produced, in his childhood, by the perusal of Amadis of Gaul, and always exercised a visible influence on his character. He was naturally inclined to melancholy, and this temper of mind was increased by circumstances. The sight of the great Carthusian monastery at Grenoble, the wildness of the country, as well as the severe ascetic life of the monks, made a deep impression upon him. The devil, as he said, taking advantage of his melancholy disposition, filled his soul with terror, and with doubts concerning the fundamental doctrines of religion. This situation was so insufferable, that he was tempted to free himself from it by committing suicide, and was only prevented by the fear of hell. While endeavoring to settle his faith, he found those defences of the Christian religion, which had been published before his time, unsatisfactory. In order, therefore, to read the original works, which are considered the foundation of Christianity, he studied the Oriental languages, and formed connexions with Pococke, Thomas Hyde, Samuel Clarke, Thomas Barlow, &c. The result of his studies was a conviction of its truth, which was manifested not only by his theological writings, but by his benevolence and generous disinterestedness. He instituted public lectures for the defence of Christianity; and to this endowment we owe the convincing arguments of Samuel Clarke, on the existence of a God. B. did much for the support of the mission in India, and caused Irish and Gælic translations of the Bible to be made and printed at his own expense. To his religious principles were united the purest morals, a rare modesty, and an active be

nevolence. He died at London, in 1691, and was interred in Westminster abbey. Birch published an edition of his works 5 vols. folio, London, 1744.

Boylston, Zabdiel, was born at Brookline, Massachusetts, in 1684. He studied medicine at Boston, where, in a few years, he rose into extensive practice, and accumulated a considerable fortune. In 1721, when the small-pox broke out in Boston, and filled the whole country with alarm, doctor Cotton Mather pointed out to the physicians of the town an account of the practice of inoculation in the East, contained in a volume of the Transactions of the royal society. This communication was received with great contempt by the whole faculty, with the exception of B. Although this practice was unexampled in America, and not known to have been introduced into Europe, he immediately inoculated his own son, a child of six years of age, and two servants. Encouraged by his success, he began to extend his practice. This innovation was received with general opposition. The physicians of the town gave their unanimous opinion against it, and the selectmen of Boston passed an ordinance to prohibit it. But, supported by the conviction of the utility of this invention, and the countenance of several intelligent clergymen, he persevered; and, in 1721 and 1722, inoculated 247 persons; 39 more were inoculated by others, and of the whole number (286), only six died. During the same period, of 5759, who had the small-pox the natural way, 844, nearly one seventh, died. Still, however, his opponents maintained that his practice was wilfully spreading contagion; that, as the disease was a judgment from God on the sins of the people, all attempts to avert it would but provoke him the more; and that, as there was a time appointed to every man for death, it was impious to attempt to stay or to avert the stroke. Religious bigotry, being thus called into action, so exasperated many of the ignorant against B., that attempts were threatened against his life, and it became unsafe for him to leave his house after dusk. Time and experience at length came in to the aid of truth, opposition died away, and B. had the satisfaction of seeing inoculation in general use, in New England, for some time before it became common in Great Britain. In 1725, he visited England, where he received much attention, and was elected a fellow of the royal society. Upon his return, he continued at the head of his profession for many years, but yet found time for literary and philosophical pursuits, and contributed several valuable papers to the Transactions of the royal society. He died March 1, 1766. His only publications, besides his communications to the royal society, are, Some Account of what is said of Inoculating, or Transplanting the Small-pox, by the learned doctor Emanuel Timonius, and Jac. Pylarinus, (a pamphlet, Boston, 1721), and An Historical Account of the Small-pox inoculated in New England, &c. (London 1726).

Boyne; a river of Ireland, running into the Irish channel, near which was fought a celebrated battle between the adherents of James II and William III, in 1690; the latter was victorious, and James was obliged to flee to the continent.

Bozzaris. (See *Greece.*)

Brabant, duchy of; in the kingdom of the Netherlands, having Holland on the north, Liege and Limburg on the east, Flanders on the west, and Hainault and Namur on the south. North B. contains 252,000 inhabitants, and South B. 366,000. B. was erected into a duchy in the 7th century. For some ages, it belonged to the Frankish monarchy, and subsequently became a German fief. At all periods in the history of the Belgic provinces, it appears to have been preëminent among the states, in the general assemblies of which its deputies held the first place, and gave their votes before the others. The last duke, a descendant of Charlemagne, dying in 1005, the duchy devolved on Lambert I, count of Louvain, his brother-in-law. Through his posterity, it descended to Philip II, duke of Burgundy, and afterwards came, in the line of descent, to the emperor Charles V. In the 17th century, the republic of Holland took possession of the northern part, which was thence called *Dutch B.* The other part belonged to Austria, and was occupied by the French in 1746, but restored at the peace of Aix-la-Chapelle. It was again occupied by them in 1797, and their possession confirmed by the treaties of Campo Formio (1797) and Luneville (1801). Dutch B. was united to the French empire in 1810. Austrian B., while under the dominion of Austria, had its own states, consisting of 2 bishops and 11 abbots, with the barons, and 7 deputies, chosen by the cities of Brussels, Louvain and Antwerp. Since the formation of the kingdom of the Netherlands in 1815, North B. sends 7, and South B. 8 members to the representative assembly. The province of Antwerp, which

formerly belonged to the duchy, sends 5. Much of the soil, especially in the southern part, is fertile, produces large quantities of grain, and affords excellent pasturage. In the north, considerable tracts are covered with moss, heath and woods; but others yield large crops of wheat, hops and flax. There are manufactures of cloth, lace, linen, &c. The chief rivers are the Dommel, the Demer, the Dyle and the Nethe, which, with the canals, facilitate the internal commerce of the duchy. In the northern part, the inhabitants are Protestants; in the southern, chiefly Catholic.

Brachmans. (See *Gymnosophists.*)

Bracteates; thin coins of gold or silver, with irregular figures on them, stamped upon one surface only, so that the impression appears raised on one side, while the other appears hollow. It seems most probable, that these coins, being circulated in great quantities under Otho I, emperor of Germany, when the working of the silver mines of the Hartz afforded the most convenient medium of exchange, were first coined at that place, and spread into other countries, where the Roman money was not known or in circulation. The original form of these coins was borrowed from that of the Byzantian gold ones, which, about that time, lost in thickness what they had gained in extension. Allowance was made, however, for the greater softness of the silver. Gold and copper *bracteates* belong only to a later period. The name *bracteate* itself points to Byzantium (according to Isidore, it is derived from βραχεῖν, to ring). *Bractea* signifies leaf of gold, or other metal. The real name, at the time when they were in circulation, was *denarius*, *moneta*, *obolus*, *panningus*. They are of importance as illustrating history. A very good representation of a rich collection of *bracteates* can be seen in W. G. Becker's Two hundred rare Coins of the Middle Ages (Dresden, 1813, 4to.). In later times, there have been many bad imitations of these coins, and the study of them is therefore much more difficult.—*Bracteated coins*, or *bracteati nummi*; a term used to signify coins or medals covered over with a thin plate of some richer metal. They are usually made of iron, copper or brass, plated over and edged with gold or silver leaf. Some of them are to be found even among the truly ancient coins. The French call them *fourrées.*

Bracton, Henry de, one of the earliest writers on English law, flourished in the 13th century. He studied civil and canon law at Oxford, and, about the year 1244, Henry III made him one of his judges itinerant. Some writers say, that he was afterwards chief justice of England; but his fame at present is derived from his legal treatise, entitled *De Legibus et Consuetudinibus Angliæ*, which was first printed in 1569, folio, but of which a more correct edition was published in 1640, 4to. It is possibly to the unsettled nature of the times, and the alternate ascendency of the crown and barons, that we must attribute his inconsistency with regard to the royal prerogative; in one place observing that no man must presume to dispute or control the actions of the king; and in another, that he is subordinate to the law, and may be "bridled" by his court of "earls and barons." The time of his death is unknown.

Braddock, Edward, major-general, and commander of the British army in the expedition against the French, on the river Ohio, in 1755, arrived in Virginia in February of that year, and, in the spring, marched against fort Du Quesne, now Pittsburg. He reached the Monongahela, July 8, at the head of 1200 men, the baggage having been left behind, under the care of colonel Dunbar, to advance by slower marches. On the next day, he moved forward to invest the fort, and, by disregarding the caution of his provincial officers, who warned him of the danger of surprise in an Indian war, fell into an ambuscade, by which he lost nearly one half of his troops, and received himself a mortal wound. All his officers on horseback, except colonel, afterwards general, Washington, who acted as aid, being killed, the army retreated precipitately, near 40 miles, to Dunbar's camp, where the general, who was conveyed there in a tumbril, expired.

Bradford, William, an American lawyer of eminence, was born in Philadelphia, September 14th, 1755. In the spring of 1769, he entered the college of Nassau hall, at Princeton, New Jersey, then under the direction of the late learned and pious doctor John Witherspoon. In 1779, he was admitted to the bar of the supreme court of Pennsylvania, where his character soon introduced him to an unusual share of business; and, in August, 1780, only one year after he was licensed to practise, he was appointed attorney-general of the state of Pennsylvania. August 22, 1791, he was made a judge of the supreme court of Pennsylvania. His industry, integrity and ability enabled him to give general satisfaction

in this office. On the attorney-general of the U. States being promoted to the office of secretary of state, B. was appointed to the vacant office, Jan. 28, 1794. This office he held till his death. In 1793, he published an Inquiry how far the Punishment of Death is necessary in Pennsylvania. This performance justly gained him great credit. His death was occasioned by an attack of the bilious fever. He died August 23, 1795, in the 40th year of his age.

Bradley, James, a celebrated astronomer, was born at Shireborn, England, in 1692. He studied theology at Oxford, and took orders; but his taste for astronomy soon led him to change his course of life. His uncle instructed him in the elements of mathematics, his own industry did every thing else, and, in 1721, he was appointed professor of astronomy at Oxford. Six years afterwards, he made known his discovery of the aberration of light. (q. v.) But, although this discovery gave a greater degree of accuracy to astronomical observations, and although the discrepancies of different observations were much diminished, yet slight differences remained, and did not escape his observation. He studied them during 18 years with the greatest perseverance, and finally discovered that they were fully explained by the supposition of an oscillating motion of the earth's axis, completed during a revolution of the moon's nodes, i. e., in 18 years. He called this phenomenon the *nutation of the earth's axis*; and published, in 1748 (Philosoph. Trans. No. 785), his account of the apparent motion of the fixed stars, with its laws, arising from this phenomenon of nutation. D'Alembert afterwards explained the physical causes of this phenomenon, upon the principle of universal attraction. By these two discoveries, astronomers were, for the first time, enabled to make tables of the motions of the heavenly bodies with the necessary accuracy. B. had already, in 1726, explained the method of obtaining the longitude by means of the eclipse of Jupiter's first satellite. In 1741, at the death of doctor Halley, he received the office of astronomer royal, and removed to the observatory at Greenwich. Here he spent the remainder of his life, entirely devoted to his astronomical studies, and left 13 volumes folio of his own observations, in manuscript. Of these, the first volume was published by Horesby, 1798. The whole appeared under the title of *Astronomical Observations made at the Observatory at Greenwich*, 1750—62; Oxford, 1805, 2 vols. folio. From this rich mine have been taken thousands of observations on the sun, moon and planets, which, properly arranged, have brought our astronomical tables to great accuracy. It was from this that Mayer drew the elements of his celebrated tables of the moon. In addition to his merit as a man of science, B. was modest, benevolent, humane and generous in private life. He died in 1762, aged 70.

Bradshaw, John; president of the high court of justice which tried and condemned Charles I. He studied law in Gray's Inn, and obtained much chamber practice from the partisans of the parliament, to which he was zealously devoted. When the trial of the king was determined upon, the resolute character of B. pointed him out for president, which office, after a slight hesitation, he accepted. His deportment on the trial was lofty and unbending, in conformity to the theory which rendered the unhappy sovereign a criminal, and amenable; and every thing was done, both for and by him, to give weight and dignity to this extraordinary tribunal. He rendered himself obnoxious to Cromwell, when the latter seized the protectorate, and was deprived of the chief justiceship of Chester. On the death of Cromwell, and the restoration of the long parliament, he obtained a seat in the council, and was elected president. He died in 1659, and, on his deathbed, asserted that, if the king were to be tried and condemned again, he would be the first to agree to it. He was magnificently buried in Westminster abbey, whence his body was ejected, and hanged on a gibbet at Tyburn, with those of Oliver and Ireton, at the restoration.

Braga. (See *Mythology, northern.*)

Braganza; one of the oldest towns of Portugal. It was made a duchy in 1442, and from its dukes the present reigning family of Portugal are descended. The town and surrounding district still belong to the king of Portugal as duke of Braganza. Lat. 41° 44′ N.; lon. 6° 25′ W. (See *Portugal.*)

Braham; one of the greatest professional singers England has ever produced. His tenor is unrivalled for power, compass and flexibility. His compass extends to about 19 notes, to each of which he knows how to give almost any degree of strength; and his *falsetto*, from D to A, is so entirely within his control, that it is hardly possible, in the ascent and descent of the scale, to distinguish at what note

the natural voice begins and ends. His intonation may be called perfect, so far as respects the strength and quality of a note, and his tone readily takes the character of whatever he wishes to express. His articulation is equally excellent, and not a syllable escapes the hearer. On this account, he particularly excels in recitative. The flexibility of his organs, and his rapidity of execution, are incredible. He goes rapidly through the whole compass of his voice, makes the boldest leaps from the highest to the lowest notes, and makes chromatic runs with incredible velocity. The hearer is never troubled with the fear of his failing; and this unlimited power is used with extravagant liberality. B. enters into every composition with a glow of feeling which gives the performance the liveliest coloring, and brings into full action all his natural powers. Always enthusiastic, his imagination pours itself out most profusely on sentiment, passion, melody, expression and ornament. But it is in this that he overleaps the bounds of art, and often excites more of wonder than pleasure, often dissatisfies more than he delights, and, indeed, too often destroys the general effect. From this manner of his arise that indescribably perverted and constrained tone, those sudden stops, vehement bursts, and immoderate heaping together of notes, which injure the singing; and hence also proceeds his mixture of the theatrical with the church and concert styles, in all of which he has to sing by turns. B. has had numerous imitators: the whole kingdom resounds with them; and a generation must pass away before the bad taste, which his errors have occasioned in every corner of England, shall be destroyed. Although he is one of the greatest singers which any age has produced, yet it is not easy to find united in one individual such extraordinary powers and such glaring faults. He still sings at Drury lane theatre with great applause. He is also a composer; as, for example, of the Cabinet, in which he performs the principal part.

Brahe, Tycho de. (See *Tycho.*)

Brahilow, Brailow, or Braila, a strongly-fortified Turkish town in Walachia, on the northern bank of the Danube, with 30,000 inhabitants, governed by a pacha of three tails, lies in a Turkish military district, which is similarly organized to the adjacent frontier districts of Austria. The town is situated at the confluence of the Sereth and the Danube, which divides itself there into three arms, embracing a piece of neutral territory between the dominions of the Turks and the Russians. From this place much grain, raised in Walachia, is sent to Constantinople. The fishery of sturgeon in the Black sea carried on from B. is considerable. Lon 28° 16′ E.; lat. 45° 16′ N.

Brahma, Brahmin. (See *Brama, Bramin.*)

Brailow. (See *Brahilow.*)

Brails; certain ropes passing through pulleys on the mizzen-mast (q. v.), and afterwards fastened, in different places, on the hinder edge of the sail, in order to draw it up to the mast, as occasion requires. *Brails* is likewise a name given to all the ropes employed to haul up the bottoms, lower corners and skirts of the great sails in general. The operation of drawing them together is called *brailing* them up, or hauling them up to the *brails.*

Brain. The brain is a soft substance, partly reddish-gray and partly whitish, situated in the skull, penetrated by numerous veins, and invested by several membranes. Democritus and Anaxagoras dissected this organ almost 3000 years ago. Haller, Vicq d'Azir, and other anatomists in modern times, have also dissected and investigated it without exhausting the subject. Between the skull and the substance of the brain three membranes are found. The outer one is called the *dura mater.* This is strong, dense and elastic. It invests and supports the brain. The next which occurs is the *tunica arachnoidea.* This is of a pale white color, yet in some degree transparent, very thin, and, in a healthy state, exhibits no appearance of vessels. The membrane below this is called the *pia mater.* It covers the whole surface of the brain. It is very vascular, and a great portion of the blood which the brain receives is spread out upon its surface in minute vessels. The brain consists of two principal parts, connected by delicate veins and fibres. The larger portion, the *cerebrum*, occupies, in men, the upper part of the head, and is seven or eight times larger than the other, the *cerebellum*, lying behind and below it. It rests on the bones which form the cavities of the eyes, the bottom of the skull and the *tentorium*, and projects behind over the *cerebellum.* On the whole exterior of the *cerebrum* there are convolutions, resembling the windings of the small intestines. The external reddish substance of the brain is soft and vascular, and is called the *cortical* substance; the internal is white, and is called the *medullary* substance of the brain. This *medulla* consists of fibres, which are very different in different parts.

The *cerebellum* lies below the *cerebrum*, in a peculiar cavity of the skull. By examining the surface, it is seen to be divided into a right and left lobe, by the spinal marrow lying between, but connected at the top and bottom. Like the *cerebrum*, it is surrounded by a vascular membrane, reddish-gray on the outside, and composed of a medullary substance within. In proportion to its size, also, it has a more extensive surface, and more of the vascular membrane, than the *cerebrum*. In a horizontal section of it, we find parallel curved portions of the cortical and the medullary substances alternating with each other. Between the cortical and the medullary substance, there is always found, in the *cerebellum*, a third intermediate yellow substance. All the *medulla* of the *cerebellum* is also united in the middle by a thick cord. Experience teaches that, in the structure of the brain, irregularities are far more uncommon than in other parts of the human body. It is worthy of observation, that every part of the brain is exactly symmetrical with the part opposite. Even those which lie in the middle, and are apparently single (the spinal marrow, for instance) consist, in fact, of two symmetrical portions. The total weight of the human brain is estimated at two or three pounds. It is larger and heavier in proportion to the youth of the subject; and in old age it becomes specifically lighter. In delirious affections, it is sometimes harder and sometimes less solid and softer. The brain is the organ of sensation, and, consequently, the material representative of the soul, and the noblest organ of the body. (See Serres's *Anatomié comparée du Cerveau dans les quatre Classes des animaux Vertebrés*, &c. (Comparative Anatomy of the Brain in the four Classes of vertebral Animals, &c.); Paris, 1824, with engravings. It received the prize of the French institute.)

Brainerd, David, the celebrated missionary, was born in April, 1718, at Haddam, Connecticut. From an early period, he was remarkable for the serious and religious turn of his mind, devotional exercises occupying a considerable portion of his time, though, as he says, his piety was originally prompted by the fear of punishment, and not by the love of God. In 1739, he became a member of Yale college, where he was distinguished for application and general correctness of conduct; but was expelled, in 1742, in consequence of having said, in the warmth of his religious zeal, that one of the tutors was as devoid of grace as a chair—an expression which reached the ears of the rector, who commanded B. to make a public confession in the hall. Thinking the order unjust to humble himself before the whole college for what he had uttered in private conversation, he refused to comply, and, on this account, as well as for having gone to the separate religious meeting at New Haven, after being prohibited to do so by the authority of the college, he was dismissed. In the spring of 1742, he began the study of divinity; and, at the end of July, he was licensed to preach, for which a thorough examination had shown him qualified. He had for some time entertained a strong desire of preaching the gospel among the heathens, which was gratified by an appointment as missionary to the Indians from the society for propagating Christian knowledge. At Kaunameek, an Indian village of Massachusetts, situated between Stockbridge and Albany, he commenced his labors, in the 25th year of his age. He remained there about 12 months, at first residing in a wigwam among the Indians, but afterwards in a cabin, which he constructed for himself, that he might be alone when not engaged in his duties of preaching and instruction. On the removal of the Kaunameeks to Stockbridge, he turned his attention towards the Delaware Indians. In 1744, he was ordained by a presbytery at Newark, New Jersey, and took up his habitation near the forks of the Delaware, in Pennsylvania, where he resided for a year, during the course of which he made two visits to the Indians on the Susquehannah river. His exertions, however, were attended with little success, until he went to the Indians at Crosweeksung, near Freehold, in New Jersey. Before the end of a year, a complete reformation took place in the lives of the savages, 78 of whom he baptized within that time. They became humble and devout; and it was not unusual for the whole congregation to shed tears and utter cries of sorrow and repentance. In 1747, he went to Northampton, in Massachusetts, where he passed the short residue of his life in the family of the celebrated Jonathan Edwards. He died in 1747, after great sufferings. B. was a man of vigorous intellect and quick discernment. He was gifted with a strong memory, a happy eloquence, and a sociable disposition, that could adapt itself with ease to the different capacities, tempers and circumstances of men, which, together with an intimate knowledge of human nature, as well as of theology and worldly

science, peculiarly fitted him for the business of instruction. He was remarkably composed and resigned during the approaches of death, and left this world in the full hope of a glorious immortality. His publications are, a narrative of his labors at Kaunameek, and his journal, or account of the rise and progress of a remarkable work of grace among a number of Indians in New Jersey and Pennsylvania, 1746.

Brainerd; a missionary station among the Cherokee Indians, in the district of Chickamaugah, within the chartered limits of Tennessee, near the boundary line of Georgia, on Chickamaugah creek, a few miles above its entrance into the river Tennessee; 150 miles S. E. of Nashville, 250 N. W. Augusta. This missionary station was commenced in 1817, and it is the oldest establishment formed by the American board of missions among the Cherokees. The property belonging to the mission, in 1822, was estimated at $17,390, and there are between 30 and 40 buildings of various descriptions, mostly of logs. The labors of the missionaries here have been remarkably successful in imparting to the Cherokees a knowledge of the rudiments of learning, and of the arts of civilized life, as well as of the principles and duties of religion.

Brakenburg, Regner, a well-known Dutch painter, distinguished for his rustic scenes, family pieces, &c., was born at Haerlem, in 1649. The time of his death is not known: it took place at Friesland. His paintings are true to nature.

Brama; the first person in the Trinity, or Trimurti, of the Hindoos, consisting of *Brama*, the creator, *Vishnu*, the preserver or redeemer, and *Siva*, the destroyer. He is represented with four heads and as many arms, and the swan is consecrated to him. His name signifies *knowledge of the laws*, in allusion to his creative power. He is the god of the fates, master of life and death, and, by some, has been represented as the supreme eternal power; but he is himself created, and is merely the agent of the Eternal One. He is believed to die, according to some, annually, or, according to others, after a longer period, and to rise again. His character is no better than that of the Grecian Jupiter. He is considered as the author of the Vedas, and as the lawgiver and teacher of India. The worship of B. is regarded as the oldest religious observance in that country. (For a more particular account, see *Indian Mythology*.)

Bramante of Urbino, Francesco Lazzari, shares with Brunelleschi the credit of being the restorer of architecture. He was born at Castel Duranti, in the duchy of Urbino, in 1444. He applied himself first to painting; but his passion for architecture soon gained the ascendency. At length he went to Milan, and there his whole time was spent at the cathedral. Pope Alexander VI named him his architect, and Julius II made him superintendent of his buildings. At the command of the latter, he united the Belvedere with the palace of the Vatican. He persuaded the pope to order the church of St. Peter to be torn down, and another to be erected in its place, which should not have its equal in the world. In 1513, the foundation of this edifice was laid, according to the plan of B. It yet remains the greatest production of modern architecture. B. died in 1514, without living to see this work completed. He had begun the edifice with incredible despatch; but his successors, Raphael, Julius of San Gallo, Peruzzi and Michael Angelo altered the original plan, and left nothing of B.'s workmanship standing, except the arches which support the tower of the dome. His writings, part prose, part verse, first discovered in 1756, were printed the same year at Milan.

Bramins; the first of the four casts of the Hindoos. They proceeded from the mouth of Brama, which is the seat of wisdom. They form the sacred or sacerdotal cast, and its members have maintained a more absolute and extensive authority than the priests of any other nation. Their great prerogative is that of being the sole depositaries and interpreters of the Vedas or sacred books. There are seven subdivisions of the Bramins, which derive their origin from seven penitents, personages of high antiquity and remarkable purity, who are said to have rebuked the gods themselves for their debaucheries. The great body of the Bramins pay equal veneration to the three parts of the mysterious trinity, but some attach themselves more particularly to one person of the triple godhead. Thus the Vishnuvites are distinguished by an orange-colored dress, and the mark called *nama* on their foreheads. The devotees of Siva wear the *lingam*, and are distinguished from the former by their great abstemiousness. A Bramin should pass through four states. The first begins at about seven, when the duty of the young novice, or *Brachmacari*, consists in learning to read and write, studying the Vedas, and becoming familiar with the

privileges of his cast, and all points of corporeal purity. Thus he is taught his right to ask alms, to be exempted from taxes, from capital and even corporal punishment. Earthen vessels, belonging to Bramins, when used by profane persons, or for certain purposes, must be broken. Leather and skins of animals, and most animals themselves, are impure, and must not be touched by them. Flesh and eggs they are not allowed to eat. The Bramin is also taught to entertain a horror of the defilement of the soul by sin; and rules for purification by ablution, penances, and various ceremonies, are prescribed. The second state begins at his marriage, when he is called *Grihastha*. Marriage is necessary to his respectability. His daily duties become more numerous, and must be more strictly performed. Regular ablutions, fasting, and many minute observances, become requisite. The Bramins, however, engage in secular employments, political, commercial, &c. The third state is that of the *Vana-Prasthas*, or inhabitants of the desert, which is now, however, seldom reached. They were honored by kings, and respected even by the gods. Retiring to the forest, green herbs, roots and fruit were their food: reading the Vedas, bathing morning, noon and evening, and the practice of the most rigorous penances, were prescribed. "Let the Vana-Prastha," says Menou in the Institutes, "slide backwards and forwards on the ground, or stand the whole day on tip-toe, or continue rising and sitting down alternately; in the hot season, let him sit exposed to five fires; in the rain, let him stand uncovered; in the cold season, let him wear wet garments; then, having stored up his holy fires in his mind, let him live without external fire, without a shelter, wholly silent, and feeding on roots and fruit. When he shall have thus become void of fear and sorrow, and shaken off his body, he rises to the divine essence." The fourth state is that of a *Sannyasi*, in which new and severer penances are to be performed. Suppressing the breath, standing on the head, and other such ceremonies, are performed, till the devout patient rises to a participation of the divine nature. The sanctity and inviolability of a Bramin are maintained, in the eyes of his countrymen, by the most severe penalties. The murder of one of the order, robbing him, &c., are inexpiable sins: the killing of his cow can only be expiated by a painful penance. To some travellers it appears that the number of Bramins respectable for knowledge and virtue is very small; that the great body of them are devoted to ambition, intrigue and voluptuousness, and that their character is disgraced by avarice, meanness and cruelty. Their charity extends only to those of their own cast. The objects of their worship, besides their innumerable gods, are almost every species of animals, and a variety of malignant demons. The transmigration of souls is one of their essential doctrines, and they believe in the existence of a hell. Some of the ceremonies of the Braminical worship are horrible: some are more licentious than the orgies of Bacchus. The sacrifices commonly consist of vegetables, but animals are sometimes sacrificed, and the burning of widows is a relic of the horrid practice of offering human victims. (See *Indian Mythology*.)

Brandenburg, mark or marquisate of; one of the most extensive districts in the former circle of Upper Saxony. The soil is, in some parts, fertile, but mostly sandy, and fit for grain. It is rich in wood, fish, flax, hemp, hops, tobacco, and pastures, particularly for sheep; it also produces lime, salt-petre, turf, and some iron, &c. B. carries on an active trade in manufactured articles, and is well situated for commerce, since it has many canals, rivers, lakes, and many towns lying on them. Most of the inhabitants profess the Lutheran faith; the rest are Calvinists. From 1685 to 1688, many French refugees, Walloons, and inhabitants of Lorraine and of the Palatinate, settled in the mark. During the reign of Frederic II, prior to 1777, more than 10,000 families took up their residence there. The country is watered by the Elbe, Spree, Havel, Oder, Wartha, Netze and Ucker. The district of B. is divided into the Electoral Mark and the New Mark. I. The former includes, 1. the Old Mark (capital Stendal); 2. the Priegnitz (capital Perleberg); 3. the Middle Mark (capital Berlin); 4. the Ucker Mark (capital Prenglau). II. The New Mark (capital Custrin) receives its name from this circumstance, that the elector Frederic II redeemed it, in 1455, from the knights of the Teutonic order, to whom it had been pledged until that period. At present, B. is the most important of the Prussian states, including, as it does, the capital (Berlin), and the governments of Potsdam and Frankfort. It contains, upon 15,800 square miles, 1,335,160 inhabitants, and 150 towns, &c. The first people who are known to have inhabited B. were the Suevi. They were succeeded by the Sclavonians, a barbarous people, whom Henry I conquered

and converted to Christianity in the early part of the 10th century. The government was first conferred on a Saxon count, and did not become hereditary till the time of Albert, whose son was raised to the dignity of elector in 1100. This race becoming extinct, Charles IV assigned the electorate to his son Sigismund, who became emperor in 1415, and sold the region to Frederic, burgrave of Nüremberg, the ancestor of the present reigning family. Frederic William the Great made various accessions to the territories of his ancestors, and obliged the king of Poland, in 1656, to declare Prussia an independent state. The Old Mark was ceded to Napoleon in 1807, and formed part of the kingdom of Westphalia; but it was restored to Prussia in 1814. The elector of B. held the seventh rank among the electors of the empire, and had five votes in the council of princes.

Brandenburg; capital of the province of the same name (q. v.), on the Havel, 30 miles west of Berlin, formerly the residence of the reigning family of Prussia. It contains 12,000 inhabitants.

Brandes, Ernest; a learned and able German scholar and statesman, born at Hanover in 1758. Happily endowed by nature, and educated under favorable circumstances, he afterwards extended his views by travel, by his connexion with public affairs, by his intercourse with the best society, and by an intimate union with the greatest scholars in Germany. From 1775 to 1778, he studied at Göttingen, of which he afterwards became the benefactor, when the government of Hanover appointed him secretary of the cabinet, and intrusted him with the chief direction of the affairs of the university. During a tour which he made through Germany and France (1780—81) his attention was particularly drawn to the theatres of Paris and Vienna, and he gave his opinion concerning them in his well-known remarks upon the theatres of London, Paris and Vienna. During his residence in England, in the winter of 1784, 1785, he formed many literary and political connexions, besides gaining a complete knowledge of the English constitution. His journey gave his mind a political turn. After having been appointed to fill a number of honorable offices, he was made a member of the privy council. When the French took possession of Hanover, in 1803, he was one of the delegates appointed to treat with Mortier, and remained a member of the government, until the committee of administration was established by the victors. B. had gained so much respect, that his death, in 1810, was lamented as a public calamity. Great powers of observation, and an extensive knowledge of the world, are displayed in all his works

Brandt, Nicholas or Sebastian; a German chemist of the 17th century, usually considered the discoverer of phosphorus. Leibnitz mentions him as a chemist of Hamburg, who, during a course of experiments on urine, for the purpose of discovering a solvent which would convert silver into gold, accidentally produced phosphorus, in 1667 or 1669. He communicated his discovery to another chemist, who showed it to Leibnitz and Boyle.

Brandt, Sebastian (named *Titio*), born at Strasburg, in 1458, died there in 1520. He studied law at Bâle, where he was graduated; and delivered lectures on this science, for many years, with great applause. He was still more distinguished for his poetical talents, and the emperor Maximilian I invited him, several times, to his court. He has immortalized himself by a poem called *The Ship of Fools, or the Ship from the Land of Folly*, which satirizes the crimes and follies of his age, first published at Bâle, 1494, 4to. Four editions appeared in one year. It has since been repeatedly printed and translated into all the languages of Europe. In Germany, it was, for about a century, truly a national book, so well known and esteemed by all classes, that the celebrated preacher Geiler of Kaisersberg delivered public lectures upon it from the pulpit at Strasburg. In this work, we find a collection of moral instructions, and satires upon the crimes, vices and abuses common both in public and private life. The book is divided into 113 chapters, which, however, have no connexion with each other. The descriptions are not, in general, poetic, but still contain many happy and beautiful passages, often display learning, and not seldom vigor; and the *Ship of Fools* will always be a valuable book, full of sound reasoning, pure morality, clear and bold thoughts, and knowledge of mankind. It has been republished by Hagen in his Fool's Books.

Brandy. (See *Distillation*.)

Brandywine, a small river which rises in the state of Pennsylvania, passes into the state of Delaware, and, after a course of about 45 miles, joins the Christiana, two miles below Wilmington. It abounds in favorable sites for the application of water-power; and the Brandy-

wine flour-mills form the finest collection of the kind in the U. States.—This river is noted for giving name to a battle fought near it, Sept. 11, 1777, between the British and Americans, in which the latter were defeated, with the loss of about 300 men killed and 600 wounded.

Brantôme, Pierre de Bourdeilles, lord of the abbey of, born at Perigord, about 1527, died in 1614. In his epitaph, composed by himself, he relates, in a vaunting manner, how he first bore arms under the great Francis of Guise, and afterwards served the king, his master. After the death of Charles IX, he withdrew to his estate, and wrote his memoirs, which have a great deal of vanity and self-complacency, mingled with much that is interesting. They are a living picture of his age; for B. was personally acquainted with all the great characters of the time, and an eye-witness of all the important events which then took place, and, in some, was an actor. B.'s character was that of his birth-place (Gascony) and of his rank. He was a courtier, regardless of right or wrong; who does not blame the great, but observes and relates their faults and crimes as ingenuously as if he were uncertain whether they deserve praise or blame; as indifferent about honor and chastity in women as about integrity in men. He describes a scandalous act without being sensible of its offensiveness. He speaks of the *good* king Louis XI, who ordered his brother to be poisoned, and of the *virtuous* ladies, whose adventures no pen but his own could describe. He places us in the middle of that century, when expiring chivalry was contending with the forming, and, as yet, unsettled manners of later times. B., in the midst of his wandering life, had acquired more learning than most of his fellow-soldiers. He has left *Vie des Hommes illustres et des grands Capitaines Français; Vie des grands Capitaines Étrangers; Vie des Dames illustres; Vie des Dames galantes; Anecdotes touchant les Duels; Rodomontades et Jurements des Espagnols.* Twelve editions of his works were published from 1666 to 1740, sometimes entire, sometimes in selections.

Brasil. (See *Brazil.*)

Brass. (See *Copper.*)

Brattleborough; a post-town in Windham county, Vermont, on the Connecticut, 41 miles N. of Northampton, 110 S. of Montpelier; population in 1820, 2,017. It is one of the most considerable and flourishing towns in Vermont, and contains two parishes, in each of which there is a handsome village. The village in the west parish contains an academy; that in the east parish has a large printing establishment, various manufactures, and a flourishing trade.—In the south-east corner of B. was fort Dummer, which was established in 1724, and was the first settlement formed by Anglo-Americans in Vermont.

Brauwer, Braur, or Brouwer, Adrian; a celebrated painter, of the Dutch school, born at Haerlem, in 1608, or, more probably, at Oudenarde, where his father was a painter of common paper-hangings. Poverty contributed, perhaps, to form his talents. When a child, he painted flowers and birds to be stitched on caps, which were sold by his mother. Francis Hals, a skilful painter, expecting to profit by the talents of the young artist, took him to Haerlem. Here, amidst wearisome labors and poor diet, B. spent the greater part of his time in a garret, occupied in making little paintings, of the value of which he was ignorant, while Hals kept the profits of them for himself. Two pretty paintings of his, *The Five Senses* and *The Twelve Months*, are mentioned as belonging to that period. By the advice of Adrian of Ostade, his fellow pupil, he escaped to Amsterdam, where he was surprised to hear, that his paintings were esteemed. He now gained considerable sums by his labors; but, instead of devoting himself to his art, he made the inn his workshop, never exerting himself till the hostess insisted upon payment. He threw into the fire a painting for which he did not receive the price demanded, and began a new one with more care. Having gone to Antwerp during the wars of the Low Countries, he was thrown into prison as a spy. He declared that he was a painter, appealing to the duke of Ahremberg, who was likewise imprisoned there; and, at the prince's intercession, having been provided with materials, he painted his guards engaged in playing cards, with so much expression and truth, that Rubens, at the sight of the picture, exclaimed, "This is B.'s work; none but he can succeed so well in such subjects." Rubens effected his release by standing bail for him, clothed him, and received him into his house and at his table. B., however, instead of being grateful for this generosity, escaped secretly, to plunge into still greater extravagances. He took lodgings with a baker, Craesbeke, who became a skilful painter by his instructions. This man, whose

inclinations agreed with those of B., had a handsome wife, and the connexion between these three persons became so intimate, that they were obliged to flee from justice. B. went to Paris, but, finding no employment there, returned to Antwerp, where he died in the hospital, in 1640. Rubens, who remembered only his talents, caused him to be honorably buried in the church of the Carmelites. All the pictures of B. show what sort of places and company this artist frequented. He did not, however, like Teniers, understand how to give to mean objects the variety of which they are susceptible. Nevertheless, his paintings command high prices from amateurs. It would, indeed, be difficult to excel B. in power and harmony of coloring, in the management of the *chiaro-oscuro*, and in truth of expression.

Bravo, Nicholas, one of the most prominent leaders in the Mexican revolution, was a native of New Spain, and son of don Leonardo Bravo. He became identified with the patriot party at an early period of their struggle for independence, and adhered to it through all their vicissitudes of fortune. After the fatal termination of Hidalgo's career, B. made common cause with Morelos, commanding a division of the latter's army in 1812, at which period he was particularly distinguished, among other achievements, by a victory over the Spanish general Musitu. When Iturbide's deception of the royalists gave him the means of promoting the revolution, in 1821, B. was one of the first to take advantage of circumstances, and to raise anew the standard of revolt, undeterred by past misfortunes. Iturbide endeavored in vain to acquire the confidence of B., who, like Victoria, suspected his ambitious purposes long before he suffered them openly to appear. Victoria and B. steadily opposed the projects of the usurper, and, at length, became so far committed in their opposition as to be arrested and imprisoned by him, whilst president of the executive junta. They were subsequently released, and B. took arms against the emperor at the earliest opportunity.—Upon the establishment of a provisional republican government in 1823, subsequently to the fall of Iturbide, the executive consisted of generals Victoria, B. and Negrete. During the discussions relative to the formation of a constitution, B. maintained the necessity of a central system, like that of Colombia, in opposition to the federal party, which finally prevailed in organizing the government in imitation of that of the U. States. The new constitution was solemnly sworn to in the capital, Feb. 2, 1824; and, in the ensuing elections, B., being unsuccessful in the contest for the presidency, was chosen vice-president; and, from that period, has been regarded as the leader of the opposition party in Mexico.—During the year 1827, it is well known, the struggle between the party in favor of the present constitution, and the party opposed to it, daily increased in violence and bitterness, the former being distinguished by the party name of *Yorkinos*, the latter by that of *Escoceses*, from the different masonic rites which they uphold. Although the latter party included the Spaniards and other enemies of the republic, it was hoped that B.'s love of his country and weight of character would prevent his countenancing any design of theirs inimical to the liberties of Mexico. But, Dec. 23, 1827, lieutenant-colonel Manuel Montano raised the standard of rebellion at Otumba, and the government immediately despatched a strong body of troops, under general Guerrero, to disperse the insurgents. A few days after he marched, several officers, known to be violent *Escoceses*, clandestinely left Mexico, and joined Montano; and, at length, the vice-president, B., followed them. Their whole force, at this time, did not exceed 150 men. They proceeded to Tulancingo, immediately on B.'s joining them, where they fortified themselves; but, after a feeble resistance, were compelled to surrender. B., and 25 other officers, were taken prisoners, and thus terminated this desperate attempt. B.'s great merits in the cause of independence secured to him the lenity of the government; and he was merely sentenced to seven years' banishment from the republic. No authentic account has yet transpired of B.'s motives and particular inducements in taking this step; and, in the absence of such evidence, it is difficult to believe that a man of his tried patriotism can have dreamed of restoring the Spanish authority in Mexico. (See Ward's *Mexico*, &c.)

Bravura Air; an air so composed as to enable the singer to show his skill in execution by the addition of embellishments, striking cadences, &c. It is sometimes used for the style of execution.

Bray; a small village in the county of Berks. The church is a vicarage in the gift of the bishop of Oxford. The vicar of Bray lived in the reigns of Henry VIII, Edward VI, Mary and Elizabeth, and

was first a Papist, then a Protestant, then a Papist, and finally a Protestant again. Being accused of inconstancy, "It is not so," he replied; "for I always keep to my principle, which is this—to live and die vicar of Bray." A well known song is founded on this incident.

Bray, François Gabriel, count de; in 1809, Bavarian ambassador at St. Petersburg; since 1820, at Paris; was born in Normandy, where his father belonged to the nobility of the province; assisted, as knight of St. John of Malta, in a bloody attack upon Algiers. He prepared himself for the diplomatic career at Ratisbon, where, previous to the overthrow of the German empire, French diplomatists were bred for the courts of Northern Europe. In the revolution, he entered the Bavarian service, and, while ambassador at St. Petersburg, wrote his able work, *Essai Critique sur l'Histoire de la Livonie, suivi d'un Tableau de l'État actuel de cette Province* (1817, Dorpat, 3 vols.)

Brazil; a country of vast extent, and one of the richest regions of the earth, comprising the eastern and central parts of South America; bounded N. by Colombia, Guiana, and the Atlantic ocean, E. and S. E. by the Atlantic ocean, and W. by Buenos Ayres, or the United Provinces of La Plata, Bolivia and Peru.—The following table exhibits the population of the several *capitanias*, or provinces, as stated by Mr. Brackenridge, who visited South America in the years 1817 and 1818.

Provinces.	*Pop.*	*Chief Towns.*
Pernambuco	550,000	Pernambuco.
Bahia	500,000	St. Salvador.
Minas Geraes	380,000	Villa Rica.
Rio Janeiro	400,000	Rio Janeiro.
St. Paul	300,000	St. Paul.
Rio Grande	250,000	Portalagre.
Maranham	200,000	St. Luis.
Para	150,000	Para.
Matto Grosso	100,000	Cuyaba.
Goyas	170,000	Villa Boa.
Total,	3,000,000	

In 1826, the country was divided anew, so as to constitute nineteen provinces. Of the population, as stated by Mr. Brackenridge, 1,000,000 are supposed to be of European origin or descent, 1,200,000 Negroes, and 800,000 subdued Indians; the unsubdued Indians not being included. A later estimate makes the number of Negro slaves, 1,800,000. Malte-Brun estimates the population of B. at 3,800,000; Hassel and Humboldt, at 4,000,000.—The principal rivers are the Amazon, Madeira, Topayas, Xingu, Tocantins, Negro, St. Francisco, Paraguay, Parana, and Uraguay.—There is scarcely to be found on the globe a finer country than B.; one blessed with a more genial climate, or a more fertile soil; more happily diversified with wood and water, or with abundance of navigable rivers; or more famed for its precious produce of gold and diamonds. It comprises within its limits nearly all the most valued productions of the earth. Viewed from the sea, the country appears rugged and mountainous; but, on a nearer approach, its appearance is highly romantic and picturesque, clothed as it is with the most luxuriant vegetation, its hills covered with thick woods, and its valleys with a verdure which never fades. Towards the interior, the land rises, by gentle gradations, to the height of from 3 to 6,000 feet above the level of the sea; and, in these temperate regions, European fruits and grain are raised in abundance, while the intermediate valleys are extremely favorable to the production of sugar, coffee, and all kinds of tropical produce. A large part of the interior is overspread with an impenetrable forest, the trees being closely interwoven with brushwood and shrubs, and covered with creeping plants, adorned with beautiful flowers, thus giving a peculiar and rich appearance to the scenery. The forests abound in a great variety of useful and beautiful wood, adapted for dyeing, cabinet-work and ship-building. They contain numerous wild animals. The climate, in the neighborhood of the Amazon and in the northern parts, is hot, but tempered by the humidity of the air; in the southern parts, it is temperate, and generally healthy.—B. has been long celebrated for gold and diamonds, which abound in the higher regions of the interior, and are chiefly found in the beds of the mountain torrents, where the stream is most rapid. Most of the streams that rise from the chain of mountains which extend through the province of Minas Geraes are rich, especially near their sources, in gold and diamonds. The towns of St. Paul, Villa Rica, Cuyaba, and others in the interior, have grown out of mining establishments. Tejuco is the chief town of the principal diamond district.—Brazil was discovered by Pedro Alvarez Cabral. Emanuel, king of Portugal, had equipped a squadron for a voyage to the East Indies, under the command of Cabral. The admiral, quitting Lisbon, March 9, 1500, fell in accidentally, April 24, with the

continent of South America, which he at first supposed to be a large island on the coast of Africa. In this conjecture he was soon undeceived, when the natives came in sight. Having discovered a good harbor, he anchored his vessels, and called the bay *Puerto Seguro*. On the next day, he landed with a body of troops, and, having erected the cross, took possession of the country in the name of his sovereign, and called it *Santa Cruz;* but the name was afterwards altered by king Emanuel to that of *Brazil*, from the red-wood which the country produces.—The Portuguese entertained, for some time, no very favorable opinion of the country, not having been able to find there either gold or silver; and, accordingly, they sent thither none but convicts, and women of abandoned character. Two ships were annually sent from Portugal, to carry to the new world the refuse of the human race, and to receive from thence cargoes of parrots and dye-woods. Ginger was afterwards added, but, in a short time, prohibited, lest the cultivation of it might interfere with the sale of the same article from India. In 1548, the Jews of Portugal, being banished to B., procured sugar-canes from Madeira, and began the cultivation of that article. The court of Lisbon began to perceive that a colony might be beneficial without producing gold or silver, and sent over a governor to regulate and superintend it. This was Thomas de Souza, a wise and able man. De Souza found it very difficult to succeed in inducing the natives to fix on settled habitations, and to submit to the Portuguese government. Dissatisfaction ensued, which at length terminated in war. De Souza did not bring with him a sufficient number of men to conclude hostilities speedily. By building St. Salvador, in 1549, at the bay of All Saints, he established a central and rallying point for the colony; but the great object of reducing the Indians to submission was effected by the Jesuits, who gained their affections by presents and acts of kindness.—The increasing prosperity of B., which became visible to Europe at the beginning of the 17th century, excited the envy of the French, Spaniards and Dutch, successively. The latter, however, were the principal enemies with whom the Portuguese had to contend for the dominion of B. Their admiral, Willekens, in 1624, took possession of the country in the name of the United Provinces. Having plundered the people of St. Salvador, he returned to Europe, leaving a strong garrison. The Spaniards next sent out a formidable fleet, laid siege to St. Salvador, and compelled the Dutch to surrender. When the affairs of the Dutch assumed a more favorable aspect at home, they despatched admiral Henry Lonk, in the beginning of 1630, to attempt the entire conquest of B. He succeeded in reducing Pernambuco, and, on his return to Europe, left behind him troops which reduced, in 1633, 1634 and 1635, the provinces of Temeraca, Paraiba and Rio Grande. These, as well as Pernambuco, furnished yearly a large quantity of sugar, a great deal of wood for dyeing, and other commodities. The Dutch now determined to conquer all B., and intrusted Maurice of Nassau with the direction of the enterprise. This distinguished officer reached the place of his destination in the beginning of 1637, and subjected Seara, Seregippe, and the greater part of Bahia. Seven of the fifteen provinces which composed the colony had already submitted to them, when they were suddenly checked by the revolution, which removed Philip IV from the throne of Portugal, and gave to the Portuguese independence, and a native sovereign. The Dutch, then, as enemies of the Spaniards, became friends to the Portuguese, and the latter confirmed the title of the Dutch to the seven provinces, of which they were in possession. This division gave rise to the name of the *Brazils*, in place of the former appellation. The Dutch government soon began to oppress the Portuguese colonists, who, after an obstinate contest, drove them out of several of the provinces. Finding they were not able to retain possession of the country, the Dutch ceded all their interest to the Portuguese for a pecuniary compensation. The dominion of Portugal was now extended over all B., which, during the 18th century, remained in the peaceful possession of the Portuguese. —The value of B. to Portugal has been on the increase since the discovery of the gold mines, in 1698, and the discovery of the diamond mines, in 1782. Up to the year 1810, B. had sent to Portugal 14,280 cwt. of gold, and 2100 pounds of diamonds, which foreign countries, and especially Great Britain, at last succeeded in purchasing, at the Lisbon market. Rio Janeiro now became the mart for the proceeds of the Brazilian mines and native productions. But the administration was any thing but adapted to promote the prosperity of the country. The attention of the government was turned almost ex-

clusively to the gold washings, and to the working of the diamond mines; and the policy of the administration consisted in the exaction of taxes and duties, which were collected from the fortified ports, to which trade was solely confined. Foreigners were excluded, or jealously watched, and trade was paralysed by numerous restrictions. In the interior, the lands situated on the great rivers, after being surveyed, were frequently presented, after the year 1640, by the kings of the house of Braganza, to the younger sons of the Portuguese nobility, whom the system of entails excluded from the prospect of inheritance. These grantees enlisted adventurers, purchased Negro slaves by thousands, and subjected the original inhabitants, or drove them from their districts, and ruled their dominions with almost unlimited sway. The missions of the Jesuits also received similar donations from the kings. They organized a brave militia from the converted savages and their descendants, and bore the sword and the cross farther and farther into the interior. Equally independent with the secular lords of the soil, they united the converted savages in villages and parishes along the rivers. The celebrated Jesuit Vieyra introduced the cultivation of spices, in which Holland alone had hitherto traded. As these Brazilian proprietors defrayed, from their own means, the above-mentioned indemnifications made to the Dutch, the Portuguese government, in return, confirmed and enlarged all the privileges of the ancient planters, extending them to the present and future possessions of these noble families. But, in the end, the government multiplied its own monopolies, and assumed prerogatives interfering with the interests of the ancient and rich landlords. Even from 1808 to 1821, as long as the court resided in Rio Janeiro, the Portuguese by birth continued to have the preference, in the high offices of state, before the chief native families; and the system of taxing the productions of B., and the importation of articles needed by the Brazilian nobility for themselves and slaves, was even extended. The government finally placed obstacles in the way of increasing the number of the latter, which the rich landlords deemed indispensable for the establishment of new plantations. The vassals, moreover, always had a stumbling-block in their way in the fiscal prerogative of the court, that the land which the vassal called his own, but which he had hitherto neglected to search for gold, or for diamonds, in case of any future discovery of such treasures, should be the property of the crown, or, at least, the object of high taxation. In the grants of the ancient plantations, the crown had not indeed provided for such a contingency, and had reserved no such rights. Even the humanity of the government, in attempting to ameliorate by laws the condition of the slaves, was a subject of offence, because it appeared to the lords to be an injury to their legal property to proceed in such a matter without their consent. Out of Rio Janeiro, in the more northerly and more fertile section, the number of young merchants in the large maritime cities and their vicinity was greatly increased by emigrations from states where more freedom of thought was enjoyed than in B. Many came even from Germany. These adventurers, bent on gain, naturally felt burthened by the heavy system of taxation, and by the monopolies of the crown. They carried on the smuggling trade to such a degree, that they lived, in fact, in open war with the government. In addition to these malcontents, there were many disbanded soldiers, who had embarked from Portugal, in the hope of being rewarded by the court for their services, but, from the poverty of the finances, found that they could obtain nothing but land, which was of no value to these warriors. Moreover, many Europeans emigrated to Bahia and Pernambuco, who, though destitute, were not altogether uninformed, and who desired to make their fortune there, some way or other. The lower class of the native clergy, too, were very much dissatisfied, because, even while the court resided in B., Portuguese noblemen received the most important ecclesiastical offices. Without ascribing to the Brazilians any democratic propensities, all these circumstances must have awakened the desire of independence in their breasts, as much as it augmented their hatred of the Portuguese. From these two causes, a conflict of parties of several years' duration has lately taken place, the result of which is the new empire.—The removal of the Portuguese government to B., Jan. 19, 1808), when the royal family landed in Bahia, whence it transferred its residence to Rio Janeiro in March, till the departure of king John VI to Lisbon, April 26, 1821), was the commencement of the prosperity of B. As early as Jan. 28, 1808, all the ports of B. were opened for the unconditional entrance of all friendly and neutral vessels, and for

the exportation of Brazilian productions, under certain duties, with the sole exception of Brazil wood. B. now entered, also, into an immediate connexion with Germany, which had an equally beneficial influence on its agriculture, intellectual improvement and commerce. The treaty of alliance and commerce concluded with England at Rio Janeiro, Feb. 19, 1810, permitted the British even to build and repair vessels of war in the harbors of B.; and the then prince-regent of Portugal promised never to introduce the inquisition into B., and to co-operate in earnest to effect the abolition of the slave-trade, excepting such as was carried on in the Portuguese possessions in Africa. The decree of Nov. 18, 1814, next allowed all nations free intercourse with B. In 1815, the prince-regent promised B. independence and equal privileges with Portugal. Dec. 16, 1815, he made it a monarchy. Finally, by the marriage of the crown-prince (now emperor) of B., don Pedro, with the archduchess Leopoldine, daughter of Francis I. of Austria, Nov. 6, 1817, Germany was in various ways brought into contact with B. The government in Rio Janeiro now allowed the free prosecution of natural researches. Thus Mawe, an Englishman, was permitted to examine the diamond mines; the chevalier Eschwege, afterwards overseer of the cabinet of minerals in Rio, was enabled to examine the mountains of Minas Geraes at Villa Rica; and the latest work on B., by Martius and Spix, contains similar evidence how zealous even a royal minister, Conde da Barca, is in promoting scientific investigations. As B., by reason of its soil and climate, may become the chief mart of all colonial commodities, the government has encouraged, since 1809, the settlement of strangers, and has granted to foreigners, at a small price, large tracts of land (*cismarias*), of a league (22,500 feet) in breadth, and three leagues in length, for the cultivation of sugar, coffee, cotton, &c., as well as wheat, rice and maize, which afford here annually two crops. Swiss and Germans (such as Freyreiss, the baron Busche, and Paycke of Hamburg) have therefore founded large settlements here. According to Langsdorf, who published Observations on Brazil, at Heidelburg, 1821, Welsh corn generally yields in B. 130 fold, and rice 80 fold. The coffee-tree, which, in the West Indies, yields annually, on an average, 1½ pounds of coffee, in B., yields at least 2 or 3, and not unfrequently 5 or 6 pounds. But the want of industry, at that time, rendered the means of living in the capital and neighborhood extremely dear, while the total absence of highways, and other means of facilitating transportation, deprived the products of the interior of almost all their value. Without a considerable capital, no foreigner can cultivate the land bestowed on him, and B. is as yet far removed from that equality of rights, which secures to each one the full use of his means, as well as from that toleration, which affords protection and freedom of conscience to every creed. The royal decree of March 16, 1820, which encourages the settlement of foreigners, by an exemption from taxes for four years, will never, therefore, while these impediments exist, produce the results which have followed the colonization of North America—a country, in other respects, less inviting. The foreign relations of B., of late years, have not been altogether of a peaceful nature. After the conclusion of the congress of Vienna, Spain refused to cede Olivenza to Portugal; on which account, the Banda Oriental, with its capital, Monte Video, an important portion of the Spanish province of Buenos Ayres, was taken possession of by B., and maintained with effect against the claims of the republic of Buenos Ayres, after it had attained independence. An insurrection in Pernambuco, in April, 1817, where a party raised the republican standard, was suppressed by the Portuguese troops stationed in B. But when the revolution broke out in Portugal, Aug. 1820, having for its object the establishment of a constitution, the Portuguese troops in B. also obtained a constitution in behalf of the latter country. Don Pedro, the crown-prince, proclaimed the acceptation of the Portuguese constitution in the name of himself and father, Feb. 26, 1821. King John VI now commanded the choice of deputies (March 7th) to meet with the cortes assembled in Lisbon, and was desirous to embark with them for that city. But, the bank being unable to make the necessary advances of money, a bloody insurrection ensued. The king therefore changed the bank into a national bank, and, to defray the sums loaned, appropriated to it the charge of the diamond mines, and the regulation of the trade in diamonds. The king soon after (April 21 and 22) saw himself compelled to order the military to disperse the assembly of electors, who demanded the adoption of the Spanish constitution. On the other hand, he repeated the rati-

fication of the (then incomplete) Portuguese constitution, and, April 22, appointed his son don Pedro prince-regent of B. He now embarked for Portugal, April 26. But, as the Portuguese cortes was not willing to grant the entire equality of civil and political relations demanded by the Brazilians, and, without waiting for the arrival of the Brazilian deputation, had framed the articles of the constitution which related to B., and subsequently rejected the additional articles proposed by the Brazilian deputies, and, finally, had expressly declared, that B. was to be divided into governments, and ruled by the ministry of state at Lisbon, and the prince-regent was to be recalled to Portugal,—such violent convulsions were excited in Rio Janeiro, and various parts of B., Dec., 1821, that it was explicitly declared to the prince-regent, that his departure would be the signal for establishing an independent republic. The prince, therefore, resolved to remain in B., and gave a public explanation of his reasons, Jan. 9th, 1822, to his father, to the cortes in Portugal, and to the people of B. The Portuguese troops were removed from B. The prince-regent assumed, May 13th, 1822, the title of *perpetual defender of B.*, and, in June, convened a national assembly, composed of 100 deputies, to frame a separate constitution for the country. The cortes in Lisbon, on the other hand, declared this constitution void, Sept. 19th, 1822, and demanded the return of the prince-regent to Europe, on pain of forfeiting his right to the throne. Meanwhile, the national assembly of B. had declared the separation of that country from Portugal, Aug. 1, 1822, and, Oct. 12, appointed don Pedro the constitutional emperor of B. The new emperor retained, at the same time, the title of *perpetual defender of B.* —Soon after the establishment of the empire, began the struggle with the republican party. In this party were many free-masons. Don Pedro, who had proclaimed himself, shortly before, grand master of all the free-masons in B., ordered that all the lodges should be closed, and the congress, which he had promised to assemble for the purpose of framing a constitution, was not convened. At that time, the two brothers Andrade, Jose Bonifacio, minister of foreign affairs and of the interior, and Martin F. Ribeiro, minister of finances, especially the former, possessed the entire confidence of the emperor. The most difficult matter was to effect his recognition in Europe; for don Pedro had acquired the new dignity in consequence of the principle of the sovereignty of the people in a colony separated from the mother country; and it was also made a question, whether he should not renounce his claims to the crown of Portugal. His father, indeed, when he left B., April 26, 1821, had given him full powers to do all that might be necessary to preserve this country to the house of Braganza. The mission, nevertheless, of major Schäffer to Vienna, could not procure the acknowledgment of the new emperor by his father-in-law, the emperor of Austria. The Brazilian troops, in the meantime, conquered Monte Video, which still had a Portuguese garrison, in Dec., 1823, after which the Banda Oriental was united with B., under the name of *Cisplatino*, as also Bahia, which was defended by a Portuguese garrison, under general Madeira. Lord Cochrane, the Brazilian admiral, blockaded the harbor from March 26, 1823. Madeira, compelled to surrender by famine, sailed, during the negotiation, in the night of July 2, to Europe, and the Brazilian troops entered the place. At home, don Pedro had two parties to contend with—the ancient Portuguese, which was the weaker, and the republican, the stronger. The latter was especially powerful in Pernambuco. The brothers Andrade sought to gain both parties by the proposal of a free constitution, formed after the model of the English; but the obstacles of all kinds, and the violent opposition with which their administration was harassed, compelled them to resort to arbitrary measures and arrests. They treated the malcontents as Carbonari, and thereby excited the suspicion, that the emperor aspired to absolute authority. They finally convoked the cortes of B., the session of which was opened by the emperor, May 3, 1823. Of the 20 members, who constituted the opposition, out of the 60 (instead of 160) present, Aranjo Lima was the most eloquent. The ministers succeeded in causing secret societies to be prohibited, by which means they gained a pretence for imprisoning many, whose sentiments were republican. This augmented the public dissatisfaction, and, when the emperor, having been severely injured by a fall from a horse, did not appear in public for a month, the enemies of the ministers became more bold in their outcries, and even sent threatening representations to the emperor. The imprisoned were acquitted by the supreme court of justice, and the emperor found himself compelled to dismiss the two Andrade, July 16,

1823. Don Joaq. de Carneiro Campos (formerly professor of mathematics at the college of Lisbon) received the department of foreign affairs, and don Man. Jacint. Figueroa da Gama that of the finances—both adherents to the political principles of 1791.—Meanwhile, the royal power had been restored in Lisbon in May, 1823; but the Brazilians demanded the more loudly a free constitution and a separation from Portugal. The emperor, therefore, refused to receive the envoy of the king his father, the count de Rio Mayor, Sept. 6, 1823, because he could not give assurance of the acknowledgment of the independence of B. At the same time, the congress authorized a loan of £2,500,000 in London, which has subsequently been increased about £700,000. (75 per cent. only was paid in specie, at 6 per cent. interest!) The constitution of Aug. 10, 1823, which the national assembly had accepted with some alterations, was finally laid before the emperor, but, in consequence of a revolution which suddenly ensued, not accepted, because it resembled the Spanish and Portuguese constitutions, and restricted too much the authority of the sovereign. Since the fall of the Andrade, the republican party had gained strength, and attacked, in their journals, with particular violence, the Portuguese in the Brazilian service, and demanded their expulsion. Two officers, in retaliation, did some injury, Nov. 8, to an apothecary at Rio, who laid his complaints before the congress. The two ex-ministers Andrade, and their third brother, don Antonio Carlos, likewise a deputy, demanded that congress should investigate the matter; others desired that it should be referred to the courts of justice. This gave rise to a violent tumult on the 10th; the people took part in it; the dismissal of the ministers, and the departure of all the Portuguese, were loudly required. The ministers gave in their resignation, and the emperor collected the troops at his palace San Christovao, four leagues from the city. The congress hereupon declared itself permanent. Nov. 12, it was informed, by a message from the emperor, that all the officers regarded themselves as injured by two journals, of one of which the three Andrade were editors, and patrons of the other; and they were accused, in general, of being at the head of a rebellious party. The minister of the interior declared, at the same time, that the troops insisted on the removal of the two Andrade from the assembly. Immediately after, the troops entered the city, surrounded the hall of the convention, and an officer delivered an imperial decree, ordering the dissolution of the assembly. The president recorded it on the journals, declared the session terminated, and the deputies separated, Nov. 12, 1823. But while departing, and subsequently, many were arrested; among them the three Andrade, who were eventually transported. In a decree of the same day, the emperor termed the assembly perjured, but, on the following day, limited this expression to the faction of the Andrade. —The provinces, also, were the theatre of many turbulent scenes. In Pernambuco, the violent dissolution of the congress gave rise to much dissatisfaction, and it was difficult to appease the hatred of the Brazilians against the Portuguese. A second national assembly was finally convened at the end of Nov., 1823, and the emperor caused a constitution, drawn up by his council of state, to be laid before the *cabildo* (the municipality) of the capital, Dec. 11, 1823, which collected the votes of the citizens respecting it in writing. As all assented to this constitution, the oath was administered Jan. 9, 1824. The same course was pursued in the provinces: but here many citizens voted against the constitution; among others, the president, Man. de Carvalho Paes d'Andrade of Pernambuco. March 25, 1824, the oath to observe the constitution was also taken by the emperor and empress. In its fundamental principles, this constitution coincided with those previously projected. The four branches of civil authority—the legislative, the mediative, the executive and the judicial —are administered by the representatives of the people. The government is monarchical, hereditary, constitutional and representative. The representation of the Brazilian nation consists of the emperor and the general assembly, a body composed of two chambers—that of the deputies, chosen for four years, and that of the senators, chosen by the emperor from the election-lists. With the former rests the power of originating bills for the imposition of taxes and the levying of soldiers, as well as of proposing a change of dynasty. The latter retain their dignity for life. The sessions of these chambers are public. The majority of votes decides. The senate has jurisdiction of the misdemeanors of the members of the royal family, of the ministers, deputies and council of state. The two chambers pos-

sess, in general, great privileges. The emperor has the executive and mediatorial authorities; but his veto is not absolute. He cannot refuse his sanction to a bill equally approved by two legislative assemblies. The press is free, but libels are punished by law. All immunities, privileged corporations, &c. are abolished. The Roman Catholic is the established religion: to other denominations domestic worship is allowed, but without the power of having churches, &c. Notwithstanding this liberal constitution, the republican party gained the supremacy in Pernambuco. The president, Man. de Carvalho Paes d'Andrade, recalled by the emperor, attempted to unite the northern provinces into one republic, called the *Union of the Equator*. But, as soon as the emperor had no longer cause to fear an attack from Portugal, his forces invaded Pernambuco, in August, by land and sea, under the command of lord Cochrane and general Lima. Carvalho and Barros, with a great portion of the inhabitants, made an obstinate resistance; but, on the 17th of Sept., 1824, the city was taken by assault. Carvalho had fled to an English ship of war; the others into the interior of the country.—In the following year, the emperor sent general Brandt and the chev. de Carneiro to London, to negotiate there, with the Portuguese minister, the marquis de Villareal, respecting the independence of B. Similar negotiations afterwards took place in Lisbon, through the British envoy extraordinary, sir Charles Stuart, who finally concluded, at Rio Janeiro, with the Brazilian minister of foreign affairs, Luis Jose de Carvalho e Mello, a treaty between B. and Portugal, Aug. 29, 1825, on the following terms:—1. B. should be recognised as an independent empire, separate from Portugal and Algarvia. 2. The king of Portugal was to resign the sovereignty of B. in favor of his son and his legitimate posterity. 3. The king of Portugal should retain the title of emperor of B. for his own person merely. 4. The emperor don Pedro should promise to receive from no Portuguese colony proposals for a union with B. 5. The trade between the two nations should be restored, and all property confiscated should be returned, or compensation made for it. The king of Portugal ratified this treaty Nov. 15, 1825. The emperor of B. has since sent ambassadors to the courts of Lisbon, London, Paris and Vienna. Sir Charles Stuart, soon after, concluded at Rio, Oct. 18, 1825, a treaty of amity and commerce, and another treaty, respecting the abolition of the slave-trade, delayed for four additional years, between B. and Great Britain. But neither was ratified by the king of Great Britain, because, among other things, they contained stipulations for the mutual surrender of political criminals (or those charged with high treason) and refugees. About this time, the government of the United Provinces of the Plata urged the restoration of the Banda Oriental, which B. had held in possession since 1816. The emperor, therefore, declared war against Buenos Ayres, Dec. 10, 1825, and caused the mouth of the La Plata to be blockaded by his vessels of war. But the people of the Cisplatino, with the natives of Monte Video, had already taken up arms, for the sake of a union with the United Provinces of the Plata. The insurgents took Maldonado. General Lecor (viscount de Laguna), however, maintained himself in Monte Video. On the other hand, the republic of the Plata formally received the Banda Oriental into its confederacy, and, at the close of the year 1825, B. possessed but two points in the Banda Oriental—Monte Video and the colony del San Sagramento. A question of much importance now arose, whether the emperor don Pedro should succeed his father, king John VI, in the kingdom of Portugal. The king died March 10, 1826, having appointed his daughter, the infanta Isabella Maria, provisional regent. According to the constitution of B., don Pedro could not leave the country without the consent of the general assembly. He therefore entered upon the government of Portugal, and gave this kingdom a representative constitution, but renounced the crown of Portugal in his own person by the act of abdication of May 2, 1826, and resigned his right to his daughter donna Maria da Gloria, princess of Beira, born in 1819, who was to marry her uncle don Miguel, born in 1802; meanwhile, the emperor confirmed the present regent of Portugal. (For a further account of Maria, Miguel, and the state of Portugal, see *Portugal*.) Soon after, May 8, he opened the second constitutional assembly of B. at Rio. He had previously, April 16, 1826, founded the new Brazilian order of Pedro I.—The war with Buenos Ayres was continued in the Banda Oriental with little vigor, and with little prospect of advantage to either party, but with a ruinous charge upon the finances of both. A negotiation for peace was at length opened,

under the mediation of Great Britain, which terminated in the execution of a treaty, Aug. 27, 1828. In this treaty, the emperor of Brazil and the government of the United Provinces unite in declaring the Cisplatino, or the province of Monte Video, which had been the chief object of controversy, a free and independent state, under such form of government as it might deem most suitable to its interests, wants and resources. It was stipulated, that, for the purpose of forming this government, the existing government of the Banda Oriental should, immediately on the ratification of the treaty, convoke the representatives of the part of the province subject to it, and the government of Monte Video its citizens, to make choice of a proportional number of delegates, and that these representatives and delegates should constitute a provisional government, whose duty it should be to form a political constitution for the new state. After the meeting of this provisional government, the functions of the previously existing governments were to cease. The independence of the province of Monte Video was guarantied by the contracting parties. This treaty was duly ratified, the blockade of the La Plata was immediately raised, and the troops of the two belligerents were withdrawn from the contested territory.—By an act of the legislature, passed in 1827, the celibacy of the clergy has been abolished in B. (For further information, see *Banda Oriental.*)

The national debt of B. is considerable, including the English loan of £3,200,000. The principal ecclesiastical dignitaries are an archbishop, who resides at Bahia, and 16 bishops, of the Roman Catholic, the established religion. In all the large towns, the government supports elementary and high schools. In the former, the system of mutual instruction is introduced. In Bahia and Rio Janeiro, there are institutions for teaching surgery, medicine, engineering and law, and for imparting commercial information. Rio has an academy for the instruction of officers intended for the naval service; also an observatory. This city and Bahia, also, contain academies for the promotion of the fine arts, public libraries, &c. In 1826, 300 young Brazilians were pursuing their studies in France. The army consisted, in 1824, of 30,000 regular troops and 50,000 militia, besides a regiment of free Negroes. The navy, in 1826, consisted of 96 ships, including 1 ship of the line and 4 frigates. The revenue of B. has been lately estimated, by the minister of finances, at about $16,290,000. Of this sum, about $7,200,000 are all which come into the hands of the general government for the supply of the general expenses. The remainder is consumed in the internal administration of the provinces in which it is collected. The whole estimate, however, is vague, and not much to be depended on. Notwithstanding the many natural resources of B., it must long remain weak, in a political view; for its inconsiderable population is too unequal in its advantages and too divided in its views. 1,800,000 are Negro slaves, ignorant and barbarous; the Indians are of no advantage to the industry of the country. They live, for the most part, retired in the wilderness. The Mulattoes seem to combine in themselves the vices of the savage and the European. Both sexes give themselves up, without shame, to the impulses of their passions, and their cruelty to their slaves is often horrible. The Europeans and the Creoles form, to some extent, the aristocracy of the country. Most of them are planters or miners, or overseers in the colonies, and, in this way, are scattered far over the country, with little communication with each other, without knowledge and education. The most cultivated persons are found in the maritime cities. But, even in Rio, the merchants, according to Mathison, are men of very little information. They take no interest in any thing but what immediately concerns their business. The clergy Mathison found so dissolute, that he was ashamed to give a description of their morals. Of men of higher character, capable of administering public offices, there are but few, and they are chiefly Portuguese. (See the *Corografia Brazilica* of Manoel Ayres de Cazal, Rio Janeiro, 1817, 2 vols. 4to.; Southey's *History of Brazil*, London, 1818, 2 vols. 4to.)

Breach; the aperture or passage made in the wall of any fortified place, by the ordnance of the besiegers, for the purpose of entering the fortress. They should be made where there is the least defence, that is, in the front or face of the bastions. In order to divide the resistance of the besieged, breaches are commonly made at once in the faces of the attacked bastions, and in the ravelin. This is effected by battering, and, at such places as the cannon do not reach, by the aid of mines.—*Breach-Battery.* (See *Battery.*)—The breach is called *practicable*, if it is large enough to afford

some hope of success in case of an assault. This is generally considered to be the case if it allows a passage to 14 men abreast. Frequently, however, a breach of much less extent, even of half that width, may be entered.

Bread. In the earliest antiquity, we find the flour or meal of grain used as food. The inconvenience attending the use of the grain in its natural state, and, perhaps, the accidental observation, that, when bruised, and softened in water, it formed a paste, and, when dried again, a more compact, mealy substance, led, by degrees, to the artificial preparation of bread. Easy as it seems to us, it must have been a long time before it was completely successful. The grain was first bruised between stones, and, from the meal mixed with milk and water, a dry, tough and indigestible paste was made into balls. This is yet the chief food of the caravans in the deserts of Northern Africa. The Carthaginians, also, ate no bread, and hence were called, in derision, by the Romans, *pultiphagi* (pottage-eaters). After many attempts, or, perhaps, accidentally, it was observed that, by bringing the paste into a state of fermentation, its tenacity is almost entirely destroyed, and the mass becomes bread, porous, agreeable to the taste, digestible, and, consequently, healthy. The process pursued is the following:—Some old dough, called *leaven*, which, by a peculiar spirituous fermentation, has swelled up, become spongy, and acquired an acid and spirituous smell, is kneaded with the new dough, and produces, though in an inferior degree, a similar fermentation in the whole mass. The whole thus becomes spongy; a quantity of air or gas is developed, which, being prevented from escaping by the tenacity of the dough, heaves and swells it, and gives it a porous consistency. This is called the *working* of the dough. In this state, the dough is put into the heated oven, where the air contained in it, and the spirituous substance, are still more expanded by heat, and increase the porosity of the bread, making it materially different from the unbaked dough. The best and most wholesome bread is baked in some parts of France, and on the Rhine. In England, the flour is adulterated with too many foreign substances, in order to make the bread whiter. In some parts of Sweden, the bread is composed, in part, of the bark of trees, during the winter. In Westphalia, a kind of very coarse, black bread is made, of which the peasants bake one large loaf for the whole week. This is divided for use with small saws. It is called *pumpernickel*, and is sometimes exported. In many parts of Germany, bread is made of grain nearly entire, or but just bruised, which is very coarse, and frequently forms part of the food of the horses. Bread is found wherever civilization has extended. It is made of wheat, rye, maize, barley, oats, spelt, &c. The want of bread has often occasioned public commotions, particularly in Paris and ancient Rome.

Bread-Fruit. The bread-fruit is a large, globular berry, of a pale-green color, about the size of a child's head, marked on the surface with irregular six-sided depressions, and containing a white and somewhat fibrous pulp, which, when ripe, becomes juicy and yellow. The tree that produces it (*artocarpus incisa*) grows wild in Otaheite and other islands of the South seas, is about 40 feet high, with large and spreading branches, and has large, bright-green leaves, deeply divided into 7 or 9 spear-shaped lobes.—We are informed, in captain Cook's first voyage round the world, that the eatable part of this fruit lies between the skin and the core; and that it is as white as snow, and somewhat of the consistence of new bread. When gathered, it is generally used immediately: if it be kept more than 24 hours, it becomes hard and choky. The inhabitants of the South sea islands prepare it as food by dividing the fruit into three or four parts, and roasting it in hot embers. Its taste is insipid, with a slight tartness, somewhat resembling that of the crumb of wheaten bread mixed with Jerusalem artichoke. Of this fruit, the Otaheitans make various messes by mixing it with water or the milk of the cocoa-nut, then beating it to a paste with a stone pestle, and afterwards mingling with it ripe plantains, bananas, or a sour paste made from the bread-fruit itself, called *mahie*. It continues in season eight months, and so great is its utility in the island of Otaheite, "that," observes captain Cook, "if, in those parts where it is not spontaneously produced, a man plant but 10 trees in his whole lifetime, he will as completely fulfil his duty to his own and to future generations, as the native of our less temperate climate can do by ploughing in the cold of winter, and reaping in the summer's heat, as often as these seasons return; even if, after he has procured bread for his present household, he should convert the surplus into money, and lay it up for his children." Not only does

this tree supply food, but clothing, and numerous other conveniences of life. The inner bark, which is white, and composed of a net-like series of fibres, is formed into a kind of cloth. The wood is soft, smooth, and of a yellowish color, and is used for the building of boats and houses. In whatever part the tree is wounded, a glutinous, milky juice issues, which, when boiled with cocoa-nut oil, is employed for making bird-lime, and as a cement for filling up cracks in such vessels as are intended for holding water. Some parts of the flowers serve as tinder, and the leaves are used for wrapping up food, and other purposes.—As the climate of the South sea islands is considered not very different from that of the West Indies, it was, about 42 years ago, thought desirable, that some of the trees should be transferred, in a growing state, to the English islands there. His majesty's ship the Bounty sailed, in 1787, for this purpose, to the South seas, under the command of lieutenant, afterwards admiral, Bligh. But a fatal mutiny of the crew at that time prevented the accomplishment of this benevolent design. The commander of the vessel, however, returned in safety to his country, and a second expedition, under the same person, and for the same purpose, was fitted out in the year 1791. He arrived in safety at Otaheite, and, after an absence from England of about 18 months, landed in Jamaica, with 352 bread-fruit-trees, in a living state, having left many others at different places in his passage thither. From Jamaica, these trees were transferred to other islands; but, the Negroes having a general and long-established predilection for the plaintain, the bread-fruit is not much relished by them. Where, however, it has not been generally introduced as an article of food, it is used as a delicacy; and, whether employed as bread, or in the form of pudding, it is considered highly palatable by the European inhabitants.

Breakers; billows which break violently over rocks lying under the surface of the sea. They are readily distinguished by the foam which they produce, and by a peculiar hoarse roaring, very different from that of waves in deep water. When a ship is driven among breakers, it is hardly possible to save her, as every billow that heaves her upward serves to dash her down with additional force.

Breaking Bulk; the act of beginning to unlade a ship, or of discharging the first part of the cargo.

Breakwater. (See *Cherbourg*, *Plymouth* and *Delaware*.)

Breast. (See *Chest*.)

Breast-Plate; a piece of defensive armor, covering the breast, originally made of thongs, cords, leather, &c. (hence *lorica*, *cuirass*), but afterwards of brass, iron, or other metals. It may be considered as an improvement of the shield or buckler, which was borne on the left arm, and moved so as to protect, successively, all parts of the body. It being perceived that the free use of both hands in the employment of offensive weapons was important, the defensive armor was attached to the body, and received different names from its position, use, &c.; as, for instance, breast-plate, cuisses, greaves. These different species of defensive armor are of litfle use against fire-arms, and have, therefore, generally fallen into disuse in modern war. (See *Cuirass*.)—*Breast-plate*, in Jewish antiquity, was a folded piece of rich, embroidered stuff, worn by the high-priest. It was set with 12 precious stones, bearing the names of the tribes. It was also called the *breast-plate of judgment*, because it contained the Urim and Thummim.

Breast-Wheel; a water-wheel which receives the water at about half its height, or at the level of its axis. In England, float-boards are employed, which are fitted accurately to the mill-course, so that the water, after acting on the floats by its impulse, is detained in the course, and acts by its weight. In the U. States, they are often constructed with buckets, and with a part of the circumference fitted to the mill-course.

Breast-Work. In the military art, every elevation made for protection against the shot of the enemy. Wood and stone are not suitable for breast-works, on account of their liability to splinter. The best are made of earth; in some circumstances, of fascines, dung, gabions, bags of sand and of wool. The thickness of the work must be in proportion to the artillery of the enemy. In general, it ought not to be less than 10, nor more than 18, or, at most, 24 feet thick. The rule of Cugnot is, that the breast-work should be so high, that nothing but the sky and the tops of trees can be seen within cannon shot from the interior of the intrenchments. If this rule cannot be followed, on account of the height of neighboring mountains, the interior of the fortification ought to be secured by traverses.

Breath. The air which issues from

the lungs, during respiration (q. v.), through the nose and mouth. This operation is performed without effort, but still it causes a motion in the external air, before the nose and mouth. The air expired is the vehicle of sound and speech. A smaller portion of oxygen and a larger portion of carbonic acid is contained in the air which is exhaled than in that which is inhaled. There are, also, aqueous particles in the breath, which are precipitated, by the coldness of the external air, in the form of visible vapor; likewise other substances which owe their origin to secretions in the mouth, nose, wind-pipe and lungs. These cause the changes in the breath, which may be known by the smell, like the other qualities of the air. In youth, the breath is insipid, and contains acid: it loses these qualities after the age of puberty, and becomes more agreeable. With advancing age, it becomes again unpleasant. A bad breath is often caused by local affections in the nose, the mouth, or the wind-pipe: viz. by ulcers in the nose, cancerous *polypi*, by discharges from the mouth, by sores on the lungs, or peculiar secretions in them. It is also caused by rotten teeth, by impurities in the mouth, and by many kinds of food (viz. horse-radish, onions, and also by flesh, if used to the exclusion of other food), and by fevers. In the last case, it often varies with the character of the disease. The remedy for this complaint must depend on the causes which produce it. Substances of an aromatic kind, which have a strong, rich smell, should be chewed to diminish its offensiveness. (See Mengin's *Tentamen Physiologicum de respirat* (Edinburgh, 1790.) But it is often impossible to remove this unpleasant disorder. According to the Prussian code, a bad breath furnishes ground for a divorce.

Breathing. (See *Respiration.*)

Breccia; a term applied to a rock composed of angular fragments cemented together.

Brechin; a town of Scotland, 83 miles north of Edinburgh, with 5906 inhabitants. It is more distinguished in history than for its present importance. David I founded a bishop's see at B. in 1150, and some remains of its cathedral still exist. The steeple is a fine tower, surmounted by a spire, and is 120 feet high. Near it is one of those old towers common in Ireland, 103 feet high, and 16 feet in diameter at the base. Nothing is known of the uses of these towers, or of the time of their erection. The Culdees (q. v.) had a cell or convent here. There was, formerly, a strong castle at B., which sir Thomas Maule defended against Edward I.

Breda, in the Netherlands; capital of a district of the same name, has 9000 inhabitants, is connected with the Meuse by the navigable river Merk. B., being a strong frontier fortress, was formerly of the greatest importance to Holland, and is still of great military value as the chief point of the line of fortresses before the Meuse. The fortifications consist of 15 bastions, as many ravelins, and 5 hornworks, besides the citadel. The chief strength of this fortress lies in its marshy environs, which may easily be laid under water. B. became a town in 1534: since that time, it has often been a subject of contention between the Dutch, Spaniards and French. It was taken by surprise by Barlaimont in 1581, and by Maurice of Orange in 1590. The latter capture was accomplished by means of a boat loaded with turf, in which 70 Dutch soldiers were concealed. Spinola took B., in 1625, after a siege of 10, and Henry of Orange after one of 4 months. During the French revolutionary war, Dumouriez made himself master of the city and fortress in February, 1793, and would thereby have prepared the way for the conquest of Holland, had he not been forced, by the loss of a battle at Neerwinden, to evacuate the city and fortress, April 4. In September, 1794, B. was attacked by the army of Pichegru, but did not surrender till all Holland was conquered, in the winter of 1794. On the approach of the Russian van-guard, under general Benkendorf, in Dec., 1813, the French garrison made a sally, and the patriotic citizens profited by the occasion, rose *en masse*, shut the gates, and prevented the French from returning into the town. A peace was concluded at B. between England and Holland in 1667.

Bredow, Gabriel Godfrey, professor of history in Breslau, born in Berlin, in 1773, of poor parents, was, for a time, professor at Eutin, and a colleague of the celebrated Voss; afterwards professor at Helmstadt, and, still later, at Frankfort on the Oder, whence he went to Breslau on the removal of the university to that place. He died in 1814. He was distinguished for his patriotism and his literary works. His *Handbuch der alten Geschichte* (Manual of Ancient History) has passed through five editions, the last of which appeared in 1825. He is the author of *Chronik des neunzehnten Jahrhunderts*

(Chronicle of the Nineteenth Century), *Epistolæ Parisienses* (he went to Paris in 1807, to collect all that has been left to us by the Greek geographers), *Untersuchungen über Geschichte, Geographie und Chronologie* (Researches on History, Geography and Chronology), and of the very useful *Historische Tabellen* (Historical Tables), which have been translated into English.

Brée, Matthew van, first painter to the crown-prince of the Netherlands, member of the national institute of the Netherlands, born at Antwerp in 1773, cultivated his talents in this city, and afterwards in Paris, under the direction of Vincent, and in Italy. As early as 1798, his *Death of Cato* was admired. This great painter, being accustomed to sketch his ideas rapidly, was able to present to Napoleon the manœuvres of the fleet on the Scheldt before Antwerp, a few hours after they took place. With almost equal rapidity, he made a painting of Napoleon's entrance into Amsterdam, at the moment chosen, being that when the magistrates are delivering to him the keys of the city. In architecture and in sculpture, B. also exhibited considerable talents.—Philip James van B. is likewise a celebrated painter, and lives at Pavia. Several of his works have been purchased in France for the Louvre, St. Cloud, &c. He was born in 1786.

Breeches; an article of clothing in use even among the Babylonians, and which, with them, were made so as to cover the foot, and supply the place of stockings. In Europe, we find hose first used among the Gauls; hence the Romans called a part of Gaul *breeched Gaul* (*Gallia braccata*). In the 5th century, they had become fashionable in Rome; but the breeches-makers were expelled from the city by an imperial edict, it being considered unworthy of the lords of the world to wear these barbarous investments. The stockings were separated from them some centuries since. Sometimes they were worn small, and sometimes large, as the fashion changed. In some instances, an immense quantity of cloth was put in them. The poor stuffed theirs out with such substances as they could procure. Joachim II, elector of Brandenburg, who had forbidden the wearing of these enormous integuments, made a person, whom he saw with a pair, rip them open, when some bushels of bran fell out of them. Osiander (in his *Hoffahrtsteufel*) and Musculus (in his *Hosenteufel*) raised their voices against this preposterous fashion. The modern breeches were first introduced during the reign of Louis XIV.

Breeching; a rope used to secure the cannon of a ship of war, and prevent them from recoiling too much in the time of battle. It is of sufficient length to allow the muzzle of the cannon to come within the ship's side to be charged.

Breezes, Sea, Land and Mountain. (See *Winds*.)

Breguet, A. L., maker of time-pieces for the royal marine in France, member of the academy of sciences and the *bureau des longitudes*, of the society for the encouragement of national industry, the royal council of arts and manufactures, and the legion of honor, born at Neufchâtel, in 1747, contributed to the perfection of the art of watch-making, as well as of mechanics in general, by a number of useful inventions, for instance, astronomical double watches, double chronometers, marine watches, a sympathetic clock, watches that need not be wound up, provided they are occasionally worn about the person, the metallic thermometer, &c. He likewise improved the telegraph. He has a son, who possesses a large share of his father's talents, and has been concerned with him in the execution of many of his great works.

Brehon; an ancient Irish magistrate. The office appears to have been hereditary. Each tribe had one *brehon*, whose judgments were given in the open air on the hill-tops; many spots are yet called *Brehons' chairs*. The office was abolished under Edward III. Some fragments of the *brehon* law are yet extant. (See Ledwich's *Antiquities of Ireland*, 1790.)

Breisgau. (See *Brisgau*.)

Breislak, Scipio, born in Rome, 1768, and destined for the church, for which reason he is mentioned as an *abbate* in the works of Spallanzani, was one of the most ingenious geologists of our times, and opposed to the Neptunian system, without, however, implicitly adopting the Vulcanian. He was professor of natural philosophy and mathematics at Ragusa. He was afterwards professor in the *collegio Nazareno*, at Rome, made a scientific tour through Naples, and went to Paris, where he formed an intimacy with Fourcroy, Chaptal, Cuvier, &c. Napoleon appointed him inspector of the saltpetre works and powder-mills in the kingdom of Italy. He was also a member of the institute and many other literary societies. The first work, by which he made himself known to the public as an observer

of nature (e. g. his treatise on the *solfatara* in the vicinity of Naples, in the neighborhood of which he lived for years as director of the establishments for boiling alum), contains indications of the principles which he afterwards developed in his system. The first extensive work, which he published at Florence in 1798, was the *Topografia Fisica della Campagna* (Physical Topography of Campania). After some time spent in the examination of this region, he returned to Rome, examined the adjoining country in a geological point of view, and confirmed his former opinion, that the seven hills are chiefly the remains of an extinct volcano. Leaving his native city on account of political disturbances, he went to France, where he made himself known to the mineralogists, in 1801, by a new edition of the above-mentioned work (disfigured, indeed, by many misprints), with additional remarks, supplements and corrections, under the title *Voyages Physiques et Lithologiques dans la Campanie*, 2 vols. A topographico-mineralogical description of the environs of Rome is added to it. It contains the results of 12 years' researches. Till then, there had been no systematic treatise on the mineralogy of mount Vesuvius. Earlier writings on this volcano contained merely the history of single eruptions, and the only mineralogical work on this subject, by Gonni, is nothing but a catalogue. B. was the first who examined geologically the regions described in his work. This valuable work has been translated into several languages; into French by general Pommereuil, into German by Fr. Ambr. Reuss (Leipsic, 1802, 2 vols. with engravings).—B. took advantage of his residence in France to examine the regions of Auvergne famous for the *Puys* (volcanic mountains), and his observations there contributed not a little to the formation of his theories on the effects of volcanoes. In Milan, he wrote his *Arte di Salnitrajo* (Art of manufacturing Saltpetre), and, in 1811, published his *Introduzione alla Geologia* (Introduction to Geology), 2 vols., which was, in 1818, followed by an edition in French, almost a new work, under the title *Institutions Géologiques*, 3 vols., likewise published at Milan. In 1822, his beautiful geological description of the province of Milan appeared. He died at Turin, Feb. 15, 1826, at the age of 78. He left his celebrated cabinet of minerals to the family of Borromeo.

Breitkopf, John Gottlob Emmanuel; born at Leipsic, in 1719. He pursued, at first, a literary career. During his studies, the works of Albert Dürer, in which the proportions of letters are mathematically calculated, fell into his hands. He was pleased with this subject, and, during his whole life, labored with zeal to improve the German characters. An attempt was once made to introduce into Germany the Latin characters instead of those commonly used in that country. B. was one of the most zealous opposers of the plan. In 1755, he essentially improved the art of printing music with movable characters. His invention of a method of printing maps, pictures, and even Chinese characters, by means of movable types, is ingenious, though less useful than the other. Although the pope, as well as the academy in Paris, testified their great approbation of this invention, yet no practical use has yet been made of it. He was engaged in writing a history of the art of printing, but died in 1794, before this work was finished. B. was a man of great probity.

Bremen, on the Weser, situated in a territory formerly an archbishopric, but erected into the duchy of Bremen in 1648, was one of the leading members of the Hanseatic league. At the reformation, the city embraced the Lutheran religion, and expelled the archbishop. Since 1562, Calvinism has been the prevailing religion. By the peace of Westphalia, the crown of Sweden came into possession of the secularized archbishopric, under the title of a duchy. When the elector of Brunswick gained possession of the duchy in 1731, the prerogatives of a free city were confirmed to B. B. is divided by the Weser into the old and the new towns. The fortifications have been demolished, and on the ground where they stood a garden, in the English style, was laid out in 1802, extending, in a semicircle, round the old town, from one bank of the Weser to the other: the garden is provided with running water, and wide, clean walks. Outside of each of its gates is a retired place, planted with fir-trees, affording sheltered walks, and room for sports of various sorts. There is, also, much taste displayed in the arrangement of the trees, shrubs and plants. Adjoining it are the finest houses, which have a good view of the river, the city, and the surrounding country. The principal buildings, besides the churches, are the senate-house, with its cellar of Rhenish wine, the former archiepiscopal palace, converted, in 1819, into the city hall; the exchange, a museum, theatre, hospital,

city library, and two orphan asylums. The water-works furnish the old town with pure, soft water. The number of inhabitants is estimated at 38,000; that of the houses is 5350. The city contains a gymnasium (academy), and, for scientific instruction, a *pædagogium*. The magistrates (two of whom may be Lutherans), are 4 burgomasters and 24 senators, composed partly of the learned and partly of the mercantile professions. If matters of general moment arise, the *Wittheit* (wisdom), consisting of all the citizens who pay taxes, is convoked. The territory belonging to the city is about 74 square miles, and contains 48,500 inhabitants. From 1810 to 1813, B. was the capital of the French department of the Mouths of the Weser. The congress of Vienna admitted it into the German confederacy, as a free city, with one vote in the general assembly. B. and the three other free cities have, together, a vote in the diet. The revenues amount to 400,000 florins; the debt, to 4,500,000 florins. The constitution is, like that of Hamburg and Lübeck, a relic of other times. A thousand antiquated forms render the government of this small city a complicated web of jarring interests. These free cities do not even possess the liberty of the press, and their existence depends on the mutual jealousy of the powers which surround them, with whose whims they must always comply. The only advantage of which they can boast is the comparative lightness of the taxes. The chief points deserving of remark in the political constitution of these cities are, that they have four burgomasters chosen for life, a senate, chosen from among the citizens, also for life; likewise meetings of the citizens, either in primary assemblies or by delegates, whose opinion and consent are seldom asked, except when new taxes are to be imposed; and, finally, a number of *subjects* not represented. In 1820, the toll at Elsfleth was abolished; but the accumulation of sand between Vegesack and B. has not ceased, and vessels deeply laden can go up the river only to Bracke and Elsfleth, or, at most, to Vegesack. Their cargoes are, therefore, discharged into lighters, which is inconvenient and expensive. The herring and whale fisheries carried on from this city are important, and the trade, principally in German linen, to St. Thomas and South America, is increasing. Olbers and Heeren were born at B. B. lies in lon. 8° 48′ 3″ E.; lat. 53° 4′ 45″ N.

Brenner, in the Tyrol. Mount B., properly so called (also *mons Brennius*), rising between Inspruck and Sterzing, and between the rivers Inn, Aicha and Adige, 729 fathoms above the level of the sea, is 6063 feet in height. The road from Germany to Italy traverses this mountain. It is 4376 feet high, and about 12 miles long. At its foot is the pass, called *Lueg* or *Lug*, where the milestones of Maximin and Maxentius are standing; the first of which was erected in 236, or the year of the victory over the Allemanni, and indicates the distance of 130 Roman miles to Augsburg. The B. has been the chief position for the defence of the Tyrol. In the last revolution of the Tyrolese, in 1809, particularly in August, they defended themselves gallantly in this place against the Bavarians and French, who were advancing, cutting off their communication with Italy, until November. (See *Alps, Roads over.*)

Brennus; the name of several princes of the ancient Gauls, and expressive of their dignity. Its derivation from the old Celtic word *brenn* (chief, leader) is not improbable. A leader of the Sennones, a Gallic nation in the upper part of Italy, who is mentioned under this name, made an invasion into the Roman territory about the year 390 B. C. Aruns, an Etrurian, having failed in an attempt to obtain justice at Rome in a lawsuit with his ward, addressed himself to the Sennones for the purpose of revenging himself. Enticed by the description of the fertility of Etruria, they conquered the whole country from Ravenna as far as Picenum. They then laid siege to Clusium, the inhabitants of which city had recourse to Rome for assistance. The Romans, in consequence, sent three brothers of the Fabian family to remonstrate with B. B. replied, that his right lay in his sword. The Fabii, provoked by this haughty answer, entered the city under pretence of negotiating, exhorted the inhabitants to perseverance, promised them assistance, and even conducted a sally at their head. B. resolved to avenge this breach of faith, and, raising the siege of Clusium, directed his march towards Rome, after having in vain demanded the surrender of the Fabii. They were appointed military tribunes, and, at the head of 40,000 men, went forth to meet the enemy. A battle was fought near the river Allia, not far from Rome; the Romans were totally defeated, and B. took possession of the city, which had been previously abandoned by the inhabitants. The capitol only was provided with a

garrison; but several aged citizens of rank, priests, ex-consuls and generals, amounting in the whole to about forty, had resolved to remain in the city, and devote themselves to the infernal deities. Attired in their sacerdotal, consular and triumphal robes, like victims decorated for the sacrifice, they seated themselves in their chairs of office, in the middle of the forum, awaiting death. When B. arrived at the forum, he was struck with astonishment at their venerable aspect. The Gauls looked upon them as so many statues of deities, and feared to go near them. At last one ventured to approach M. Papirius, and stroke his beard, upon which the latter struck him with his ivory sceptre, and was immediately massacred, together with his companions, by the infuriated Gauls. Rome was sacked, and all the inhabitants who yet remained in their houses were slain. B. then assaulted the capitol, and, being repelled with considerable loss, he set fire to the city, and levelled it with the ground. The capitol, however, was so strong, that he resolved to reduce it by famine. Detached parties, at the same time, plundered the plain country, and exacted contributions from the neighboring cities. Such a party appeared before Ardea, the place where the valiant Camillus lived in exile. This magnanimous patriot persuaded the senate of Ardea to defend their city, made a nocturnal attack on the besiegers, and caused a dreadful slaughter among them. By this victory, the courage of the Romans, who had fled from their city, was revived: they rallied a body of 40,000 men, chose Camillus their leader, and the senate, being secretly apprized of it, named him dictator. Meanwhile, the garrison of the capitol was in great distress. B. attempted a surprise by night, in which he would have succeeded, had not the cackling of the geese, sacred to Juno, awakened the Romans. Manlius, the former consul, alarmed the garrison, and the Gauls were repulsed. As it was not known in the capitol that Camillus was approaching, or that the Gauls were distressed for want of provisions (Camillus having cut off their supplies), the garrison was inclined to enter into a treaty. B. promised to raise the siege, and leave the Roman territory, for 1000 pounds of gold. The gold was weighed, but the Gauls made use of false weights; and, when the Romans complained of the fraud, B. threw his sword into the scale, and cried out,—"Wo to the vanquished!" The Romans were about to submit to this injustice, when Camillus appeared with his army, and declared the treaty void. A battle ensued: after having sustained an inconsiderable loss, the Gauls retreated, and, in the succeeding night, abandoned their camp. On the following day, Camillus pursued and defeated them. Those who escaped death in battle were slain by the inhabitants of the country, so that not one of them returned to his native land.—Another B., likewise a leader of the Gauls, invaded Macedonia, about 100 years later, with an immense army (150,000 foot and 30—40,000 horse), and, after having defeated Sosthenes, directed his march through Thessaly and Greece, towards Delphi, where he plundered, or was on the point of plundering, both city and temple; but, as several writers assert, he was repelled by a terrible storm, accompanied by lightning and earthquakes: a Greek army drew near, and a general defeat of the Gauls ensued. B. himself put an end to his life.

Brentano, Clement, born at Frankfort on the Maine, in 1777, has made himself known by several literary works. Among them is *Des Knaben Wunderhorn* (The Boy's wondrous Horn, 3 vols., 1826), a collection of German popular songs, which he published with his friend Achim von Arnim.

Brentford; a town in Middlesex, Eng., seven miles W. of London. It has a weekly market and two annual fairs. Here Edmund Ironside defeated the Danes, under Canute, in 1016; and Charles I a part of the parliamentary forces, in 1642. The magnificent edifice of the duke of Somerset, where lady Jane Grey resided, now belonging to the duke of Northumberland, was built here, on the site of a suppressed nunnery.

Brescia; capital of a delegation comprising 314,000 inhabitants, and 1200 sq. miles, in the Milanese, at the foot of a mountain rising between the lakes Guarda and Iseo, on the rivers Mella and Garza. This latter river divides the city into two parts, in which respect it resembles most of the cities of Lombardy. It is a manufacturing place, containing 3438 houses and 31,000 inhabitants. It is commanded by a citadel, elevated on a rocky height, and is adorned with a magnificent cathedral. This, as well as the splendid library in the episcopal palace, it owes to cardinal Quirini. It has also a philharmonic society a cabinet of medals, and a theatre. This last is to be found in almost all Italian cities of equal importance, because, in Italy, many possessors of landed estates, hav-

ing no other pursuit than pleasure, spend their income in the cities. In this city (for many centuries called *Armata*) and in Bergamo were the chief manufactories of arms of every description, to answer the demand of the Levant, where much luxury is displayed in this article. Venice, for a long time, sent thither supplies of beautiful and costly arms. The guns of B., and the steel prepared there, are celebrated in the East. B. has also manufactures of oil, fustian, linen, silk, paper and hardware. Much silk, wine, flax and cloth is conveyed into the interior; for the artificial irrigation, by the aid of Alpine streams and the abundance of lakes, together with the southern exposure of the territory of B., impart to the fertile soil of this delegation a great richness of vegetation, which is increased by the industry of the tenants, assisted by the advances of funds on the part of the wealthy proprietors. Under the government of Venice, the taxes were very light; nevertheless, the inhabitants of B. and its territory were very unruly subjects of the republic, whose police was so lax, as scarcely to punish those who undertook to revenge themselves. An end has been put to the disorders, caused by banditti in the territory of Venice, by the French and Austrian government in Italy. In 1826, a number of remarkable antiquities were found buried in a vault near B.

Breslau, capital of Silesia, on the river Ohlau, at its junction with the Oder, has 78,860 inhabitants, among whom are 4600 Jews. B. is the residence of both the military and civil governors of Silesia, and the seat of a superior council of administration, a superior court of justice, &c. It contains more than 20 Catholic churches, of which the cathedral of St. John on the Dominsel (island of the cathedral) is the seat of the bishop of B. Among 84 literary institutions, there are four distinguished gymnasia; two Lutheran, one Reformed and one Catholic. Among the libraries worthy of notice are the royal library, the library of the university, and the library of Rhediger, which belongs to the city, and is remarkable for its rich collection of manuscripts. The city possesses, in its senate-house, and in the church of the cross, standing on Sandinsel (Sandy island) two magnificent monuments of ancient German architecture, and, in public places as well as private collections, contains many exquisite works of art. It has also a theatre. B. carries on a considerable commerce, which has, however, been diminished by late events. The two annual fairs of wool are numerously attended. Among the misfortunes that have befallen the city in modern times, the siege in 1806 and 1807, by the French and the troops of the confederation of the Rhine, must be noticed. After the capture, the French began to destroy the fortifications, which have since been entirely demolished. The spacious walks and new buildings, which occupy the place of the works, have very much contributed to embellish B. The Catholic university was established under Leopold II, in 1702, by the Jesuits, and, in 1811, combined with the Protestant university of Frankfort on the Oder. In 1826, it contained more than 850 students. The Prussian government has done much for this institution, as well as for the other new universities in Berlin and Bonn.

Brest (anciently, *Brivates Portus*, and *Gesobrivate*); a seaport in France, and principal place of a district in the department of Finisterre, in the former province of Brittany, 23 posts N. W. Vannes, 69¾ W. Paris; lon. 4° 29′ W.; lat. 48° 23′ N.; pop., 25,865; houses, 2600. It has one of the best harbors in France, and a safe road, capable of containing 500 men-of-war, in 8, 10 and 15 fathoms at low water, and it is the chief station of the French marine. The harbor and magazines were constructed in 1631, by Richelieu. The coast, on both sides, is well fortified. The entrance is narrow and difficult, with covered rocks, that make it dangerous to those not well acquainted with it. It contains two parishes and a marine seminary. The arsenal is an immense and superb building, and the dock-yards are well constructed. It is the seat of a governor, of an admiralty board, and a municipality. The climate of B. is wet and uncomfortable, and the sky is almost always obscured. June 1, 1794, the French fleet was beaten off Brest by the English, under Howe, who took from them six ships of the line, and sunk a seventh.

Bretagne. (See *Brittany*.)

Breteuil, Louis Auguste le Tonnelier, baron de; born in 1733; a French diplomatist; at first, minister plenipotentiary at the court of the elector of Cologne, afterwards at the Russian court, then successively ambassador in Sweden, Holland, Naples, at Vienna, and the congress at Teschen. His embassy to Vienna explains his attachment to the queen Marie Antoinette. As minister and secretary of state, he was a zealous defender of the monarchy: he was, therefore, considered as one of the greatest enemies of the rev-

olution. After the 14th of July, he escaped the fate of Foulon by a hasty flight. In 1790, Louis XVI intrusted him with several secret negotiations at the principal northern courts. The convention issued a decree against him. In Bertrand de Moleville's history of the revolution, there is valuable information with respect to his last diplomatic labors. In 1802, he returned, with the permission of the government, to France, and died at Paris, in 1807.

Bretschneider, Henry Godfrey von, born at Gera, March 6, 1739, died at the castle of Krzinitz, near Pilsen, Nov. 1, 1810. He was a soldier, a provincial counsellor, librarian at Ofen and Lemberg, the adviser and confidant of Joseph II, a travelling adventurer, a poet, a writer of songs, a collector of engravings and pictures, an author of reviews and satires, a *Peregrinus-Proteus*, in a hundred different colors; yet, withal, an upright friend to what he considered the truth; a sworn enemy to all political and priestly imposture, which he unmasked without mercy; an encyclopedist, without having ever been connected with d'Alembert and Diderot; an instructer and benefactor of his age; in his writings and conversation, an enemy of Napoleon; hated by thousands; loved by all who were intimately acquainted with him; courted on account of his wit and social talents; feared by all fools and hypocrites. He received his first instruction in the academy at Ebersdorf, under the care of the Bohemian brethren, where he was taught by hunger to steal, and, by hypocritical cant, to doubt all that is holy. He has written a great deal, and no folly of the times escaped him. All were boldly exposed and forcibly attacked. His Journey to London and Paris (Berlin, 1817) was translated and published in the Edinburgh Magazine. If B. had written nothing but the Almanac of the Saints, for the year 1788, in which, in compliance with the wish of the emperor Joseph, he unsparingly attacks priests and priestcraft, he would deserve, for this work alone, to be known to enlightened foreigners.

Breughel; the name of a celebrated Dutch family of painters, the first of whom adopted this name from a village not far from Breda. This was Peter B., also called, from the character and subject of most of his representations, the *Droll*, or the *Peasants' B.* He was born in 1510 (according to Mechel, in 1530), was a pupil of Peter Koeck van Aelst, travelled into Italy and France, copying the beauties of nature, and, after his return, fixed his residence at Antwerp, where he was received into the academy of painters in that place. He subsequently married the daughter of his instructer Koeck, and removed to Brussels, where he died in 1570 (according to some, in 1590). In his rural weddings, his rustic feasts and dances, he strikingly represents the gayety of the villagers, as he himself had frequently observed them, in disguise, in his youth. He also etched, but many of his pictures have been engraved by others. He left two sons—Peter and John. The former, (called the *Younger B.*,) preferring subjects affording striking contrasts, painted many scenes in which devils, witches or robbers are the principal figures. This particular turn of genius procured him the name of *Hell B.* Among his pieces are *Orpheus playing on his Lyre before the infernal Deities*; also, the *Temptation of St. Anthony.* The former picture hangs in the gallery of Florence. The second brother, John, was distinguished by his landscapes and small figures. From his usual dress, he received the title of *Velvet B.* He also painted for other masters landscapes, as back-grounds to their pieces, and sometimes little figures in them. He was a very prolific artist. In connexion with Rubens, he represented Adam and Eve in Paradise. The figures in this picture are painted by Rubens. This piece, his *Four Elements*, also *Vertumnus* and *Pomona*, which were all executed jointly with Rubens, are among his principal performances. He is said to have been born in 1568. He visited Italy, and enriched his imagination with beautiful scenery. He is said to have died in 1640. Other members of this family, belonging to a later period, are Ambrose and Abraham, who, for a time, resided in Italy, and died in 1690; the brother of the latter, John Baptist, who died in Rome; and Abraham's son, Caspar B., known as a painter of flowers and fruits.

Breve; a note of the third degree of length, and formerly of a square figure, as 𝅜; but now made of an oval shape, with a line perpendicular to the stave on each of its sides: 𝅜. The breve, in its simple state, that is, without a dot after it, is equal in duration to one quarter of a large, or to two semibreves, and is then called *imperfect;* but, when dotted, it is equal to three eighths of a large, or to three semibreves, which being the greatest length it can assume, it is then called *perfect.*

Brevet; a term borrowed from the French, in which it signifies a royal act granting some favor or privilege; as, *brevet d'invention.* It is applied, in England and the U. States, to nominal rank in the army higher than that for which pay is received. Thus a brevet major serves as captain, and draws pay as such. In the army of the U. States, officers, having brevets or commissions of a prior date to those of the regiments in which they serve, may take place in courts-martial, and on detachments composed of different corps, according to the rank given them in their brevets, or dates of their former commission; but, in the regiment, troop or company, to which they belong, they shall do duty and take rank according to the commissions by which they are mustered in such corps. (*Rules and Art. of War*, 61.) By act of congress, April 16, 1818, brevet officers shall receive the pay and emoluments of their brevet commissions only when on duty, and having command according to their brevet rank. The same act provides that brevet commissions shall, from that date, be conferred only with the consent of the senate.

Breviary; the book containing the daily service of the church of Rome, matins, lauds, prime, third, sixth, nones and vespers, which all Catholics were formerly bound to read daily. This obligation is now restricted to the beneficiary clergy.

Brewing. The juices of fruits contain sugar, which is essential to the vinous fermentation. But this does not exist, in any important quantity, in seeds. Instead of it, however, we have starch, and this may combine with water, so as to form sugar. This combination is performed very perfectly by a vital process; that is to say, it takes place only in a living seed, and not in one which is frozen, burned, or otherwise killed. It is known by the name of *germination* or *growing*, and is of familiar occurrence, being what takes place in every seed that is successfully planted. The seeds of wheat, rye, barley, &c. consist principally of starch. If a grain of these is examined, we find near one end of it a small body, which is the rudiment of the future plant, and the microscope shows us that this consists of two parts—the *plumula*, which is destined to ascend through the earth to form the stalk, and the *radicle*, which is to be spread abroad below, and form the root. Whenever a grain of barley, oats, or certain other of the gramineous seeds, is exposed to water, it begins to swell and absorb the moisture; and, at the same time, if the temperature of the air is not too cold, the radicle thrusts itself out at the lower end; the plumula, on the other hand, pushes itself along beneath the husk of the grain to the other end, before it thrusts itself out. There are several curious considerations in regard to this process. The one which concerns us at present is this, that, as the plumula is passing along through the husk, the part of the seed along which it passes becomes changed into the substance known in chemistry by the name of *starch sugar*; that is, when the plumula has passed along one third of the length of the grain, that third is starch sugar, while the remaining two thirds are still starch; and so with the rest. The starch sugar seems to be some combination of starch and water. The final cause of the change is undoubtedly the support of the growing plant, sugar being evidently necessary to the growth of plants, as it is always found in their sap, and sometimes, as in the sugar maple, in great quantities. The moment, however, the plumula begins to protrude beyond the end of the grain, the sugar diminishes, as it is consumed by the young stalk; and the substance of the seed is also consumed, though by no means to the same extent, by the growth of the root. To produce this change in seeds, and thereby to fit them for yielding a sweet fluid, when mixed with water, is the business of the maltster; and it is an operation of great delicacy, upon the successful performance of which the success of a manufactory of ale or beer in a great measure depends. The first operation in malting is, to plunge the barley, or other grain to be malted, into a large cistern, containing water enough to cover the whole mass. The barley immediately separates into two parts; one is heavy, and remains at the bottom of the water, while the lighter portion, consisting of chaff, defective grains, &c. floats on the top. This latter is skimmed off as of no use. The heavier part, or sound barley, is suffered to remain till it has absorbed a portion of the water, sufficient for the purpose of enabling it to germinate. This is *steeping*. It is the first process, and usually occupies about two days. When the grain is sufficiently steeped, the water is let off, and the grain thrown out of the cistern, and piled in a heap, or, as it is technically called, a *couch*. After a few hours, the bottom and inner part of the heap begin to grow warm, and the radicle or root to make its appearance: and the germination thus commenced would go on rapidly but for the labor of

the malster, who, with a view of making all the grains grow alike, checks the growth of such as are in the middle of the heap by turning them to the outside, and *vice versa*. For this reason, malting cannot be performed, with any success, in summer, which would, at first sight, seem to be the fittest season. On the contrary, the best maltsters prefer the coldest weather; for, at this season, they can always keep the germination going on at the rate they wish, by heaping up the grain; whereas, in warm weather, it grows so rapidly, that no effort can make the process equal and regular. Thus the grain is turned backwards and forwards for 14 days, at the end of which period the *acrospire*, as it is called, or the plumula, having nearly reached the end of the grain, and the latter having acquired a sweet taste, the process of growth is suddenly and effectually stopped by spreading the whole upon a kiln, which is a floor of iron or tiles, perforated with small holes, and having a fire beneath it. There the life of the grain is destroyed, and it is thoroughly dried.—The malt thus made is ground, or rather crushed, by passing it between a pair of iron rollers. It is then prepared for brewing. The first step in brewing is called *mashing*. It consists in stirring up the malt with a quantity of hot water, which dissolves the starch sugar of the malt, and forms a sweet liquor called *wort*, similar to the must, or sweet juice of the grape, from which wine is made. The manufacture differs, however, in some essential particulars, at this stage of the process, from that of wine; for, if the wort were allowed, as the must is, to ferment without obstruction, it contains so much of the mucilage and starch of the grain, that it would run into the acetous, and from thence into the putrefactive fermentation, and would be *foxed*, as it is technically termed; that is, it would become ill-smelling vinegar instead of beer. To prevent this, it is first boiled. This process renders it stronger, by evaporating a portion of the water; and, further, it coagulates or curdles the mucilage, which subsides afterwards, and is not again dissolved, thus separating an injurious ingredient. While boiling, a portion of hops is added. One object of this is to give an aromatic, bitter taste to the liquor, which habit has rendered agreeable. The principal object of adding the hops, however, is, to check the tendency to the acetous fermentation, which is always far greater, in liquor so compound in its character as beer, than in the simpler liquors, as wine and cider. It is further a common opinion, that hops add to the intoxicating qualities of the article; and this opinion is probably well founded.—After the worts are sufficiently boiled, they are poured out into large shallow cisterns or coolers, till they become cool, and deposit much of the curdled mucilage. They are then allowed to run into a deep tub or vat to ferment. If left to themselves, however, the process would take place very imperfectly, and it is therefore assisted by the addition of yeast. The true nature of this substance, notwithstanding much attention and some laborious analyses, is not yet understood. It excites fermentation, however, which continues for a period of time longer or shorter, according to the fancy of the brewer, and is then checked by drawing off the liquor into barrels or hogsheads. In these the fermentation still goes on, but it is now called by brewers *cleansing*. With a view to take advantage of this process, the casks are placed with their bung-holes open, and inclined a little to one side. The scum, as it rises, works out at the bung, and runs over the side, and thus the beer is cleansed from a quantity of mucilage, starch, and other unfermented matters. What does not run out at the bung subsides to the bottom, and constitutes the *lees*. After this cleansing is completed, the clear beer is racked off into barrels, and preserved for use. The scum and lees are collected, and the former constitutes the yeast for the next brewing.—Such is the general history of brewing, whether the product is to be beer, ale, porter or wash, except that in the latter the cleansing is not necessary.—Even this racking, however, does not remove all the unfermented matter. Some starch and gluten still remain; of course, the liquor soon begins to ferment again in the barrels; but, as these are closely stopped, the carbonic acid gas, or fixed air, cannot escape, but becomes mingled with the beer. Every successive fermentation causes some lees, from which the beer may be racked off, and, by repeated racking, the fermentative matter may be completely removed, and such beers become clear, transparent, and somewhat like the German wines, as, for instance, that commonly called *hock*. But, the disposition to ferment being thus entirely destroyed, they are, like these wines, perfectly still, and acquire no disposition to froth by being bottled. Hence old sound beers may remain in bottles for years without *coming up*, as it is technically called. The object of the brewer is

to produce an agreeable beverage, distinguished not so much for absolute strength, or quantity of alcohol, as for color, flavor, transparency, liveliness, and power of keeping well. Some of these qualities are not compatible with the developement of the greatest quantity of alcohol or ardent spirit, which is the main object of the whiskey-distiller. To effect this purpose, he makes a kind of beer, which is called *wash*. This differs from brewers' beer in some important particulars. In the first place, the grain is not all malted: in England, only a part of it is so; in the U. States, generally, none at all. In the next place, it is ground a great deal finer than in brewing. If the brewer were to grind his grist as fine as the distiller, he would run great risk of *setting his mash*, as the phrase is; that is, he would make paste of his grain, and entangle the solution of sugar so effectually, that he could not get it out again. The distiller does not run the same risk, because he does not use such hot water as the brewer, and he can mash and stir his *goods* a great deal longer without injury, and even with benefit to his liquor. Again, he does not need to boil or add hops to his worts, for he does not care about precipitating the mucilage, or making his beer keep. In the next place, he adds a great deal of yeast, and ferments violently and rapidly, so as to decompose the sugar as quickly as possible, and is quite indifferent whether the worts even become somewhat sourish in the process, as, when sufficiently fermented, the alcohol is removed at once by distillation. If raw grain be ground, mixed with water at a certain heat, and allowed to stand, the change of the starch into starch sugar, or the combination of starch and water, takes place in the same way as in malting. It takes some time, however, and hence the distillers' mashes stand longer than the brewers'. It would seem, therefore, from this, that the malting of grain is not necessary for the making of beer; and, accordingly, this method of proceeding has been recommended by an eminent chemist, one who has paid much attention to this subject, and there can be no doubt that a certain description of small beer may be so made. But the process is not applicable to the finer and more valuable kinds of malt liquors, for reasons which it would require too many details to explain perfectly.—Besides the kinds of beer and wash already mentioned, there are others in very common use in the U. States. These are made by mixing honey, molasses or sugar with water, and fermenting with yeast, or some other leaven. Beers made in this way are commonly mingled with some vegetable substance, as ginger, spruce, sarsaparilla, &c. to give them a particular flavor, and are familiar to all by the names of *ginger beer*, *spruce beer*, *sarsaparilla mead*, &c. &c. The wash of this kind is made from molasses and water, fermented in large vats under ground, by means, not of yeast, but the remains or returns of former fermentations. The liquor thus fermented is pumped up at once into the still, and the product is common under the name of *rum*. Of the beers manufactured from grain, as an article of consumption in that state, there are a great many varieties. These, however, may be all comprehended under three principal ones—*beer*, *ale* and *porter*. Beer differs from the other two in the circumstance of its being made for immediate consumption. There are two or three kinds of it, known by the names of *strong beer*, *table beer*, *half-and-half*, &c. These differ only in their relative strength, being all brewed upon the same general principle, and adapted to be used soon after they are made. It is of no consequence, so far as regards the principle of brewing beer, whether the malt of which it is made be of one color or another: it may be pale, or high-dried, or amber, or any thing else. It is not even of the first consequence whether the malt be good or bad, for the beer is drank soon after it is made, and if it is not, it is lost; so that there is little opportunity to discover any particular flavor. Moreover, it is a common and necessary practice to color it so highly with burned molasses or sugar, that the original taste of the liquor is, in a great measure, concealed. There is also a sort of fulness of taste which is given to beer, by this practice in part, but still more by the mode of fermentation. This mode is to stop the progress of the latter before the sweet taste is entirely gone, by removing the beer from the fermenting tun to the smaller casks. In some places, indeed, where the beer is to be sent out very weak, it does not go into the fermenting tun at all, but the yeast is mingled with the worts in the small casks, and it is sent out at once in full fermentation, and drank up, in fact, before this has time to subside entirely. Ordinarily, however, it is fermented a little in the tun, and then cleansed and racked in a very short time. When beer is sent out in this state, it is always necessary to mingle with it a quantity of what are called *finings*, that is to say,

isinglass, or something of the sort, which has the same effect as the fish-skin or isinglass commonly put into coffee—it settles it; that is, it causes the dregs to subside to the bottom. Beer made in this way is an agreeable liquor, and well adapted to the purposes of draught in cold weather, especially when its briskness is increased, as it usually is, by warming it a little. However, beer, properly so called, is an imperfect liquor. The process is not complete, and very slight variations alter its character.—The other varieties of malt liquor are ale and porter, or, as they are commonly called, *stock liquors*. These are not intended for immediate consumption, but to be kept for a longer or shorter period, during which they do or ought to improve in quality. Ale is a sweeter liquor than porter, and much stronger, the best London brown stout being about 25 per cent. weaker than Burton ale. The first part of the process, on which the difference in the liquors depends, is the drying of the malt: for ale it must be dried very carefully and slowly, so as to be of a pale color; and the article is inferior if any of the grains are scorched or burned, so as to communicate a harsh taste to the liquor. In the next place, the heat of the water, when poured on the grain or mash, must be higher. The reason given for this is, that it renders the worts clearer when they are drawn off from the mash-tun. It is not clear why this is of any consequence, for it would seem that the boiling, to which the worts are afterwards subjected, would be sufficient to curdle and precipitate any mucilage dissolved during the mashing. Such, however, is not the case; and a low heat in mashing is always apt to be followed by violent fermentation, very difficult to check, and very apt to produce acidity. The higher the heat of the mashing-water the better, provided it is not so high as to set or make paste of the mash. The exact point can be determined only by experiment, and must vary with the comparative softness of the water and comparative paleness of the malt. In the next place, the mashing or stirring must not be long continued, as it is only desirable to dissolve the sugar; and the effect of long mashing is to mix the starch and mucilage with the worts, and, of course, to diminish their comparative sweetness. For the same reason, the first mash only is proper for fine ales, as the last always contains much more starch and mucilage. These ales thus acquire a sweetness which cannot be removed, except by very long fermentation, and, therefore, they long continue more generally palatable than porter.—The fermentation of ales is conducted very differently from that of beer. They are let down, or put into the fermenting tun, at a lower temperature, and the fermentation is made to go on slowly and gradually. They are then drawn off clear, and cleansed, till the yeast is as much as possible removed. Hence these liquors, when well made, require no finings, but are racked off so clear that they become fine of themselves, and much higher flavored than they can possibly be when finings are used. Lastly, ale can only be had in perfection from bottles. Its sweetness, high flavor and effervescing quality cannot long be preserved on draught, any more than the fine qualities of Champagne.—Porter, the favorite drink of Londoners, to be perfect, in the first place, requires a large proportion of brown or high-dried malt; i. e., malt which has been scorched on the kiln; but it is rarely, or, rather, never made so at the present day. It is a wasteful and expensive practice to dry malt in this way, as very much of its valuable constituents is wasted by this high-drying, which operates, in fact, like distillation, carrying off in the steam what ought to be left behind. Only a small portion of such malt is, therefore, now used, and sometimes very little indeed, the color of porter being produced artificially, by means of burned sugar. Low heats are used in the mashing, for the liquor is not to be sweet, and it is, therefore, most profitable to get as much starch as possible. For the same reason, the products of all the mashings are mingled together, thus constituting entire porter. Formerly, it was the practice, in London, to take the separate mashes, for porter, of three different qualities, which were mixed by the retailer, to form porter *of three threads;* but, afterwards, the brewers, disliking this practice, made the porter *entire* at once. It is obvious that ale could not be made entire. Again, porter is fermented with more rapidity than ale, and hence it requires very careful watching, lest it suddenly pass the bounds of the vinous, and run into the acetous fermentation. It requires to be cleansed off sometimes at a moment's warning, or else it gets that acidity which is its most common fault. After all, it abounds in unfermented matter, and requires a length of time to ripen, that is, to change this matter into alcohol; and this it does best in large masses. Whether from this reason, or some other that does not appear, it seems to be pretty generally

admitted, that no brewery, either in England or elsewhere, has been able to make porter equal to the large porter-breweries of London. This superiority has been attributed to the use of the Thames water; but, in the first place, the small London breweries, which do not make good porter, have this advantage in common with the larger ones; and, secondly, these last have long since ceased to use the water of the river, as it contains too much vegetable matter, and is liable to cause acidity in the liquor. The superiority, as far as it exists, is doubtless owing to command of capital, and consequent power of choice in the malt-market, and system in conducting the business: as to the rest, a wealthy concern, like a London brewing company, has always means of persuading bottlers and retailers of all descriptions, that it is for their advantage to sell and praise their porter in preference to that of a small establishment, whose liquor may be equally good, but not quite so cheap. Of the two stock liquors, porter is generally considered more wholesome, and more easily digestible. It keeps better, and, in London, is generally preferred for common use. The ales manufactured in many parts of the U. States are colored by the addition of brown malt or burnt sugar. This is to suit the taste of the consumers, who obstinately associate the idea of strength and body with high color. It is impossible that ales thus colored should be without a harsh taste, which is a defect. Ales, to be perfect, must be pale, and the fine English ales always are so. No very good porter is made in the U. States, so far as is known to the writer of this article. Three mash tuns are necessary to make it perfect, and only one is commonly used in this country. (See *Ale*, *Beer*, *Porter*.)

Brewster, David; secretary of the royal society of Edinburgh; one of the most learned natural philosophers in Great Britain; born about 1785. The great number of treatises which he has written, on various subjects in natural philosophy, are chiefly inserted in the Transactions of the Edinburgh Royal Society. He is the editor of the much esteemed Edinburgh Encyclopedia. He is also the principal editor of the Edinburgh Philosophical Journal, which appears quarterly. His fame became general by his invention of the kaleidoscope. (q. v.) Among the many learned men who render a residence in Edinburgh agreeable to foreigners, B. is one of the most eminent, as he has a great fund of general information, and is a man of the most polite manners.

Brézé, marquis de; grand master of ceremonies at the court of Louis XVI; known in consequence of the famous reply of Mirabeau to the message which he brought, June 23, 1789, from the king to the deputies of the *tiers état*, ordering the dissolution of their body: "Tell your master," said Mirabeau, in a voice of thunder, "that we are here by the will of the people, and that nothing but the bayonet shall drive us out." The court, intimidated by this bold answer, which produced the highest enthusiasm in the assembly and the public, became wavering and irresolute in its measures. Mirabeau, on the other hand, taking advantage of the excitement, carried the decree declaring the persons of the deputies inviolable, and that whoever should dare issue or execute a warrant of arrest against a part or the whole of them should be deemed guilty of treason. The marquis de B. followed Louis XVIII abroad, and, after the restoration, was reinstated in his former office.

Briareus (also called *Ægæon*); a giant with 100 arms and 50 heads, the son of Uranus and Terra. His two brothers, Cottus and Gyges, were formed in a similar manner; and their formidable appearance struck their father with such terror, that he imprisoned them, at their birth, in the bowels of the earth. (Hes. Theog. 147.) In the war with the Titans, Jupiter set them free, and, by their assistance, gained the victory. When Juno, Neptune and Minerva conspired to bind the sovereign of the gods, Thetis brought Briareus from the depths of the sea (how he came there is not known), to the relief of the trembling Jove. (Il. *a*. 402.) Virgil places B. in the vestibule of hell. (Æn. vi, 287.) He was employed, with his hundred-handed brothers (*Centimani*), in watching the Titans in Tartarus. (Hes. Theog. 734.)

Bribe; a reward given to a public officer, or functionary, to induce him to violate his official duty for the benefit or in compliance with the wishes of the party by whom, or on whose behalf, the bribe is given or promised. The term *bribery* is applicable alike both to the receiving and to the giving of the reward. A corrupt bargain for the votes of electors in the choice of persons to places of trust under the government is bribery. In this instance, the electors, as such, are a kind of public functionaries. Particular species of bribery are expressly forbidden,

with penalties, by the positive laws of every state that is governed according to a written code. The corrupt discharge of a public trust, in consideration of bribery, is punishable at the common law, though not prohibited by any positive statute. A clerk to the agent for French prisoners in England was indicted and punished for taking bribes given for the purpose of inducing him to procure them to be exchanged out of their regular turn. An attempt to influence jurymen in giving their verdict, by rewards, is a species of bribery, denominated *embracery*. Even *offering* a reward to a revenue officer, to induce him to violate his duty, though the reward was not received, has been held to be an indictable offence. (2 *Dallas's Reports*, p. 384.) A similar doctrine is held in England. (3 *Coke's Institutes*, part third, p. 147, and 4 *Burrow's Reports*, p. 2500.) The same was held of a promise of money to a member of a corporation, to induce him to vote for a mayor. (2 *Lord Raymond's Reports*, p. 1377.) The British laws, as well as those of the U. States, specially prohibit bribery of the officers of the revenue; and the forfeiture, on the part of the offender offering the bribe, in England, is £500; the officer receiving the bribe incurs the like forfeiture, and is disqualified for public employment, civil or military. Under the U. States' laws, the party offering or receiving a bribe, in such case, incurs a pecuniary penalty, and becomes disqualified for any place of trust under the government. The laws of many of the U. States contain special provisions against bribery of judges or jurymen, or of electors in the choice of public officers.

Briceño Mendez, Pedro, was born in 1792, in Varinas, capital of the province of that name in Venezuela, of a wealthy and distinguished family. At the commencement of the Colombian revolution, he was pursuing the study of law in Caraccas. Having concluded his studies there, he returned to Varinas in 1812, and obtained the office of chief secretary to the provincial legislature. But the success of Monteverde dissolved that body, and compelled him to emigrate into New Grenada. Here he joined Bolivar after his victories in Cucutá, and, making a tender of his services as a volunteer, Bolivar appointed him his secretary. In this capacity, Briceño served through the campaign of 1813. After the disastrous battle of La Puerta, he followed Bolivar back to Carthagena, and continued attached to him, as secretary, through all his vicissitudes of fortune, until the formation of the congress of Angostura, in 1819. At this period, he was made secretary of war and the marine, with the rank of colonel, and accompanied the liberator in his campaigns, as before. In 1821, he received the same appointment under the constitution, but remained at the seat of government when Bolivar departed for the campaign of Quito, after having been confidentially attached to his person for eight years. In 1823, he became general of brigade. In 1825, he resigned his office of secretary of war, and was succeeded by general Soublette. (*Restrepo's Colombia*, vi, 29.)

Brick is a sort of artificial stone, made principally of argillaceous earth, formed in moulds, dried in the sun, and baked by burning. The use of unburnt bricks is of great antiquity. They are found in the Roman and Grecian monuments, and even in the ruins of Egypt and Babylon. They were dried in the sun, instead of being burned, and mixed with chopped straw, to give them tenacity. On account of the extreme heat and dryness of the climate, they acquired a great hardness, and have lasted for several thousand years; but they are unsuitable for more northern latitudes. The most common bricks, among the Romans, were 17 inches long and 11 broad, and, in later periods, they were burned. Modern bricks are generally about twice as long as they are broad, and twice as broad as they are thick; their length is ordinarily about 10 inches. The best are made of a mixture of argillaceous earth and sand. Their red color is owing to the presence of oxyde of iron, which is turned red by burning.—The best season for making them is spring or autumn, since the process of drying then takes place more gradually and equably. The clay should be dug in autumn, and exposed to the influence of frost and rain. It should be worked over repeatedly with the spade, and not made into bricks until the ensuing spring, previously to which it should be well tempered by treading it with oxen, or by a horse mill, till it is reduced to a ductile and homogeneous paste. The clay may have too great or too small a proportion of argillaceous earth or of sand to form a paste of proper consistency; it will then be necessary to add the one or the other, as the case may be. When the mass has thus been thoroughly mixed, the moulder throws it into the mould, presses it down till it fills all the cavity, and removes the overplus with a stick. The bricks are then arranged on

hacks to dry, disposed diagonally, to allow a free passage to the air. In about nine or ten days, they are ready for the burning, for which purpose they are formed into *clamps* or *kilns*, having flues or cavities at the bottom for the insertion of the fuel, and interstices between them for the fire and hot air to penetrate. A fire is kindled in these cavities, and gradually increased for the first 12 hours, after which it is kept at a uniform height for several days and nights, till the bricks are sufficiently burned. Much care is necessary in regulating the fire, since too much heat vitrifies the bricks, and too little leaves them soft and friable.—*Pressed bricks* are those which, after being moulded in the common manner, are placed in a machine, and subjected to a strong pressure, by which they become regular in shape, and smooth, and more capable of resisting the action of the atmosphere.—*Floating bricks* are so called on account of their property of swimming on the water. They are made of Agaric mineral, or fossil farina, which is found in some parts of the U. States. Their infusibility at the highest temperatures renders them useful in constructing reverberatory furnaces, pyrometers, and magazines of combustible materials. Their lightness and non-conducting property render them particularly useful for the construction of powder-magazines on board of ships.

Bridewell Hospital, situated in Blackfriars, London, is now used as a house of correction for dissolute persons, idle apprentices and vagrants. The building is a large quadrangle, one side of which is occupied by the hall, containing a picture by Holbein, representing Edward VI, who founded the hospital in 1553, delivering the charter to the corporation of London. The other sides of the quadrangle are occupied by the masters of the trades, with whom several youths are placed as apprentices, and by the prison, where disorderly persons are made to work during their confinement.

Bridge. It is needless to investigate ancient authors for a description of the primitive bridge, as its origin and elements are to be found in uncultivated nations of modern times. Stepping-stones, in shallow rivers, covered with planks from stone to stone, exhibit the incipient principles of piers and arches, which science has brought to their present perfection. In deeper rivers, an accumulation of stones forms a loftier pier; and, where the openings were sufficiently narrow, and the slabs of stone sufficiently long, or the art and strength of the untaught architect sufficient to the task, a roadway was formed from pier to pier, like the Vitruvian architrave of the primitive Tuscan temple. With the Greeks, who were a more maritime people, and more accustomed to navigation than the Romans, there is no doubt that ships and boats preceded, if they did not supersede, the use of bridges. In their brightest days, when their fine style of architecture was complete, when their porticoes were crowded with paintings, and their streets with statues, the people of Athens waded or ferried over the Cephisus, for want of a bridge. The Greeks do not seem to have valued the construction of the arch sufficiently to excel in bridge-building. No people of the ancient world carried the power of rearing the stupendous arch and the magnificent dome to such an extent as the Romans. After the construction of their great sewers, their aqueducts, and the cupola over the Pantheon of M. Agrippa, a bridge over the Tiber was of easy execution; and the invention of the architecture of stone bridges, as practised in its best and most effectual manner, must be conceded to this great and indefatigable people. The most celebrated bridges of ancient Rome were not distinguished by the extraordinary size of their arches, nor the peculiar lightness of their piers, but, like the rest of the magnificent works of this city, as far as construction is concerned, they are worthy of study from their excellence and durability. The span or chord of their arches seldom exceeded 70 or 80 feet, and the versed sine or height was nearly half of the chord, so that they were mostly semicircular, or constituted a segment nearly of that form. —Among the most celebrated bridges in modern times, or those built subsequently to the destruction of the Roman empire, are those of the Moors in Spain, who imitated and rivalled the best constructions of the Romans. The bridge of Cordova, over the Guadalquivir, is an eminent example of their success. The bridge over the Rhone, at Avignon, is one of the most ancient bridges of modern Europe. It was built by a religious society, called the *brethren of the bridge*, which was established upon the decline of the second, and the commencement of the third race of French kings, when a state of anarchy existed, and there was little security for travellers, particularly in passing rivers, on which they were subject to the rapaci-

ties of banditti. The object of this society was, to put a stop to these outrages, by forming fraternities for the purpose of building bridges and establishing ferries and caravansaries on their banks. The bridge of Avignon was commenced in 1176, and completed in 1178. It was composed of 18 arches. The length of the chord of the largest was 110 feet 9 inches, and its height 45 feet 10 inches. France can boast of many fine bridges, built during the last two centuries.—In Great Britain, the art of building bridges appears to have been diligently studied from early times. The most ancient bridge in England is the Gothic triangular bridge at Croyland in Lincolnshire, said to have been built in 860. The ascent is so steep that none but foot-passengers can go over it. The longest bridge in England is that over the Trent at Burton in Staffordshire, built in the 12th century, of squared free-stone. It consists of 34 arches, and is 1545 feet long. London bridge was commenced in 1176, and was incumbered with houses for many years. These were removed between 1756 and 1758. The other bridges over the Thames are highly ornamental, as well as necessary, to the metropolis. Blackfriars bridge is both novel and handsome in design, and its elliptical arches are well suited to its situation, but its material is bad and perishing. This bridge was designed and erected by Robert Milne, an able Scotch architect. It was commenced in 1760, and completed in 1771. It is 995 feet long, and 43 feet 6 inches broad between the parapets. The centre arch is 100 feet in span, and 41 feet 6 inches in height. Waterloo bridge is one of the greatest architectural works of our times. It is the only bridge over the Thames which has a flat surface in its whole course. Its length is 1250 feet. It consists of 9 elliptical arches, each of 120 feet span, and 32 feet in height. Westminster bridge is one of the handsomest as well as most scientifically constructed bridges in Europe, and forms an era in English bridge architecture, from the success of the method employed in laying the foundations in deep water and a rapid current. It was commenced in 1740, and completed in 1750. It is 1220 feet long, and 44 feet between the parapets, has 13 large and 2 small arches, all semicircular. The middle arch is 76 feet in span.

Metal bridges are the invention of British artists. The true elements of their construction are as yet but imperfectly understood. The first bridge of cast-iron ever erected is that over the Severn, about two miles below Colebrookdale, in Shropshire. It is an arch composed of five ribs, forming the segment of a circle. Its chord is 100 feet long, and its height 45 feet. It was erected in 1777. The second cast-iron bridge was designed by Thomas Paine, the famous political writer, and was intended to have been taken to America; but, the speculator failing in his payments, the materials were afterwards used in constructing the beautiful bridge over the river Wear at Bishop's Wearmouth, in the county of Durham. The chord of the arch is 240 feet long; the height, 30 feet. The Southwark or Trafalgar bridge over the Thames at London is, at present, the finest iron bridge in the world. It consists of three arches. The chord of the middle arch is 240 feet long, and its height 24 feet. There are several other fine bridges of this kind in England. Mr. Telford proposed an iron arch of much larger dimensions than any now existing, to take the place of London bridge. The length of the chord was to be 600 feet, and its height 65. The plan has not been executed.

Timber bridges. Timber is the most ready, and perhaps the most ancient material used for the construction of bridges. The earliest timber bridge on record is that thrown by Julius Cæsar over the Rhine, and described in his Commentaries. Germany is the school for wooden bridges, as England is for those of iron. The most celebrated wooden bridge was that over the Rhine at Schaffhausen. This was 364 feet in length, and 18 feet broad. The plan of the architect was, that the bridge should consist of a single arch. The magistrates of the place, however, required that he should make it of two, and use the middle pier of a stone bridge, which had previously stood there. He did so, but contrived to leave it doubtful whether the bridge was at all supported by the middle pier. It was destroyed by the French, in April, 1799. The same architect and his brother have also erected several other fine arched wooden bridges. Several others have been erected, in Germany, by Wiebeking, perhaps the most ingenious carpenter of our times.—In the United States, the Trenton bridge over the Delaware, erected by Burr in 1804, is the segment of a circle 345 feet in diameter. Its chord measures 200 feet; its height, or versed sine, is 32 feet, and the height of the timber framing of the arch, at its vertex, is no more than

2 feet 8 inches. The timber bridge over the Schuylkill, at Philadelphia, is of the extraordinary span of 340 feet. The versed sine is only 20 feet, and the height of the wooden framing, at the vertex, 7 feet. Its architect was Wernwag, who built it in 1813. The bridge built by Palmer, over the Piscataqua, near Portsmouth, New Hampshire, in 1794, is the segment of a circle 600 feet in diameter. Its chord line measures 250 feet, its versed sine 27 feet 4 inches, and the height of the timber frame-work of the arch 18 feet 3 inches. It is put together with wooden keys. The same ingenious mechanic erected two other wooden bridges, one over the Merrimack, at Deer Island, near Newburyport, of 160 feet diameter, finished in 1792, and the other over the Schuylkill at Philadelphia, of 194 feet chord, and 12 feet versed sine, being the segment of a circle 796 feet in diameter. This was finished in 1803.

Pendent bridges, or bridges of suspension, although held, by some persons, to be a modern invention, or derived from the rope bridges of South America and the East Indies, were in use in Europe in the time of Scamozzi, as may be seen in his *Del Idea Archi*, 1615; yet the principles requisite to determine the structure of this kind of bridges had not been made public before the time of Bernouilli. The use of these bridges is of great antiquity in mountainous countries. The most remarkable bridge of suspension in existence is that lately constructed by Mr. Telford over the Menai strait, between the isle of Anglesea and Caernarvonshire in Wales. It was finished in 1825. The roadway is 100 feet above the surface of the water at high tide. The opening between the points of suspension is 560 feet. The platform is about 30 feet in breadth. The whole is suspended from 4 lines of strong iron cables by perpendicular iron rods, 5 feet apart. The cables pass over rollers on the tops of pillars, and are fixed to iron frames under ground, which are kept down by masonry. The weight of the whole bridge, between the points of suspension, is 489 tons. There are several other bridges of suspension in Great Britain. In 1814, a chain-bridge, 1000 feet long, was projected by Mr. Telford, to cross the Mersey at Liverpool, but it has never been executed.—In the U. States, such bridges are to be found, though not of the dimensions of the English. That over the Merrimack, at Newburyport, is a curve whose chord measures 244 feet. That over the river Brandywine, at Wilmington, has a chord of 145 feet; that at Brownsville, over the Monongahela, measures 120 feet between the points of suspension. Another, in its vicinity, forms an inverted suspended arch, with a chord of 112 feet. Besides these there are some others.

The following remarks on the construction of bridges are from Bigelow's Technology, (Boston, 1829):—The construction of small bridges is a simple process, while that of large ones is, under certain circumstances, extremely difficult, owing to the fact, that the strength of materials does not increase in proportion to their weight, and that there are limits, beyond which no structure of the kind could be carried, and withstand its own gravity. Bridges differ in their construction, and in the materials of which they are composed. The principal varieties are the following:—1. *Wooden bridges.* These, when built over shallow and sluggish streams, are usually supported upon piles driven into the mud at short distances, or upon frames of timber. But, in deep and powerful currents, it is necessary to support them on strong stone piers and abutments, built at as great a distance as practicable from each other. The bridge, between these piers, consists of a stiff frame of carpentry, so constructed, with reference to its material, that it may act as one piece, and may not bend, or break, with its own weight and any additional load to which it may be exposed. When this frame is straight, the upper part is compressed by the weight of the whole, while the lower part is extended, like the tie-beam of a roof. But the strongest wooden bridges are made with curved ribs, which rise above the abutments in the manner of an arch, and are not subjected to a longitudinal strain by extension. These ribs are commonly connected and strengthened with diagonal braces, keys, bolts and straps of iron. The flooring of the bridge may be either laid above them or suspended by trussing underneath them. Wooden bridges are common in this country, and some of them are of large size. One of the most remarkable is the upper Schuylkill bridge at Philadelphia, already mentioned.—2. *Stone bridges.* These, for the most part, consist of regular arches, built upon stone piers constructed in the water, or upon abutments at the banks. Above the arches is made a level or sloping road. From the nature of the material, these are the most durable kind of bridges, and many are now standing, which were built

by the ancient Romans. The stone piers, on which bridges are supported, require to be of great solidity, especially when exposed to rapid currents, or floating ice. Piers are usually built with their greatest length in the direction of the stream, and with their extremities pointed or curved, so as to divide the water, and allow it to glide easily past them. In building piers, it is often necessary to exclude the water by means of a *coffer-dam*. This is a temporary enclosure, formed by a double wall of piles and planks, having their interval filled with clay. The interior space is made dry by pumping, and kept so till the structure is finished.—3. *Cast-iron bridges*. These have been constructed, in England, out of blocks or frames of cast-iron, so shaped as to fit into each other, and, collectively, to form ribs and arches. These bridges possess great strength, but are liable to be disturbed by the expansion and contraction of the metal with heat and cold.—4. *Suspension bridges*. In these the flooring or main body of the bridge is supported on strong iron chains or rods, hanging, in the form of an inverted arch, from one point of support to another. The points of support are the tops of strong pillars or small towers, erected for the purpose. Over these pillars the chain passes, and is attached, at each extremity of the bridge, to rocks or massive frames of iron, firmly secured under ground. The great advantage of suspension bridges consists in their stability of equilibrium, in consequence of which a smaller amount of materials is necessary for their construction than for that of any other bridge. If a suspension bridge be shaken, or thrown out of equilibrium, it returns by its weight to its proper place, whereas the reverse happens in bridges which are built above the level of their supporters.—5. *Floating bridges*. Upon deep and sluggish water, stationary rafts of timber are sometimes employed, extending from one shore to another, and covered with planks, so as to form a passable bridge. In military operations, temporary bridges are often formed by planks laid upon boats, pontons, and other buoyant supporters.

Bridgetown; a seaport town, and capital of the island of Barbadoes, in the West Indies, lying in the S. W. part, and in the parish of St. Michael. Lon. 59° 40′ W.; lat. 13° 5′ N. Population, 15 or 20,000. It is situated on the innermost part of Carlisle bay, which is large enough to contain 500 ships, being 4 miles in breadth, and 3 in depth; but the bottom is foul, and apt to cut the cables. It suffered greatly by fire, on Feb. 8th, 1756, May 14th, 1766, and Dec. 27th, 1767, when the greatest part of the town was destroyed; before which time, it had about 1500 houses, mostly brick, very elegant, and said to be the finest and largest in all the Caribbee islands, the greatest part of which have been rebuilt. It has a college, founded liberally, and endowed by colonel Codrington. Here are commodious wharves for loading and unloading goods, with some forts and castles. The town is subject to hurricanes. On the east side of the town is a small fort of eight guns, where the magazines of powder and stores are kept under a strong guard. This is the seat of the governor, council, assembly, and court of chancery.

Bridgewater; a borough town in the county of Somerset, England, on the Parret, over which is an iron bridge. Although the town is 12 miles from the sea, the tide rises six fathoms at high water, and flows in with such impetuosity as frequently to injure the shipping. This rapid motion is called the *bore*, and is not uncommon in the rivers which flow into the Bristol channel. (q. v.) It has little coasting, but considerable foreign trade. In the castle built by king John, the duke of Monmouth lodged, and was here proclaimed king, in 1685, before the battle of Sedgemoor, which was fought about three miles from the town. B. then became the theatre of Feversham's and Jefferies' barbarity. The borough sends two members to parliament. Population, 6155. Lon. 2° 59′ W.; lat. 51° 7′ N.

Bridgewater, duke of, (See *Egerton*.)

Bridle; the head-stall, bit and reins, by which a horse is governed. The origin of it is of high antiquity. The first horsemen guided their horses with a little stick, and the sound of their voice. A cord drawn through the nose is sometimes used for other animals. The ancient Thessalian coins often represent a horse with a long rein trailing on the ground. The Romans were trained to fight without bridles, as an exercise in the manege. On Trajan's column, soldiers are thus represented at full speed. The parts of a modern bridle are the snaffle or bit; the headstall, or leathers from the top of the head to the rings of the bit; the fillet, over the forehead, and under the fore-top; the throat-band, which buttons under the throat; the reins; the nose-band, buckled under the cheeks; the trench, the cavesan, the martingal and the chaff-halter.

Brief, from the French *bref*, which comes from the Latin *brevis*, denotes a

thing of short extent or duration. It is more particularly used for a summary or short statement.—*Brief*, in law, signifies an abridgment of the client's case, made out for the instruction of counsel on a trial. In this, the case of the party is to be concisely but fully stated; the proofs are to be placed in due order, and proper answers made to whatever may be objected against the cause of the client. In preparing the brief, great care is requisite, that no omission be made which may endanger the case.—*Briefs, apostolical;* written messages of the pope, addressed to princes or magistrates, respecting matters of public concern. Such *brevia* as are despatched by the *datarii* or *secretarii*, and called *rescripts, despatches, concessions, mandates*, &c., are written on parchment, and sealed, with the fisher's ring, in red wax. Pastoral letters, directed to princes and bishops, are without seal. These papers derive their name from the shortness of their formalities, since they have no introductory preamble, but commence with the pope's name, and these words: *dilecto filio salutem et apostolicam benedictionem.* Briefs are not subscribed by the pope, nor with his name, but with that of his secretary.

Briel, or Brielle, a town of the Netherlands, near the mouth of the Maese, with a good harbor, well built and strongly fortified. It is remarkable, in history, as the place where the confederates laid the foundation of the Dutch republic, in 1572. Having been expelled by Alva from the Low Countries, they equipped a small fleet in England, and were carried accidentally, by an unfavorable wind, to B., which capitulated to them, and thus became the cradle of Dutch liberty.—Van Tromp was born here.—The population is 3200, principally engaged in the fisheries. Lon. 4° 10′ E.; lat. 51° 54′ N.

Brienne, a small town in the department of the Aube (Upper Champagne), consists of Brienne-la-Ville and Brienne-le-Château, containing together 285 houses, and 3200 inhabitants, with a number of manufactories and vineyards. In the military academy for young noblemen, formerly existing at B.-le-Château, Napoleon received his first instruction in the military art. B. afterwards became celebrated as the scene of the last struggles of his long and oppressive domination. There the first battle within the boundaries of France was gained by the allied powers, the last trust of the army in Napoleon shaken, and the charm, which, it was supposed, would render the French invincible at their own hearths, was broken. The way to Paris and the overthrow of the imperial dignity were prepared. After the battle at Bar-sur-Aube (Jan. 24, 1814), where the allied armies met with the first resistance after their entry into France by the way of Switzerland, they advanced rapidly. Napoleon, having left Paris, compelled Blücher to retreat, on the 26th, near Vitry, before superior numbers, and concentrated his forces on the 28th at B.; Schwarzenberg took up his position at Chaumont, Blücher at St. Dizier, Wrede at Andelot, and Witgenstein at Vassy. On the 29th, the French made an impetuous attack on the allies. The struggle on both sides was obstinate and bloody. Night came on, but the flames of B., which had been set on fire, shed their light over the field of battle. General Chateau, with two battalions, had taken the castle of B., but was soon forced to relinquish it. The battle continued till 11 o'clock. It was renewed on the following day, and Blücher was compelled, by superior numbers, to fall back upon Trannes. On the 31st, Napoleon arrayed his whole force in the plains between La Rothière and Trannes. The corps of the crown-prince of Würtemberg, count Giulay, and the Russian reserves of grenadiers, having effected a junction with Blücher on the 1st of Feb., prince Schwarzenberg gave orders to commence the battle. About noon, Blücher's forces advanced in three columns; general Sacken leading one upon La Rothière, Giulay another upon Dienville, and the crown-prince of Würtemberg another upon Chaumreil. In the mean time, general Wrede took up his line of march from Doulevent upon B. Only a few field-pieces could be brought into action, on account of the nature of the ground; but the courage of the soldiers compensated for this deficiency. The crown-prince of Würtemberg first drove the enemy from his position, which was covered by woods, and deprived him of the important point of La Gibrie. Although he was immediately assailed in this position, he remained in possession of it after a struggle of more than an hour. Giulay took Unienville, and Sacken forced his way to La Rothière. By 3 o'clock, all the lines were brought into action. A heavy snow-storm silenced for a moment the fire of the artillery, but could not paralyse the activity of the combatants. Napoleon directed all the operations of his army, and repeatedly exposed his person, with a full conviction of the importance of success.

The allied monarchs, also, encouraged their troops by their presence in the field. La Rothière was repeatedly taken, lost and recovered. Sacken renewed his efforts to gain possession of it: the cavalry of the enemy had already encountered the bayonets of his infantry, when he received succor. The French cavalry was forced back as far as Old B., and threw the infantry into disorder. Sacken took 32 pieces of cannon. Meantime, Blücher had brought up fresh troops against La Rothière, and captured that position. The crown-prince of Würtemberg got possession of Petit Masnil, Wrede of Chaumreil, Giulay of Dienville. The victory was decisive for the allied powers. During the night, the French retreated on all sides upon the road of B., leaving there a small detachment as a rear guard, which, however, on the following morning, was compelled to retreat with the main army. The loss was great on both sides. The allies took 60 pieces of cannon and a considerable number of prisoners.

Brienne, cardinal de Lomenie de. (See *Lomenie.*)

Brig, or Brigantine; a square-rigged vessel, with two masts. The term is applied to different kinds of vessels, by mariners of different countries. The term *brigantine* is also applied to a light, flat, open vessel, with 10 or 15 oars on a side, furnished also with sails, and able to carry upwards of 100 men. The rowers, being also soldiers, have their muskets lying ready under the benches. Brigantines are frequently made use of, especially in the Mediterranean, for the purpose of piracy, from which they derive their name. They are very fast sailers.

Brigade; in general, an indeterminate number of regiments or squadrons. In the English army, a brigade of infantry is generally composed of 3 regiments; a brigade of horse, of from 8 to 12 squadrons; and one of artillery, of 5 guns and a howitzer.—In the U. States' army, the brigade is commonly composed of two, but sometimes of more regiments. A number of brigades form a division, and several divisions an army corps. A brigade-major is the chief of the brigade-staff. A brigadier-general is the officer who commands a brigade. In the British service, this rank is now abolished. In the U. States' service, he is next in rank to the major-general, who is the highest officer under the president, as commander-in-chief. *Brigadier-general* is also the title of the chief of the staff of an army-corps. In the French military language, *brigade*, in the cavalry, signifies a corporal's guard. Hence *brigadier* signifies a corporal.

Brigandine; a kind of defensive armor, consisting of thin, jointed scales of plate, pliant and easy to the body.

Brigantine. (See *Brig.*)

Brighella. (See *Mask.*)

Bright, in painting; a picture is said to be bright, when the lights so much prevail as to overcome the shadows, and are kept so clear and distinct as to produce a brilliant appearance.

Brighthelmstone, or Brighton; a seaport town in the county of Sussex, England, much resorted to for sea-bathing. It was not long since a mere village of fishermen; but, under the patronage of George IV, when prince of Wales, it rapidly increased, and, by the returns of 1821, the population was 24,429. It is situated on a gentle eminence, at the base of which is the Steine, a lawn surrounded with elegant buildings. The Steine and marine parade are fashionable promenades. The esplanade, extending from the Steine to the pier, which is 1154 feet long, and supported by 8 chains, is 1250 feet in length. The king has a palace here, called the *marine pavilion*. B. contains several public libraries and reading-rooms, and hot, cold, vapor and salt-water baths, air-pump water baths, for the gout and violent scorbutic affections, and a swimming bath. The streets are clean and well paved, and the hotels numerous and well fitted up. Travellers embark hence, in the steam-packets, for France. The number of visitors is greatest towards the end of July. B. is 52 miles south of London.

Brighton, in England. (See *Brighthelmstone.*)

Brighton; a post-town in Middlesex county, Massachusetts, 4½ miles west of Boston. Population, in 1820, 702. It is a pleasant town, and contains a number of elegant country seats.—A cattle fair was begun here during the revolutionary war, and has been increasing since the peace of 1783. Most of the cattle for the supply of Boston market are driven to this place. Often from 2 to 3000, and even 5000, have come in one week; and sheep, also, in great numbers.—In 1816, the trustees of the Massachusetts agricultural society commenced a cattle-show and exhibition of domestic manufactures at this place; and a commodious house, 70 feet by 36, has been erected, for the accommodation of the trustees, and the exhibition of cloths, implements of husbandry, &c.

Brilliant. (See *Diamond.*)

Brimstone. Sulphur (q. v.), as first obtained, is mixed with foreign bodies, and, for the purpose of purification, is melted in a close vessel, by which the impurities are allowed to subside. It is then poured, in the liquid state, into cylindrical moulds, in which it becomes hard, and is known in commerce by the name of *roll brimstone.*—The Jewish history (Gen. xix, 24) relates that Sodom and Gomorrah were destroyed by fire and brimstone from heaven. Showers of fire have been observed by Bergmann (occasioned by electricity) (*Geog. Physique* ii, 45, § 115), and showers of brimstone may be produced from the sulphuric acid which exists in the atmosphere.

Brindley, James, a native of Tunsted, near Wormhill, Derbyshire, an eminent engineer and mechanic, was born in 1716. The poverty of his family prevented his receiving more than the rudiments of education, and, at 17, he became apprentice to a millwright. On the expiration of his indentures, he commenced business as an engineer, and, in 1752, displayed great talent in contriving a water-engine for draining a coal-mine. A silk-mill, which he constructed on a new plan, and other works of the same description, introduced him to the patronage of the duke of Bridgewater, then occupied in planning a communication between his estate at Worsley and the towns of Manchester and Liverpool by water. This immense work, the idea of which was ridiculed by most of the scientific men of the period as impracticable, B. undertook, and, by means of an aqueduct over valleys, rivers, &c., completed, so as to form a junction with the Mersey. This success caused him to be employed, in 1766, to unite the Trent and Mersey, upon which he commenced the "grand trunk navigation canal," but, dying before its completion, the work was finished, in 1777, by his brother-in-law, Mr. Henshaw. From this main branch B. also cut another canal near Haywood in Staffordshire, uniting it with the Severn in the vicinity of Bewdley, and finished it in 1772. From this period scarcely any work of the kind in the kingdom was entered upon without his superintendence or advice. Among other designs, he prepared one for draining the fens in Lincolnshire and the Isle of Ely, and another for clearing the Liverpool docks of mud, which was especially successful. The variety of his inventions, and the fertility of his resources, were only equalled by the simplicity of the means with which he carried his expedients into effect. He seldom used any model or drawing, but, when any material difficulty intervened, generally retired to bed, and there meditated on the best mode of overcoming it. On such occasions, he has been known to seclude himself for days; and so partial was he to inland navigation, that he is said, to a question humorously put to him on his examination before the house of commons, "For what purpose did he consider rivers to have been created," at once to have replied, "Undoubtedly to feed navigable canals." The intensity of his application to business brought on a hectic fever, of which he died in 1772.

Bring-to; to check the course of a ship, when she is advancing, by arranging the sails in such a manner, that they shall counteract each other, and prevent her from moving forward or backward. In this situation, she is said to *lie to*, having some of her sails *aback*, to oppose the force of those which are full.

Brinkmann, Charles Gustavus, one of the most eminent living scholars of Sweden, born in 1764, was for a long time ambassador in France (in the time of the republic), England and Germany. He now lives retired in Stockholm, and keeps up an extensive correspondence with many of the most distinguished persons of our times. He carried on a lively correspondence with the baroness de Staël. He is distinguished in the literary world by works in German as well as in Swedish.

Brion, Luis, a native of the island of Curaçoa, distinguished for his love of freedom, early took part with the patriots of Carthagena. When Bolivar set on foot the celebrated enterprise against Margarita, the command of the maritime forces was intrusted to Brion, who, being possessed of considerable property, contributed largely from his private resources towards defraying the expenses of the expedition. He had previously served on board the republican flotilla, and received the privileges of citizenship in acknowledgment of his bravery and conduct, and continued to be actively engaged in the naval operations of the patriots until near the close of the war. (See *Colombia.*)

Brisach, Old; a town of the grand-duchy of Baden, once included in the Brisgau, formerly on the west side of the Rhine, but, since the river changed its course, near the east bank. It was for-

merly a very strong place, and has sustained several sieges.—New B. is in the department of the Upper Rhine, in France, on the west side of the river. Vauban fortified it in 1699, and it is considered one of his master-pieces. It is 30 miles south of Strasburg.

Briseis. (See *Achilles.*)

Brisgau, also Breisgau, with the district of Ortenau, formerly constituted a landgraviate in the south-western part of Suabia, between the Schwartzwald and the Rhine. This is one of the most fertile parts of Germany, containing 1,272 square miles, and 140,000 inhabitants. Though chiefly in possession of Austria since the 15th century, it was governed by its own laws. At the peace of Luneville, 1801, Austria ceded B., one of the oldest possessions of the house of Hapsburg, to the duke of Modena, after whose death it fell to his son-in-law, the archduke Ferdinand of Austria, as duke of Brisgau. By the peace of Presburg, 1805, it was assigned to Baden, with the exception of a small part, and still belongs to the grand-duchy.

Brissac. (See *Cosse.*)

Brissot de Warville, Jean Pierre; born in 1754, at Ouarville, a village in the vicinity of Chartres, where his father, a pastry-cook, and keeper of an ordinary, possessed a small estate. This circumstance led him to assume the surname d'Ouarville, which he afterwards, while in England, changed into de Warville. At the age of 20, he had already published several works, for one of which he was thrown into the Bastile, in 1784. Madame de Genlis, in her memoirs, says, that she procured his liberty through her influence with the duke of Chartres. He married one of the household of madame d'Orleans, and went to England, where he was in the pay of the lieutenant of the police in Paris. At the same time, he was engaged in literary pursuits, and attempted to establish a lyceum in London; but, being disappointed in his plans, he returned to France. In 1788, he travelled in America, as it is asserted, to study the principles of democracy. After his return, he published, in 1791, a work on the United States. On the convocation of the states general, he published several pamphlets in Paris, and afterwards a journal—the French Patriot. When the municipal government of Paris was established, July, 1789, he was one of the members, and was one of the principal instigators of the revolt of the Champ de Mars, where the dethronement of Louis XVI and the establishment of a republican constitution were demanded. He constantly displayed a hostile disposition towards foreign powers, and the first declaration of war against Austria was owing to him. On the 10th of August, the new ministry was almost entirely composed of his partisans. In the convention, he was at the head of the diplomatic committee, in the name of which he made a motion for war against England and Holland. On the trial of Louis XVI, he endeavored to refer the sentence to the decision of the people, and voted for the king's death, proposing, at the same time, that the execution should be deferred till the constitution should be sanctioned by the whole people in primary assemblies. In the midst of the revolutionary ferment, the ground whereon his party stood was insensibly undermined. After several charges had been brought against him, Robespierre accused him, May 28, 1793, of favoring a federative constitution, with two parliaments, &c., and demanded that he should be brought before the revolutionary tribunal. The 31st of May completed his ruin. He endeavored to reach Switzerland in the disguise of a merchant of Neufchatel, but was arrested at Moulins, and led to the guillotine, in Paris, October 31, at the age of 39. He was a great admirer of the Americans, assumed the habits of the Quakers, and introduced the fashion of wearing the hair without powder. His personal qualities were below his fame: he was indeed a leader among the Girondists, but many others of this party were far superior to him in courage and talents.

Brissotins, or Brissotists; a name sometimes given to the Girondists (q. v.), from the subject of the preceding article.

Bristol; a city and county of England, situated on the Avon. The river is here deep and rapid, and the tide flows to the height of 40 feet, so that a vessel of 1000 tons can come up to the city. It was constituted a bishop's see by Henry VIII, and part of a monastery founded by Stephen, in 1140, has been converted into a cathedral. The church of St. Mary's, Redcliffe, is one of the finest Gothic structures in the kingdom. The city has long been distinguished for its well conducted and extensive charities, and is adorned with many handsome public buildings. Manufactories of glass and sugar, distilleries and brass-works, the largest in England, give employment to many of its inhabitants. Its foreign trade is also considerable, principally to the

West Indies. It returns 2 members to parliament, and is governed by a mayor, 2 sheriffs, 12 aldermen, and 28 common councilmen. Here the famous Chatterton was born: his father was sexton of St. Mary's. About a mile from B. stands the village of the Hot-Wells, famous for its medicinal spring, the temperature of which is from 72° to 76°: it discharges 60 gallons a minute. The Hot-Wells, and the village of Clifton, on the hill above, are fashionable resorts. At the time of the earthquake at Lisbon, in 1755, the water of the spring became red and turbid, the tide of the Avon flowed back, and the water in the vicinity turned black, and was unfit for use for a fortnight. The extensive commerce and fine harbor of B. rendered it desirable to obviate the inconvenience attending ships lying aground at every tide. By constructing extensive works, and opening a new channel for the Avon, the flux and reflux of the tide at the quays have been prevented, and merchant-ships of any burden may now constantly lie afloat. B. is very ancient. Gildas mentions it, in 430, as a fortified city. By the Britons it was called *Caer Brito*, and by the Saxons *Brightstowe*, or *Pleasant Place*. It was erected into an independent county by Edward III, in 1372, and has since been endowed with various privileges. All persons are free to trade here, and the markets are unequalled in plenty and variety by any in England. Many of the houses in the older part of the town are built of wood, and crowded together in narrow streets, but those of more recent erection are of brick and stone, and disposed in spacious streets and squares. The common sewers, which run through the town, render it remarkably clean. Carts are not admitted into the city for fear of damaging the arches of vaults and gutters under the streets, and every thing is conveyed by sledges. The population, in 1821, including the suburbs, was 52,889. It is 117 miles west from London; lon. 2° 46′ W.; lat. 51° 30′ N.

Bristol (Indian names, *Pocanocket* and *Sowam*); a seaport town, and capital of a county of the same name in Rhode Island. on the continent; 15 miles S. Providence, 15 N. Newport, 56 S. S. W. Boston; lon. 71° 12′ W.; lat. 41° 38′ N.; population, in 1820, 3197. It is a very pleasant town, finely situated, and handsomely built, has a safe and commodious harbor, and is a place of considerable trade. The shipping belonging to this port in 1820 amounted to 10,701 tons. The trade is chiefly to the West Indies and to Europe. It contains a court-house, a jail, a market-house, a masonic hall, an academy, a public library, containing about 1400 volumes, and four houses of public worship. Great quantities of onions are raised here for exportation. Mount Hope, which lies two miles N. E. of Bristol, within the township, is a pleasant hill of a conical form, and is famous for having been the residence of the Indian king Philip.

Bristol Channel; an arm of the Irish sea, extending between the southern shores of Wales and the western peninsula of England, and terminating in the estuary of the Severn. It is about 90 miles long, and from 15 to 50 miles wide. It is remarkable for its high tides and the rapidity with which they rise. (See *Bridgewater*.)

Britain, according to Aristotle, was the name which the Romans gave to modern England and Scotland. This appellation is, perhaps, derived from the old word *brit*, party-colored, it having been customary with the inhabitants to paint their bodies with various colors. According to the testimony of Pliny and Aristotle, the island, in the remotest times, also bore the name of *Albion*. (q. v.) The sea, by which B. is surrounded, was generally called the *Western*, the *Atlantic*, or the *Hesperian ocean*. Until the time of Cæsar, B. was totally unknown to the Romans. But the Phœnicians, Greeks and Carthaginians, especially the first, were acquainted with it from the earliest period, being accustomed to obtain tin there. On this account, they called it *Tin island*, as Herodotus informs us. Cæsar undertook two expeditions to B. He defeated the inhabitants, whom he found entirely savage, and continued a short time on the island. It was not, however, until the time of Claudius, that the Romans gained a firm footing there. At that period, they extended their possessions in the country, and called the territory under their dominion *Britannia Romana*. The most important acquisitions were afterwards made under Adrian and Constantine. At last, the inhabitants assumed the manners of their conquerors. The country was very populous in the time of Cæsar, and, according to the testimony of Tacitus, fertile. It was divided into *Britannia Romana* and *B. Barbara*. The Romans, from the time of Adrian, anxiously endeavored to secure the former against the invasions of the barbarians, by a wall or rampart of earth fortified

with turrets and bulwarks. Lollius Urbicus, in the reign of Antoninus, extended this wall; but Septimius Severus restored its former limits. In his time, the Roman province was divided into the eastern (*prima*, or inferior) and the western part (*secunda*, or superior). Two provinces were added by Constantine. The inhabitants of ancient B. derived their origin partly from an original colony of Celtæ, partly from a mixed body of Gauls and Germans. The Celtic colonists, or the Britons, properly so called, living in the interior of the country, had less intercourse with foreign merchants than the Gauls, who lived along the coasts. They are therefore represented by the Romans as less civilized. The Gallic inhabitants, who had settled nearer the sea-coast, possessed some property, and were therefore more easily intimidated than those tribes that were dispersed through the forests. None of them cultivated the ground: they all lived by raising cattle and hunting. Their dress consisted of skins. Their habitations were huts made of wicker-work and covered with rushes. Their priests, the Druids, together with the sacred women, exercised a kind of authority over them. (For the modern kingdom of Great Britain, see *Great Britain*.)

Britain, New; a group of islands belonging to Australia (q. v.), and separated by Dampier's strait from New Guinea. The situation of these islands has not been very exactly ascertained; but they stretch from about 1° 30′ to 6° S. lat., and from 148° to 153° E. lon. Their extent is equally uncertain. Some geographers include in this group the island of the same name, New Ireland, New Hanover, Admiralty islands, and some smaller ones. Some of the group are volcanic. The natives are Papuas, and manage their canoes, some of which are 80 feet long, with great skill. They are black; their hair is curled and woolly; but they have neither the thick lips nor the flat noses of the Negroes. Those of the Admiralty islands are gentle and peaceful; those of New Holland are warlike. The islands contain some high mountains, covered with lofty trees to their summits. The bread-fruit-tree, the fig-tree, pepper, aloes, nutmeg, &c., are found here. The seas abound in coral reefs, which often render the navigation dangerous. Dampier first discovered that this archipelago was separate from New Guinea. Carteret first showed that New Ireland was separated from New Britain by the strait which he called *St. George's channel*. These islands have been also visited by d'Entrecasteaux, Bougainville, Hunter, &c. (See *Labillardière's Voyage*, 2 vols., 4to., 1798.)

Britain, New; a vast country of North America, lying round Hudson's bay, north and north-west of Upper and Lower Canada, comprehending Labrador, New North Wales and New South Wales, attached to the government of Lower Canada, and belonging to Great Britain.—The face of the country is various. On the south-west of Hudson's bay, from Moose river to Churchill's river, in some parts, for the distance of 600 miles inland, the country is flat, marshy, and wooded, in many parts, with pines, birch, larch and willows. North of Churchill's river, and on the eastern coast, it is high, rocky and barren, every where unfit for cultivation, covered with masses of rock of amazing size, composed of fruitless valleys and frightful mountains, some of them of great height. The valleys are full of lakes formed by rain and snow, and are covered with stunted trees, pines, fir, birch and cedar, or juniper. The mountains have here and there a blighted shrub, or a little moss. The climate is extremely severe, and, in lat. 60., on the coast, vegetation ceases.—The principal rivers are Mackenzie's river, Copper-Mine river, Nelson's, Churchill's, Albany, Moose, Seal, Severn, Rupert and Pokerekesko. The most considerable lakes are Winnipeg, Slave lake, Great Bear lake, and Athapescow.—The principal article of trade is fur. The trade is carried on by two companies, who have several forts, viz. forts Prince of Wales, Chippeyan, Alexandria, Churchill, Albany, Nelson, Severn, &c.—The wild animals are numerous, such as bears, beavers, deer, raccoons, &c. The Esquimaux Indians occupy the coasts of Labrador: the interior is inhabited by various tribes of a diminutive and miserable race.

Britannicus Cæsar (Tiberius Claudius Germanicus), son of the emperor Claudius and Messalina, was born a few days after the accession of Claudius to the throne. After the return of the emperor from his expedition to Britain, the surname *Britannicus* was bestowed on the father and son. As the eldest son of the emperor, B. was the legitimate heir to the throne; but Claudius was prevailed upon by his second wife, the ambitious Agrippina, to adopt Domitius Nero, her son by a former marriage, who was three years older than B., and declare him his successor. The venal senate gave its

consent. In the mean time, Agrippina, under the pretext of motherly tenderness, strove to keep B., as much as possible, in a state of imbecility. She removed his servants, and substituted her own creatures. Sosibius, his tutor, was murdered by her contrivance. She did not permit him to appear beyond the precincts of the palace, and even kept him out of his father's sight, under the pretence that he was insane and epileptic. Although the weak emperor showed that he penetrated the artifices of Agrippina, yet his death, of which she was the author, prevented him from retrieving his error. Nero was proclaimed emperor, while B. continued in close confinement. In a dispute with Nero, Agrippina threatened to place B., who was then 14 years old, on the throne, upon which Nero caused him to be poisoned.

Britinians; a body of monks of the order of St. Augustine, who received their name from Britini, in Ancona, which was the place of their institution. Their manner of living was very austere. They abstained from all kinds of meat, and fasted from the festival of the Exaltation of the Cross to Easter, besides observing the fasts prescribed by the church, which they were strictly enjoined to do by the rules of their order. Their dress was gray; and, to distinguish themselves from the Minorites, they wore no girdle. When Alexander IV, in 1256, effected the union of the different congregations of the order of St. Augustine, the Britinians became members of this union.

British America. Under the general name of British America is comprehended all that part of the continent of North America which lies to the north of the U. States, with the exception of the Russian possessions in the north-west, and Greenland in the north-east. It consists of four provinces: 1. Lower Canada, to which is annexed New Britain; 2. Upper Canada; 3. New Brunswick; 4. Nova Scotia; together with the island of Newfoundland. The whole country is under a governor-general, whose residence is at Quebec. Each of the four provinces has also a lieutenant-governor; and Newfoundland is governed by an admiral.

British Channel. (See *English Channel.*)

British Museum was founded by sir Hans Sloane, who, in 1753, bequeathed his collection of natural and artificial curiosities, and his library, consisting of 50,000 volumes of books and MSS., to the nation, on condition of the payment of £20,000 to his heirs. Montague-house, one of the largest mansions in the metropolis, was appropriated to its reception, and it has since been gradually increased by gifts, bequests, and purchases of every species of curiosity—animals, vegetables, minerals, sculptures, books, MSS., &c. The main building is 216 feet long and 57 high; the wings are occupied by the officers of the establishment. The library of printed books occupies 16 rooms. The upper floor is composed of 11 rooms, 2 of which contain miscellaneous collections, 4 contain collections of natural history, and 5 the library of MSS., which is extremely valuable, besides the saloon, containing the minerals. The Lansdowne library of MSS. consists of 1245 volumes, exclusive of rolls and charters, and contains the Burleigh, Cæsar and Kennet papers. (*Catalogue of Lansdowne MSS.*, folio, 1819.) The Sloane and Birch MSS., consisting of 4437 volumes, are valuable. (See Ayscough's *Undescribed MSS.*, 2 vols., 4to., 1782.) The Harleian MSS. were collected by Harley, lord Oxford, and form 7639 volumes, containing 40,000 documents. (*Catalogue of Harleian MSS.*, 4 vols., folio, 1809.) The Cottonian collection was injured by fire in 1751. The number of articles is upwards of 20,000, among which is the original of the *Magna Charta*, and original documents connected with it. (*Catalogue*, folio, 1802.) There are many other very valuable collections, which we cannot enumerate. The gallery, or department of antiquities, is distributed in 15 rooms; 6 of which contain Greek and Roman sculptures and antiquities, and 2 are occupied with Egyptian sculptures and antiquities, many of which were collected by the French, and fell into the hands of the English at the capture of Alexandria, September, 1801. Salt's Egyptian antiquities have also been lately added. The famous Rosetta stone belongs to the collection. Other rooms are occupied by *terracottas*, the Hamilton vases, coins and medals, prints and drawings, the Phigalian marbles, and the Elgin marbles. The anteroom contains the famous Barberini vase, or, as it is generally called, the *Portland vase.*

Brittany, or Bretagne; formerly one of the largest provinces of France, being a peninsula washed by the Atlantic on all sides except the east, where it joined Poitou, Anjou, Maine and Normandy. It now forms five departments (q. v.), containing 2,532,500 inhabitants, on 1775 square miles. It is supposed to have

received its name from the Britons, who were expelled from England, and took refuge here in the fifth century. It formed one of the duchies of France, till it was united to the crown by Francis I, in 1532. The province was divided into Upper and Lower B. Agriculture, in this territory, is very backward, and it is estimated, that about one half of the surface lies waste. Corn and wine are produced in small quantities. Flax and hemp, apples and pears, are abundant, and of good quality. Cider is the principal drink. Salt is made on the coast, and coals, lead and iron are found in various parts. There are manufactures of hemp, flax and iron. The fisheries, also, employ many of the inhabitants. The Bas-Bretons speak a dialect of the Celtic. There is also a *patois* among them, called *Lueache*, of which the words are principally Greek. The lower classes are poor and ignorant.

Brizard. (See *French Theatre.*)

Broach; a large, ruinous town in Guzerat, Hindostan, on the Nerbuddah. It contains a Hindoo hospital for sick and infirm beasts, birds and insects, which has considerable endowments in land, and accommodates not only animals considered sacred by the Hindoos, such as monkeys, peacocks, &c., but horses, dogs and cats: it has, also, in little boxes, an assortment of lice and fleas. These animals are fed only on vegetable food, and are, generally, in a miserable condition. Near B. is the celebrated banian-tree, which has been renowned ever since the first arrival of the Portuguese in India, and which, according to the natives, was capable of sheltering 10,000 horsemen under its shade. Part of it has been washed away by the river, but enough yet remains to make it one of the noblest groves in the world. B. was captured by the English in 1803. Lon. 73° 6′ E.; lat. 21° 41′ N.

Broach; any thing which will pierce through; a pin; that part of certain ornaments by which they are stuck on; the ornament itself. Among the Highlanders of Scotland, there are preserved, in several families, ancient broaches of rich workmanship, and highly ornamented. Some of them are inscribed with characters to which particular virtues were attributed, and seem to have been used as a sort of amulet or talisman.

Broach-to; to incline suddenly to windward of the ship's course when she sails with a large wind; or, when she sails directly before the wind, to deviate from her line of course with such rapidity as to bring her side to windward, and expose her to the danger of oversetting. The masts act like levers on the ship, sideways, so as to overturn her, unless she is relieved by the rending of the sails, or the carrying away of the masts.

Broad Piece; a denomination that has been given to some English gold pieces broader than a guinea, particularly Caroluses and Jacobuses.

Broadside, in a naval engagement; the whole discharge of the artillery on one side of a ship of war, above and below.—A squall of wind is said to throw a ship on her broadside, when it presses her down in the water, so as nearly to overset her.

Broad-Sword; a sword with a broad blade, designed chiefly for cutting, used by some regiments of cavalry and Highland infantry in the British service. It has, in general, given place to the sabre, among the cavalry. The claymore or broad-sword was formerly the national weapon of the Highlanders.

Brocade; a stuff of gold, silver or silk, raised and enriched with flowers, foliage and other ornaments. Formerly, it signified only a stuff wove all of gold or silver, or in which silk was mixed; at present, all stuffs, grograms, satins, taffetas and lustrings are so called, if they are worked with flowers or other figures.

Brocken. (See *Hartz.*)

Brody, a town in Austrian Gallicia, situated in the circle of Zloczow, bordering on the Russian frontier, includes 2600 houses, and 16,500 inhabitants, half of whom are Jews, who have a college and a school for the instruction of artists and mechanics. The commerce, carried on principally by Jews, is important, the town being very favorably situated for the exchange of the products of Poland for the horses, black cattle, wax, honey, tallow, skins, furs, anise, preserved fruits, &c., of Walachia, the Crimea, &c. B. belongs to count Potocki.

Broekhuizen, Jan van (better known as *Janus Broukhusius*); born at Amsterdam in 1649. When young, he lost his father, a hatter, and was put under the guardianship of one of his relations, who placed him with an apothecary, though he desired to study a learned profession. While in this situation, he wrote verses, and was encouraged by the applause of the public. He subsequently entered the military service of his native country. In 1674, he embarked under the command of the famous admiral de Ruyter, as a marine, on an expedition to the West

India islands. In the autumn of the same year, he went into winter quarters at Utrecht. Here he became acquainted with several scientific men, and published a collection of his poems Utrecht, 1684). A splendid edition of them appeared at Amsterdam in 1711, 4to. He afterwards received a military appointment at Amsterdam, which afforded him leisure for literary pursuits. He published an edition of the poems of Sannazarius, and also of Palearius's works, an edition of Propertius (Amsterdam, 1702 and 1726, 4to.), and Tibullus (Amsterdam, 1708 and 1727, 4to.), with critical notes. In these works, he displayed extensive knowledge. After the peace of Ryswick, he received his dismission, with the rank of a captain. He died in 1707.

Broglio; a family distinguished in the annals of French wars and French diplomacy, which derives its origin from Piedmont.—1. François Marie, marshal of France, born in 1671, died in 1745; from 1689, fought with distinction in the Netherlands, in Germany and Italy. He was also employed in diplomatic affairs. He rose by degrees, till, in 1734, he became marshal of France. In the Austrian war of succession, he had the chief command of the armies of Bavaria and Bohemia; but, leading them back to the frontiers of France, he fell into disgrace at court.—2. Victor François, the eldest son of the preceding, likewise marshal of France, born in 1718, commenced his career in the battles of Guastalla and Parma (1734); was engaged in all the wars of France, and was always distinguished for his valor, though not uniformly successful. During the seven years' war, he fought under d'Estrées at Hastenbeck, and at Rossbach under Soubise. He was more successful as commander-in-chief at Bergen. The emperor, to reward him for the victory obtained at that place, created him a prince of the empire. Disputes with Soubise, who was in particular favor with madame de Pompadour, caused his recall and banishment. In 1789, when the revolution broke out, Louis XVI appointed him minister of war; at the same time, he received the command of the troops that were to keep Paris in check. The desertion of the national guards rendered all his efforts vain, and B. left France. In the campaign of 1792, he commanded a division of the *émigrés* without success. After its close, he withdrew entirely from public life, and died at Münster in 1804, in the 86th year of his age.—3. Claude Victor, the third son of Victor François, on the other hand, entered wholly into the views of the revolutionary party. He was deputy of the nobility of Colmar to the states general. After the dissolution of the constituent assembly, he was appointed field-marshal in the army of the Rhine, but, upon his refusal to acknowledge the decrees of the 10th of August, was deprived of his command, and afterwards, on the same account, summoned before the revolutionary tribunal, and led to the guillotine in June, 1794.—4. Charles François, a brother of Victor François, is known in the history of French diplomacy as the head of the secret ministry of Louis XV. Although B. discharged the duties of this difficult office with much ability, yet, as his views were often in direct opposition to those of the public ministry, the greatest and the most ridiculous confusion was often produced. He was, therefore, formally banished by the king; but, at the same time, received secret instructions to continue his usual duties in his exile. Under Louis XVI, he was not employed, and died in 1781.—5. Victor, peer of France, a son of Claude Victor: see the following article.

Broglio, Victor, duke of, peer of France, born in 1785, married a daughter of the celebrated madame de Staël. His grandfather was the marshal duke of B., who was distinguished in the seven years' war. His father, Victor, notwithstanding the patriotism which he had always displayed, fell a victim to the revolutionary tribunal. The son received an excellent education, and devoted himself, at first, to literature and the fine arts. But he soon engaged in more serious studies, and in political affairs. He became counsellor of state, auditor, military intendant in Illyria and Valladolid, and was attached to the French embassies in Warsaw, Vienna and Prague. In 1814, he took his seat in the chamber of peers, where he gave splendid proofs of his intimate acquaintance with the present state of society, and with the legislation adapted to it. In the trial of Ney, he was one of the few peers who voted for his acquittal. He spoke with energy against the laws of exception and the proscription lists. At the time when the ministry was making efforts to extend the power of the police, the following observation of his met with great approbation: "The existing government (said he) wish to know all things, and to confine this knowledge to themselves. Hence arises the inconvenience, that the public remains ignorant of facts by which

the government are guided, and the government of the opinions of the public." In the debates upon the censorship of the public journals, he observed: "A new government may more readily grant freedom of speech, as it is not called upon to defend former abuses. Restrictions on the liberty of the press prevent the ministers from acquiring a knowledge of their real situation, and discredit them with the nation. The restraint of the press can only be of importance to ministers, who throw themselves into the arms of a violent party, with the intention of allowing it an unlimited license." The duke is profoundly versed in the whole department of political economy.

Broker; an agent who is employed to conclude bargains, or transact other business, for his employer, for a certain fee or premium. Brokers are of several kinds—merchandise, money, exchange, ship, insurance, real estate, pawn, stock brokers, &c. Exchange brokers negotiate notes and bills of exchange; money brokers exchange different kinds of money; these two classes are not unfrequently united. Merchandise brokers make contracts for the sale of merchandise. Pawn brokers make it their business to lend money upon pawns. Insurance brokers are those whose business it is to procure insurance of vessels at sea or bound on a voyage. They are, at once, the agents of the underwriters (who expect from them a full disclosure of all circumstances affecting the risk, and the payment of their premiums), and of the party insured (who trusts to them for the regularity of the contract, and a proper selection of underwriters). An agent or broker should not, therefore, be an insurer; for he then becomes too much interested to settle with fairness the rate of premium, the amount of partial losses, &c. Stock brokers are those who are employed to buy and sell shares in the stocks, including the public funds of their own and other countries, bank stock, &c. In the U. States, brokers are not required to be licensed, nor to give bonds. In France, the brokers who deal in money, exchange, merchandise, insurance and stock, are called *agents de change*, and their number at Paris is fixed at 60. The company of *agents de change* is directed by a chamber of syndics (*chambre syndicale*), chosen annually by the company. They are obliged to give bonds to the amount of 125,000 francs, for the prevention of abuses. They are also obliged to keep books, and are restricted to from $\frac{1}{8}$ to $\frac{1}{4}$ per cent. for each negotiation. They are allowed to deal in the public funds, foreign and domestic, and the different kinds of merchandise, &c. In London, the brokers must be licensed by the lord mayor, who takes bonds for the faithful execution of their duties. In Egypt, the Arabs are the exchange brokers, and are called *consuls*. In the Levant and the Indies, the Jews, Armenians and Banians are the chief brokers.

Brome; a peculiar substance discovered in 1826, and named from the Greek βρωμος, in consequence of its disagreeable odor. It is obtained from the bittern of sea-water, or the washings of the ashes of sea-weed. It is a dark-red liquid, of a specific gravity of 2.965, highly volatile, and emits copious red fumes at the ordinary temperature of the air. It boils at 116°. The vapor does not sustain the combustion of a candle, though several of the metals burn in it. It possesses the bleaching powers of chlorine, and, like that substance, is eminently hostile to life; a single drop of it, placed upon the bill of a bird, being sufficient to kill it. With oxygen and hydrogen it forms acids. Its properties have led to the opinion, that it might be a compound of chlorine and iodine; but, as neither of these substances have been detected in it, we are, for the present at least, obliged to regard it as a simple element.

Bromelia. (See *Pine-Apple*.)

Bromius; a surname of Bacchus.

Bronkhorst, Peter van; a Dutch painter, born at Delft in 1588, and died in 1661. He painted, with great success, perspective views of temples and churches, enlivened with small but well executed human figures. In the town-house of Delft is his representation of Solomon's judgment.—John van B., born at Leyden in 1648, learned the art of painting without any instruction, and attained to a high degree of perfection. He principally painted animals, and was particularly successful in his birds. The lightness and brilliancy of the feathers are represented with much truth. He was a pastry-cook, and painted merely for his amusement.—Another John van B., born at Utrecht in 1603, was a painter on glass. His works in the new church at Amsterdam are much esteemed. He has also engraved some works of Cornelius Poelenburg.

Bronner, Francis Xaver, born in 1758, at Hochstadt, on the Danube, of the lowest extraction, while a boy, entered the Jesuit college at Dillingen, as a singer

He afterwards became a Benedictine monk, and devoted himself, with the greatest zeal, to the study of philosophy and mathematics, as well as to music and poetry. He fled twice from the monastery, and took shelter in Zürich. In 1810, he was made professor in Kazan, in Russia, whence he returned in 1817. His poems, in particular his piscatory idyls, are interesting for their truth and simplicity, and the refined feeling of moral and natural beauty which pervades them. He wrote his own life, in 3 vols.

Bronze. For the mode in which this metal is prepared, see *Copper*.

Bronzes, in archæology; works of art cast in bronze. The ancients used bronze for a great variety of purposes: arms and other instruments, medals and statues, of this metal, are to be found in all cabinets of antiquities. Egyptian idols of bronze are contained in the British museum. The most celebrated antique bronze statues are, the sleeping satyr; the two youthful athletes; the colossal equestrian statue of Marcus Aurelius, at Rome; the Hercules of the capitol; the colossal head of Commodus; the statue of Septimius Severus in the Barberini palace. The horses of St. Mark, at Venice, are of pure copper. On tables of bronze were inscribed laws, edicts, and treaties. 3000 of these were destroyed by fire in the time of Vespasian. Bass-reliefs, vaults, and doors of public edifices, were ornamented with decorations of the same metal. Urban VIII took from the Pantheon alone 450,000 pounds of bronze, which he used for the ornaments of St. Peter's, and for the cannon of the castle of St. Angelo. One of these was composed wholly of bronze nails, taken from the portico, and bore the inscription, *Ex clavis trabalibus porticûs Agrippæ*. The ancients considered this metal as naturally pure; all their instruments of sacrifice, and sacred vessels, were therefore of bronze. They also believed it endowed with the power of driving away spectres and malignant spirits. (*Ov. Met.* vii. 226, and *Fast.* v. 441.) The words *moneta sacra* are found only on bronze medals. It was sacred to the gods; and the Roman emperors, who struck gold and silver coins, could not strike them of bronze without the permission of the senate; hence the inscription S. C. (*Senatus consulto*). (For the method of casting in bronze among the ancients, see Winckelmann's *History of Art*, book ii.) The moderns have also made much use of bronze, particularly for statues exposed to accidents, or the influence of the atmosphere, and for casts of celebrated antiques. The moulds are made on the pattern, of plaster and brick dust. The parts are then covered on the inside with a coating of clay as thick as the bronze is intended to be. The mould is now closed, and filled on its inside with a nucleus or core of plaster and brick-dust, mixed with water. When this is done, the mould is opened, and the clay carefully removed. The mould, with its core, are then thoroughly dried, and the core secured in its position by bars of bronze, which pass into it through the external part of the mould. The whole is then bound with iron hoops, and the melted bronze is poured in through an aperture left for the purpose: of course, the bronze fills the same cavity which was previously occupied by the clay, and forms a metallic covering to the core. It is afterwards made smooth by mechanical means.

Bronzing. Bronze of a good quality acquires, by oxydation, a fine green tint, called *patina antiqua*, or, by the Romans, *ærugo*. Corinthian brass receives in this way a beautiful clear green color. This appearance is imitated by an artificial process, called *bronzing*. A solution of sal ammoniac and salt of sorrel in vinegar is used for bronzing metals. Any number of layers may be applied, and the shade becomes deeper in proportion to the number applied. For bronzing sculptures of wood, plaster, figures, &c. a composition of yellow ochre, Prussian blue, and lampblack, dissolved in glue-water, is employed.

Bronzino, Angelo, a painter of the Florentine school, and imitator of Michael Angelo, flourished about 1550. He painted a great number of portraits; and his historical paintings are distinguished by the striking and pleasing features of the heads which they contain. One of his best paintings is a *Christ*, in the church Santa Croce, at Florence. It is remarkable for its grouping and coloring, as well as for the heads, many of which are the portraits of his friends and contemporaries; yet it is not altogether free from mannerism and affectation. Some persons have found fault with the nakedness of his figures. He died at Florence, 1570.

Brooding. (See *Ornithology*.)

Brooklyn, a post-town of New York, in King's county, on the west end of Long Island, separated from the city of New York by East river. Population in 1810, 4,402; in 1820, 7,175. The village of B., within the township, is incorporat-

ed, and has a pleasant and somewhat elevated situation, opposite to the city of New York, from which it is three fourths of a mile distant. It is a flourishing village, compactly and handsomely built, having various manufactures, and an extensive trade; and contained, in 1825, 8,800 inhabitants, and 5 houses of public worship. To the east of the village is a tract of land called the *Wallaboght*, which is the site of a navy-yard, and public store-houses, belonging to the U. States. Between B. and Flatbush, on the south, a severe battle was fought during the revolutionary war, between the British and Americans, in which the latter were defeated with great loss.

Brooks, John, was born in Medford, Mass. in the year 1752. His father was a respectable farmer. After receiving a common education at the town school, young B. was indented as an apprentice, according to the prevailing custom, to doctor Simon Tufts, for the space of seven years. He here contracted an intimacy with the celebrated count Rumford, which was continued by correspondence until the latter's death.—After completing his studies, he commenced the practice of his profession in the neighboring town of Reading; but he had not been long so engaged, when the revolutionary war broke out, and he was appointed to command a company of minute men, whom he soon had an opportunity of exercising against the British, on their retreat from Lexington and Concord.—He was soon after raised to the rank of major in the continental service, and was distinguished for his knowledge of tactics, being considered as second, in that respect, to baron Steuben alone, with whom he was associated in the duty of introducing a uniform system of exercise and manœuvres.—In 1777, he was appointed lieutenant-colonel, and had no small share in the capture of Burgoyne, on the 7th of October, at Saratoga.—When the conspiracy of some of the officers against the commander-in-chief, in March, 1783, had well nigh ruined the country, Washington rode up to Brooks, and requested him to keep his officers within quarters, to prevent their attending the insurgent meeting. Brooks replied, "Sir, I have anticipated your wishes, and my orders are given." Washington took him by the hand, and said, "Colonel Brooks, this is just what I expected from you." He was one of the committee who brought in the resolutions of the officers, expressing their abhorrence of this plot, and also one of that appointed by the officers to adjust their accounts with congress.—After the army was disbanded, colonel Brooks resumed the practice of medicine in Medford and the neighboring towns. He was soon after elected a member of the Massachusetts medical society, and, on its extension, and new organization, in the year 1803, a counsellor. He was for many years major-general of the militia of his county, and his division, during the insurrection of 1786, was very efficient in the protection of the courts of justice, and the support of the government. General Brooks also represented his town in the general court, and was a delegate in the state convention, for the adoption of the federal constitution, of which he was one of the most zealous advocates. In the late war with England, he was the adjutant-general of governor Strong, and was chosen to succeed him on his retirement from office, almost without opposition. As governor, he discharged his duties with signal ability and excellent temper.—He was president of many literary, religious, patriotic, benevolent and professional societies.—After discharging, for seven successive years, the duties of chief magistrate, he retired to private life, and spent his remaining years in the town of Medford, where he was much beloved. The inhabitants referred to him all their disputes, and his decisions generally satisfied both parties. The death of this excellent man took place in the 73d year of his age, March 1st, 1825.—As a physician, he was judicious and accurate in his investigations, and clear in his discernment; prudent rather than bold, and kind and attentive to his patients. His mind was active, ardent, and indefatigable. His whole conduct was regulated by the purest sentiments of morality and religion, imbibed at an early period.

Broom; a genus of plants which includes numerous species. The *common broom* (*spartium scoparium*) is a shrub growing abundantly on sandy pastures and heaths in England. It is distinguished by having large, yellow, butterfly-shaped flowers, leaves in threes, and single, and the branches angular. This is a handsome shrub, and one of the most useful of the common plants of Great Britain. Its twigs are tied in bundles, and formed into brooms. Some persons roast the seeds, and make them into a kind of coffee. The fibrous and elastic parts of the bark, separated by soaking in water, may be manufactured into cor-

dage, matting, and even into a coarse kind of cloth. The twigs and young branches have been successfully employed as a substitute for oak bark in tanning leather. They may also be rendered serviceable as thatch for houses and cornricks; and some persons mix them with hops in brewing; but it is doubtful whether, in this respect, they are wholesome. The flower-buds, when pickled, have, occasionally, been used as a substitute for capers. The wood, when the dimensions are sufficient for the purpose, is employed by cabinet-makers for veneering; and it is stated, by doctor Mead, that a decoction of the green tops, in conjunction with mustard, has been found efficacious in the cure of dropsy.—*Spanish broom*, or *spart* (*spartium junceum*), is an ornamental flowering shrub, common in English gardens, which has opposite round branches, that flower at the top, and spear-shaped leaves. In the province of Valencia, and other parts of Spain, great attention is paid to the manufacture of various articles from the twigs and bark of this shrub. They are plaited into mats, carpets, covering for plants, baskets, ropes, and even shoes. A great portion of these twigs was formerly exported to different French ports in the Mediterranean, particularly to Marseilles; but, in 1783, on account of the employment of which it deprived the Spanish people in working them, their exportation was prohibited by the government.

Brosses, Charles de, first president of the parliament of Burgundy, was born at Dijon in 1709. He applied himself to the study of law, and, at the same time, did not neglect the arts and sciences. His intimate acquaintance with Roman history produced in him a desire of visiting Italy, whither he went in 1739. On his return, he published his Letters on the present Condition of the subterraneous City Herculaneum (Dijon, 1750). Ten years afterwards appeared his treatise on the religious worship called *Fetisch*. At the request of Buffon, who had been his friend from youth, he wrote a History of the Voyages to Australia (1756). At that time, it was generally believed that there was a southern continent, to which De B. gave the name of *Magellania*. The erroneous nature of this supposition was first made known by Cook. A work of a very different kind succeeded this, and displayed the extent and variety of the author's learning. This was a treatise on the mechanical formation of languages. It contained, together with many imperfections, numerous curious and profound investigations, ingenious conjectures, and penetrating views. De B. employed himself, through his whole life, on a work which was held in no slight estimation by the learned. This was a translation of Sallust, in which he labored to supply the lost parts of this historian. For this purpose, he collected above 700 fragments of Sallust, by means of which, with some important additions, he composed a history of the 7th century of the Roman republic, displaying a great extent of erudition. The work would have been received with greater approbation, if the graces of style had been joined to the depth and sagacity of research which it manifests. Though these various labors claimed a large portion of his time, yet they did not hinder him from attending to the duties of his office. He died in 1777. The manuscripts which he left were lost during the revolution.

Brothel. (See *Bawdy-House.*)

Brotherhood, Holy. (See *Hermandad.*)

Brotherhoods. (See *Fraternities.*)

Brothers; male children of the same father or mother, or both. Among the ancients, the term was employed to denote more remote relations. Thus, among the Jews, Abraham was called the *brother* of Lot, his nephew. By the civil law, brothers and sisters stand in the second degree of consanguinity: by the canon law, they are in the first degree. In the monastic and military orders, the members were called *brothers*, as being united in one family. In Europe, the kings address each other by the title of *brother:* the president of the U. States uses the same title in addressing the Indian chiefs who are sent to *talk* with him.

Brougham, Henry, was born at London, in 1779. He attracted public notice, originally, as one of the principal contributors to the Edinburgh Review. Sound learning, a terse and expressive style, logical reasoning, vigor and independence of thought, were the distinguishing traits of his compositions. But his efforts as a parliamentary orator, as an advocate, and as a public benefactor, have given him the most extensive reputation, and raised him to an enviable height in public opinion. As an advocate, he stands in the front rank of the English bar; and the variety of his talents and acquisitions have served to reflect credit upon his character as a lawyer; while the solid footing of professional eminence has communicated authority and weight to his exer

tions in other walks of life. His professional course has been, to a considerable degree, associated with his political career, in consequence of the differences between George IV, when prince-regent, and the then princess of Wales. During the discussions relative to her conduct and affairs, he acted as her counsel; and afterwards, on the accession of George IV, when queen Caroline claimed the rights and privileges of queen-consort, B. was appointed her attorney-general, and acted in that capacity at her trial. Of course, he belonged to the opposition party; and he has consistently maintained the principles of the whigs down to the present moment. The responsible part he took in behalf of queen Caroline secured to him the regard of her friends and of the opposition. But he possesses more solid claims to the respect of the liberal party, from his labors as a member of the house of commons. Among these may be mentioned his efforts to procure a repeal of the orders in council; his opposition to the leather tax; his opinions on the liberty of the press; his efforts in behalf of popular education; and, recently, his attempts to procure a reform in the administration of the laws. On all occasions, he has acted with purity and independence, and has proved himself above mere personal considerations. Although he never took office, yet he is, unquestionably, the most prominent man in the house. The variety of his powers and attainments is not the least of his claims to attention. Preëminent as a man of science, a literary man, a statesman, lawyer and orator, and throwing himself, with energy and success, into all these different departments of intellectual pursuit, he necessarily occupies a large space in the public eye. As an orator, he is neither finished nor accurate in style, but his characteristics are ingenuity and force of argument, quickness and strength of sarcasm, and a prompt, vigorous, impassioned style of reasoning, which render him, as an antagonist in debate, always redoubtable, and often irresistible. In addition to his contributions to the Edinburgh Review, and to various scientific journals, we may mention, among his publications, the following:—1. An Inquiry into the Colonial Policy of the European Powers; 2 vols., 8vo., 1803. 2. On the State of the Nation. 3. Speech on the State of Commerce and Manufactures; 1812. 4. Speech at Liverpool; 1812. 5. Practical Observations on the Education of the People; 1825. 6. Speech on the State of the Law; 1828. The reputation which he has hitherto acquired by his occasional efforts, upon temporary and transient subjects, is splendid; but he is now laying the foundation of a deeper and more brilliant fame, by his unwearied industry in the cause of popular instruction and of legal reform. As to the first, it is sufficient to say, that his principles on the subject of extending the elements of knowledge among the middling or lower classes, have met with the most decided support, and are the basis of much that is now doing for their improvement. His propositions of legal reform having been brought forward but lately, the result remains to be seen; but the reception they have met with augurs auspiciously for the result. His life, we hope, will long be spared to his country.

Broughton's Archipelago; an extensive range of islands, rocky islets and rocks, in an arm of the Pacific ocean, on the west coast of North America; so called from an Englishman, who discovered them in 1790. Lon. 232° 56′ to 233° 40′ E.; lat 50° 33′ to 51° N.

Broussonet, Pierre Marie Auguste, physician and naturalist, born at Montpellier in 1761, first introduced the Linnæan system into France. Daubenton, though an opponent of Linnæus, made him his substitute in the *college de France*, and, in 1784, his assistant in the veterinary school. B. read several valuable papers before the academy, and was chosen a member. As secretary of the agricultural society at Paris, he published the useful *L'Année rurale ou Calendrier à l'Usage des Cultivateurs*, and caused the first flock of Merino sheep to be introduced from Spain, and Angora goats from the Levant. In 1789, he became a member of the national assembly, and, although he did not distinguish himself in political disputes, he was imprisoned by the convention as a Girondist. He escaped to Madrid, but was obliged, by the royalist *émigrés*, to fly from that place. By the assistance of his friend sir Joseph Banks, he embarked in an English vessel for India. A storm forced the vessel into the harbor of Lisbon, where he soon met with new persecutions. Under the title of physician to the American consul at Morocco, he went to Africa, and reassumed his botanical studies. His name was finally struck from the list of emigrants. He was made consul at Mogadore, and at the Canaries, and, in 1805, member of the *corps legislatif*. He died, in 1807, from the consequences of a fall

he had met with some time before, by which he lost his memory for all proper names and other substantives, but had adjectives in abundance at his command. His manuscripts are of great value.

BROWER. (See *Brauwer.*)

BROWN, Charles Brockden, greatly distinguished as a novelist, and the editor of various periodical works, was born in the city of Philadelphia, in 1771. He was remarkable in his childhood for his attachment to books, and, at the age of 16, after having received a liberal education, had already formed plans of extensive literary works. The profession of which he made choice was the law. He was apprenticed to an eminent member of the Philadelphia bar, but, during the term intended for preparatory legal study, was, in fact, principally occupied with literary pursuits; and, when the time approached for his admission into the courts, he renounced, altogether, the legal career from constitutional timidity, and an invincible dislike to the scenes which courts present. His friends remonstrated and reasoned in vain. The youth desired only retirement and the employments of a student and an author. The delicacy of his frame, moreover, incapacitated him for the bustle of business and all athletic amusements. During frequent visits to New York, he became intimate with a literary club, who fostered his devotion to letters, and increased his eagerness to be conspicuous as a writer. He kept minute journals, indited essays and dissertations, and cultivated, with unremitting assiduity, the arts of composition.—The first novel which he wrote was entitled Sky Walk. It was never published, owing to the death of the printer, who had undertaken to issue it at his own risk. Parts of it were afterwards incorporated in the productions by which B. became so advantageously known to his country and Great Britain. The first of these was the novel called Wieland, which appeared in 1798. It soon acquired the reputation of a powerful and original romance. The next published, in the following year, was Ormond, or the Secret Witness, which had neither the success nor the merit of the other, but still exhibits uncommon powers of invention and description. At this time, B. had begun no less than five novels, two of which—Arthur Mervyn and Edgar Huntley—were completed and sent forth almost immediately. In Arthur Mervyn, the ravages of the yellow fever, which the author had witnessed in New York and Philadelphia, are painted with terrific truth. All these compositions abound both with excellences and faults, and bear a character of originality. In 1801, he published another novel—Clara Howard—less open to exception, but also less deserving of praise. Its form is different from that of the others, being epistolary. The last of his novels was Jane Talbot, originally published in London, in 1804. It is deficient in interest, and, indeed, in all respects, inferior to its predecessors. In April, 1799, B. published the first number of the Monthly Magazine and American Review. This work he continued with great industry and ability until the end of the year 1800. He wrote abundantly for it. Circumstances compelled him to relinquish it; but, in 1805, he commenced another journal, with the title of the Literary Magazine and American Register; and, in this undertaking, he persevered for five years. His prolific pen gave birth to three large political pamphlets in the same interval. Their respective titles are, an Address to the Government of the U. States on the Cession of Louisiana to the French, and on the late Breach of Treaty by the Spaniards; the British Treaty; and an Address to the Congress of the U. States on the Utility and Justice of Restrictions on Foreign Commerce, with Reflections on Foreign Trade in general, and the future Prospects of America. In 1804, B. married Miss Linn, a sister of the amiable and popular poet, the reverend doctor John Blair Linn. The match proved eminently happy. In 1806, he entered upon a new work, a semi-annual American Register, five volumes of which he lived to complete and publish. It is now and must long be consulted as a valuable body of annals.—We have already mentioned the delicacy of B.'s constitution. It had a tendency to consumption of the lungs, which his sedentary and studious habits unfortunately aggravated. In 1809, it was discovered that his lungs were seriously affected, and he then consented to travel for the recovery of his health. The remedy, however, was applied too late. In November of that year, after an excursion into the states of New Jersey and New York, he betook himself to his chamber, as he thought, for a few days; but his confinement lasted until February, and ended only with his life. He expired on the 22d of that month, at the age of 39. Among his manuscripts, an unfinished system of geography was found, to which his friends have ascribed rare merit. He was widely and critically

conversant with geography and history, and, therefore, particularly qualified to produce a superior system of this kind. His knowledge of the French language is evinced in his accurate translation of Volney's Travels in the U. States.—B. was a man of romantic temper, benevolent heart, pregnant invention, extensive attainments and prodigious industry. His colloquial powers were considerable, but rarely indulged in mixed society. He was reserved, but not unsocial. He could be taxed with no excess, save that of application. His moral character has no stain. He was one of the gentlest of human beings. In person, he was of the middle size, and bore the marks of a valetudinarian and literary devotee.—The writings of B. were admired and current during his life. Even his novels, however, fell, after his death, into comparative oblivion at home, and remained so until they began, not long since, to be read and praised in England. An edition of them in 6 vols. 8vo. was printed in Boston in 1828. Their leading traits are, a rich and correct diction, variety of incident, vivid scenes of joy and sorrow, a minute developement and strong display of emotion, and a powerful use of wonderful phenomena in the physical faculties and habits of man. Almost all is new and strange in his machinery and situations; but he deals too much in the horrible and criminal. Extravagant and consummate depravity actuates too many of his characters. His scenes may rivet attention, and his plots excite the keenest curiosity; yet they pain the heart beyond the privilege of fiction, and leave in the imagination only a crowd of terrific phantasms. None of his novels can be said to possess unity in the details, or to be finished in the general design and execution. These merits were incompatible with the extreme rapidity of his workmanship, and the number of distinct performances in which his fancy and pen were engaged at the same time.

Brown, George, count, an Irishman, born in 1698, studied at Limerick, and entered the Russian service, in 1730, as lieutenant, where he distinguished himself in several wars, and was three times made prisoner and sold as a slave by the Turks. In reward for the discovery of some secrets of the divan, he was made major-general in the Russian army. In the battle of Zorndorf, he was taken prisoner by the Prussians, and disabled, by wounds, for future military services. Notwithstanding his bold remonstrances against the Danish war, Peter III made him governor of Livonia, in which post he remained 30 years, and was not less honored by Catharine II. He died in 1792.

Brown, John, M. D., the founder of the Brunonian system in physic, was born at Buncle in Berwickshire, in 1735. His parents apprenticed him to a weaver, but, it being discovered that he possessed abilities superior to his occupation, he was sent to a grammar-school. Having imbibed a considerable portion of religious enthusiasm, he looked forward to the ministerial office, among the strict sect of seceders. Upon some disgust, however, he changed his mind, and, in 1756, entered himself as a student of divinity in the university at Edinburgh. His theological predilection gradually forsaking him, after officiating as the usher of the school in which he had been educated, he returned to Edinburgh in 1759, and commenced the study of physic. He was admitted, as an indigent scholar, to a gratuitous attendance on the lectures, and obtained the patronage of doctor Cullen, who employed him as a tutor in his own family. During this course of study, he married, and set up a boarding-house, but failed, and became bankrupt. About this time, by a long course of meditation on the animal system, and the vigor of his own mind, directed by some reading, but seconded by little or no aid from practical observation, he elaborated a new theory of medicine. The result was the publication of his *Elementa Medicinæ*, which he further explained in a course of private lectures. B. scrupled at no means to push his doctrines. A new medical language was introduced; ideas totally at variance with former opinions were maintained; and the most virulent abuse of the regular professors of the university was perseveringly uttered. At length, ruined in reputation and involved in his circumstances, he repaired, in 1786, to London. Here he endeavored to excite attention by his Observations on the Old Systems of Physic, but without success, and died suddenly of apoplexy, probably produced by laudanum, which he was in the habit of taking when common spirits failed to excite him sufficiently. The opinions of B., although not admitted to the extent and in the form in which he proposed them, made a considerable change in medical language and doctrines, not only in Great Britain, but in the principal schools of Europe, his *Elementa* and Observations having been translated and

published at more than one place on the continent. His object was to simplify medicine, by arranging both diseases and remedial powers into large and strongly-marked classes. He divided all diseases into sthenic and asthenic, or those in which excitement is too great or too little, and all curative means into such as increase or diminish excitement. The system has been useful in overturning false and trifling analogies, and in leading to a full trial of vigorous remedies; but in practice it is found impossible to act on ideas so general and abstract. The best edition of the English translation of the *Elementa* is that revised and corrected by doctor Beddoes, with a biographical preface.

Brown, Robert, the founder of a religious sect, first called *Brownists*, and afterwards *Independents*, was born of an ancient family in Rutlandshire, and studied at Cambridge, where, in 1580, he began openly to attack the government and liturgy of the church of England as anti-Christian. He first ascended the pulpit at Norwich in 1581, where he succeeded in converting a number of Dutch, who had a congregation there, to his opinions, for which he was brought before the ecclesiastical commissioners, to whom he behaved so rudely, that he was sent to prison, but soon obtained a release. He then went to Middleburg, in Zealand, with his followers, and wrote a book called *A Treatise of Reformation without tarrying for any Man*. In 1585, he returned to England, and, as he still labored to gain converts, he was excommunicated by the bishop of Peterborough. This censure, joined, perhaps, with the evaporation of his zeal, induced him to submit; and, in 1590, he was presented to a living in Northamptonshire, of which he received the emoluments without discharging the duties. In other respects, too, his morals were licentious, so that he retained little of the austerity of the founder of a sect. After leading a turbulent life, this extraordinary character died in 1630, in Northampton jail, where he had been sent for assaulting a constable and insulting a magistrate. The sect of Brownists was far from expiring with their founder, but spread so as to become a great object of alarm; and a bill was brought into parliament which inflicted on them very severe pains and penalties. In process of time, however, the name of Brownists was merged in that of Congregationalists or Independents (q. v.), under the latter of which titles they formed a powerful party in the commonwealth, and were very obnoxious to the Presbyterians, whose successors, it is remarkable, have, for the most part, gradually adopted Brownist principles in relation to church government.

Brown, doctor Thomas; an ingenious writer on metaphysics and morals. He was born in Scotland, in 1778, and was educated at the high-school, and subsequently at the university of Edinburgh, where he obtained the professorship of moral philosophy. He distinguished himself, at a very early age, by an acute review of the medical and physiological theories of doctor Darwin, in a work entitled Observations on Darwin's Zoonomia, 8vo. This work introduced him to the academy of physics, of which Mackenzie, Jeffery and Brougham were members. It was this society which gave rise to the Edinburgh Review, to which the first contributors sent their papers gratuitously. B. wrote the review of the philosophy of Kant, in the second number, but, being displeased with some liberties taken with one of his papers intended for the fourth number, his connexion with it was terminated. He also published some poems, which displayed considerable talent. His principal poetical work is the Paradise of Coquettes, London, 1814. But he chiefly deserves notice on account of his metaphysical speculations; and his last work, on the Philosophy of the Human Mind, affords ample proof of his merit as a profound and original thinker. He died at Brompton, near London, April 2, 1820.

Brown, William, the celebrated admiral of Buenos Ayres, was born in Ireland, from whence he emigrated to Baltimore, in the U. States, in 1793, being then about 14 years of age. He was employed in the American mercantile marine until 1796, when he was impressed by a British man-of-war. He continued partly in the English navy and partly in the merchant service until 1814, when, being at Buenos Ayres, in the command of an English merchant-ship, during the war of independence, he was induced to enter into the naval service of the country. Being appointed to the command of the republican flotilla of two brigs, three corvettes and a schooner, he put to sea in April, 1814, and engaged some ships of the Spaniards, off the island of Martin Garcia. In the ensuing May, a more decisive engagement took place off Monte Video, in which four of the enemy's vessels were either taken or destroyed, and the rest

dispersed. This victory enabled B. to blockade Monte Video, and thus contribute essentially to bring about the surrender of that city, which speedily took place.—B. was now raised to the rank of admiral; and, there being no further occasion for his services in the river La Plata, after the destruction of the Spanish fleet, he planned an expedition against the Spaniards in the Pacific ocean. For some time he cruised with great success, making many rich prizes from the Spaniards, who had no force in those seas adequate to oppose him. He was daring enough to attack Callao, but without success; and afterwards made a similar attempt to gain possession of Guayaquil. But, on the latter occasion, his flag-ship, the Trinidad, grounded on the sands under the guns of a battery, and he was obliged to surrender at discretion. He remained in confinement but a few days, being exchanged for the governor of Guayaquil, don Manuel Mendiburu, who had been made prisoner by one of his cruisers. In May, 1816, he anchored in the harbor of Buenaventura with the corvettes Hercules and Hawk, and entered into communication with the government of Popayan, for the purpose of selling some of the property taken from his prizes, and obtaining supplies. At this time, the patriot cause in New Grenada was in its most desperate condition, Morillo having overrun the whole country, and obtained possession of Santa Fé. Some of the most eminent republican leaders, who were flying for their lives, took the road for Buenaventura, hoping to escape on board B.'s vessels. But, the Spaniards having gained possession of Choco, B. found it necessary to put to sea precipitately in the Hercules, scuttling the Hawk, and abandoning a number of his seamen, who were on shore, with a large quantity of valuable merchandise.—After having greatly annoyed the Spanish commerce in the Pacific, and sent a number of his prizes to Buenos Ayres, he returned in the Hercules, with a rich booty on board, to enjoy the fruits of his intrepidity and enterprise. Finding the La Plata blockaded by the Portuguese, and his vessel needing repairs, he determined to proceed either to the West Indies or the U. States. On the way, he was captured by the British ship of war Brazen, captain Sinclair, carried into Antigua, and condemned by the admiralty court, upon allegations so frivolous and unreasonable as to afford good cause to charge the captors or the court with corrupt and arbitrary conduct.—Owing to this unjust proceeding, B. lived at Buenos Ayres in retirement, and almost in poverty, until the war with Brazil commenced. This event brought him once more into notice, and gave him an opportunity of acquiring no small share of naval reputation.—As admiral of the naval forces of the republic during this war, B. has displayed uncommon bravery, activity and skill, having been generally successful in his military enterprises. But, owing to the straitened means of the republican government, his courage has generally been wasted upon small enterprises, which have signalized his talents and prowess on many brilliant occasions, but produced no decisive effect upon the war.

Browne, Maximilian Ulysses, count, field-marshal in the Austrian service, born at Bâle, in 1705. His father, Ulysses de Browne, left Ireland in 1690, as a follower of king James II, became colonel in the Austrian service, and died in 1721. The son served from his early youth in the imperial army; distinguished himself in the Italian war, in particular, in the battles of Parma and Guastalla; and, in 1739, was made lieutenant-field-marshal. In the Silesian wars, B. served with zeal and ability; the 15th June, 1746, he gained the battle of Piacenza against the French, took the pass of Bochetta, and made himself master of Savona. In 1752, he was made governor of the city of Prague, and commander in chief of the forces in Bohemia; and, in 1756, when king Frederic II attempted to penetrate through Saxony to Bohemia, he was appointed field-marshal. October 1, 1756, he lost the battle of Lowositz, but, seven days after, advanced towards Saxony, to rescue the Saxon troops, who were surrounded between Pirna and Königstein. Although he did not effect this purpose, he forced the Prussians to evacuate Bohemia, and was, in consequence, rewarded with the order of the golden fleece. Frederic invaded Bohemia a second time with his whole force, and, May 6, 1757, the battle of Prague was fought. B. was obliged to leave the field, and was carried to Prague, mortally wounded, and died in June, 1757. Frederic II called him his master.

Browne, Simon; a learned and ingenious dissenting divine, remarkable for an extraordinary species of mental derangement, born about 1680. He preached for some time at Portsmouth; afterwards at the Old Jewry, one of the principal congregations of Dissenters in Lon-

don. Here he published a volume of hymns, and one of sermons. In 1723, the loss of his wife and only son threw him into a settled melancholy, attended with the persuasion, that God had annihilated in him the thinking substance, and utterly divested him of consciousness; and, although he retained the human shape, and the faculty of speaking in a manner that appeared to others rational, he had all the while no more notion of what he said than a parrot. He, therefore, thought himself no longer a moral agent, or a subject of reward or punishment, and, desisting from his functions, could not be prevailed upon to join in any act of worship, public or private. This persuasion, which remained with him to the end of his life, at first tempted him to commit suicide; but he at length became calm, and appeared uneasy only when his friends appeared to doubt the truth of his assertions. Notwithstanding this alienation of mind, his faculties, in other respects, were in full vigor, which he proved by various publications, including the compilation of a dictionary. This, he observed, "was nothing that required a reasonable soul." Towards the close of his life, he published several clearly-written theological pieces, and, among the rest, a defence of revelation. So strong, however, was his delusion, that, in a dedication to queen Caroline, which his friends would not permit him to publish, but which appeared in the 88th number of the Adventurer, he describes his deprivation of a soul with great force of expression, and even pathos. He died in 1732, aged 55.

Browne, sir Thomas, a physician and writer, was born in London, in 1605. He was educated at Winchester school, whence he was removed to Oxford, and afterwards received the degree of M. D. at Leyden. On his return to England, he settled at Norwich, where he acquired extensive practice and reputation. In 1642, he published his famous work, entitled *Religio Medici*, which was translated into various languages. In 1646, his literary character was still further exalted by his *Pseudodoxia Epidemica*, or Treatise on Vulgar Errors, a work of extraordinary learning. In 1658, his *Hydriotaphia*, or Treatise on Urn-Burial, appeared, with his Garden of Cyrus. In 1665, he was constituted an honorary member of the college of physicians, and, in 1671, Charles II conferred on him the honor of knighthood. He died in 1682. Fancy and feeling predominated in him over judgment; he believed in the existence of guardian angels, in the reality of witchcraft, and the appearance of spectres. The Treatise on Vulgar Errors ably discusses the causes of error. A folio edition of his works was published in 1686. Doctor Johnson, who has written his life, speaks highly of his exuberance of knowledge and plenitude of ideas.

Browny, in the Hebrides, and the Highlands of Scotland; a spirit who cleaned the house, churned, threshed, and did other good-natured offices. He seems to be the same as the English puck, hobgoblin, or Robin Goodfellow, whom Reginald Scott (Discovery of Witchcraft) describes as one, who, for his pains in grinding malt and mustard, and sweeping the house, had a bowl of milk set for him. When Johnson visited the Hebrides, nothing had been heard of the browny for many years.

Bruce, James, a celebrated modern traveller, was born at Kinnaird-house, in Scotland, in 1730. He received his early education at Harrow, whence he was removed to the university of Edinburgh, where he studied with a view to pursue the profession of the law. His object, however, changing, he entered into partnership with a wine-merchant, whose daughter he married; but, upon his wife's death within a year, he made a tour abroad, during which absence he succeeded, by the death of his father, to the estate of Kinnaird. On his return to England, he sought public employment, and at length was indebted to lord Halifax for the appointment of consul at Algiers. He repaired to his post in 1763, and employed himself there for a year in the study of the Oriental languages. He commenced travelling by visits to Tunis, Tripoli, Rhodes, Cyprus, Syria, and several parts of Asia Minor, where, accompanied by an able Italian draughtsman, (of whose labors he is now known to have assumed the merit,) he made drawings of the ruins of Palmyra, Baalbec, and other remains of antiquity. These were deposited in the king's library at Kew, and, in the language of boast and hyperbole, which formed the great weakness of this able and adventurous character, constituted "the most magnificent present in that line ever made by a subject to his sovereign." Of his first travels he never published an account. In June, 1768, he set out on his famous journey to discover the source of the Nile. Proceeding first to Cairo, he navigated the Nile to Syene, thence crossed the desert to

the Red sea, and, arriving at Jidda, passed some months in Arabia Felix, and, after various detentions, reached Gondar, the capital of Abyssinia, in February, 1770. In that country, he ingratiated himself with the sovereign, and other influential persons, of both sexes, in the several capacities of physician, courtier and soldier. On November 14, 1770, he obtained the great object of his wishes—a sight of the sources of the Nile. Claiming to be the first European who had accomplished this interesting discovery, his exultation was proportionate, and he records it with singular strength of expression. The right of the fountains which he visited to the title of the principal sources of the Nile is rationally controverted; but, whether they be so or not, they had been previously visited by the missionary Jesuits of Portugal, a fact of which he could scarcely have been ignorant. On his return to Gondar, he found the country engaged in a civil war, and was detained two years before he could obtain permission to leave the country. Thirteen months more were occupied in travelling back to Cairo, in which journey he endured excessive privations. He returned to his native country in 1773, and retired to his paternal seat. He married again, and maintained the character of an elegant and hospitable host, and an amiable man in private life, but capricious in his friendships, and haughty and arrogant to strangers. His long-expected Travels did not appear until 1796, in four large quarto volumes, decorated with plates. These volumes are replete with curious information concerning a part of the world but little known to Europeans, and contain much interesting personal adventure, and fine description. It is to be lamented that the authority of the work, in regard to facts of natural history and human manners, is not altogether satisfactory; and, the pride of the author not allowing him to remove objections, it is, perhaps, entitled to more credit than it has received. Whatever its portion of accuracy and merit, the nature of its reception may serve to guard all future travellers against the indulgence of too much egotism and personal vanity in their narrations; for, with little direct evidence against either his facts or his veracity, those faults have greatly obscured the fame of B., who, after escaping the most momentous danger in a long peregrination through barbarous countries, lost his life in consequence of an accidental fall down stairs, as he was attending the departure of some guests whom he had been entertaining. His death took place in April, 1794.

Bruce, Michael, a British poet of the last century, distinguished for the plaintive elegance of his compositions. He was born at Kinnasswood, in Scotland, in 1746; and, his friends being persons in low circumstances, he had to struggle with poverty, which, together with constitutional disease, gave a melancholy turn to his mind, and influenced the character of his writings. For a short time, he was engaged in the occupation of a village-schoolmaster, the fatigues of which probably shortened his life. He became consumptive, and died in 1767. His poems, which are few in number, were published by the reverend John Logan, together with some of his own, at Edinburgh, in 1770. One, composed on the anticipation of his own death, is peculiarly affecting.

Bruce, Robert; the competitor of John Baliol for the throne of Scotland. On the death of Alexander III, without any lineal descendant, the right to the crown devolved on the descendants of David earl of Huntington, who were John Baliol descended from his oldest daughter, and Bruce, descended, though one generation nearer, from his second daughter. Baliol, therefore, claimed as issue of the elder branch; Bruce as one degree nearer the common stock. If the principle of representation were regarded, the former had the better claim; if propinquity were considered, the latter was entitled to the preference. The dispute was referred to the decision of Edward I of England, who decided in favor of Baliol; and the new king took the oath of fealty as vassal of England. The oppressions of the English induced Baliol and his countrymen to have recourse to arms, and Bruce served in the army of Edward. Scotland was subjected, her king imprisoned, her defenders reduced, slain, or made captive, when an obscure individual arose to revenge her wrongs. William Wallace (q. v.), having succeeded in delivering his country, was accused by Bruce of aspiring to the throne, and, in the dreadful battle of Falkirk, B. was in the English ranks. In the pursuit, Wallace had the celebrated interview with him on the banks of the Carron. Hume (ch. 13) relates that the interview was between Wallace and the younger Bruce; but the Scottish historians Drummond, Lesly, Buchanan, &c., give the account as here stated: Wallace displayed such elevation of sentiment, such disinterestedness

of patriotism, that Bruce melted into tears, and swore to embrace the cause of his oppressed country.

Bruce, Robert; son of the preceding. Seven years of alternate resistance and submission, of wars and truces, had passed, from the battle of Falkirk, when Edward I returned to London, in 1305, victorious for the third time over Scotland, and delivered by treachery from the dreaded Wallace. In his train, among other Scotch nobles, were Robert Bruce and John Cumyn, who, formerly rivals, now conspired to deliver themselves from the perfidious Edward. They agreed that B. should be declared king, and that Scotland should be summoned to arms. Cumyn betrayed his accomplice, who, without being informed of the discovery of the plot, was ordered not to leave the court. He received the first intimation of his danger by the present of a pair of spurs and a purse of gold from one of his friends; and, understanding the hint, he had his horses shod with their shoes inverted, that the traces on the snow might baffle his pursuers, and escaped to Scotland. He immediately assembled his friends at Dumfries, and all the nobles, except Cumyn, encouraged his resolution, and promised their aid. Cumyn endeavored to dissuade them from so desperate an undertaking; and, after the assembly was dismissed, he was attacked by B. in the cloisters of the Gray Friars, and run through the body. B. was soon after crowned at Scone. Being twice defeated, he dismissed his troops, and retired to the Hebrides, accompanied only by two friends. His wife was carried captive to London, his three brothers were hanged, and he himself was supposed to be dead, when he reappeared in Scotland, collected an army, put to the sword the English garrisons, and rallied all Scotland under his banners. Edward set out to subdue the thrice-conquered Scots, and was on the point of entering the kingdom, vowing revenge, and secure of success, when he sickened and died, enjoining it with his last breath on his successor never to desist till he had subjected all Scotland. B., though obliged to be carried in a litter, defeated the English at Bannockburn, near Stirling, and secured the independence of his crown, June 24, 1314. The distracted state of the country required vigorous measures. The Scottish nobles had encroached on the possessions of the king and the commons. The king called upon them to show the titles by which they held their lands. "By these," they exclaimed, drawing their swords, "we have acquired our lands, and with these we will preserve them!" King Robert was once more obliged to defend his territories from the English, who, encouraged by these disputes, had again passed the Scottish borders. On the plains of Byland, 1323, he gained another memorable victory over those formidable enemies. On the accession of Edward III, 1329, he obtained from that king the recognition of the independence of Scotland, and the renunciation of all claims of sovereignty on the part of the English. He died in the course of the same year.

Bruges; a city of the Netherlands, and capital of West Flanders, situated about 6 miles from the sea. It is the centre of an extensive canal commerce. The principal canals are those which lead to Sluys and Ostend, on the latter of which vessels of 300 tons can come up to B. In the 14th century, it was one of the chief commercial places in Europe, and an important member of the Hanseatic confederacy. Towards the end of the 15th century, it began to decline. It now carries on a considerable trade with the north of Europe. The population is about 34,300. The exchange is supposed to have been one of the earliest establishments of the kind in Europe, and is still a fine building. B. has also a chamber of commerce, a large insurance company, a navigation school, and a dock-yard; likewise an academy of painting, sculpture and architecture; a national literary society, &c., and many valuable specimens of architecture and sculpture. In the church of Notre Dame, with its elevated spire, are the splendid tombs of Charles the Bold, and of Mary of Burgundy, his daughter, constructed in 1550. Philip the Good here founded the order of the golden fleece, in 1430; and the celebrated John van Eyk, or John of Bruges, the supposed inventor of painting in oil, was born here. (See *Collection de Gravures au Trait représentant les principaux Mon. d' Architect. et de Sculpt. de Bruges, depuis le 14me jusqu' au 17me Siècle*, 1824.) The chief articles manufactured at B. are lace and linen. It also exports much grain, and, when the English ports are open, immense quantities are shipped. Lat. 51° 13′ N.; lon. 3° 14′ E.

Bruges, viscount of; one of the principal persons of the French court. He was a lieutenant in the marine when the French revolution broke out, and served among the English troops on the expedition to St. Domingo, where his family

had great possessions. He afterwards married the countess Golofkin, in Germany. After the restoration of the Bourbons, the viscount, who drew his origin from one of the oldest families, was appointed inspector of the eighth military division of Provence. He could not prevent the landing of Napoleon, on his return from Elba, in 1815. He served in the army of the duke of Angoulême, in the south of France, and attempted to take Marseilles in June, 1815, when marshal Brune compelled the duke to capitulate. In 1816, he was sent by the French government on an important mission to Berlin. His elder brother, count Bruges, became, in 1815, inspector-general of the national guards.

Brugmans, Sebald Justinus; a learned Dutchman, physician-in-chief of the army, of the marine, and of the colonies; member of the institute of the Netherlands, and of many learned societies. He was born at Franeker, in 1763, and graduated, in 1781, at Groningen. His dissertations, *Lithologia Groningiana;* On hurtful and poisonous Plants in Pastures; On the Symptoms of Decay in Trees, and *De Puogenia*, in 1785, procured him distinction. He became professor of philosophy and physics in Franeker, where he formed a cabinet of comparative anatomy, one of the first in Europe. In 1795, he went to Leyden as professor of chemistry. His labors for the organization of the medical department of the army commenced in 1794. He was an active contributor to the *Pharmacopœia Batava.* King Louis made him his physician, and confirmed all his institutions. After the union of Holland with France, Napoleon made him inspector-general of the hospitals, and rector of the university of Leyden, for which he procured large sums of money from the state, and, in later times, the return of its collection of natural history from Paris. During the many years he was director of the military hospital, the number of deaths by wounds and diseases was never increased by hospital fevers. After the battle of Waterloo, he promptly procured medical aid for more than 20,000 wounded men. His treatise On the Nature of the Miasma of Hospital Fever gained the prize of the academy in Haarlem. His original views on the organization of fishes are to be found in the transactions of the national institute of the Netherlands. He died in 1819.

Brühl, Frederic Aloysius, count of, born at Dresden, 1739, son of Henry count of Brühl, described in the next article, was very unlike his father. Educated by his mother, an estimable and enlightened lady, with prudence and strictness, and happily endowed by nature, he became the *ideal* of an accomplished man of the world. He was remarkable for his beauty and strength, wrote and spoke almost all the European languages, was skilled in music, painted with taste, and was well acquainted with mathematics and gunnery. He worked a whole year incognito in a cannon foundery. His activity and temperance were both extraordinary. He excelled in writing, and still more in conversation.

Brühl, Henry, count of, minister of Augustus III, king of Poland and elector of Saxony, was born in 1700, in Thuringia. His family not being very rich, he entered, as a page, the service of the duchess Elizabeth, whose favor, as well as that of Augustus II, he gained by his lively and graceful manners. On the death of the king, at Warsaw, in 1733, the crown of Poland, with the other regalia, being, through the good fortune of B., intrusted to him, he carried them immediately to the new elector, Augustus III, and showed the greatest activity in promoting his election. From this time, fortune never deserted him. He had cunning and skill sufficient to govern his master and get rid of his rivals. While he felt himself not sufficiently powerful to remove his rival, count Sulkowski, he acted as his friend; but, after his marriage with the countess Kollowrath, the favorite of the queen, he effected the dismissal of Sulkowski through her influence. He now succeeded in keeping every body at a distance from the king. No servant entered his service without the consent of B.; and, even when he went to the chapel, all approach to him was prevented. The monarch's wish that his minister should make a great parade was gratified in the widest extent. B. kept 200 domestics; his guards were better paid than those of the king himself, and his table more sumptuous. Frederic II says of him, "B. had more garments, watches, laces, boots, shoes and slippers than any man of the age. Cæsar would have counted him among those curled and perfumed heads which he did not fear." But Augustus III was no Cæsar. When this idle prince loitered about, smoking, and asked, without looking at his favorite, "Brühl, have I any money?" "Yes, sire," was the continual answer; and, to satisfy the king's demands, he exhausted the state, plunged the country into debts,

and greatly reduced the army. At the beginning of the seven years' war, it comprised but 17,000 men, and these were compelled to surrender, at Pirna, from want of the necessary supplies. B. fled with the king, the pictures and the china, to Poland; but the archives of the state were left to the victor. He was no less avaricious of titles and money than of power. He died a few weeks after his king, in 1763. An examination, after his death, showed that he owed his immense fortune to the prodigality of the king, rather than to unlawful means of accumulation. His own profusion was often beneficial to the arts and sciences. He had four sons. An account of the eldest is contained in the preceding article.

Brühl, John Maurice, nephew of the minister, died in 1809, while Saxon ambassador in London, is known by his ingenious improvements of several instruments, by his essays in the Philosophical Transactions, and by his *Recherches sur divers Objets de l'Économie politique* (Dresden, 1781).

Brulotta. (See *Fire-Ship.*)

Brumaire, the 18th (Nov. 9), 1799. On this day, general Bonaparte overthrew the directory. The next day, he dispersed, at the point of the bayonet, the council of the five hundred, and was elected consul. (See *Napoleon* and *France.*)

Brun. (See *Lebrun.*)

Brunck, Richard Francis Philip, one of the most ingenious critics of modern times, born at Strasburg, in 1729, made rapid progress in learning, when he studied with the Jesuits in Paris, but neglected study as soon as he entered into active life. While in winter quarters at Giessen, as commissary of war, during the French campaigns, he resided with a professor, who, by his advice and example, revived his love of letters, and led him to the study of the classics. When B. returned to Strasburg, he devoted all his leisure time to Greek, and, at the age of 30 years, and while holding a public office, attended the lectures of the Greek professor of the university. The zeal which had encouraged him to undertake this laborious study was increased by the pleasure of overcoming difficulties, and he became fixed in the conviction, that all the instances of apparently careless writing in the Greek poets were only errors of the transcribers. Entertaining this opinion, he altered whatever displeased him, overthrew the order of the verses, and permitted himself liberties which criticism must needs reject. To this rage of altering he gave himself up, particularly in the marginal comments of his books, and in the numerous copies which he made of the Greek poets, more for his own pleasure than for use. This arbitrary process is so visible, even in the editions he has published, that much caution is required in using them. B. has nevertheless been of essential service to Greek literature; and, since the revival of letters, few scholars have so effectually promoted it. It is wonderful how much he has done in the space of 20 years. He published also a valuable edition of *Virgil.* Of his Greek editions we may mention those of the *Analecta*, *Apollonius Rhodius*, *Aristophanes*, the Gnomic poets, and his masterpiece, *Sophocles*, for which the king allowed him a pension of 2000 francs. At this time, the French revolution interrupted his studies. He adopted the new ideas with enthusiasm, and was one of the first members of the popular society in Strasburg, without deviating, however, from the principles of moderation. This is proved by the circumstance that he was arrested at Besançon, during the reign of terror, and did not obtain his liberty until after the death of Robespierre. In 1791, economical reasons obliged him to sell part of his library, and, in 1801, he was obliged to adopt the same resource a second time. As he was passionately fond of his books, and his former fortune had enabled him to collect an excellent library, this was a severe privation. If he was reminded of an author he had once possessed, tears came into his eyes. From this time, Greek became his aversion; but he prepared an edition of *Terence*, and had *Plautus* ready for publication, when he died, in 1803. Many of the papers which he left are in the library at Paris.

Brundusium (now *Brindisi*); a city in Terra di Otranto, in the kingdom of Naples, on the Adriatic sea, very celebrated in the time of the ancient Romans. It had then an excellent harbor, which is now almost filled up with sand. From this place the Romans usually embarked for Greece and Asia. The Appian way led to this city. It was also on the nearest route from Constantinople to Rome, by the way of the mountains of Macedonia and Albania. Virgil died here. The population, in the 12th century, was 60,000, but is now reduced to about 5900. It is the seat of an archbishop.

Brune, William Maria Anne, marshal of France, son of a lawyer at Brives la Gaillairde, was born there March 13, 1763, and went while young to Paris. At the breaking out of the revolution, he was a

printer, and had made himself known by some small pieces of his own composition. He now devoted himself ardently to politics, became a member of the club *des Cordeliers*, was connected with Danton, and played an active part in the tempests of that period. Till Aug. 10, 1792, he was engaged in publishing a daily newspaper. Afterwards, he went as a commissary to Belgium. In 1793, he entered the military service in the revolutionary army, in the Gironde. Oct. 10, 1795, he aided Barras to put down the Jacobins, who had assaulted the camp of Grenelle. Afterwards, he distinguished himself as general of brigade in the Italian army, in 1797, in the attack of Verona, and in the battle of Arcoli. When the directory of Switzerland declared war, B. received the chief command of an army, entered the country, without much opposition, in January, 1798, and effected a new organization of the government. In 1799, he received the chief command in Holland, defeated the English in the north of Holland, Sept. 19, near Bergen, and compelled the duke of York to agree to the treaty of Alcmaer, Oct. 18, by which the English and Russians were to evacuate the north of Holland. In January, 1800, he was made a counsellor of state, and was placed at the head of the army of the west. The restoration of tranquillity to the provinces, torn by civil war, was, in a great degree, effected by him. Aug. 13, he was appointed commander-in-chief of the Italian army. Towards the end of December, he led his troops over the Mincio, conquered the Austrians, passed the Adige, Jan. 8, 1801, took possession of Vicenza and Roveredo, and concluded an armistice, Jan. 16, at Treviso, with the Austrian general Bellegarde, by which several fortified places in Italy were surrendered to the French troops. When peace recalled him to the council of state, towards the end of November, 1802, he laid before the legislative body for confirmation the treaty of peace with the court of Naples. The next year, he went as ambassador to the court of Constantinople. He prevailed there at first over the English party, and received from the Turkish ministry the highest marks of honor; but, when new dissensions arose between the two powers, he left Turkey. During his absence, May 19, 1804, he was appointed marshal of the empire. At the end of 1806, Napoleon appointed him governor-general of the Hanseatic towns, and, soon after, commander of the troops in Swedish Pomerania, against the king of Sweden. This monarch invited the marshal to a personal interview, in which he endeavored to convert him to the cause of Louis XVIII. B. refused every proposal. He may, however, have drawn upon himself the indignation of Napoleon by his conduct in this interview, or by favoring the English contraband trade in Hamburg. At any rate, he was recalled, and suffered to remain without employment. After the revolution of 1814, he recognised Louis XVIII, and received the cross of Louis, but no appointment. This was the cause of his declaring himself for Napoleon, immediately upon his return. He received the chief command of an important army in the south of France, and was made a peer. When circumstances changed again, he delayed a long time before he gave up Toulon, which was in his possession in 1815, to the troops of Louis XVIII, and sent in his resignation to the king. This circumstance, and the severities exercised by his command, might well have excited against him the rage of the people. While retiring from Toulon to Paris, he was recognised, at Avignon, by the people who favored the king; and they immediately collected together about the hotel where he had entered. The excited populace were heated still more, when a report was spread among them, that B. was the murderer of the princess Lamballe. The marshal was permitted, however, to go away quietly. But scarcely had his carriage left the city, before a mob of the rabble which had followed compelled the driver to turn back to the hotel. When the marshal had alighted, and retired, with his two adjutants, to his former chamber, the doors of the house were locked. The insurgents had, in the mean time, gained a powerful accession to their numbers, and, with loud shouts, demanded the death of the marshal. In vain did the prefect and the mayor strive to defend him (as there were no troops in the city) for the space of four hours and a half, at the peril of their lives. The door was at last broken open, a crowd of murderers rushed into the chamber, and the unhappy marshal fell under a shower of balls, after a fruitless attempt to defend himself and justify his conduct. His body was exposed to the most shameful insults, and then dragged from the hotel to the bridge over the Rhone, from which it was thrown into the river.

Brunehaut. (See *Brunehild.*)

Brunehild, Brunichild; married to Siegbert I, king of Austrasia, in 568, a

Visigothic princess, of powerful mind, enterprising spirit, heroic resolution, deep political knowledge, and unrestrained ambition. She involved her husband in a war with his brother Chilperic, in the course of which he was murdered, A. D. 575; but she continued to live and rage till 613, when she fell into the hands of Clothaire II, king of Soissons, who put her to a most terrible death, as having been the murderess of 10 kings and royal princes. (See *Fredegonde.*)

Brunelleschi, Philip, born 1377, at Florence, devoted himself to the study of the works of Dante, to natural philosophy and perspective, the rules of which were then scarcely known. He formed various figures, and invented ingenious machines. He devoted himself particularly, however, to architecture, and learned the art of drawing, to make his architectural plans; statuary, to adorn them; and mechanics, that he might be able to raise the materials. He was also profoundly versed in mathematics and geometry. He is said to have drawn views of the finest monuments in Florence in perspective—an art which then excited much astonishment. This various knowledge prepared him for bold and difficult undertakings, and gained him the name of the restorer of architecture. As a statuary, he was much indebted to his intimate connexion with Donatello, who was then very young, but very able. Both went to Rome. Here B. conceived the idea of restoring architecture to the principles of the Greeks and Romans. When the architects assembled, in 1407, at Florence, to consult upon the building of the dome of the cathedral, the plan which B. proposed received but little attention, and he went back to Rome. It was found necessary, however, to have recourse to him, as the undertaking far surpassed the powers of the other architects. He engaged to erect a dome, which, by its own weight, and by the strong connexion of its parts, should hang suspended. This proposal seemed so wonderful, that the author was regarded as insane. As all other plans, however, failed to answer the expectations of the magistrates, B. was again recalled, and ordered to explain the mode in which he intended to execute his plan. This he refused to do, but built two small chapels according to his new system, upon which the charge of erecting the dome was committed to him. As he observed that the higher the building was raised the more time was lost in going up and down, he erected some small lodgings on the dome itself, and by that means saved the laborers the time thus spent. Aided only by his own genius, he accomplished the work, which remains one of the boldest creations of the human mind. But the ingenious lantern, which formed the upper part of the dome, was not finished when he died, in 1444, aged 67. It was completed, however, according to his first design. No monument of ancient architecture is so noble as this wonderful building. Only the dome of St. Peter's at Rome, which was built since, excels it in height, but is inferior to it in lightness and grandeur of style. Michael Angelo said it was difficult to imitate B., and impossible to excel him. B. is the author of a great number of other masterpieces of architecture.

Brunet, James Charles, bookseller at Paris, began his bibliographical career by the preparation of several auction catalogues, of which the most interesting is that of the count d'Ourches (Paris, 1811), and of a supplementary volume to Cailleau's and Duclos's *Dictionnaire Bibliographique* (Paris, 1802). In 1810 was published the first edition of his *Manuel du Libraire et de l'Amateur de Livres*, in 3 vols., which gained such universal applause, that, in 1814, a second, and, in 1820, a third edition, of four volumes each, were demanded. This work showed him the worthy successor of the meritorious Debure (from whose works those of B. are distinguished only by the alphabetical form.) An attempt to unite the plan of his work with the considerations which must guide the man of learning in his studies and labors, is contained in the Bibliographical Lexicon, by Ebert, since published.

Brunet. (See *Paris, Theatre of.*)

Brunhildis. (See *Nibelungen.*)

Bruni. (See *Bruno, Giordano.*)

Brűnings, Christian; one of the greatest hydraulic architects of Holland; born 1736, at Neckerau, in the Palatinate. In his childhood, he devoted himself to the sciences connected with hydraulic architecture. In 1769, the states of Holland appointed him general inspector of rivers. This introduced him to a share in several important commissions; for instance, that for the improvement of the dike system, in 1796; that for draining the tracts between Niewskogs and Zevenhoven, in 1797, &c. His most important waterworks are his improvements in the diking of the lake of Haerlem, the improved diking and deepening of the Oberwasser, so called, in the Netherlands, which, at

high tides, often inundated vast extents of country, together with the change in the course of the Waal-stream and the canal of Pannerde, by which the beds of the Rhine, the Waal and the Leck were improved. He introduced into his department the use of the *stream measure*, so called. His many official duties permitted this worthy officer but seldom to appear as an author. Yet we find scientific essays written by him in the 14th, 19th and 20th volumes of the Memoirs of the Haerlem Society of Sciences, and some other pieces. He died in 1805. The directory of the then republic wished to erect a monument to him in the cathedral church at Haerlem; but it has never been completed, on account of the political disturbances that occurred soon after his death.

Brünn; the capital of Moravia, and of a circle of the same name, which contains a population of 300,000, and is fertile in corn and flax. The population of the city, with the suburbs, is 33,300. It contains the government offices, the house for the meeting of the states, the palace of prince Lichtenstein, a gymnasium, many fine houses, &c. There are at B. several flourishing manufactures of fine woollen cloths and kerseymeres, one of which employs 5000 individuals. It is the centre of the Moravian commerce, a great part of which is carried on by fairs held at B. every three months. On a hill near it is the fortress of Spielberg, now used as a prison. Lat. 49° 11′ N.; lon. 16° 35′ E.

Bruno the Great, archbishop of Cologne and duke of Lorraine, third son of Henry the Fowler, and brother of the emperor Otho I, had a great share in the events of his time, and surpassed all the contemporary bishops in talents and knowledge. A numerous train of learned men from all countries, even from Greece, continually followed him, and his excellent example was imitated by many prelates. He died at Rheims, Oct. 11, 965. Commentaries on the five books of Moses, and the biographies of some saints, are ascribed to him.

Bruno, St. Among several individuals of this name, the most famous is the one who established the order of Carthusian monks. He was born at Cologne, about 1030, of an old and noble family, which still flourished in the middle of the 18th century; was educated in the school of the collegiate church of St. Cunibert; in which, also, he afterwards received a canonship, and then studied at Rheims, where he distinguished himself to such a degree, that Gervais, the bishop, appointed him to superintend all the schools of the district. He attracted many distinguished scholars, and, among others, Odo, afterwards pope Urban II. The immorality of his times induced him to go into solitude. He retired, therefore, with six friends of the same disposition, to the residence of St. Hugo, bishop of Grenoble, who, in 1084, led them to a desert, four or five leagues distant from the city, called *Chartreuse*, whence the order of monks received its name. Here, in a narrow valley, overshadowed by two steep rocks, covered with snow and thorns, B. and his companions built an oratory, and small, separate cells to dwell in, and founded, in 1086, one of the severest orders of monks. In the mean time, Urban II became pope, and, in 1089, invited his former instructer to his court. B. reluctantly obeyed, but refused every spiritual dignity, and, in 1094, received permission to found a second Carthusian establishment in the solitude of della Torre, in Calabria. Here he lived in his former mode, ruled his new colony with wisdom, and died in the arms of his scholars, A. D. 1101. Leo X, in 1514, permitted the Carthusians to celebrate a mass in honor of him; and Gregory XV, in 1623, extended it to the whole Catholic church. He was afterwards canonized. B. gave his scholars no particular laws. A complete set of regulations for the Carthusians was first formed A. D. 1581, and confirmed by Innocent XI.

Bruno, or Bruni (Brunus, Leonardo), of Arezzo, whence his name *Aretino* (Aretinus), was one of the most famous of the literati at the period of the revival of classic literature in Italy. He was born in 1370, and, in his childhood, was excited by the character of Petrarch, to the pursuit of those studies to which he consecrated his life. He first studied law at Florence and Ravenna; but the arrival of Emanuel Chrysoloras at Florence gave him a decided turn for classical learning. He afterwards filled many offices in the Roman Catholic church, and accompanied pope John XXIII to Constance, where the latter was deposed, and B. escaped to Florence. Here he wrote his Florentine History, received, in consequence, the rights of citizenship, and afterwards, by the favor of the Medici, became secretary to the republic. In this important post he died, A. D. 1444. Florence and Arezzo vied with each other in honoring his memory by splendid obsequies and mon

uments. The merits of B., in spreading and advancing the study of Greek literature, consist particularly in his literal Latin translations of the classics; for instance, the writings of Aristotle, the orations of Demosthenes, the biographies of Plutarch, &c. The other works on which his fame rests are, his Florentine History, also a history of his times, from 1378 to 1440, and his speeches. His collection of letters, also, is valuable. His writings are in the Latin language, with the exception of two biographies of Dante and Petrarch. His chief work is *Historiæ Florentinæ* (12 books, Strasb., 1610, folio), with which is connected the *Commentarius Rerum suo Tempore Gestarum*, published in Italian, at Venice, 1476, folio.

Bruno, Giordano; a philosopher of the 16th century, distinguished by the originality and poetical boldness of his speculations; born at Nola, in the Neapolitan territory; entered the order of Dominicans; took refuge, probably, from the persecutions which he drew upon himself by his religious doubts and his satires on the life of the monks, at Geneva, in 1582, where, however, he was soon persecuted, by the Calvinists, for his paradoxes and his violence; stood forth, in 1583, at Paris, as the antagonist of the Aristotelian philosophy, and as teacher of the *ars Lulliana*. Here he found many opponents, went to London, returned to Paris, and, from 1586 to 1588, taught his philosophy at Wittenberg. Why he left Wittenberg is not known; but it is certain that he went, in 1588, to Helmstadt, and he seems to have visited Prague before that year. Protected by duke Julius of Wolfenbüttel, he remained in Helmstadt till his protector died, in 1589. He was then engaged, at Frankfort on the Maine, with the publication of some works, but left this city, also, in 1592, and returned (it is not known for what purpose) to Italy. He remained for some time at Padua in tranquillity, until the inquisition of Venice arrested him, in 1598, and transferred him to Rome. After an imprisonment of two years, that he might have opportunity to retract his doctrines, he was burnt, Feb. 16th, 1600, for apostasy, heresy, and violation of his monastic vows. He suffered death, which he might have averted, even eight days before, by a recantation, with fortitude. Whilst his violent attacks on the prevailing doctrines of the Aristotelian philosophy, and on the narrow-minded Aristotelians themselves, every where created him enemies, his rashness and pride threw him into the hands of his executioners. His philosophical writings, which have become very rare, display a classical cultivation of mind, a deep insight into the spirit of ancient philosophy, wit and satire, as well as a profound knowledge of mathematics and natural philosophy. Most of them were published between 1584 and 1591, as appears from the enumeration of the oldest editions in the Bibliographical Lexicon of Ebert (Lps., 1821, quarto, vol. i, p. 238 et seq.). In 1584 appeared, at Paris, his famous *Spaccio della Bestia trionfante* (a moral allegory, with many satirical strokes on his own times), also his work *De la Causa, Principio et Uno* (Venice and London, 1584), besides *De l'Infinito, Universo, et Mondi*. The former contains the foundation, the latter the application, of metaphysics to the natural world. The doctrine is a pure Pantheism, connected with truly dignified notions of God—a more complete Pantheistical system than had been previously exhibited, and which, since his time, Spinoza only, who, like Descartes, borrowed his ideas, has carried to a greater perfection. The notion that God is the soul of the universe, and the world endowed with organization and life, might have been forgiven by his contemporaries; but his inference that the world is infinite and immeasurable, and his doctrine of the plurality of worlds, at the moment when the new system of Copernicus was attacked from all quarters, could not but be looked upon as a crime. His writings are mostly in the form of dialogues, without any methodical order. His language is a strange mixture of Italian and Latin. His style is violent and fiery. The originality and loftiness of his ideas take a powerful hold on those who can understand him. His logical writings, in which he boldly and skilfully applies Raymond Lully's art of topical memory, are more obscure and less interesting. His belief in magic and astrology, notwithstanding his enlightened views of the nature of things, is to be attributed to the spirit of his age. He has also written poems, *Heroici Furori*, and, among others, a comedy, *Il Candelajo*. The most eminent philosophers since his time have borrowed much from him. Among recent writers, Schelling resembles him the most in his metaphysics and his philosophical views of nature, and has given his name to one of his philosophical writings (*Bruno, oder über das göttliche und natürliche Princip der Dinge*, Berl., 1802). On Bruno and his writings, see Sieber's

and Thanner's *Lehrmeinungen berühmter Physiker* (5 vols., Sulzb., 1824.)

Brunonian System. (See *Excitement.*)

Brunswick, Family of. The true founder of this ancient house was Azo II, marquis of Tuscany, who, in the 11th century, married Cunigunda, heiress of the counts of Altorf, and thus united the two houses of Este and Guelph. The previous history of the Este family is uncertain. Guelph, the son of Azo, was created duke of Bavaria in 1071. He married Judith of Flanders, who was descended from Alfred the Great of England. His posterity acquired Brunswick and Luneburg, and William, or his son Otho (1235), was the first who bore the title of duke of B. John, eldest son of Otho, founded the house of Luneburg. Albert the Great, a younger son of Otho, conquered Wolfenbüttel, and, on his death (1278), his three sons divided his dominions. Henry founded the house of Grubenhagen; Albert became duke of Brunswick, and William duke of Brunswick-Wolfenbüttel. Henry Julius, of this last branch, inherited Grubenhagen (1596). Ernest of Zell, of the second branch, who succeeded (1532), conquered the territories of Wolfenbüttel, and left two sons, by whom the family was divided into the two branches of Brunswick-Wolfenbüttel (II) and Brunswick-Hanover; from the latter of which comes the present royal family of England. The former is the German family, now in possession of the duchy of Brunswick-Wolfenbüttel. (q. v.) Charles William married Augusta, sister of George III of England (1764). His descendants are presumptive heirs to the throne of Great Britain in case of a failure of the direct line. Ernest Augustus, of the Brunswick-Hanover house, was created elector of Hanover in 1692. He married Sophia, daughter of Elizabeth, the daughter of James I of England. George Louis, son of Ernest Augustus and Sophia, succeeded his father, as elector of Hanover, in 1698, and was called to the throne of Great Britain in 1714, by act of parliament passed in the reign of queen Anne, which vested the succession in the Protestant line of James I. George IV, the present king of Great Britain and Ireland, and of Hanover (made a kingdom in 1815), is the 23d of the family of Brunswick by lineal descent from Azo; the 53d king of England from Egbert, and is descended from Woden, the head of the ancient Saxon family, from which so many sovereigns of Europe have sprung, by 52 generations. (See the articles *George*, *Hanover*, *England*, &c.)

Brunswick; the duchy of Brunswick-Wolfenbüttel, in Germany, situated in the former circle of Lower Saxony, and bordering upon Luneburg on the north and Westphalia on the west. The duke holds the 12th rank among the members of the German confederation. The duchy comprises 1500 square miles, and 232,000 inhabitants. It is divided into six districts, besides the two cities of Brunswick and Wolfenbüttel, which are also considered as districts. The family of B. (q. v.) is one of the most ancient in Europe. In 1806, the duchy was annexed, by Napoleon, to the kingdom of Westphalia, but its native prince, Frederic William (q. v.), was restored by the peace of Leipsic, 1813. The reigning duke, Charles, born Oct. 30th, 1804, succeeded to the government in 1824. The revenue, exclusive of Oels (q. v.), is 2,000,000 florins. The circumstances and manners of the inhabitants resemble those of the adjacent countries. Most of the people are Lutherans. The whole number of Catholics and Calvinists does not probably exceed 4000. The ducal house is Lutheran. (For the form of government, see *Constitutions.*)—B. has, with Nassau, one vote in the diet of the German states; and has, by itself, two votes in the general assembly. Its contingent of troops to the army of the confederacy is 2096 men. The most important articles of trade and manufacture are corn, rape-seed, flax, tobacco, chicory, hops, madder and wood. The country affords sheep, swine, goats, poultry and bees in sufficient quantities to supply the inhabitants. Some fat cattle and horses are imported. In the forests there are wild boars, deer, hares, heath-cocks, black-cocks, partridges and hazel grouse; but, as no attempts are made to preserve the game, the quantity gradually decreases. The mountainous tracts yield iron, copper, salt, marble, coal, porcelain earth and other minerals. In the Rammelsberg are found silver, copper, lead, arsenic, vitriol and sulphur, and small quantities of gold. Large tracts are covered with peat, in the sandy regions in the northern districts. The breweries and distilleries of spirit, the spinning of linen yarn (the most extensive branch of industry), the manufacture of linen and leather, the preparation of paper, soap, tobacco, sal-ammoniac, madder and chicory afford the principal employment of the people. The lackered wares and porcelain of B. are famous

even in foreign countries. B., the capital, is the centre of trade. The country is provided with good roads.

Brunswick, capital of the duchy of the same name, is situated on the Ocker, and contains 3041 houses, with 32,500 inhabitants. It was formerly one of the free cities of Germany, but it is now subject to the duke, and has been the ducal residence since 1754. The principal buildings are the ducal palace, the mint, the house in which the diet assembles, the town-house, the arsenal and the cathedral, the public wine-cellars. The *collegium Carolinum* was founded in 1745, and intended as a medium between the common schools and the universities. It has enjoyed a high reputation even in foreign countries, particularly in England and Russia. The principal manufactures are wool, yarn, linen, porcelain, pasteboard, paper hangings and chemical preparations. The traffic in home produce, and the carrying trade, are of some consequence, and the great Brunswick fairs rank next to those of Leipsic and Frankfort. Lat. 52° 16′ N.; lon. 10° 29′ 30″ E.

Brunswick; a post-town of Maine, in Cumberland county, on the south-west side of the Androscoggin, 26 miles N. E. of Portland; lat. 43° 53′ N.; lon. 69° 55′ W.; population, 2931. The falls of the Androscoggin, at this place, afford excellent seats for several mills and manufactories. Bowdoin college, in this town, was incorporated in 1794, and went into operation in 1802. It is pleasantly situated on an elevated plain, about half a mile from the Androscoggin, is a well endowed and flourishing institution, and has a medical school connected with it. The officers, in 1829, consisted of a president, a professor of mathematics, natural philosophy, chemistry and mineralogy, a professor of the learned languages, a professor of moral and intellectual philosophy.

Brunswick, New. (See *New Brunswick*.)

Brunswick, Charles William Ferdinand, duke of, was born in 1735. He was the eldest son of the reigning duke Charles of Brunswick and a sister of Frederic the Great. At the age of 7, his education was committed to the abbé Jerusalem, then chaplain to the court at Wolfenbüttel. At the age of 12, he entered, under the superintendence of Jerusalem, the *collegium Carolinum*, then recently established. His tutor was the chamberlain von Wittorf—a man of talents, but without principle. His ambition was early kindled by the achievements of Frederic II. The seven years war afforded him the first opportunity of cultivating his military talents. He commanded the Brunswick troops in the allied army, and, in the fatal battle at Hastenbeck, July 28th, 1757, in which he recaptured a battery that had been taken by the French in the centre of the allied army, "he showed" (such was the expression of Frederic) "that nature had destined him for a hero." June 23d, 1758, he decided the victory of Crefeld. He took the most active part in all the enterprises of his uncle Ferdinand; and Frederic's esteem for him continued to increase, as appears from his *Geschichte des Siebenjährigen Kriegs* (History of the Seven Years' War), and his *Ode auf den Erbprinzen von Braunschweig* (Ode on the hereditary Prince of Brunswick). In 1764, he married the princess Augusta of England. Having early become acquainted with the real situation of his native country, and drawn salutary instruction from the constant embarrassments of his father, before he entered upon the government, he practised the greatest economy, living mostly retired from public business, and devoted to the arts and sciences. In 1773, he entered the Prussian service, and became general of infantry, but had no opportunity of cultivating his military talents. After the death of his father (in 1780), he entered upon the government with zeal and activity. Anxious above all for the improvement of the finances, he diminished his household, discharged the debts of the state, encouraged agriculture, extended the liberty of commerce, undertook or assisted in the erection of considerable buildings, and, by causing Italian operas, masquerades, &c. to be exhibited gratis, provided also for the amusement of the public. Yet, with the best intentions, he was often unsuccessful. This was the case with his plans for the improvement of public education. He invited men of learning into the country at great expense, but, the projected reformation having met with innumerable obstacles, they became a burthen to the state. In 1787, he was obliged to place himself at the head of a Prussian army for the support of the stadtholder of Holland. The facility with which this campaign was terminated procured the duke more reputation than he perhaps deserved. High expectations were entertained of him when the wars of the French revolution broke out. The duke received the chief command of the Austrian and Prus-

sian army, and issued at Coblentz, July 15, 1792, the famous manifesto, drawn up in a very harsh and haughty style by a Frenchman, De Limon. It certainly did more injury to the allied forces than a hostile army could have done. It inflamed the French nation almost to fury against the insolent conquerors, who intended "to make every city, that dared to resist, level with the ground, and to cut their way to Paris." The emperor Francis approved it, and so did the king of Prussia; but the duke considered the expressions too strong. The severest passages were expunged; but its tone was still very insolent. The duke designed to press forward from Lorraine to Paris, to cut off its supplies, and thus to force it to surrender by famine. Aug. 23, 1792, Longwy was taken, and, Sept. 2, Verdun. But, in Champagne, a country of itself unproductive, the transport of provisions for the army from the frontiers was rendered difficult by mountains and forests. Dumouriez was encamped in the vicinity of St. Menehould, and skirmishes took place daily; but Dumouriez, not willing to hazard the fate of France, and foreseeing that the Germans would be forced to retreat by want and disease, avoided a decisive action, notwithstanding the efforts of the enemy to provoke him to it. The Germans were, therefore, obliged to conclude an armistice, and to evacuate Champagne. Custines took Worms and Spire during this retreat, and, Oct. 21, captured the fortress of Mentz, and soon afterwards Frankfort, which latter city, however, was retaken by the Prussians and Hessians Dec. 2. The endeavors of the Germans, therefore, were principally directed to the recapture of those places. To this end the duke, in conjunction with the Austrians, opened the campaign on the Upper Rhine in 1793, took the fortress of Kőnigstein March 7, conquered Mentz July 22, and prepared to attack the strong fortress of Landau, then in the power of the French. The French, on the other hand, Sept. 14, made a general attack on the duke and Wurmser, from Strasburg to Saarbrűck. On that day, the duke had a sanguinary engagement with Moreau, in the vicinity of Pirmasens, a town belonging to the landgraviate of Hesse-Darmstadt. The French were driven from their camp near the village of Hornbach, as far as to the Saar. A month later, the duke, having formed a union with Wurmser, succeeded, Oct. 13th, in his attack on the lines of Weissenburg, and his attempt to draw nearer to Landau. In order to gain another strong point of support, he ventured, on the night of Nov. 16, to make an assault upon the mountain-fortress of Bitsch, which is the key of the Vosges, as the roads from Landau, Pirmasens, Weissenburg and Strasburg unite at that place. This attempt miscarried. Between the 28th and the 30th of November, however, he defeated a division of the army of the Moselle, at Lautern, which was pressing through the mountains, under the command of Hoche, with the intention of relieving Landau. But the daily attacks of Hoche and Pichegru, without regard to the sacrifice of men, and the successful attempt of the latter to break the Austrian lines near Froschweiler, Dec. 22, forced the Austrians to retreat beyond the Rhine, and occasioned the retreat of the duke also. As some difficulties had already risen between Austria and Prussia, he laid down the chief command of the army in the beginning of the year 1794. Mőllendorf was his successor. The duke continued to labor for the welfare of his country until the fatal year 1806. Although he was now of such an age that he might have retired without reproach from public life, yet he assumed burthens beyond his powers. At the beginning of the year 1806, commissioned by the king of Prussia, he made a journey to Petersburg relative to the war that soon broke out with France. He was then placed at the head of the Prussian army. But his physical strength was not equal to his moral energy, as was proved by the battles of Jena and Auerstädt. (q. v.) He was mortally wounded, and closed his life at Ottensen, near Altona, Nov. 10, 1806. As a civil ruler, he was distinguished for good intentions; yet the want of consistency, which is evident in most actions of his life, may have been the cause of the many failures of his benevolent purposes. The duke's subjects were also offended by his foreign partialities, particularly his fatal inclination for the French nation, which had been instilled into him by Frederic II.

Brunswick, Ferdinand, duke of, born at Brunswick, Jan. 11th, 1721, fourth son of duke Ferdinand Albert, was educated for the military profession. In 1739, he entered into the Prussian service, was engaged in the Silesian wars, and became one of the most eminent generals in the seven years' war. He commanded the allied army in Westphalia, where, always opposed to superior forces, he displayed

superior talents. He drove the French from Lower Saxony, Hesse and Westphalia, and was victorious in the two great battles of Crefeld and Minden. (See *Seven Years' War.*)—After the peace, he resigned his commission, on account of a misunderstanding between him and the king. From that time he lived at Brunswick, the patron of art and literature. He died in 1792.

Brunswick, Frederic William, duke of; fourth and youngest son of duke Charles William Ferdinand of Brunswick. He was born in 1771, and received the same education with his second and third brothers, who were a few years older, till the military career, to which he was destined, gave his studies a particular direction. He was loved by his father with great tenderness, but very strictly treated. In 1786, he was appointed, by the king of Prussia, successor of his uncle, Frederic Augustus, duke of Oels and Bernstadt. He then went to Lausanne, remained two years in Switzerland, and, upon his return, was made captain in a Prussian regiment of foot. During the war against France, in 1792, and the following year, he fought in the Prussian armies, and was twice wounded. After the peace of Bâle, he received a regiment, and, in 1804, married the princess Maria Elisabeth Wilhelmina of Baden. The offspring of this marriage were two princesses, born in 1804 and 1806, who are still living. In 1805, his uncle died, and he became duke of Oels and Bernstadt. In 1806, he took part in the war against France, with all the fire which the oppression of Germany and his father's unhappy fate had kindled in him. He finally joined the corps of Blücher, and was made prisoner with him at Lübeck. By the death of his eldest brother, the hereditary prince, who died in September of the same year, without leaving any children, and by an agreement adjusted by his father between him and his elder brothers, who, on account of their blindness, were unfit to govern, and were unmarried, he would have succeeded his father in the government of Brunswick, had not the peace of Tilsit and Napoleon's will prevented. After that time, he lived at Bruchsal, where, in April, 1808, his wife died. In 1809, at the breaking out of the war between Austria and France, he raised a body of volunteers in Bohemia. Schill had already perished in Stralsund, when the duke made an invasion into Saxony. He was, however, compelled, by the king of Westphalia, to evacuate Dresden and Leipsic, with his black hussars. The duke, in conjunction with the Austrian general Am Ende, forced his way from Dresden to Franconia, whither the Austrians, under Kienmayer, had penetrated from Bohemia. After the armistice of Znaim (July 12), the Austrians again evacuated Dresden, which they had occupied for the second time, and retreated behind the frontiers of Bohemia. But the duke, renouncing his alliance with the emperor of Austria, advanced with his corps, consisting of 1500 men, among whom were 700 horse, from Altenburg, towards Leipsic. After a slight skirmish with the garrison there, he continued his march to Halle, where he arrived July 27, and immediately pushed on to Halberstadt, where he arrived July 30. The Westphalian colonel Wellingerode, with the fifth regiment of infantry, had entered the place the same morning. Although this regiment made a gallant resistance, it was overpowered, and its commander taken prisoner. The duke then proceeded to Brunswick, his native city, where he arrived July 31, and bivouacked on the ramparts. He did not allow himself any rest, for he was closely pursued on all sides. The Westphalian general Reubel assembled 4000 men of his division at Ohof, in the vicinity of Brunswick; general Gratien, with a Dutch division, had set out from Erfurt; and the Danish general Ewald, marching from Glückstadt into the territories of Hanover, crossed the Elbe in order to cover that river. Aug. 1, Reubel met the duke not far from Brunswick, near the village of Oelper, and an action ensued (the 11th since he had left Saxony), in which a corps of 4000 men not only retreated before 1500, but also opened to them the only way by which they could escape. Aug. 2, the duke left Brunswick. From the road he took, it was conjectured that he would march towards Celle, whither he was pursued, therefore, by the Westphalian troops. Instead, however, of doing this, he took his way through Hanover immediately to Nienburg, crossed the Weser, and, having destroyed the bridges behind him, marched down the river. He reached Hoya Aug. 4, and hastened his march upon the left bank of the Weser, while part of his corps, to make a demonstration, turned towards Bremen. Here the black hussars entered on the 5th, and occupied the gates, but on the next day continued their march. Meantime the duke advanced through the territory of Oldenburg. He passed the night

of the 5th of August at Delmenhorst, and appeared to be directing his course to East Friesland, in order to embark there. But, contrary to expectation, he crossed, at Huntebrück, the small river Hunte, which falls into the Weser, seized the merchant ships which were lying at Elsfleth, principally unloaded, embarked his troops in the night of the 6th, leaving behind the horses, and procuring, in that country, which is inhabited by seamen, the necessary sailors by force. On the 7th, in the morning, the duke himself, having the English flag hoisted, set sail, and, on the 8th, landed at Heligoland, whence he sailed, on the 11th, with his corps, for England. In England, the duke was received with great distinction. His corps immediately entered the English service, and was afterwards employed in Portugal and Spain. The parliament granted him a pension of £6000, until he returned to his hereditary dominions, Dec. 22, 1813. He was a prince of an uncommonly open character. In his hereditary states, he acted with the best intentions; but his frequent errors disappointed the great expectations which had been formed of him, and narrow-minded counsellors contributed to lead him astray. He wished to sow and reap at the same time. His military spirit and penetrating mind led him to foresee new dangers from the great oppressor of Europe. His great preparations must be explained from this view of circumstances in 1814 and 1815. His finances were thrown into great disorder by his maintaining so many troops; and even the interest of the public debt was not paid. Thus he became unpopular as the sovereign of a country which had been prosperous under his father's sceptre. The events of 1815 called him again to arms, and he fell June 16, 1815. (See *Quatrebras*, and *Ligny*.)

Brunswick, Louis Ernest, duke of; third son of Ferdinand Albert, duke of Brunswick-Lüneburg; born in 1718; entered the imperial service in 1750; became field-marshal of the republic of Holland; during seven years from 1759, was captain-general of the United Provinces; was regent during the minority of the stadtholder, and had previously preserved the neutrality of the republic during the long war of the neighboring powers from 1754. After the stadtholder became of age, B. was made counsellor by the states-general. Having, however, incurred the hatred of the people by his partiality for the nobility, and some other errors, he was obliged to leave the stadtholder in 1772. He died in 1788.

Brunswick (M. J. Leopold), prince of, major-general in the Prussian service, youngest son of duke Charles of Brunswick, born at Wolfenbüttel in 1752, was instructed by the abbé Jerusalem. He studied in Strasburg military science and other branches of knowledge, travelled through Italy under the care of Lessing, and entered the Prussian service, in 1776, as commander of a regiment of foot, at Frankfort on the Oder. In this city, where he resided after his return from the Bavarian war of succession in 1779, he gained universal esteem by his amiable character, his talents, and his zeal for literature. In 1780, Frankfort was preserved, by his activity, from an inundation which threatened to overthrow the dikes and deluge the suburbs. He displayed the same vigilance on the occasion of several conflagrations, with which this city was afflicted. He visited the poor in their most miserable haunts, and his life was devoted to works of benevolence. He fell a sacrifice to his humanity in the inundation of 1785, in which he was drowned while hastening to the assistance of the suburbs. The monuments that have been erected to him will bear witness to future generations of the esteem of his contemporaries.

Brush-Wheels. In light machinery, wheels sometimes turn each other by means of bristles or brushes fixed to their circumference. They may, also, communicate circular motion by friction only. The surface brought in contact is then formed of the end grain of wood, or is covered with an elastic substance, and the wheels are pressed together to increase the friction.

Brussels, formerly the capital of the Austrian Netherlands, with 75,000 inhabitants, principally Catholics, and, after Amsterdam, the second city of the kingdom of the Netherlands, is a handsome city of South Brabant. During 20 years, from 1794 to 1814, it was in the possession of the French, and the chief town in the department of the Dyle. It is now, alternately with the Hague, the royal residence, and the place of meeting of the states-general of the kingdom. It is a favorite resort of the English, many of whom have resided here since the peace of 1814. The gloomy forest of Soignies, so memorable since the battle of Waterloo, lies on the south and south-west of the town. It was formerly surrounded by a wall, which has been demolished,

and the ramparts laid out in public walks. The upper part of the city is magnificent. The park is a spacious square, laid out with shaded walks, and surrounded by the palaces, public offices and principal private houses. In the lower part, lying on a plain watered by the Senne, the streets are narrow and crowded, but the great market-place is very beautiful. This part of the city is intersected by several canals, connected with the Senne, and the great Scheldt canal. The other principal squares are Oorlogo plaats, Michael's plaats and Sands plaats. The principal churches are St. Michael's and the church of St. Gudule. B. also contains an academy of arts and sciences, a foundling hospital, and a central school with a library of 100,000 volumes, a valuable gallery of paintings and a cabinet of natural history. The school of medicine and that of botany have also apartments, and there is a public botanic garden. The town is ornamented with 20 public fountains, all embellished with sculpture. The manufactures of B. are celebrated throughout Europe and America, particularly its lace, camlets and carpets; the first alone employs 10,000 individuals. Its carriages surpass even those of London and Paris. The other articles made here are ticking, various kinds of cotton and woollen stuffs, silk stockings, galloons, earthenware, &c. It carries on considerable trade with the interior of the Netherlands, and also with foreign countries, by means of its canals. The principal of these was constructed in 1560 and 1561, and leads to Antwerp: it is 110 feet above the level of the sea. The city owes its origin to St. Gery, who, in the 7th century, built a chapel on an island in the Senne, and preached to the peasants. As the numbers collected here became great, it was surrounded with a wall in 1044, and became, in process of time, the residence of the dukes of Brabant, and of the Austrian governors. It was several times captured by the French, and, in 1789—90, took the lead in the troubles which broke out in the Netherlands.

Brutus, or Brute, in the fabulous history of Britain, was the first king of the island, according to Geoffrey of Monmouth. He is said to have been the son of Sylvius, and grandson of Ascanius, the son of Æneas, and to have been born in Italy. He landed at Totness, in Devonshire, destroyed the giants who then inhabited Albion, and called the island from his own name. At his death, the island was divided among his three sons: Locrine had England, Camber Wales, and Albanact Scotland.

Brutus, Lucius Junius, son of Marcus Junius and the daughter of the elder Tarquin, saved his life from the persecutions of Tarquin the Proud by feigning himself insane, on which account he received the surname *Brutus* (stupid). During a plague that broke out at Rome, he accompanied the son of Tarquin to the oracle in Delphi. When Lucretia, the wife of Collatinus, plunged a dagger into her bosom, that she might not outlive the insult which she had suffered from Sextus, the son of Tarquin, B., being present, threw off the mask. He drew the dagger, all bloody, from the wound, and swore vengeance against the Tarquins, explaining to the astonished spectators the reason of his pretended imbecility, and persuading all who were present to take the same oath. The people submitted to his guidance, and he caused the gates to be shut, the inhabitants to be assembled, and the body to be publicly exposed. He then urged the banishment of the Tarquins. After this had been resolved on, B. proposed to abolish the regal dignity, and introduce a free government. It was then determined that two consuls should exercise supreme power for a year, and Junius Brutus and Tarquinius Collatinus were chosen for the first term. Tarquin, who had seen the gates shut against him, and found himself deserted by his army, sent ambassadors to Rome to demand a restoration of his private property, and, at the same time, to promise that he would make no attempt against the republic. His request was granted. The ambassadors, however, set on foot a conspiracy, and drew into it many young men, among whom were the two sons of B. and the nephews of Collatinus. But a slave named Vindex discovered the plot. The criminals were imprisoned, and the consuls caused the people the next morning to be called to the *comitia*. All were deeply shocked to see the sons of B. among the prisoners, and their father on the judgment-seat to condemn them. Collatinus wept, and even the stern Valerius sat silent. But B. arose firmly, and, after their crime had been proved beyond a doubt, ordered the lictors to execute the law. Neither the entreaties of the people nor of his sons could alter his resolution. He witnessed the horrible spectacle without emotion, and did not leave the assembly until after the execution. He was called back, however, when Collatinus wished to save

his guilty nephews. The people condemned them all, and chose Valerius consul in place of Collatinus. In the mean time, Tarquin, supported by Porsenna, collected an army, and marched against Rome. The consuls advanced to meet him. B. led the cavalry; Aruns, son of Tarquin, commanded the body opposed to him. They pierced each other with their spears at the same moment, and both fell, A. C. 509. The Romans came off conquerors, and B. was buried with great splendor. The women lamented him a whole year, as the avenger of the honor of their sex.

Brutus, Marcus Junius. This republican resembled in spirit, as well as in name, the expeller of Tarquin. He was at first an enemy of Pompey, who had slain his father in Galatia, but forgot his private enmity, and was reconciled to him, when he undertook the defence of freedom. He did not, however, assume any public station, and, after the unfortunate battle of Pharsalia, surrendered himself to Cæsar, who received him with the tenderest friendship, as he had always loved him, and regarded him almost like his own son, because the mother of Brutus, sister of the rigid Cato, had been the object of his affection. In the distribution of the offices of state, the dictator appointed B. to the government of Macedonia. Notwithstanding these benefits, B. was the head of the conspiracy against Cæsar, deeming the sacrifice of private friendship necessary for the welfare of his country. He was led into the conspiracy by Cassius, who, impelled by hatred against Cæsar, as well as by the love of freedom, sought, at first, by writing, and then by means of his wife, Junia, sister of B., to gain his favor; and, when he thought him prepared for the proposal, disclosed to him, verbally, the plan of a conspiracy against Cæsar, who was then aiming at the supreme power. B. agreed to the design, and his influence led many of the most distinguished Romans to embrace it also. Cæsar was assassinated in the senate-house. In public speeches, B. explained the reasons of this deed, but he could not appease the dissatisfaction of the people, and retired, with his party, to the capitol. He soon after took courage, when the consul P. Cornelius Dolabella, and the prætor L. Cornelius Cinna, Cæsar's brother-in-law, declared themselves in his favor. But Antony, whom B. had generously spared, was reconciled to him only in appearance, and obtained his leave to read Cæsar's will to the people. By means of this instrument, Antony succeeded in exciting the popular indignation against the murderers of Cæsar, and they were compelled to flee from Rome. B. went to Athens, and endeavored to form a party there among the Roman nobility; he gained over, also, the troops in Macedonia. He then began to levy soldiers openly, which was the easier for him, as the remainder of Pompey's troops, since the defeat of their general, had been roving about in Thessaly. Hortensius, the governor of Macedonia, aided him; and thus B., master of all Greece and Macedonia, in a short time stood at the head of a powerful army. He went now to Asia, and joined Cassius, whose efforts had been equally successful. In Rome, on the contrary, the triumvirs prevailed. All the conspirators had been condemned, and the people had taken up arms against them. B. and Cassius, having with difficulty subdued the Lycians and Rhodians, returned to Europe to oppose the triumviri. (Plutarch informs us, that a spirit appeared to B., on his march from Sardis to Abydos, in Asia Minor.) The army passed over the Hellespont, and 19 legions and 20,000 cavalry were assembled on the plains of Philippi, in Macedonia, whither, also, the triumvirs Antony and Octavianus marched with their legions. Although the Roman historians do not agree in their accounts of the battle of Philippi, so much as this appears certain, that Cassius was beaten by Antony, and caused himself to be killed by a slave; that B. fought with greater success against the division of the army commanded by Octavianus, who was hindered by indisposition from conducting the battle in person; that B., after the engagement, took possession of an advantageous situation, where it was difficult for an attack to be made upon him; that he was induced, by the ardor of his soldiers, to renew the contest, and was a second time unsuccessful. He was totally defeated, escaped with only a few friends, passed the night in a cave, and, as he saw his cause irretrievably ruined, ordered Strato, one of his confidants, to kill him. Strato refused, a long time, to perform the command; but, seeing B. resolved, he turned away his face, and held his sword, while B. fell upon it. Thus died B. (A. C. 42), in the 43d year of his age.

Bruyère, John de la, the famous author of the Characters and Manners of his age, was born, 1639, in a village near Dourdan, not far from Paris. He purchased the place of treasurer at Caen:

but, a short time after, through the influence of Bossuet, he was employed in the education of the duke of Burgundy, with a pension of 3000 livres, and was attached to his person during the remainder of his life. In 1687, he translated the Characters of Theophrastus into French, with much elegance, and accompanied them with a succession of characters, in which he represented the manners of his time with great accuracy, and in a style epigrammatical, ingenious and witty. B. often took his characters from living persons, although he denied it, and seems, by this means, to have gained many enemies. He was a man of pleasant manners and amiable disposition. In 1693, he was elected a member of the French academy, with some opposition, and died in 1696.

Bruyn, Corneille le, a painter and traveller, born at the Hague in 1652, went, in 1674, to Rome, where he studied his art for two years and a half. He then followed his inclination for travelling, visited Naples, and other cities of Italy, embarked for Smyrna, travelled through Asia Minor, Egypt, and the islands of the Archipelago, noting down and drawing all that he found worthy of his attention. He afterwards settled in Venice, and became a disciple of Carlo Lotti. In 1693, he returned to his native country, and published his travels in 1698. The favorable reception of this work excited in him the desire to travel anew. He visited, in 1701, and the following years, Russia, Persia, India, Ceylon and other Asiatic islands. In Russia, he painted Peter the Great, and different princes of his family; in 1706, in Batavia, some of the principal men. In 1708, he returned to his country, where he published an account of his second journey, the value of which, like that of the first, consists more in the beauty and correctness of the drawings than in the trustworthiness of the statements. During the rest of his life, Le B. was occupied exclusively with his art, passed his time alternately at the Hague and at Amsterdam, and died at Utrecht, in the house of his friend and protector van Mollem.

Bryant, Jacob, a philologist and antiquary, born at Plymouth in 1715, died, in 1804, at his country-seat, near Windsor. He studied at Eton and Cambridge, became afterwards tutor of the sons of the famous duke of Marlborough, the eldest of whom he also accompanied to the continent as his secretary. After his return, he received, by the influence of his patron, a lucrative post in the ordnance, which gave him leisure for his researches into Biblical, Roman and Grecian antiquities. His most important work is the New System of Ancient Mythology, which appeared in 3 vols. 4to., 1773 to 1776. Whatever may be the ingenuity and the learning of the author, it is justly objected, that he has taken conjectures for proofs, and, in particular, that he has trusted too much to the deceptive conclusions of etymology. He was engaged in a famous dispute on the veracity of Homer and the existence of Troy, in which he endeavored to show, that there never was such a city as Troy, and that the whole expedition of the Greeks was a mere fiction of Homer's. The object of one of his earlier treatises, which appeared in 1767, is to show, that the island Melita, on which Paul was wrecked, was not Malta, but situated in the Adriatic. He endeavored to illustrate the Scriptures by explanations drawn from Josephus, from Philo the Jew, and from Justin Martyr; but in this, as in all his writings, his learning and his ingenuity are misled by his love of controversy and paradox.

Bubna, count of, descended from an old family in Bohemia, was, early in life, the chamberlain of the emperor of Austria, afterwards entered the military service, and rose to the rank of field-marshal-lieutenant. At the end of 1812, he was sent, by his court, with extraordinary commissions, to Napoleon, at Paris, and, in May, 1813, was sent again to him at Dresden. In the war of 1813, he commanded an Austrian division with much honor, and, in 1814, received the chief command of the Austrian army which was to pass through Geneva to the south of France. Here he showed as much caution in his movements as forbearance and humanity towards the inhabitants. He advanced upon Lyons, which was defended by marshal Augereau, but was unsuccessful in his attacks upon the city, till the corps of Bianchi and Hessen-Homberg came to his assistance, upon which the prince of Hessen-Homberg took the chief command. B. remained at Lyons till the return of the allied forces, and then retired to Vienna. After the landing of Napoleon in 1815, he again led a corps, under Frimont, against Lyons, and in Savoy opposed marshal Suchet, till Paris was conquered, and the marshal retreated beyond Lyons. He then took possession of Lyons without opposition, established a court-martial to punish the disturbers of public order, and proceeded

with greater severity than on his former campaign. In September, he marched back to Austria, and received, for his services, valuable estates in Bohemia, from his emperor. In the insurrection of Piedmont (q. v.), 1821, the count de B. received the chief command of the Austrian troops destined to restore the ancient government. After the accomplishment of this commission, he was appointed general commandant of Lombardy. He died at Milan, June 6, 1825, in the 56th year of his age.

Buccaneers; a band of English and French freebooters in America, whose exploits form one of the most remarkable parts of the history of the 17th century. After the assassination of Henry IV, in France, in 1610, several Frenchmen sought a residence on the island of St. Christopher, one of the Antilles. Driven thence in 1630, some of them fled to the western coast of St. Domingo, others to the small island of Tortugas, in the vicinity. Several Englishmen, led by a similar disposition, associated themselves with the latter. The fugitives at St. Domingo employed themselves especially in the chase of wild cattle, of which there were large herds on the island. They sold the hides to the mariners who landed on the coast, and, because they did not boil the flesh, but roasted it before the fire, like the American savages, they were called *buccaneers*. Without a captain, without laws, without the society of women, these hunters lived in the rudest state of nature, associating two by two, and enjoying in common all that they had taken in the chase or acquired by robbery. The Spaniards, who could not conquer them, determined to extirpate all the cattle on the island, and thus obliged the buccaneers either to cultivate the land as husbandmen, or to join the other freebooters on the island of Tortugas. These bold adventurers attacked, in small numbers, and with small means, but with an intrepidity which bade defiance to danger, not only single merchant vessels, but several of them together, and sometimes armed ships. Their common mode of attack was by boarding. They directed their efforts especially against the Spanish ships which sailed for Europe laden with the treasures of America. By the repeated losses which they suffered, the Spaniards were at last so discouraged, that they seldom offered a serious resistance. It happened once that a ship of the buccaneers fell in with two Spanish galleons, each of which had 60 cannon and 1500 men on board. To escape was impossible, and the pirates could not think of surrender. Their captain, Laurent, made a short speech to them, sent one of his men to the powder-room with orders to set fire to it upon the first sign which he should give him, and then placed his men in order of battle on each side. "We must sail between the enemy's ships," cried he to his crew, "and fire upon them to the right and left." This manœuvre was executed with extraordinary rapidity. The fire of the pirate killed so many people, on board both ships, that the Spaniards were struck with a panic, and let him escape. The Spanish commander was afterwards put to death on account of the disgrace which he had brought upon his nation. Their frequent losses greatly reduced the trade of the Spaniards with America. The buccaneers now began to land on the coast, and to plunder the cities. Their manner of dividing their booty was remarkable. Every one who had a share in the expedition swore that he had reserved nothing of the plunder. A false oath was of extremely rare occurrence, and was punished by banishment to an uninhabited island. The wounded first received their share, which was greater according to the severity of their wounds. The remainder was divided into equal parts, and distributed by lot. The leader received more than the others only when he had particularly distinguished himself. Those who had perished in the expedition were not forgotten. Their part was given to their relations or friends, and, in default of them, to the poor and to the church. Religion was strangely blended with their vices, and they always began their enterprises with a prayer. The wealth which they acquired was spent in gambling and debauchery, for it was the principle of these adventurers to enjoy the present and not care for the future. The climate and their mode of life gradually diminished their number, and the vigorous measures of the English and French governments at last put an end to their outrages, which had, perhaps, been purposely tolerated. From this band of pirates arose the French settlements on the western half of St. Domingo. In the beginning of the 18th century, the piracies of the buccaneers had entirely ceased. An account of their mode of life, and of many of their deeds, is to be found in the 10th volume of Raynal's History of the two Indies, and in the 2d volume of Archenholz's Historical Writings.

Bucentaur, in mythology; a monster, half man and half ox or ass. The splendid galley in which the doge of Venice annually sailed over the Adriatic on Ascension-Day also bore this name. Dropping a ring into the sea, he espoused it in the name of the republic, with the words *Desponsamus te, mare, in signum veri perpetuique dominii.* The custom originated in 1176, when the doge, having refused to deliver up the pope, who had taken refuge in Venice, to the emperor, encountered and defeated the imperial fleet which was sent to reduce the Venetians.

Bucephalus; the horse of Alexander the Great, which he bought for 13 talents (about 10 or 11,000 dollars). Philonicus, a Thessalian, offered to sell him to king Philip; but Philip, who considered the price too great, commanded the unmanageable steed to be led away, when the young Alexander offered to mount him. He leaped up, in fact, and, to the astonishment of all, the horse obeyed him, and willingly submitted to his guidance, though he had never before obeyed a rider. Alexander, from this circumstance, conceived such an affection for him, that he never rode upon any other horse; and Bucephalus, also, when caparisoned for battle, endured no other rider. He died of a wound, and Alexander caused him to be buried near the Hydaspes, and built, over his grave, a city, which he called *Bucephala.*

Bucer, Martin; born, 1491, at Schlettstadt, in Alsace. He died in the office of professor of theology at Cambridge, 1551. At the time of the reformation, he left the Dominican order, and became a convert to Lutheranism. He was, at first, preacher at the court of Frederic, the elector of the Palatinate, afterwards in Strasburg, and at the same time professor in the university there for 20 years, till king Edward VI of England, at the suggestion of archbishop Cranmer, invited him to Cambridge. In 1557, queen Mary caused his bones to be burned, to show her detestation of Protestantism. The cardinal Contarini called him the most learned divine among the heretics. He wrote a commentary on the Psalms, under the name of *Aretius Filinus.* His first wife had been a nun in her youth. After her death, he married again.

Buch, Leopold von; born in 1777, in Prussia; one of the most distinguished geologists of Germany. He has studied the structure of the earth, by personal observation, for more than 30 years, in his travels through all the provinces of Germany, through Scandinavia to the North cape, through parts of Great Britain, France, Italy and the Canaries. In the possession of a happy independence, he sets out every spring, from Berlin, where he usually passes the winter, on his scientific travels. Simple in his habits, frugal, accustomed to hardships, he travels in the carriage, on horseback, on foot, as his purpose requires. He was the first geologist who clearly explained the different volcanic phenomena, particularly their effects on the elevation of the surface and the nature of the soil. He divides volcanoes into central volcanoes and volcanic chains. The latter appear to him to follow the direction of great clefts in the earth, which, in turn, correspond with the direction of the primitive mountains. His central volcanoes are, Etna, the isles of Lipari, Iceland, the Azores, the Canaries, &c. The results of his geological labors are contained in his Geognostical Observations on Travels through Germany and Italy (1802), and his Physical Description of the Canaries, where he lived, in 1815, for several months. He was afterwards accompanied by the Norwegian botanist Christian Smith, who, some years later, was among the victims of the unhappy expedition of captain Tuckey in the Congo river. Buch's Travels through Norway and Lapland (2 vols., Berlin, 1810, with copperplates) is one of the best works on the structure of the earth in the high northern regions.

Buchanan, George, an eminent poet and historian, and one of the great masters of modern Latinity, was born in Scotland, in 1506. His parents were indigent, and he owed his education to an uncle, who sent him to Paris. He afterwards repaired to St. Andrew's. He became tutor or companion of the earl of Cassilis, with whom he lived five years, and obtained the notice of James V, who appointed him tutor to his natural son, afterwards the famous regent, earl of Murray. His satires against the monks exposed him to the vengeance of the clergy, and he was imprisoned for heresy; but, contriving to escape, he withdrew to Bourdeaux, where he taught three years, and composed his tragedies of *Baptistes* and *Jepthes*, and his translations of the *Medea* and *Alcestes* of Euripides. In 1543, he quitted Bourdeaux on account of the pestilence, and became, for a while, domestic tutor to the celebrated Montaigne, who records the fact in his essays. In 1544, he went to Paris, and,

for some time, taught in the college of Bourbon. In 1547, he accompanied his friend Govea to Portugal. He had not been there a year before Govea died, and, the freedom of B.'s opinions giving offence, he was thrown into prison, where he began his translations of the Psalms into Latin verse. He obtained his liberty in 1551, and spent four years at Paris, as tutor to the son of the marshal de Brissac. In 1560, he returned to Scotland, where he openly embraced Protestantism, yet was well received at court, and assisted the queen in her studies. He was also employed in regulating the universities, and was made principal of St. Leonard's college, St Andrew's. He even obtained a pension from Mary, which did not prevent him from connecting himself with the party of Murray. Though a layman, he was made, in 1567, moderator of the general assembly, which appointed him preceptor to James VI, who acquired, under his tuition, the scholastic knowledge on which he so much prided himself. It is said that Buchanan, on being subsequently told that he had made the king a pedant, replied, that "it was the best he could make of him." He next accompanied Murray to England, in order to prefer charges against Mary, and, in 1571, published his *Detectio Mariæ Reginæ*, a virulent attack upon the character and conduct of that unhappy queen; and, although his patron Murray had been assassinated in 1570, he continued in favor with the prevalent party, who made him one of the lords of the council and lord of the privy seal. He likewise received a pension of £100 per annum from queen Elizabeth. In 1579, he published his celebrated *De Jure Regni*, a work which will ever rank him among the spirited defenders of the rights of the people to judge of the conduct of their governors. He spent the last 12 or 13 years of his life in composing his great work, entitled *Rerum Scoticarum Historia*, in 90 books, which was published at Edinburgh, in 1582. He died the same year, at the age of 76, in very poor circumstances; and the city of Edinburgh interred him at the public expense.—The moral character of B. has been the subject of much obloquy with his enemies; and the charge of early licentiousness seems countenanced by several of his poems. Conscious of his great abilities, he was also querulous and discontented with his circumstances, and by no means scrupulous in his attempts to amend them; added to which, his temper was harsh and unamiable, and his conduct, as a party man, exceedingly virulent. As a writer, he has obtained high applause from all parties; and as a Latin poet, in particular, he stands among the first of the moderns. His Psalms are in all kinds of measure, and some of them are extremely beautiful. As a historian, he is considered to have united the beauties of Livy and Sallust as to style; but he discovered a great lack of judgment and investigative spirit, taking up all the tales of the chronicles as he found them, and affording to their legendary absurdities the currency of his own eloquent embellishment. On the whole, however, B. may justly be deemed an honor to his country; as a man whose genius burst through all disadvantages to the attainment of a wide and justly-celebrated distinction. Of his different works in verse and prose, various editions have been given; and a valuable edition of the whole was published at Edinburgh, in 2 vols. folio, 1714, and reprinted at Leyden, in 2 vols. 4to., 1725.

Bucharest (i. e. *city of joy*), the chief city of Walachia, the residence of the hospodar and of a Greek bishop, contains 10,000 meanly built houses, and 60,000 inhabitants, including Greeks, Jews and Armenians. The streets are not paved, but covered with logs. The Greeks formerly had an academy here with 12 instructers, which, in 1810, contained 244 students. It has declined since the present hospodar Ghika, a native of Walachia, took possession of its funds in 1825. The trade in wine, skins, and other products of the country, is very brisk. May 28, 1812, a peace was concluded here between Russia and the Porte.

Bucharest, Peace of, May 28, 1812, between Russia and the Porte. In November, 1806, the emperor Alexander took up arms for the protection of Moldavia and Walachia, and on account of the violation of the free navigation of the Bosphorus. He occupied Moldavia, upon which the Porte declared war against Russia, Jan. 7, 1807. An armistice, however, was agreed upon at Slobosia, Aug. 24, 1807, in consequence of the peace of Tilsit, by which the Russians evacuated the principality. After the expiration of the truce, in April, 1808, it was tacitly continued; but when Napoleon, in the congress at Erfurt, had agreed to the union of the two principalities with Russia, the Russian court opened a congress, to deliberate upon peace at Jassy, in Feb., 1809, and demanded the cession of both principalities by the Turks, and the re-

moval of the British ambassador from Constantinople. Upon this, the Porte broke off the negotiations, and in April, 1809, the war was renewed. The Russians advanced to Bulgaria, and, after two bloody campaigns, remained masters of the Danube. The Porte now offered terms of peace. A congress was opened at B. in Dec., 1811. Napoleon soon after turned his arms against Russia, and concluded an alliance with Austria, March 14, 1812, by which both powers guarantied the integrity of the Porte. He also did all in his power to induce the Porte to continue the war. But the interposition of Great Britain and Sweden, as well as the concessions of Russia, and the distrust of the Porte towards Napoleon, brought to a conclusion the peace of B., which was signed, on the part of the Russians, by Andri Italinski, Sabanejeff, and Jos. Fonton, May 28. The Porte gave up to Russia all Bessarabia and a third of Moldavia, with the fortresses of Choczim, Bender, Ismail and Kilia, so that the Pruth, as far as to its confluence with the Danube, became the boundary between the two powers, and from thence the left bank of the Danube as far as Kilia, and even to its entrance into the Black sea. The Russians gave back the remainder of their conquests. In Asia, the boundaries were established as before the war. The Porte granted the Servians, who had fought for their independence as allies of the Russians, a full amnesty, with the right of administering their internal affairs themselves, and of raising, in the way which they should judge best, the small tax which the Porte imposed upon them. The Servians, however, would not accept these conditions, and continued the contest, but were soon overpowered by the Turks.

Bucharia, Great; a country of Central Asia, lying between the parallels of 35° and 44° N. lat., and from 60° to 72° E. lon. It comprehends the three provinces of Bucharia Proper, Samarcand and Balkh, corresponding to the country of the nomade Scythians, Sogdiana and Bactriana of ancient geography. It forms the south-eastern part of Tartary, and, being occupied chiefly by the Usbeck Tartars (q. v.), is sometimes called *Usbeckistan*. The original inhabitants, or *Taujiks*, a Persian colony, are handsomer than the Tartars, and still speak the Persian language. They live in cities, and carry on a trade with Russia, China, Hindostan and Persia. There are also many Jews in the country. The rivers are the Gihon or Oxus, the Sir, or Jaxartes, and the Sogd. The Bucharians or Taujiks lead a frugal life, their food consisting chiefly of rice, wheat, millet, and, above all, fruits, such as melons, grapes and apples: they are fond of horse-flesh, but it is expensive, and beef is more used. Tea and wine, the former flavored with anise, are their principal drink: they intoxicate themselves with opium, and their bread is not fermented. Besides these articles, which, except tea, are produced in the country, the principal vegetable productions are the Judas tree, the rhubarb, assafœtida, &c. B. is supposed to be the native country of the camel, and a large, shaggy variety, called *luk*, has the peculiarity of blowing a large bladder from its mouth when it utters a cry. Other varieties of the camel, and dromedaries, fine horses, and asses, of various sorts, abound. Sheep and cows are scarce. Several rare birds are found here, particularly the *tetrao paradoxus*. This bird resembles the partridge of the desert, except in the structure of its feet, which consist of one large toe, placed between two diminutive ones, resting on a hard sole, and enabling it to run with great speed over the dry, gritty sand. The province of Balkh, which is described by geographers as forming a part of B., lies on the south of the Oxus, and belongs, at present, to the Afghans. The two provinces on the north of that river form the Transoxana, famous in Arabian and Tartar history, under the Arabian name *Maweralnahr* (beyond the river), where Timur received the homage of so many conquered princes. His descendants were driven out by the Tartars in the 15th century. The government, as in other Mohammedan states, is despotic. The population, extent and revenue of the state have not been ascertained. (Eversmann's *Reise nach Buchara*, Berlin, 1823; Elphinstone's *Caubul*; Meyendorf's *Journal* (in French), Paris, 1826.) Bucharia, or Bochara, a large and populous city, has often disputed with Samarcand the title of capital. Its population has been stated at from 100,000 to 200,000. The streets are so narrow, that a loaded camel fills the space from side to side. The houses are low, and built of mud and brick. The number of mosques is said to be 360, and that of *medreses*, or schools, 285. It has always been distinguished for the study of theology and Mohammedan law. B. is the commercial emporium of Central Asia for the Hindoos, Afghans, Persians, Russians, Chinese and Arabians. The trade is carried on by caravans, and there are

10 large caravansaries in the city. The caravans bring Russian and English manufactures from the Russian towns, and return silk, wool, Cashmere shawls, indigo, &c. About 500 camels bring silk and woollen cloths, shawls, &c. from Meschid and Herat, and Russian manufactures are carried back in return. China ware and tea from Cashgar, and shawls, calicoes, muslins, from Caubul and Cashmere, are the other principal articles of import.—A description of the city is contained in the work of Meyendorf, above referred to, who was attached to the Russian mission to B. in 1820.

Bucharia, Little, as it is improperly called, lies east of Great B., stretching from 73° to 100° E. lon., and from 38° to 44° N. lat. It is very imperfectly known, but appears to be bounded on the north and east by the Calmuck country, on the south by Thibet, and on the west is separated from Great Bucharia by the Beloor mountains. It is a very elevated country, forming a portion of the great central *plateau* of Asia, which constitutes a sixth part of the old continent, yet shrouds from the curious philosopher its mineral, animal and vegetable productions. The climate is very rigorous, owing to the great elevation of the country. It was overrun, in 1683, by the Calmucks, who were subdued by the Chinese in 1759. Little is known of the origin and manners of the native inhabitants, who still form the principal part of the population. The divisions into provinces are very differently stated by different authors. Cashgar, with a town of the same name, Yarkand, also with a town of the same name, which, by some, is thought to be the capital of Little B., if, indeed, Yarkand is not merely another name for Cashgar, and the other provinces, are little known. Both sexes wear long drawers, and a garment reaching to the calf, bound round the waist by a girdle. The women dye their nails with henna. The houses are chiefly of stone, and furnished with articles of Chinese manufacture. Tea is the general beverage, taken, in the manner of Central Asia, with milk, butter and salt.

Bucher, Anthony von, a well known and much esteemed Catholic writer against the Jesuits, born in Mũnich, Jan. 8, 1746, was educated in the Latin schools of the Jesuits, studied at Ingoldstadt, and was consecrated priest in 1768. In his different offices as a public teacher, he has done a great deal to instruct and enlighten his country. His contributions to the history of the Jesuits in Bavaria (*Beiträge zur Geschichte der Jesuiten in Baiern*) are of great historical value. His works were published in 6 vols., Mũnich, 1819 et seq.

Buchholz, Paul Ferdinand Frederic; born, Feb. 5, 1768, at Altruppin (Old Ruppin). At the age of 32, he resigned the office of teacher at Brandenburg, and went to Berlin, where, for 21 years, he has been an author. He is best known to foreign countries as the publisher of the New Monthly Journal for Germany. In many of his writings, he tries to prove the existence of a law of gravitation in the moral as well as the natural world.

Buck; the male of the fallow deer, also of rabbits and other animals. (See *Deer, Rabbit*, &c.)

Buckeburg. (See *Lippe*.)

Buckets, in water-wheels, are a series of cavities into which the water is delivered, on the circumference of the wheel to be set in motion. By the revolution of the wheel, the buckets will be alternately erected so as to receive water, and inverted so as to discharge it; the loaded side will descend, and present the empty buckets in succession to the current, and thus keep up a constant revolution of the wheel.

Buckinck, Arnold, the first artist who engraved geographical maps on copper. He brought this art to a high degree of perfection. Schweynheym, who had learnt the secret of printing from the inventors, Faustus and Schoeffer, wished to publish an edition of Ptolemy. Wood cuts were too imperfect for the maps contained in the expensive manuscripts of it. Sweynheym determined to engrave them on copper, and, for that purpose, associated himself with B. The former died during the progress of the work. B. completed it. The first edition of Ptolemy with maps (for the edition of 1468 is certainly dated wrong) at length appeared in folio, at Rome, 1478, and concluded as follows: *Claudii Ptolemæi Alexandrini philosophi geographiam, Arnoldus Buckinck e Germania Romæ tabulis æneis in picturis formatam impressit sempiterno ingenii artificiique monumento*, &c. These charts are also added to some Roman editions of Ptolemy published afterwards.

Buckingham, George Villiers, duke of; the unworthy favorite of James I and Charles I of England; born, 1592, at Brookesby, in Leicestershire, of a family which came thither, from Normandy, in the time of William the Conqueror. In his youth, he showed little taste or little

aptitude for literature. Nature had lavishly bestowed upon him beauty, ease and grace. By means of these qualities, he so effectually won the affections of James I, that, in less than two years, he was made a knight, a gentleman of the bedchamber, baron, viscount, marquis of B., lord high-admiral, lord warden of the cinque ports, &c., and, at last, dispenser of all the honors, offices, favors and revenues of the three kingdoms, according to the dictates of his ambition, his cupidity and his caprice. The nation was indignant at seeing merit undervalued, the people trampled upon, the nobility humbled, the crown impoverished and degraded, to elevate and enrich a weak and insolent favorite. To complete the catalogue of his misdeeds, B. became a traitor in 1623, the eighth year of his favor. He desired to remove the earl of Bristol, an able and virtuous minister, from office. Bristol was then negotiating the marriage of a Spanish princess with the prince of Wales, afterwards Charles I. The design of B. was, not only to reconcile to himself the prince, against whom he had dared to lift his hand in a fit of passion, but also to make him dependent upon himself, that he might secure the continuance of his power, in case of the death of James. He therefore inspired young Charles with the romantic idea of going to Madrid himself, and removing all the difficulties of negotiation by his presence. The king's consent to this measure was gained in an hour of weakness, and, though he was long angry, on this account, with B., he soon after made him a duke. The event was what James had anticipated. While the young prince delighted the royal family and the whole nation by the gentleness and modesty of his manners, B., who accompanied him, offended them by his arrogance and licentiousness. He attained his purpose: the negotiation, which was far advanced by means of Bristol, was broken off; and, that no one else might afterwards complete it with success, he indulged himself in the grossest insults against the Spanish ministry, speedily left the kingdom with the prince, deceived James by false reports, and instigated the parliament to declare, that, instead of forming a connexion with Spain, it was necessary to make war against it, which was accordingly done by James. The house of commons peremptorily refused the requisite supplies, although they had consented to the war. B. connected himself with the Puritan party, and formed the project of abolishing the episcopal dignity, selling the possessions of the church, and continuing the war with the money raised in this way. Thus the policy, the feelings and conscience of James were betrayed by his favorite, and in the midst of these disorders he died. He had succeeded, indeed, in concluding a treaty for the marriage of his son with Henrietta of France; but had the grief of seeing an English army, which was intended to recover the hereditary dominions of his son-in-law, the unhappy elector palatine Frederic V, ruined by the mismanagement of B., while a union with Spain might have effected a peaceful restoration of the territories. After the death of James, B. continued to be the arbitrary minister of Charles I; but the time had now come for the fulfilment of the prophecy of his former king. After having been declared the savior of the prince and the nation, in the house of commons of the last parliament, B. was declared, by the new one, a seducer of the king, a traitor to the liberty of his country, and a public enemy. This took place during a war which required, more than ever, the fullest harmony with the house of commons. Hence the dissolution of two parliaments, the imprisonment of the members who had been most distinguished for their zeal, illegal taxes and forced loans, instead of supplies granted by parliament, the arbitrary imprisonment of those who refused to pay them; in short, every thing that could conspire to bring a virtuous king to the most fearful end. But B., who had learned, by his disgraceful attempt on Cadiz, that he was unequal to a war against Spain, did not hesitate to engage in a war against France. He had gone to Paris to solemnize, in the name of the king, his marriage with the daughter of Henry IV. Here he dared to raise his eyes to the queen of France. As this princess dismissed him with indulgence rather than indignation, he desired to return to the French court as English ambassador. His rashness, however, did not remain unobserved; and Louis XIII wrote to him to forbid his cherishing the thought of this journey. In order to avenge himself for this prohibition, B. engaged with the Protestants of Rochelle in a war against France. This enterprise, and the assault of the island Rhé (1627), was more disgracefully conducted than the attempt on Cadiz. B., at the same time minister, admiral and general, seemed to make it his object to dishonor himself in all three capacities. After having

excited the people of Rochelle to a sedition, only to deliver them to the vengeance of Richelieu, and after having sacrificed a third of the British army, he returned to England, despised and execrated as much by his fellow-citizens as by his enemies. Pecuniary necessity compelled him to call a new parliament. B. opened it with the declaration, that the king might have done without it, and that, if money was refused, his majesty would find other means to supply his wants. Thus he scattered the seeds of discord between the king and people. In the course of the debates, he was obliged to hear himself called the author of the public distress, while the king's heart was acknowledged to be the sanctuary of all the virtues. Without knowing when to yield and when to resist, he contended most violently against the famous petition of rights; but he suddenly ceased his resistance, when he heard that an impeachment was preparing against him in the house of commons. The complaints against him, however, continued; but the house of commons contented itself, instead of a solemn impeachment, with a petition, that the king would remove him from his person and his council, as the author of the public calamities. The only reply of the monarch was a sudden dissolution of the parliament. Charles resolved to attempt anew the relief of the Protestants of Rochelle. Count Denbigh was appointed to command the expedition, but soon after returned without accomplishing any thing, after having disgraced the banner of England by his inefficiency. The king now ordered B. to put himself at the head of a new armament, which was fitted out with incredible despatch. The duke was obliged to submit to the command, and was on the point of embarking at Portsmouth, when, in Aug., 1628, surrounded by courtiers, guards and soldiers, he fell under the dagger of Felton, a subaltern officer.—Thus died a man, whose name suggests the idea of the most unlimited power; who had braved the denunciations of the two houses of parliament, the hatred of Richelieu and Olivarez, and even the displeasure of the two kings in whose names he ruled. At the moment of his death, he had regained the favor of his master by the activity of his zeal, and, confiding in the immense resources with which he was surrounded, was looking forward to victory.

Buckingham, George Villiers, duke of, son of the preceding, was born at Wallingford-house, in Westminster, Jan. 30, 1627. After studying at Trinity college, Cambridge, he travelled abroad, and, on his return home, after the commencement of the civil war, he was presented to the king at Oxford. He served in the royal army, under prince Rupert and lord Gerard. His estate was seized by the parliament; but, having obtained the restoration of it, he travelled, with his brother, into France and Italy. In 1648, he returned to England, and was with Charles II in Scotland, and at the battle of Worcester. He followed that prince abroad, and served, as a volunteer, in the French army in Flanders. He afterwards returned to England, and, in 1657, married the daughter of lord Fairfax, by which means he repaired the ruin of his fortune in the royal cause. He, however, preserved the favor of Charles II, and, at the restoration, was made master of the horse. He also became one of the king's confidential ministers, who were designated by the appellation of the *cabal*. His political conduct was, like his general behavior, characterized by unprincipled levity and imprudence. In 1666, he engaged in a conspiracy to effect a change of the government; notwithstanding which, he recovered the favor of king Charles, which he repeatedly abused. The profligacy of his private life was notorious. He seduced the countess of Shrewsbury, and killed her husband in a duel; and he was more than suspected of having been the instigator of the infamous colonel Blood to his brutal outrage against the duke of Ormond, whom he attempted, with the assistance of other ruffians, to carry to Tyburn, and hang on the common gallows. In 1676, he was, together with the earls of Shaftesbury and Salisbury, and lord Wharton, committed to the Tower for a contempt, by order of the house of lords; but, on petitioning the king, they were released. After plotting against the government with the Dissenters, and making himself the object of contempt to all parties, he died, neglected and unregretted, at Kirkby Moorside, in Yorkshire, April 16, 1688. Pope (Moral Essays, epistle 3d) has strikingly described his death. His abilities were far superior to those of his father; and, among his literary compositions, the comedy of the Rehearsal may be mentioned as a work which displays no common powers, and which greatly contributed to the correction of the public taste, which had been corrupted by Dryden, and other dramatists of the age.

Buckler. (See *Shield*.)

Bŭckler, John, under the name of *Schinderhannes*, was the leader of a band of robbers, on the banks of the Rhine, towards the end of the last century. Born of indigent parents, he entered into the service of an executioner. He stole some skins from his master, and eloped, but was apprehended, and condemned to be scourged. This punishment, publicly inflicted on him, as he himself said, determined the character of his future life. Without knowing what to undertake at this juncture, he wandered about stealing sheep. He was a second time brought to justice, escaped, and connected himself, at Fink, with Rothbart, the leader of a band of robbers. Being seized again, he again escaped, and returned to his old acquaintance. He was apprehended once more, and escaped anew. He now resolved upon highway robbery, and collected a large band, which soon struck terror into all the surrounding country. He was not entirely destitute of good qualities. He often assisted the poor, and relieved the distresses of those who were severely treated by his band. Political commotions drove him to the right bank of the Rhine, where he married one Juliet Blasius. A song which he composed on her was played at all the fairs and religious festivals throughout the adjacent country. About this time, his followers began to rob houses; and carried on their lawless trade so publicly, that the Jews, who were most annoyed by them, sent to treat with B. At length Schinderhannes was taken prisoner, and brought to Frankfort. He confessed immediately his true name, and a great part of his crimes. He was then given up, with his comrades, to the tribunal at Mentz. Here he confessed many facts, thinking, that, as he had never committed murder, he would not be condemned to death. After his condemnation, he still continued to hope for pardon, and, till the last moment of his life, showed the greatest presence of mind. He was guillotined Nov. 21, 1803.

Buckminster, Joseph Stevens, celebrated as a pulpit orator and man of letters, was born at Portsmouth, New Hampshire, May 26, 1784. His father was eminent among the clergy of that state, and he himself manifested, in his boyhood, such talents and dispositions as gave assurance of his success in the same career. In 1797, he entered Harvard college, Cambridge. In the year 1800, he received the honors of the university with the distinction due to his uncommon proficiency in the studies of the institution, and to the excellence of the oration which he delivered on the literary character of different nations. After leaving college, he devoted himself for more than four years to theology and general literature. In Oct., 1804, at Boston, he preached for the first time, and, in the following year, accepted an invitation from a religious society in that place, to become their minister. The fatigue and agitation which he suffered at his ordination threw him into a severe illness of two months duration. On his recovery, he devoted himself ardently to his clerical duties, but his zeal aggravated a predisposition to epilepsy, which had been felt some years before. The increase of this dreadful disorder rendered a voyage to Europe expedient. He embarked for England in 1806, remained for some months in that country, went through Holland to Switzerland, and thence proceeded to Paris, where he passed nearly half a year. After revisiting England, he returned to his native land, not, indeed, cured of his malady, but generally more vigorous in constitution, and enriched with a large additional store of knowledge. No American of his age had made a more favorable impression abroad. His parishioners welcomed him back with enthusiasm, and he requited their esteem by an admirable discharge of all his duties. His sermons placed him in the first rank of popular preachers. He also contributed valuable and beautiful papers to the periodical publications of the day, besides preparing a number of occasional addresses of distinguished merit. In 1808, he superintended an American edition of Griesbach's Greek Testament, and wrote much in vindication and praise of this author's erudition, fidelity and accuracy. In 1810, he digested a plan of publishing all the best modern versions of the prophetical books of the Old Testament; but the whole design failed for want of public patronage. In 1811, he was appointed the first lecturer on Biblical criticism at the university of Cambridge, on the foundation established by Samuel Dexter. While he was laboriously preparing for the execution of this office, a violent fit of epilepsy at once destroyed his noble and affluent intellect, and gave a shock to his frame, which he survived only a few days. He died June 9, 1812, at the completion of his 28th year.—Mr. Buckminster possessed a fine face, an easy and winning address, a cheerful temper, and the power of gaining a multitude of friends and admirers. In 1814, his sermons were

collected, and published in an octavo volume, to which is prefixed a well-written memoir of his life and character. These remains have been extensively circulated. They are highly valuable in every respect, and fitted to excite universal regret at the premature fate of the accomplished and virtuous author. A second volume has appeared very recently (Boston, 1829).

Buckwheat, or Brank, is a black and triangular grain, produced by a plant of the *persicaria* tribe (*polygonum fagopyrum*), with somewhat arrow-shaped leaves, and purplish-white flowers.—Buckwheat was first brought to Europe from the northern parts of Asia, and first cultivated in England about the year 1600. The flowers appear about July, and the seeds ripen in October; and so tender are the plants, that a single night's sharp frost will destroy a whole crop. As a grain, buckwheat has been principally cultivated for oxen, swine and poultry; and, although some farmers state, that a single bushel of it is equal in quality to two bushels of oats, others assert, that it is a very unprofitable food. Mixed with bran, chaff or grain, it is sometimes given to horses. The flower of buckwheat is occasionally used for bread, but more frequently for the thin cakes called *crumpets*. In Germany, it serves as an ingredient in pottage, puddings, and other food. In Pennsylvania, it is very extensively used, throughout the winter, in cakes, which are cooked upon a griddle. Beer may be brewed from it; and by distillation it yields an excellent spirit.—The best mode of harvesting this grain is said to be by pulling it out of the ground like flax, stripping off the seeds with the hand, and collecting these into aprons or cloths, tied round the waist.—Buckwheat is much cultivated in the domains of noblemen, possessed of landed property, as a food for pheasants. With some farmers, it is the practice to sow buckwheat for the purpose only of ploughing it into the ground, as a manure for the land. Whilst green, it serves as food for sheep and oxen; and, mixed with other provender, it may also be given with advantage to horses. The blossoms may be used for dyeing a brown color. It is frequently cultivated in the Middle U. States as food for bees, who are very fond of it, and to whose honey it imparts a flavor by no means unpleasant.—The principal advantage of buckwheat is, that it is capable of being cultivated upon land which will produce scarcely any thing else, and that its culture, compared with that of other grain, is attended with little expense.

Bucolics. (See *Pastoral Poetry*.)

Buda (in German, *Ofen*) is the Hungarian name of the capital of Hungary, situated on the west bank of the Danube, opposite Pest. It consists of the Upper Town, which is fortified, and lies, with the castle, on a hill; of the Lower Town, or Waterstadt, which lies at the foot of the hill, and is connected with Pest by a bridge of boats; of the Neustift, in which is the remarkable Trinity pillar, 52 feet high; and of the Taban, called, in German, *Raitzenstadt*, from being almost entirely occupied by the Rascians, a Sclavonian race. There are three other parts inhabited by Germans and Hungarians. The population is 28,500, exclusive of the court of the palatine, the officers of government, the military and the clergy. Among the public buildings are the royal fortress, in which the crown is kept, the arsenal, the cannon foundery, the new observatory on the Blocksberg. The trade in wine, which the environs produce of an excellent quality, is the chief occupation of the inhabitants. There are also manufactures of silk, leather, tobacco, copper and iron. The baths are efficacious in palsy, weakness of limbs, and similar complaints. The castle was chosen as a place of residence by the emperor Louis I; and king Matthias I founded the library, which was destroyed by the Turks, in whose hands B. remained from 1530 till 1686, when it was taken by storm by the duke of Lorraine. The castle was then destroyed, but was rebuilt by the empress Maria Theresa for the university, which was removed from Tyrnau to Buda in 1777, and which has subsequently been removed to Pest. Lon. 19° 2′ E.; lat. 47° 30′ N.; distant 120 miles S. E. from Vienna.

Buddha, the founder of a very ancient religion, called after him. His worship, after the Bramins had put a stop to it in India, spread to Japan, Thibet and China, where, as well as in Ceylon, it exists at the present day. Ritter, in his *Vorhallen Europäischer Völkergeschichten* (Introduction to the Histories of the European Nations), advances the opinion, that the Buddhists also migrated to the N. W. to the shores of the Black sea, to Colchis, to the modern Mingrelia, and thence to Thrace, where they laid the foundation of the civilization of the Pelasgi and Hellenes. Even in the doctrine of Asa, in the extreme north, traces of Buddhism have been thought to appear. According

to Abel Remusat, who cites the Japan Encyclopedia, in the *Journal des Savans*, Jan. 1821, Buddha, whose historical name was Tshakia-muni, was born under the reign of Tshao-wang, of the dynasty of Tsheu, 1029 B. C., and died under the reign of Mou-wang, 950 B. C. Before his death, he intrusted his disciple Mahakaya, a Bramin in the kingdom of Makata, which lay in the centre of India, with his mysteries. This Mahakaya, who lived under Hio-wang, 950 B. C., is the first saint or patriarch of Buddhism, which was left by him to his successor, Ananta. The Japan Encyclopedia enumerates 33 patriarchs, including Mahakaya, in chronological succession, each of whom chose his successor, and transmitted to him the secret doctrine of Tshakia-muni, who was afterwards worshipped as a god, under the name of Buddha. Several of them died (or, to use the language of the Buddhists, emigrated) voluntarily in the flames. Among them, Maming, the successor of Buddha (by the Chinese called *Phu-sa;* in Sanscrit, *Deva-Bodhisatua*), who gave names to the gods of the second class, was worshipped as his son, born from his mouth, because he perfected the doctrine of Buddha by his own philosophy, which is a metaphysical allegorical mysticism. His epoch must be fixed, according to the above-mentioned work, in 332, under the reign of Hian-wang, 618 years after the death of Tshakia-muni. The 28th patriarch, Bodhidhorma, was the last who lived in Hindostan. He afterwards fixed his residence in China, near the famous mountain Sung. He died A. D. 495. The secret of his doctrine was left by him to a Chinese, who was the 29th patriarch. After him, the above-mentioned book gives the names of four Chinese, who succeeded to the same dignity. The last of them died A. D. 713. Their history, like that of many other saints, is mixed with fables: their manner of living was the same as what the ancients report to us of the Gymnosophists and Samaneans. They devoted themselves to religious exercises and constant contemplation, and condemned themselves to the most severe abstinence; nay, several of them, as we have mentioned, sealed their belief in the transmigration of souls with a voluntary death. From that Indian patriarchate originated, A. D. 706, the sacerdotal dignity, which is common in China, and among the Monguls, with the title *spiritual prince of the law*. These priests are, at the same time, a sort of confessors to the emperors. From this priesthood afterwards sprung the hereditary dignity of Grand Lama, in Thibet; and, in process of time, the whole hierarchal system, when the monastical life of the Buddhists required regular superiors, or inferior lamas. Besides many other monuments of the ancient worship of Buddha, there are two particularly remarkable—the ruins of the gigantic temple Boro-Budor, in Java, with works of sculpture; and the five large subterranean halls, called *Pantsh-Pandu*, probably an old temple of the Buddhists, near the city of Bang, on the way from Guzurat to Malwa. Tradition ascribes these astonishing works of ancient Indian architecture and sculpture, which far surpass the skill of the modern Hindoos, to the Pandus, the heroes of Indian mythology. An accurate description of these monuments is contained in the second volume of the Transactions of the learned society at Bombay (London, 1819).

Budé, Guillaume; more generally known under the Latin form *Budæus;* one of the greatest French scholars of his time; born at Paris in 1467, died in 1540; was royal librarian, and master of *requêtes;* studied at Paris and Orleans at first without success, on account of his dissipated life in his early youth. From his 24th year, he devoted himself to study with the greatest zeal, in particular to belles-lettres, to mathematics, and to Greek. Among his philosophical, philological and juridical works, his treatise *De Asse et Partibus ejus*, and his commentaries on the Greek language, are of the greatest importance. By his influence, the *collége royal de France* was founded. He enjoyed, not only as a scholar, but also as a man and citizen, the greatest esteem. His works appeared at Bâle, 1557, 4 vols. folio.

Budessin. (See *Bautzen.*)

Budgell, Eustace, an ingenious writer, was born at St. Thomas, near Exeter, about 1685, and educated at Christ church, Oxford; after which he went to London, and was entered of the Inner Temple, where his inclinations led him to neglect his profession, and study polite literature. During his stay here, he contracted a friendship with Addison, who, in 1717, when principal secretary of state in England, procured for B. the place of accountant and comptroller-general of the revenue in Ireland. He lost these places when the duke of Bolton was appointed lord-lieutenant, in 1718, by a lampoon on his grace. He then returned to England,

where, in 1720, he lost £20,000 by the South sea bubble. He afterwards tried to get into parliament, and spent £5,000 more in unsuccessful attempts, which completed his ruin. In 1727, the duchess-dowager of Marlborough gave him £10,000 for the purpose of getting him into parliament; but his attempts were ineffectual. In 1733, he commenced a weekly paper, called the *Bee*, which was very popular. On the death of doctor Tindal, the author of Christianity as old as the Creation, £2,000 was left to B., by his will. This sum was so disproportionate to the testator's circumstances, and the legacy so contrary to his known intentions, that suspicions arose respecting the authenticity of the testament; and, upon its being contested by his nephew, it was set aside. The disgrace of this affair had such an effect upon this unhappy man, that, on May 4th, 1737, taking a boat at Somerset stairs, he threw himself overboard, with stones in his pocket, and immediately sank.—Besides the above-mentioned works, he also possessed a share in the Craftsman, wrote several papers in the Guardian, with the history of Cleomenes, (8vo.,) and memoirs of the lives of the Boyles, (8vo.)

Budget, in the parliamentary language in England, means the minister's proposed plan of taxation for the ensuing year; and comprehends a general view of the national debt, income and expenditure, ways and means of raising supplies, &c., with the actual product of the preceding budget. It is brought forward by the chancellor of the exchequer. The term has also been introduced into France, where the minister of finances presents the budget to the king and chambers.

Budweiss; a circle and city of Bohemia. The circle is separated from Austria by high mountains, in which the Muldau has its source: it contains extensive forests and sheep-walks, and abounds in game and fish. The city of B. is a mining town on the Muldau, with manufactures of saltpetre and cloth. Population of the circle, 170,000; of the city, 4,600. The latter lies in lon. 14° 20′ E.; lat. 49° 2′ N.

Buenaventura; a settlement, and Spanish mission, on the coast of New California. Lon. 118° 58′ W.; lat. 34° 16′ N. It was founded in 1782, and contains 950 inhabitants. It has a tolerably good roadstead, and the soil and climate are very favorable to the production of a great variety of fruits.

Buenaventura; a seaport in Colombia, on the bay of Choco, at the mouth of a river of the same name; 90 miles W. N. W. Cali, 200 W. by S. Santa Fé de Bogota. It is supported by the vessels that touch at it; the entrance is difficult, and the climate unhealthy. It is the port of Santa Fé de Bogota, Popayan and Cali. Lat. 3° 56′ N.; lon. 77° 42′ E. There are many small settlements and villages of this name in Spanish America.

Buen Ayre, or Bonair; a small island near the coast of South America, belonging to the Dutch, 50 miles in circumference, inhabited chiefly by Indians, with a small mixture of Europeans; mountainous; producing a few cattle, goats, large quantities of poultry, and a considerable quantity of salt. It has springs of fresh water. On the S. W. side is a good harbor and road. 52 miles E. Curaçoa. Lon. 67° 36′ W.; lat. 12° 26′ N.

Buenos Ayres; an extensive country of South America, formerly belonging to Spain, and styled the *viceroyalty of La Plata*, or of *Rio de la Plata*; but since the declaration of independence, in 1816, it has assumed the name of the *United Provinces of South America*. It is bounded N. by Bolivia, E. by Brazil, S. E. by the Atlantic ocean, S. by Patagonia, and W. by Chili and the Pacific ocean. It comprehends most of the valley or basin of the great river La Plata, and is watered by the river La Plata, and its tributaries, the Parana, Paraguay, Uraguay, Pilcomayo and Rio Grande, and also by the Colorado and Negro.—The great chain of the Andes extends along the western side, and the western and northern parts of the country are mountainous. Most of the other portions, which comprise the greater part of the whole country, consist of one vast and uniform plain; and extensive tracts which border on the river are liable to inundation. In the southern division are found immense *pampas*, or plains, which extend into Patagonia, and are upwards of 1200 miles in length, and 500 in breadth. They are covered with tall, waving grass, which affords pasture to vast numbers of cattle and wild horses, and have few interruptions from forests or eminences.—The climate is different in different parts, but generally healthy. On the plains, the atmosphere is moist, and, in summer, the heat is excessive, with frequent rains, accompanied by tremendous thunder and lightning.—A large part of the country has a very fertile soil, adapted to the growth of wheat, maize, barley, tobacco, sugar, wine and fruits; but agriculture is much neglected. A

great portion of the wealth of this country consists in the immense herds of cattle and horses which graze upon its plains. The principal exports are hides, tallow, beef, gold and silver. It has valuable mines of gold, silver, copper, lead and tin.—Some of the principal towns are Buenos Ayres, Monte Video, Cordova and Assumption. (Respecting the relations of Buenos Ayres and Brazil, see *Brazil.*)

Buenos Ayres, or Nuestra Señora de Buenos Ayres; a city of South America, and capital of the country to which it gives name, on the S. W. side of the La Plata, 66 leagues from its mouth; first built in the year 1535. Lon. 58° 31′ W.; lat. 34° 35′ S. The population is uncertain, and, within a few years, has been variously stated at 50,000, 70,000, and 100,000. About one fourth of the inhabitants are whites; the rest are Indians, Negroes and mixed breeds. The situation is agreeable and healthy, and the city derives its name from the salubrity of its climate. The temperature is nearly the same throughout the year. The city is built with great regularity, and the principal streets are straight and regular, and some of them are paved. They are broad, with side-walks, but, from the great scarcity of stone, are generally unpaved in the middle. The houses are mostly built of brick or chalk, with flat roofs, many of them of two stories, though the greater part of only one. They are generally plastered on the outside, but now appear somewhat shabby. The public buildings are a palace, a royal chapel, a cathedral, a college, 2 hospitals, 4 monasteries, 2 nunneries, 10 or 15 churches, a public library of nearly 20,000 volumes, an academy, and 8 public schools. Some of these public buildings are large and splendid.—There is no harbor at Buenos Ayres, nor so much as a mole to facilitate the landing of boats. Ships can only come within three leagues of the town; there they unload their goods into boats, which enter a little river named *Rio Chuelo*, from whence the merchandise is brought in carts to the town, which is about a quarter of a league from the landing places. The ships which want careening, or take lading at Buenos Ayres, go to the bay of Baragon, a kind of port about 12 miles S. E. of the town.—The environs of this city are well cultivated, furnishing all the necessaries of life in abundance, except wine, which is brought from Spain, or from Mendoza. —The inhabitants have country-houses there, called *quintas*. Wood is very dear at Buenos Ayres and at Monte Video. In the neighborhood of these places are only some little shrubs, hardly fit for fuel. All timber for building houses, and constructing and refitting the vessels that navigate in the river, comes from Paraguay in rafts.—After the province of Buenos Ayres withdrew from the government of Spain, the city of B. was the temporary seat of the central government, and the congress of the United States of South America. In 1826, it was made, by the congress of the United Provinces of La Plata, the permanent seat of government, and the capital of the confederacy. It is also the seat of a bishop. The city has an extensive trade in ox-hides and tallow, which are disposed of, principally, to the British and people of the U. States. The Germans and Dutch likewise trade with B. Much of the commerce of Brazil, Chili, Peru and Paraguay is also carried on through this city. From 300 to 400 foreign ships annually enter this port.—The climate of B. is mild. There are very few days in winter in which water is frozen.—In 1806, B. was conquered by an English squadron, under the command of admiral Popham and general Beresford. Soon after, the inhabitants, having recovered from their terror, attacked the English by surprise, and made a great slaughter among them. In the following year, Whitelock and Crawford came over with reënforcements. They were quietly permitted to enter the city, and were then attacked with such fury, that a third part of their number was destroyed, and the remainder were glad to conclude a truce.

Buen Retiro; a royal summer-residence, on an elevated ground, near Madrid, built, with much splendor, by the duke of Olivarez, at the beginning of the 17th century. It has a theatre, park, and some valuable pictures. In 1808, when the French attacked Madrid, Dec. 5, it was the centre of the conflict, and was plundered. The French afterwards fortified it, and used it as a citadel.

Buffalo; a post-town of New York, the capital of Erie county, situated at the eastern end of lake Erie, at the efflux of Niagara river, and at the west end of the Erie canal; 296 miles W. of Albany, 240 E. of Sandusky. Population in 1810, 1508; in 1820, 2095; in 1825, 5140. The village of B. is very advantageously and finely situated on a handsome plain, near the entrance of Buffalo creek or river into lake Erie, on the channel of

communication between the Atlantic ocean and the lakes. It has been, for several years past, a very flourishing place, and has an extensive trade. In 1813, this village, which then contained about 100 houses, was burnt by the British, in retaliation for the burning of Newark, in Upper Canada, by the Americans. —*Black Rock* is a considerable post-village, within the township of B., two miles from the village of B. It is situated at the ferry across the Niagara river, which is here about three quarters of a mile wide.

Buffalo; in America, a name misapplied to the *bison*. (q. v.) It properly belongs to a species of ox (*bos bubalus*), found in various parts of India. This species, in the wild state, lives in herds of considerable numbers, frequenting moist and marshy situations. It is naturally fierce and stubborn, and is with difficulty subjugated. The bellowing of the buffalo is hoarser than that of the common bull. The female begins to breed at 4 years of age, and ceases at 12. The term of life in this species is from 18 to 25 years. One variety of this species has horns of vast size and length. This is the *arni* or *arnee*. The horns are turned laterally, and flattened in front. They are wrinkled on the concave surface, 4 or 5 feet long, and 8 or 10 from tip to tip. The buffalo is 7 or 8 feet long, by 4 in height, and is generally of a black color. The skin is covered by a harsh and thinly-scattered hair.

Buffet; anciently, a little apartment, separated from the rest of the room, for the disposing of china, glass, &c. It is now a piece of furniture in the dining-room, called also a *side-board*, for the reception of the plate, glass, &c. In France, the principal houses have a detached room, called *buffet*, decorated with pitchers, vases, fountains, &c.

Buffon (George Louis Leclerc), count of, one of the most celebrated naturalists and authors of the 18th century, born at Montbard, in Burgundy, 1707, received from his father, Benjamin Leclerc, counsellor to the parliament of his province, a careful education. Chance connected him, at Dijon, with the young duke of Kingston, whose tutor, a man of learning, inspired him with a taste for the sciences. They travelled together through France and Italy, and B. afterwards visited England. In order to perfect himself in the language without neglecting the sciences, he translated Newton's Fluxions and Hales's Vegetable Statics. After some time, he published some works of his own, in which he treated of geometry, natural philosophy, and rural economy. He laid his researches on these subjects before the academy of sciences, of which he became a member in 1733. The most important were on the construction of mirrors for setting bodies on fire at a great distance, as Archimedes is said to have done, and experiments on the strength of different kinds of wood, and the means of increasing it, particularly by removing the bark of the trees some time before felling them. B., in his earlier years, was animated only by an undefined love of learning and fame, but his appointment as intendant of the royal garden, in 1736, gave his mind a decided turn towards that science in which he has immortalized himself. Considering natural history in its whole extent, he found no works in this department but spiritless compilations and dry lists of names. There were excellent observations, indeed, on single objects, but no comprehensive work. Of such an one he now formed the plan, aiming to unite the eloquence of Pliny and the profound views of Aristotle with the exactness and the details of modern observations. To aid him in this work, by examining the numerous and often minute objects embraced in his plan, for which he had not the patience nor the physical organs requisite, he associated himself with Daubenton, who possessed the qualities in which he was deficient; and, after an assiduous labor of 10 years, the two friends published the three first volumes of the Natural History, and, between 1749 and 1767, 12 others, which comprehend the theory of the earth, the nature of animals, and the history of man and the viviparous quadrupeds. The most brilliant parts of them, the general theories, the descriptions of the characters of animals, and of the great natural phenomena, are by B. Daubenton limited himself to the description of the forms and the anatomy of the animals. The nine following volumes, which appeared from 1770 to 1783, contain the history of birds, from which Daubenton withdrew his assistance. The whole shape of the work was thus altered. Descriptions, less detailed, and almost entirely without anatomy, were inserted among the historical articles, which, at first, were composed by Guenau de Montbeillard, and afterwards by the abbé Bexon. B. published alone the five volumes on minerals, from 1783 to 1788. Of the seven supplement-

ary volumes, of which the last did not appear until after his death, in 1789, the 5th formed an independent whole, the most celebrated of all his works. It contains his Epochs of Nature, in which the author, in a style truly sublime, and with the triumphant power of genius, gives a second theory of the earth, very different from that which he had traced in the first volumes, though he assumes, at the commencement, the air of merely defending and developing the former. This great labor, with which B. was occupied during 50 years, is, however, but a part of the vast plan which he had sketched, and which has been continued by Lacépède, in his history of the different species of cetaceous animals, reptiles and fishes, but has remained unexecuted as far as regards the invertebral animals and the plants. There is but one opinion of B. as an author. For the elevation of his views, for powerful and profound ideas, for the majesty of his images, for noble and dignified expression, for the lofty harmony of his style in treating of important subjects, he is, perhaps, unrivalled. His pictures of the sublime scenes of nature are strikingly true, and are stamped with originality. The fame of his work was soon universal. It excited a general taste for natural history, and gained for this science the favor and protection of nobles and princes. Louis XV raised the author to the dignity of a count, and d'Argivilliers, in the reign of Louis XVI, caused his statue to be erected, during his life, at the entry of the royal cabinet of natural curiosities, with the inscription *Majestati naturæ par ingenium*. The opinions entertained of B. as a natural philosopher, and an observer, have been more divided. Voltaire, d'Alembert, Condorcet, have severely criticised his hypotheses, and his vague manner of philosophizing from general views. But although the views of B. on the theory of the earth can no longer be defended in detail, he will always have the merit of having made it generally felt, that the present state of the earth is the result of a series of changes, which it is possible to trace, and of having pointed out the phenomena which indicate the course of these changes. His theory of generation has been refuted by Haller and Spallanzani, and his hypothesis of a certain inexplicable mechanism to account for animal instinct, is not supported by facts; but his eloquent description of the physical and moral developement of man, as well as his ideas on the influence which the delicacy and developement of each organ exert on the character of different species of animals, are still of the highest interest. His views of the degeneracy of animals, and of the limits prescribed to each species by climates, mountains and seas, are real discoveries, which receive daily confirmation, and furnish to travellers a basis for their observations, which was entirely wanting before. The most perfect part of his work is the History of Quadrupeds; the weakest, the History of Minerals, in which his imperfect acquaintance with chemistry, and his inclination to hypothesis, have led him into many errors. His last days were disturbed by the painful disease of the stone, which did not, however, prevent the prosecution of his great plan. He died at Paris, April 16, 1788, at the age of 81 years, leaving an only son, who perished, in the revolution, by the guillotine. B. was of a noble figure, and of great dignity of manners. His conversation was remarkable for a simplicity but little in accordance with the style of his writings. The best edition of his Natural History is that published from 1749 to 1788, in 36 volumes.

Buffone (*Italian*); buffoon; a comic singer in the *opera buffa*, or the Italian *intermezzo*. The Italians, however, distinguish the *buffo cantante*, which requires good singing, from the *buffo comico*, in which there is more acting. *Buffoonery* is the name given to the jokes which the buffoon introduces. The word is, no doubt, borrowed from the Low Latin, in which the name *buffo* (cheeked), was given to those who appeared on the theatre, with their cheeks puffed up, to receive blows on them, and to excite the laughter of the spectators. Hence *buffa*, cheeks; *buffare*, to puff up the cheeks. Afterwards, the name came to signify a *mimic*, a *jester* in general.

Bugenhagen, John, also *Pomeranus*, *doctor Pommer*, was of great service to Luther in the reformation. He was born in 1485, at Stettin, and, in 1505, was made rector of the school in Treptow. He fled from his Catholic superiors to Wittenberg, in 1521, where he was made, in 1522, professor of theology. Luther derived assistance from his profound exegetical learning, in preparing his translation of the Bible. In 1525, he gave occasion for the controversies about the sacrament, by a work against Zwinglius, on the communion. He acquired more reputation by his excellent *Interpretatio in Librum Psalmorum* (Nuremberg, 1523).

He effected the union of the Protestant free cities with the Saxons, and introduced into Brunswick, Hamburg, Lübeck, Pomerania and Denmark, and many other places, the Lutheran service and church discipline. For the Lower Saxons, he translated the Bible into Low German (Lübeck, 1533). He was a faithful friend to Luther, and delivered his eulogy. Together with Melancthon, he composed the Interim of Leipsic. He died in 1558. He wrote also a History of Pomerania.

Bugge, Thomas, born in 1740, at Copenhagen, professor of mathematics and astronomy at the university in that city, and in the royal marine, has rendered much service to astronomy and geography by his own observations, and by the education of young men, from many of whom we have valuable observations in Norway, Iceland, Greenland, and several parts of the East and West Indies. He caused more correct surveys to be made in Denmark, for the equalization of the land-taxes, and had the principal part in the preparation of the excellent map of Denmark. His works are, Elementary Principles of spherical and theoretical Astronomy (1796), Elementary Principles of pure Mathematics (Altona, 1797), Description of the Method of Measurement in the Construction of the Danish Maps and Charts. He died in 1815.

Bugle-Horn. (See *Horn.*)

Buhrstone. (See *Quartz.*)

Builth; a small town of Wales, on the Wye, 171 miles W. N. W. of London. It was probably the Roman station *Bullæum*, and Roman relics are yet occasionally discovered there. The Britons built a castle there, when driven from their country by the Saxons, which was occupied by the English after the conquest. Llewellyn, the last Welsh prince, was slain in the neighborhood, in an engagement between the Welsh and English. Lon. 3° 16′ W.; lat. 52° 8′ N.

Buinaah Point; a cape on the west coast of Ireland, in the county of Mayo, on the south side of the entrance into Newport bay. Lon. 9° 45′ W.; lat. 53° 46′ N.

Bukharia. (See *Bucharia.*)

Bukowina. (See *Galicia.*)

Bulac, or Boulac, in Egypt; the port of Grand Cairo, on the Nile, where vessels which bring goods to that city abide; one mile W. of Cairo. It is a large, irregular town, and contains a custom-house, magazines, and a large bazar. In 1799, it was almost destroyed by the French. Niebuhr seems to fix on this as the site of the ancient Litopolis. The baths are fine.

Bulama; an island on the west coast of Africa, one of the Bissgoes. It is 24 miles long and 12 broad, and is situated about two miles from the mouth of the Rio Grande. It is very fertile, but not easy of access. The Bulama association attempted to colonize it, in 1792, but it was soon abandoned. Lon. 14° 38′ W.; lat. 11° N.

Bulgaria, European or Little, a Turkish province, which owes its name to the Asiatic race of Bulgarians (q. v.), who overran it, was the *Mœsia Inferior* of the Romans. Its capital is Sophia, and it is divided, by the Turks, who conquered it in 1392, into four sangiacats, forming a part of the pachalic of Romelia. It is nearly in the form of a triangle, enclosed by the Danube on the north, the Black sea on the east, the Balkan (q. v.) or mount Hæmus on the south and west. It is 36,870 square miles in extent, with a population of 1,800,000 inhabitants, engaged in agricultural labors, peaceful and industrious, and mostly members of the Greek church. The whole province, except in the neighborhood of the Danube and the Black sea, is rugged and mountainous. From the eastern extremity of the Balkan, a branch runs north-easterly, nearly parallel with the Euxine, and the streams flow northerly and westerly to the Danube, or south-easterly to the sea. The soil is very productive; all sorts of grain, cattle, wool, iron and wine are raised in abundance, and the province is considered by the Turks the granary of Constantinople. About Philippopoli are large rice farms. A very fine wool is brought from the pastures near Nicopoli, and silk, honey, wax and tobacco are important articles of produce. Dobrudsha, the sandy plain on the Black sea, is famous for its horses, which are small, but strong and well-shaped. Some of the principal towns, besides those already mentioned, are Silistria, taken by the Russians, June 28, 1829, 216 miles N. of Constantinople, Brailow (q. v.), Varna (q. v.), Chumla or Schumla (q. v.), which have been the objects of violent contest between the Russians and Turks in the war now existing between them.

Bulgarians, or *Voulgarians*; an ancient Turkish or Tartar nation, which, in the fourth century, was settled on the Volga. The ruins of their former capital may still be seen in the neighborhood of Kazan. Their kingdom, which occupied a part of the Asiatic Sarmatia of the Greeks, is

called *Great Bulgaria*, and is now comprehended in the Russian government of Orenburg. They afterwards removed to the countries between the Bog and the Danube, and called their territories *Second Bulgaria*. They passed the Danube in 539, made themselves masters of the coasts of the Black sea, as far as mount Hæmus, subdued the Sclavonic tribes of that region, and founded the kingdom of Black Bulgaria. They penetrated Thrace, Macedonia and Thessaly, and their wars with the Greek empire were very sanguinary. Whole provinces were reduced to deserts, called *Bulgarian forests*, and the Greeks, not less barbarous, put out the eyes of 15,000 Bulgarian prisoners in one day. Their kingdom, which extended, in 1010, over Macedonia, Albania and Servia, was destroyed by the emperor Basil II, and the dispersed tribes took refuge in Turkey, in 1185. Those who remained in B. revolted, and formed, with the Walachians, a new kingdom, which was sometimes the ally and sometimes the vassal of the Byzantine empire, until it was finally conquered by the Ottomans, in the 14th century.

Bulimia. The persons attacked by this disorder are tormented with an insatiable hunger. When their stomach is surfeited, they are seen to faint, and throw off the food which they have taken, half digested, and with violent pain. It usually appears as a concomitant of other diseases. It occurs during certain intermittent fevers, in certain diseases of the stomach and bowels, particularly in such as are produced by the tape-worm; and is also common after fevers, by which the strength of the patient is exhausted. In this last case, it arises from the effort of all parts of the body to supply the lost flesh and strength. In certain cases, however, the extraordinary desire for food seems to be caused by a particular condition of the stomach, which digests with too great rapidity. This is observed sometimes in women during their pregnancy, in young people who exercise too violently, and in persons who take much high-seasoned and heating food. In this case, the desire is not to be considered as a disease, but only as an excessive appetite. As a disease, its consequences are dreadful—leanness, pulmonary fevers, consumption, constipation, dropsy.

Bulkh, or Balkh. (See *Afghanistan.*)

Bulk-Heads; certain partitions or walls built up in several places of a ship between two decks, either lengthwise or across, to form and separate the various apartments.

Bull; the name applied to the males of all the species of ox (*bos*, L.) (See *Ox.*)

Bull; an instrument, ordinance or decree of the pope, treating of matters of faith or the affairs of the church, written on parchment, and provided with a lead seal. The word was originally the name of the seal itself. The papal bulls are commonly designated by the words with which they begin; e. g., the bulls *In cœna Domini*, *Cum inter*, *Unigenitus*, *Ascendente*, &c. A collection of bulls is called *bullary*. Certain ordinances of the German emperors are also called *bulls*. The *golden bull*, emphatically so called, from the seal attached to it being in a gold box, is that fundamental law of the German empire enacted by the emperor Charles IV, in two diets, held in succession, in 1356, at Nuremberg and at Metz, with the assistance of the electors, and, in part, with the assent of the empire. The chief design of the golden bull was to fix, with certainty, the manner of electing the emperor, and whatever was connected with it. Another object was to check the lawless violence of the times, which was not, however, then effected. (For an account of the particular bulls of importance, see the separate articles.)

Bull-Baiting; the barbarous and unmanly sport of setting dogs on a bull, who is tied to a stake, with the points of his horns muffled, and torn to death for the amusement of the spectators. Bears and badgers are baited, even at the present day, in the cock-pits in London, and dog-fights also are exhibited in the same places.

Bull-Dog; a variety of the common dog, called, by naturalists, *canis molossus*, remarkable for its short, broad muzzle, and the projection of its lower jaw, which causes the lower front teeth to protrude beyond the upper. The *condyles* of the jaw are placed above the line of the upper grinding teeth. The head is massive and broad, and the frontal *sinuses* large. The lips are thick and pendulous; the ears pendant at the extremity; the neck robust and short; the body long and stout, and the legs short and thick. The bull-dog is a slow-motioned, ferocious animal, better suited for savage combat, than for any purpose requiring activity and intelligence. For this reason, he is generally employed to guard houses, especially by the butchers, tanners, &c., and this office he performs with great fidelity. The butchers use bull-dogs in catching and throwing

down cattle; and it is surprising to see the apparent ease with which the dog will seize an ox by the nose, and hold him perfectly still, or throw him on his side, at his master's command. In fighting with other dogs, or in attacking animals capable of exciting their fury, bull-dogs display the most ferocious and indomitable spirit. It is stated, in the Sporting Calendar, that they have suffered their limbs to be cut off, while thus engaged, without relinquishing their hold on the enemy. They become very vicious, and sometimes extremely dangerous, as they advance in years, inflicting dreadful bites for the slightest provocation. Indeed, at no period of their lives, will bull-dogs allow even their masters to take liberties with them.

Bullen, Anne. (See *Boleyn.*)

Bullers of Buchan, or Boilers of B.; a large oval cavity in the rocks on the coast of Aberdeenshire, 150 feet deep. Boats enter under a natural arch, near which is a large rock, separated by a deep chasm from the land. Through an aperture, in the middle of this rock, the waves rush with a tremendous noise.

Bulletin (*French*; diminutive of *bulla*); an official report, giving an account of the actual condition of some important affair; thus the bulletin of the army, of his majesty's health, &c. It has acquired great celebrity by the brilliant despatches issued from the French head-quarters, under this name, during the imperial domination. All Europe and America echoed with their accents of blood and victory, until the 29th bulletin of the grand army announced that the tide was rolled back, and that Paris was to share the fate of the other capitals of Europe.

Bulletin Universel des Sciences et de l'Industrie, le, is divided into eight sections, of each of which a number is issued monthly. It is published at Paris, by the French society for the promotion of useful knowledge, under the general direction of the baron Ferussac, assisted by eight editors, one for each section. These divisions are—1. mathematical, physical and chemical sciences; 2. natural history and geology; 3. the medical sciences; 4. agriculture, horticulture, fishing and hunting; 5. technology; 6. geography, statistics, political economy, voyages and travels; 7. philology, antiquities and history; 8. military. (See *Periodicals.*)

Bull-Fights are among the favorite diversions of the Spaniards, who, like all the nations of the south of Europe, are passionately fond of public combats, and exhibitions of strength and agility. The excommunications of the popes have not been sufficient to induce them to abandon this amusement. Charles IV abolished it; but it was revived again by Joseph. The assailants are seldom killed in these sports. The splendid bull-fights formerly exhibited by the king on festival days were very costly. The Spaniards distinguish the *toréo*, in which the bull is killed, from the *corrida de novillos*, where he has his horns tipped with leaden balls (*novillo embolado*), and is only irritated. Bull-fights, in the capital, and in all the larger cities of Spain, are got up by private persons, or for the benefit of some public institution. They are exhibited at Madrid twice a week through the summer regularly, for the benefit of the general hospital. The income from such a spectacle is commonly about 2000 dollars, and the outlay, which goes principally to the combatants, who have their fixed wages, about 1000. The bull-fights are held, at Madrid, in the *Coliseo de los Toros*, an amphitheatre having circular seats, rising one above another, and a row of boxes over them. All the spectators are dressed in their best. The combatants, who make bull-fighting their profession, march into the arena in procession, with some magistrate at their head. They are of various kinds—the *picadores*, combatants on horseback, in the old Spanish knightly garb; the *banderilleros*, combatants on foot, in short, variegated frocks, with banners; and, lastly, the *matador* (the killer). As soon as the corregidor gives the signal, the bull is loosed from the stall. The *picadores*, who have stationed themselves near him, commence the attack. Sometimes a horse is wounded, and the rider is obliged to run for his life. A peculiar kind of foot-combatants, *chulus*, assist the horsemen, by drawing the attention of the bull with their banners; and, in case of danger, they save themselves by leaping over the wooden fence, which surrounds the arena. The *banderilleros* then come into play. They try to fasten on the bull their *banderillas*—hollow tubes filled with powder, having strips of paper wound round them, and small hooks at the ends. If they succeed, the squibs which are attached to them are discharged, and the bull races madly about the arena. The *matador* now comes in gravely, with a naked sword, and aims a fatal blow at the animal. If it is effectual, the slaughtered bull is dragged away, and another is let out from the stall. If a bull is too inactive, the dogs are set upon him;

if he is too violent, several horses are often killed. The bull is more furious in proportion as the heat of the weather is greater. Burlesque scenes accompany the spectacle: apes are trained to spring upon the neck of the bull, without his being able to reach them. Men of straw are set up before him, upon which he exhausts his strength. Some of the foot combatants, likewise, dress themselves grotesquely, to irritate the bull, and amuse the spectators. (See Doblado's *Letters from Spain*, and *A Year in Spain, by a young American* (Boston, 1829).

Bullfinch (*loxia pyrrhula*; L.); a well-known European bird, which has a short, rounded, robust bill, a black cap, and plumage on the back of an ash or dark blue gray color: the inferior parts of the body are reddish. The female is of a grayish red beneath. The bullfinch builds its nest in hedges, and various trees, and feeds chiefly on different seeds and buds of fruit-trees, for which its strong, thick bill is well adapted. The bullfinch is remarkable for the facility with which it is tamed and taught to sing, or even to articulate words. Its natural tones are soft, and, when taught to repeat tunes, by a bird organ, nothing can be imagined more delightfully sweet and clear than its piping. In captivity, it appears to be rather a dull and quiet bird, though it displays much attachment to its feeder, showing evident marks of pleasure at his approach, and singing at his bidding. Bullfinches thus taught are sold at high prices, as much as $20 or $30 being demanded for a single bird. There are species of finch found in America, which might, without much difficulty, be taught to perform as well.

Bullfrog. (See *Frog*.)

Bull, John. (See *John Bull*.)

Bullion is uncoined gold or silver, in bars, plate, or other masses. The word *bullion* was of frequent use in the proceedings respecting the bank of England (see *Bank*), from 1797, when the order of council was issued, that the bank should discontinue the redemption of its notes by the payment of specie, to 1823, when specie payments were resumed; for, by a previous law, the bank was authorized to pay its notes in uncoined silver or gold, according to its weight and fineness. The investigations of the bullion committees, and the various speculations on the subject of bullion, related to the supply of gold and silver, whether coined or not, as the basis of the circulating medium. (See *Currency*.)

Bullock. (See *Ox*.)

Bullock's Museum, Piccadilly, London; a private establishment for the deposit of collections of all sorts, particularly of natural history and ethnography. The following not very scientific classification of the curiosities there is given in the Picture of London: curiosities from the south seas, from America, from Africa; works of art, natural history, specimens of quadrupeds stuffed, birds, reptiles, insects, fish, productions of the sea, minerals, *miscellanea*, halls of arms. This museum is open for the inspection of the curious every week-day (admittance, one shilling), and continual additions are made to it. Here Belzoni deposited his Egyptian collections.

Bullrush. (See *Scirpus*.)

Bull's Bay, or Baboul Bay; a well-known bay in Newfoundland, a little to the north of St. John's harbor, on the east side of the island. Lon. 52° 20′ W.; lat. 47° 25′ N.

Bulmer, William; next to Bensley, the most distinguished printer in England. One of the first productions of his press was an edition of Persius, 1790, 4to. Among his masterpieces are the splendid editions of Shakspeare (1792—1801, 9 vols., folio), from which his establishment was called the *Shakspeare press*; and of Milton (1794—97, 3 vols., folio). He is a particular favorite of the fancy booksellers in England (hence he has most of the printing for the Roxburgh club), and is supported almost solely by them. The unprejudiced will, however, not put him above Bensley. The productions of his press, particularly the works of Dibdin, are disfigured by errors more than is allowable in an artist who aspires to tread in the steps of Didot and Bodoni.

Bülow, Frederic William, count von Dennewitz, royal Prussian general of infantry, knight of several military orders, &c., famous for his victories in the last French and German war, was born in 1755, on his father's estate, Falkenburg, in Altmark. In his 14th year, he entered the Prussian army, and, in 1793, was appointed governor of prince Louis Ferdinand of Prussia. In this capacity, he served with distinction in the campaign on the Rhine. In 1795, his charge of the prince ended, and he received a battalion. In the war of 1806, he was a lieutenant-colonel at the siege of Thorn, and distinguished himself in various battles. In 1808, he was made major-general and general of brigade. When the war against France broke out in 1813, he fought the

first successful battle, at Möckern, April 5; May 2, took Halle, and protected Berlin from the danger which threatened it, by his victory at Luckau, June 4. After the armistice, he commanded the third division of the army, under the crown-prince of Sweden, and saved Berlin a second time by the memorable victory of Grosbeeren, Aug. 23. He relieved the same city a third time, by the great victory at Dennewitz. (q. v.) For this service, the king made him one of the few grand knights of the iron cross, and, after the end of the campaign, bestowed on him the title *count Bülow of Dennewitz*, and made the same hereditary in his family. At the storming of Leipsic, Oct. 19, he took an important part. He distinguished himself equally in Westphalia, Holland, Belgium, on the Rhine, at Laon, and took Soissons and Lafere. After the peace, he was commander-in-chief in East Prussia, and Lithuania. At the opening of the campaign of 1815, he received the chief command of the fourth division of the army, with which he contributed so essentially to the victory of Waterloo, that the king gave him the command of the 15th regiment of the line, which was to bear, in future, the name of the *regiment of Bülow von Dennewitz*. Jan. 11, 1816, he resumed the chief command in Königsberg, in Prussia, and died there, Feb. 25, 1816. B. was highly esteemed, both as a citizen and as a man. He had learned the art of war, in early youth, scientifically, and continued the same study with unremitting diligence, throughout his military course. He was also devoted to literature and the fine arts. Music especially attracted him, and he composed many *motets*, a mass, and the 51st and 100th psalms.

Bülow, Henry von, born at Falkenberg, in Brandenberg, 1770, studied in the military academy at Berlin, and afterwards entered the Prussian service. But he soon retired, and occupied himself with the study of Polybius, Tacitus, and J. J. Rousseau, and then served for a short period in the Netherlands. He afterwards undertook to establish a theatre, but immediately abandoned his project, and visited the U. States; from whence he returned poor in purse, but rich in experience, and became an author. His first work was on the Art of War, in which he displayed uncommon talents. He wrote a book on Money, translated the Travels of Mungo Park, and published, in 1801, his History of the Campaign of 1800. In 1804, he wrote *Lehrsätze des neuern Krieges* (Theory of modern Warfare), and several other military works, among which is Tactics of the Moderns as they should be. In the former, he points out the distinction between strategy and tactics, and makes the triangle the basis of all military operations. This principle of his was opposed by Jomini, and other French writers. His history of the war of 1805 occasioned his imprisonment in Prussia, at the request of the Russian and Austrian courts. He died in 1807, of a nervous fever, in the prison of Riga. He was a follower of Swedenborg.

Bulwark. (See *Bastion.*)

Bum-Boat; a small boat used to sell vegetables, &c., to ships lying at a distance from shore.

Bundelcund; a district of Allahabad, lying between 24° and 26° N. lat. The country is mountainous and stony, and produces all kinds of fruit. It was ceded by the Mahrattas to the British in 1804, by whom it was annexed to the province of Benares. It is famous for the diamonds of Paunah. Square miles, 11,000. Chief towns, Banda, which is the residence of the officers of government; Callinger, &c.

Bungalow; an East Indian term for a house with a thatched roof.

Bungo; a kingdom in Japan, and one of the most considerable in the island of Bungo, or Ximo. The capital is Fumay. The king of Bungo was baptized by the name of Francis Civan, and sent a solemn embassy to pope Gregory XIII, in the year 1582. Lon. 132° E.; lat. 32° 40′ N.

Bunk is a word used, in the U. States, to signify a case or cabin of boards for a bed. Thus, in the army, the soldier's birth is called his *bunk*.

Bunker Hill. (See *Charlestown.*)

Bunt; the middle part or cavity of the principal square-sails, as the main-sail, fore-sail, &c. If one of them be supposed to be divided into four equal parts, from one side to the other, the two middle divisions, which comprehend half of the sail, form the limits of the bunt.

Bunting; a thin woollen stuff, of which the colors and signals of a ship are usually formed.

Bunyan, John, was the son of a tinker, and was born at the village of Elston, near Bedford, in 1628. He followed his father's employment, and, for some time, led a wandering, dissipated life. During the civil war, he served as a soldier in the army of the parliament; and the danger to which he was then exposed probably brought him to reflection, in consequence

of which his conduct became reformed, and his mind impressed with a deep sense of the truth and importance of religion. He joined a society of Anabaptists at Bedford, and at length undertook the office of a public teacher among them. Acting in defiance of the severe laws enacted against dissidents from the established church, soon after the restoration, B. incurred the sentence of transportation; which was not executed, as he was detained in prison more than twelve years, and at last liberated through the charitable interposition of doctor Barlow, bishop of Lincoln. To this confinement he owes his literary fame; for, in the solitude of his cell, his ardent imagination, brooding over the mysteries of Christianity, the miraculous narratives of the sacred Scripture, and the visions of Jewish prophets, gave birth to that admired religious allegory, the Pilgrim's Progress—a work which, like Robinson Crusoe, has remained unrivalled amidst a host of imitators. His Holy War made by Shaddai upon Diabolus, his other religious parables, and his devotional tracts, which are numerous, are now deservedly consigned to oblivion. There is a curious piece of auto-biography of B. extant, entitled, Grace abounding to the Chief of Sinners. On obtaining his liberty, B. resumed his functions as a minister at Bedford, and became extremely popular. He died during a visit to London, in 1688.

Buonaparte. (See *Bonaparte.*)

Buonarotti, Michelagnolo. (See *Angelo.*)

Buoy; any floating body employed to point out the particular situation of any thing under water, as of a ship's anchor, a shoal, &c.—The *can* buoy is of a conical form, and painted with some conspicuous color; it is used for pointing out shoals, sand-banks, &c.—The *cask* buoy is in the form of a cask; the larger are employed for mooring, and are called *mooring* buoys; the smaller for cables, and are known as *cable* buoys. The buoy-rope fastens the buoy to the anchor, and should be about as long as the depth of the water where the anchor lies; it should also be strong enough to draw up the anchor in case the cable should break. —The *life* or *safety* buoy is intended to keep a person afloat till he can be taken from the water. It should be suspended from the stern of the ship, and let go as soon as any person falls overboard. A light may be attached to it, both to indicate its position to the individual in danger, and to direct the course of the boat sent to relieve him, if the accident happens by night.

Burats. (See *Buriats.*)

Burchiello, Domenico; one of the most eccentric of poets. Of the circumstances of his life we know but little. He lived, at the beginning of the 15th century, at Florence, where he was probably born. He was the son of a barber named Giovanni, and was called, originally, only *Domenico.* He assumed the name of B. afterwards, for reasons that cannot be assigned. His fame began about 1425. He was first registered as a barber in 1432. Some writers have reproached him for shameful vices, and represented him as a low buffoon, who did every thing for money. Others have defended him. His shop was so famous, that learned and unlearned, high and low, assembled there every day, and Cosmo the Great caused it to be painted on one of the arches of his gallery. It appears here divided into two portions; in one, B. is acting the part of a barber; in the other, that of a musician and poet. The portrait of B. himself is painted over his shop. It is extremely difficult to decide upon the absolute value of his satires, as the local and personal allusions in them are obscure. They were composed for his contemporaries, with a studied obscurity and extravagance of expression. His style is, nevertheless, pure and elegant. His burlesque sonnets are enigmas, of which we have no intelligible explanation, notwithstanding what Doni has done. The narrative and descriptive parts are very easy to be understood; but the wit they contain is, for the most part, so coarse, that the satire fails of producing its effect. They are, on the whole, lively, but licentious. The best editions of his sonnets are those of Florence, 1568, and of London, 1757.

Burckhard, John Louis, born in 1784, celebrated for his travels to Nubia, was descended from a respectable family in Bâle. As he was unwilling to enter into the service of his country, at that time oppressed by France, after having completed his studies at Leipsic and Göttingen, he went to London, in 1806, where the African association wished to make a new attempt to explore Africa, from the north to the interior, in the way already trodden by Hornemann. They received B.'s proposal to undertake this journey in 1808. B. now studied the manners of the East, and the Arabian language, in their purest school, at Aleppo. He remained two years and a half in Syria,

visited Palmyra, Damascus, Lebanon and other regions; after which he went to Cairo, in order to proceed with a caravan, through the northern part of Africa, to Fezzan. In 1812, he performed a journey up the Nile, almost to Dongola; and afterwards, in the character of a poor trader, and a Turk of Syria, proceeded through the deserts of Nubia (where Bruce had travelled before him), under great hardships, to Berbera and Shendy, as far as Suakem on the Red sea, whence he passed through Jidda to Mecca. He was now so well initiated into the language and manners of the Arabians, that, when a doubt arose concerning his Islamism, after having passed an examination in the theoretical and practical parts of the Mohammedan faith, he was acknowledged, by two learned jurists, not only a very faithful, but a very learned Mussulman. In 1815, he returned to Cairo, and afterwards visited Sinai. Just before the arrival of the long-expected caravan, he died at Cairo, April 15, 1817. The Mohammedans performed his obsequies with the greatest splendor. He had previously sent home all his journals. His last thoughts were devoted to his mother. B. was the first modern traveller who succeeded in penetrating to Shendy, in the interior of Soudan, the *Meroë* of antiquity (still, as it was 3000 years ago, the depôt of trade for Eastern Africa), and in furnishing exact information of the slave-trade in that quarter. He found articles of European fabric, such as the Zellingen sword-blades, at the great fair of Shendy. His Travels in Nubia, in 1815, were published in London (1819) by the African association, with his researches into the interior of Africa.

Burckhardt, John Charles; member of the royal French academy of sciences, one of the first astronomical calculators in Europe, born at Leipsic, April 30, 1773, applied himself to mathematics, and acquired a fondness for astronomy from the study of the works of Lalande. He applied himself particularly to the calculation of solar eclipses, and the occultation of certain stars, for the determination of geographical longitudes. He made himself master, at the same time, of nearly all the European languages. Professor Hindenburg induced him to write a Latin treatise on the combinatory analytic method (Leipsic, 1794), and recommended him to baron von Zach, with whom he studied practical astronomy at his observatory on the Seeberg near Gotha, and whom he assisted, from 1795 to 1797, in observing the right ascension of the stars. Von Zach recommended him to Lalande, at Paris, who received him at his house, Dec. 15, 1797. Here he distinguished himself by the calculation of the orbits of comets, participated in all the labors of Lalande, and those of his nephew, Lefrançois Lalande, took an active part in the observatory of the *ecole militaire*, and translated the two first volumes of Laplace's *Mécanique Céleste* into German (Berlin, 1800). Being appointed adjunct astronomer by the board of longitude, he received letters of naturalization as a French citizen, Dec. 20, 1799. His important treatise on the comet of 1770, which had not been visible for nearly 30 years, although, according to the calculations of its orbit, it should have returned every five or six, was rewarded with a gold medal, by the institute, in 1800. This treatise, which proposed some improvements in doctor Olbers' mode of calculation, is contained in the *Mem. de l'Institut*, 1806. During this year, he was made a member of the department of physical and mathematical sciences in the academy; in 1818, was made a member of the board of longitude, and, after Lalande's death, astronomer in the observatory of the military school. In 1814 and 1816, he published in French, at Paris, Tables to assist in Astronomical Calculations. He also wrote some treatises in von Zach's Geographical Ephemerides. His labors in the board of longitude were particularly valuable. He died in 1825.

Burden, or Burthen; 1. the contents of a ship; the quantity or number of tons which a vessel will carry; 2. the part of a song which is repeated at every verse or stanza, is called the *burden of the song*, from the French *bourdon*, drone or base, because they are both characterized by an unchangeable tone, and bear upon the ear with a similar monotony.

Burdett, sir Francis, baronet, member of the British parliament, in which he has long held a conspicuous place in the opposition, is descended from an ancient and opulent family, and was educated at Westminster. He entered on his parliamentary career in 1796, when he was chosen member from Boroughbridge. He soon distinguished himself as an ardent and enlightened friend of reform, and the steady opposer of the arbitrary measures of the ministry, the suspension of the habeas corpus act, the sedition bills, and the policy towards Ireland. In 1802, he was returned member for Middlesex. In

1804, he was wounded in a duel with Mr. Paull, which arose from political causes. After the death of Pitt, he voted with the Fox ministry, and, in 1807, was elected to parliament from Westminster. In 1810, having addressed a letter to his constituents, in which he accused the house of commons of a usurpation of power in committing to prison the author of a publication derogatory to the dignity and privileges of the house, a writ was issued against him, ordering that he should be committed to the Tower. The execution of the writ was resisted, during three days, by crowds which surrounded his house. Several riots took place; but he was finally arrested, and conducted to the Tower, where he remained till the prorogation of parliament. He has since continued a vigilant and bold opponent of corruption and oppression on the part of the ministry. In 1815, he presented a petition of the city of Westminster, in favor of peace and parliamentary reform, with a speech, in which he advocated a peace with Napoleon, accused the ministers of a violation of treaties, by which, he said, they had effected the downfall of the emperor, and placed the Bourbons, a name synonymous with falsehood, on the throne of France.

Bureau; a writing-table; afterwards used to signify the chamber of an officer of government, and the body of subordinate officers who labor under the direction of a chief.—*Bureau system*, or *bureaucracy*, is a term often applied to those governments in which the business of administration is carried on in departments, each under the control of a chief; and is opposed to those in which the officers of government have a coördinate authority. Sometimes a mixture of the two systems is found. Thus the business of the executive branch of government may be carried on by bureaus, while the administration of justice is in the hands of coördinate judges.—The *bureau des longitudes*, in France, corresponding to the English *board of longitude*, is charged with the publication of astronomical and meteorological observations, the correction of the astronomical tables, and the publication of the *Connaissance des Temps*, an astronomical and nautical almanac. (See *Almanac.*) According to the parliamentary usage of France, at the opening of each session, the chamber of deputies is divided into nine *bureaus*, composed of an equal number of deputies, designated by lot. Each bureau appoints its own president, and discusses all matters referred to it by the chamber separately. A reporter is appointed by each bureau, and, after the discussion by bureaus, the nine reporters meet, discuss the subject, and appoint one of their number to report to the whole chamber, where the final discussion and decision of the subject takes place. (See *Réglement pour la Chambre des Députés*, Paris, 1827, chap. v.)

Bürg, John Tobias; an astronomer, born, 1766, in Treves; resolved, when young, to become a mechanic, for the purpose of supporting his father, but was prevented by his teacher, who perceived his great talents; studied mathematics and astronomy under Triesnecker; was, in 1791, professor of natural philosophy in Clagenfurt, and, in 1792, adjunct astronomer at the imperial observatory. He has distinguished himself by his theory of the motion of the moon. The national institute proposed, as a prize question, in 1798, the determination, by at least 500 accurate observations, the epochs of the mean distance of the apogee of the moon and of her ascending node. The committee who examined the calculations of the competitors found those of B. and of Alexander Bouvard both so excellent, that they determined to divide the prize between them; but the consul Bonaparte doubled the prize, assigning one to each. B.'s tables of the moon, according to the theory of Laplace, were published in 1806, by the national institute.

Burgas, or Bourgas; a trading town of European Turkey on the Black sea, in the government of Roumelia. The bay on which it stands is of sufficient depth for large vessels, and the exports are grain, iron, butter, wine, and also woollen goods for Constantinople. Lon. 27° 29′ E.; lat. 42° 31′ N.

Bürger, Godfrey Augustus, born Jan. 1, 1748, at Wolmerswende, near Halberstadt, where his father was a preacher, died June 18, 1794, at Göttingen. Before his 10th year, he learned nothing but reading and writing, but showed a great predilection for solitary and gloomy places, and began early to make verses, with no other model than that afforded by hymn books. He learned Latin with difficulty. In 1764, he studied theology at the university in Halle, and, in 1768, he went to Göttingen, in order to exchange theology for law, but soon formed connexions here equally disadvantageous to his studies and his morals, so that his grandfather, who had hitherto maintained him, withdrew his support from him.

The friendship of several distinguished young men at the university was now of great service to him. In union with his friends, he studied the ancient classics and the best works in French, Italian, Spanish and English, particularly Shakspeare, and the old English and Scotch ballads. Percy's Relics was his constant companion. His poems soon attracted attention. In 1772, he obtained, by the influence of Boie, the small office of baily in Alten-Gleichen, and, by a reconciliation with his grandfather, a sum for the payment of his debts, which he unfortunately lost, and, during the rest of his life, was involved in pecuniary difficulties. In 1774, he married the daughter of a neighboring baily, named Leonhardt, but his marriage was unfortunate. He conceived a violent passion for the sister of his wife, and married her, in 1784, soon after his first wife's death. She also, his celebrated *Molly*, died in the first year of their marriage. At the same time, he lost his little property by imprudent management, and was obliged, by intrigues, to resign his place. He was made professor extraordinary in Göttingen, but received no salary, and this favorite poet of the nation was obliged to gain a living for himself and his children by poorly-rewarded translations for booksellers. A third marriage, in 1790, with a young lady of Suabia, who had publicly offered him her hand in a poem, completed his misfortunes; he was divorced from her two years afterwards. The government of Hanover afforded him some assistance shortly before his death, which took place in June, 1794, and was occasioned by a complaint of the lungs.—In the midst of these misfortunes and obstacles, it is astonishing how much he did. He has left us songs, odes, elegies, ballads, narrative poems and epigrams. In none of these departments does he hold a low rank; in some, the public voice has placed him in the first. Schiller criticised him very severely; he denied him the power of idealizing, and reproached his muse as being of too sensual a character. The judgment of A. W. Schlegel seems more just: he says, "B. is a poet of a more peculiar than comprehensive imagination; of more honest and plain than delicate feelings; his execution is more remarkable than his conception; he is more at home in ballads and simple songs than in the higher lyrical poetry; yet, in some of his productions, he appears as a true poet of the people, and his style, with some faults, is clear, vigorous, fresh, and sometimes tender." The first collection of his poems appeared in Göttingen, 1778. His poetical works have been published several times by K. Reinhard; last in Berlin, 1823—25, 8 vols.; so also his *Lehrbuch der Æsthetik* (Compendium of Æsthetics), Berlin, 1825, and his *Lehrbuch des Deutschen Styls* (Manual of German Style), Berlin, 1826.

Burgess, in England; the holder of a tenement in a borough: in a parliamentary sense, the representative of a borough. The latter must have a clear estate to the value of £300 per annum. The burgesses in parliament bear a quadruple proportion to the members for counties; the former being (from England alone) 339, the latter, 80. The whole number of the former, from the three kingdoms, is 396; of the latter, 186. Before the North American revolution, the popular branch of the legislature in Virginia was called the *house of burgesses*: it is now called the *house of delegates*.

Burghers. (See *Seceders*.)

Burglary (supposed to be derived from the German *burg*, a house, and *larron*, a thief, from the Latin *latro*) is defined to be a breaking and entering the mansion-house of another, in the night, with intent to commit some felony within the same, whether such felonious intent be executed or not. This is the modern signification of the term, which formerly applied, also, to the breaking into a church, fort or town; and the breaking into a church is said, by sir William Blackstone (4 Com. 224), to be, undoubtedly, burglary. Both breaking and entering are considered necessary to constitute the offence. The opening a door or window, picking a lock, or unlocking it with a key, raising a latch, or loosing any fastenings, constitutes a *breaking*. Likewise, knocking at the door, and, on its being opened, rushing in, has been so considered. So, if a lodger in the same house open and enter another's room; or if a servant conspire with a robber and let him into the house, it will be such a breaking of a house, as, if done with intent to commit a felony, will be burglary. The breaking and entering must, however, be in the night, to make it burglary; and, according to lord Hale's opinion (1 P. C. 550), if there be enough of daylight in the evening twilight or dawn for discerning a man's face, it will not be burglary. But this does not extend to moonlight, since such a construction would secure impunity to many burglaries. The breaking open of a barn, shop

shed, or other building, is not burglary, unless it be appurtenant to a dwelling-house. A chamber in a college, or in the London inns of court, is, for this purpose, considered to be a mansion-house. The more usual punishment of burglary has heretofore been death. In the U. States, there is some diversity of punishment for this offence, the penalty being death in some states, and imprisonment for life or years in others. In Maine, for the principal and accessary before the fact, where the criminal enters a dwelling-house by night, with a deadly weapon, it is death. In New Hampshire, the offence, according to the common definition, is punished by imprisonment and hard labor for life. In Vermont, the punishment is imprisonment in the state prison for a term not exceeding 15 years, or a fine not exceeding 1000 dollars; in Massachusetts, imprisonment for life of the principal and accessary before the fact, in case of being armed with a deadly weapon; in Rhode Island, death; in Connecticut, imprisonment in the state prison not exceeding 3 years; in New York, a fine, and imprisonment with hard labor not exceeding 10 years; in Pennsylvania, for the first offence, imprisonment not exceeding 10 years; for the second, not exceeding 15; in Maryland, restoration of property, and imprisonment not less than 2 nor exceeding 10 years; in Virginia, restoration of property, and imprisonment not less than 5 nor more than 10 years; and in Louisiana, imprisonment not less than 10 nor more than 15 years; and the code of this state makes the crime the same where the culprit conceals himself in the house during the day, until night, as where he breaks into it during the night. The British statute 7 & 8 Geo. IV, c. 29, makes the punishment death; and this statute, pursuing that of 12 Anne, c. 7, makes the committing a felony in a house, and breaking out of it by night, burglary. This statute of Geo. IV also alters the definition of the crime, by substituting *dwelling* for *mansion-house*. [The American statutes generally adopt this description.] It also defines what shall be considered as part of the house, saying, that no building within the same curtilage, and occupied with the dwelling-house, shall be deemed a part of it for this purpose, "unless there shall be a communication" with the house "by means of a covered and enclosed passage." This provision clears up a doubt that had hung over the former law. This act also provides (s. 12), that, "if any person shall *break and enter* a house and steal," &c., or shall steal any property in any dwelling-house, any person *therein being put in fear*," or "shall steal to the value of £5," he shall suffer death; and it does not appear, by Mr. Collier's edition of the criminal statutes, 1828, that any distinction is made, in this section, as to the offence being by day or night. This crime is punishable, under the French code (Penal. lib. 3, tit. 2, c. 2, s. 1, No. 381, 383), either by death or by hard labor for life, according to the circumstances of aggravation.

Burgomaster; the name of the chief magistrates of large towns in the Netherlands and Germany. Their number and term of office are different in different places. They are sometimes chosen for life, sometimes for a fixed period. They preside in the municipal counsels, &c. The same officer, in France, is called *maire;* in England and the cities of North America, *mayor*.

Burgos; a city of Spain, the capital of Old Castile, and once the residence of its kings. It stands on the declivity of a hill, on the right bank of the Arlanzon. The streets are narrow and dark. It contains a college, numerous churches and convents, and a population of about 10,000. The cathedral, one of the most beautiful Gothic structures in Spain, was built in the 13th century, and, as well as some of the other churches, contains splendid mausoleums. It is so large, that service can be performed in eight chapels at once, without confusion. The wool of Old Castile passes principally through B., and it has some woollen manufactures. It was captured by the English in 1813. Lat. 42° 21′ N.; lon. 2° 40′ W.

Burgoyne, John; an English general officer and dramatist. He was the natural son of lord Bingly, and entered early into the army. In 1762, he commanded a force sent into Portugal for the defence of that kingdom against the Spaniards. He also distinguished himself, in the American war, by the taking of Ticonderoga, but was, at last, obliged to surrender, with his army, to general Gates, at Saratoga. He was elected into parliament for Preston, in Lancashire, but, refusing to return to America, pursuant to his convention, was dismissed the service. He published some pamphlets in defence of his conduct, and is the author of three dramas,—the Maid of the Oaks, Bon Ton, and the Heiress,—all in the line of what is usually called *genteel comedy*, of which they form light and pleasing specimens.

Burguetta, or Elburguetta; a town of Spain, in the valley of Roncéval, where the rear-guard of Charlemagne's army was defeated by the Saracens, and the famous Roland slain, A. D. 778; 24 miles N. E. of Pampeluna.

Burgundians. The Burgundians (called, by the ancients, *Burgundi*, *Burgundiones*, *Burngundi*, *Buganteæ*, *Bunticcæ*, and sometimes *Urugundi*), one of the principal branches of the Vandals, can be traced back to the country between the Oder and the Vistula, in what is now the New Mark, and the southern part of West Prussia. They were distinguished from the other Germans by living together in villages, *burgen* (whence, perhaps, they received the name of *Burgundians*). The others lived separately, and led a more wandering life. This is probably the reason why they retained possession of their country much longer than the neighboring Goths and Vandals, till, at length, they were no longer able to withstand the Gepidæ, who pressed in upon them from the mouths of the Vistula. In consequence of the loss of a great battle with the Gepidæ, they emigrated to Germany, where they advanced to the region of the Upper Rhine, and settled near the Allemanni. From them they took a considerable tract of country, and lived in almost continual war with them. In the beginning of the 5th century, with other German nations, they passed over into Gaul. After a long struggle, and many losses, they succeeded in obtaining possession of the south-eastern part of this country by a contract with the Romans. A part of Switzerland, Savoy, Dauphiny, Lionnais and Franche-Comté belonged to their new kingdom, which, even in the year 470, was known by the name of *Burgundy*. The seat of government seems to have been sometimes Lyons, and sometimes Geneva.—By their old constitution, they had kings, called *hendinos*, whom they chose and deposed at their pleasure. If any great calamity befell them, as a failure of the crops, a pestilence, or a defeat, the king was made responsible for it, and his throne was given to another, under whom they hoped for better times. Before their conversion to Christianity (which happened after their settlement in Gaul), they had a high-priest, called *sinestus*, whose person was sacred, and whose office was for life. The trial by combat even then existed among them, and was regarded as an appeal to the judgment of God. Continually endeavoring to extend their limits, they became engaged in a war with the Franks, by whom they were finally wholly subdued, under the son of Clovis, after Clovis himself had taken Lyons. They still preserved their constitution, laws and customs for a time. But the dignity of king was soon abolished, and, under the Carlovingians, the kingdom was divided into provinces, which, from time to time, shook off their dependence. In 879, Boson, count of Autun, brother-in-law of king Charles the Bald, and duke of Milan, with the assent of the Burgundian nobles, succeeded in establishing again the royal dignity in this kingdom. He styled himself *king of Provence*. His residence was at Arles, and hence is derived the name *kingdom of Arles*. He was deprived of several provinces by Louis and Carloman; but his son Louis added to his hereditary possessions the country lying beyond the Jura, and thus established the kingdom of Burgundy, Cis-Jurana, or Lower Burgundy, which included a part of Provence, with Arles, Dauphiny, Lionnais, Savoy, and a part of Franche-Comté. A second kingdom of Burgundy arose when the Guelph Rodolph von Strettlingen (duke of Swiss Lorraine) gained possession of the rest of Lorraine, namely, Switzerland beyond the river Reuss, the Valais, and a part of Savoy, and, in short, all the provinces between the Jura and the Pennine Alps, and caused himself, in 883, to be crowned king of Upper Burgundy (*regnum Burgundicum Transjuranum*). Both Burgundian kingdoms were united about the year 930, and, after the race of Rodolph became extinct (1032) were incorporated with Germany, under the emperor Conrad II. But a third state, which had its origin about the same time with Upper Burgundy, consisting, principally, of the French province Bourgogne (*Burgundy*, properly so called), and the founder of which is said to have been Richard, brother of Boson (first king of Lower Burgundy), maintained its independence. From Ludegardis, granddaughter of Richard, and her husband, Otho, a brother of Hugh Capet, sprang the ancient dukes of Burgundy (Bourgogne). They became extinct, in 1361, with the death of duke Philip, and Burgundy was immediately united, by king John of France, with the French crown, partly as a fief of the kingdom, and partly because his mother was sister of the grandfather of the last duke. The dignity of duke of Burgundy was restored in 1363, by his grant of those domains, under the title of

a dukedom, as an appanage to his youngest and favorite son, Philip the Bold. Philip was the founder of the new line of the dukes of Burgundy. In 1368, he married Margaret, the widow of the last duke Philip of the old line, only daughter and heiress of Louis III, count of Flanders, whereby he greatly augmented his possessions. At that time, Flanders, Mechlin, Antwerp and Franche-Comté fell to him. In 1402, he was made regent of France, on account of the sickness of Charles VI. Louis, duke of Orleans, brother of the king, being obliged to yield to him this dignity, conceived a bitter hatred against him. This was the occasion of the famous division of the French into the Orleans and Burgundian parties. In 1404, Philip died, and was succeeded by his son, John the Fearless. Orleans now became regent of France. But both cousins remained bitter enemies, till, under the walls of Montfauçon, at the commencement of a civil war (1405), they embraced each other in the sight of the whole army, and, as a pledge of entire reconciliation, slept in the same bed the following night. Nevertheless, Orleans was assassinated in the street in 1407, and duke John of Burgundy declared himself the author of the deed, which was the melancholy cause of the greatest disturbances in Paris. Indeed, John obtained a letter of pardon from the king; but justice overtook him as he was about to repeat the farce of a public reconciliation with the dauphin, on the bridge of Montereau. While the first words of salutation were passing between them, he was stabbed by the companions of the dauphin (1419). His son and successor, Philip, surnamed the *Good* (previously count of Charolais), in the peace which was concluded between England and France and Burgundy (1420), succeeded in effecting the exclusion of the dauphin, as a punishment for the murder of duke John. In the reign of Philip happened his memorable dispute with Jacqueline of Brabant, and her second husband, the duke of Gloucester, which was settled by a treaty, by virtue of which Philip was to become the heir of Jacqueline (if she died childless), and she was not to marry without his consent. But Jacqueline violated this last stipulation (1430), and Philip took possession of her territories, Hainault, Holland and Zealand, setting aside a small portion for her maintenance. The year before, Philip had purchased Namur, and, in 1431, Brabant and Limburg reverted to him, when the line of Anthony of Burgundy, second son of duke Philip the Bold, became extinct. In the peace with France (Arras, 1435), it was stipulated that king Charles VII should sue for pardon on account of the murder of John, and that Philip should receive from France the valuable districts of Macon, St. Gengou, Auxerre and Bar sur le Seine for himself and his lawful male and female heirs; Peronne, Mondidier and Roye for his lawful male heirs; and, further, St. Quentin, Corby, Amiens, Abbeville, Ponthieu, Dourlens, St. Riquier, Crevecœur, Arleux and Mortagne, and the county of Boulogne, for himself and his heirs. To these important possessions he added also, in 1441, the duchy of Luxemburg. In 1430, Philip had contracted a third marriage, as his two former wives had borne him no children. On his marriage with Isabella (Elisabeth), daughter of king John of Portugal, at Bruges (q. v.), in Flanders, he founded the order of the golden fleece. Three sons sprung from this marriage, of whom the two first soon died. The third, Charles count Charolais, after the death of Philip (at Bruges, July 16th, 1467), became duke of Burgundy. (See *Charles the Bold.*) He acquired Gueldres in 1475, and left behind him, in 1477, a daughter, Maria, the sole heiress of his states. Seven princes were her suitors, among whom were the dauphin of France and Maximilian of Austria. The last obtained her hand and the dukedom (the Netherlands and Upper Burgundy). The king of France received, of the Burgundian territory, nothing except the cities in Picardy and the dukedom of Bourgogne, which he assumed as being a male fief. Maria died in her 25th year, in consequence of a fall, leaving three children, Philip, Margaret and Francis (who died soon after). The Burgundian provinces would not all recognise Maximilian as the guardian of his children. He betrothed his daughter to the dauphin, Charles, with the county of Artois and Burgundy, together with the Maconnais, Auxerrois, Salins and Bar sur le Seine, as her dowry. But his object, which was wholly to pacify the provinces, was not attained. The people of Flanders were particularly obstinate, and they went so far that Maximilian, two years after his election as king of the Romans (1488), was retained a prisoner at Bruges for more than three months. Finally, the people of Flanders acknowledged him as guardian of his son Philip, and regent of the government. Burgundy was, as we have seen above, separated into two parts

—Burgundy Proper, and Upper Burgundy or Franche-Comté. The former was transferred from Spain to France in the *ladies' peace*, so called, of Cambray, 1529. (See *Francis I.*) The latter Louis XIV conquered, and retained at the peace of Nimeguen. Since that time, the Burgundies have never been separated from France. (See *Netherlands, Kingdom of.*) The baron Barante, peer of France, published at Paris, in 1824, in 10 volumes, a *Histoire des Ducs de Bourgogne de la Maison de Valois* (1364—1477).

Burgundy (called, also, *Burgundy Proper*, or *Lower Burgundy*); formerly a province in the east of France, lying on the west of Franche-Comté, and on the south of Champagne. It was divided into the duchy of B. and four counties. It now forms the four departments of Yonne, Côte-d'Or, Saône-et-Loire and Ain, containing, according to official tables for 1827, 1,570,463 inhabitants. It is watered by a number of navigable rivers. The central canal joins the Loire with the Saône; that of B. will connect the Seine and the Rhone; and that of Monsieur will unite the Saône with the Rhine. B. is one of the most productive provinces in France. The plains are rich in arable land, the sides of the hills are covered with vineyards and fruit-trees, while the summits abound in pastures, wood and game. The principal product is wine. (See *Burgundy Wines.*) Iron ore and other minerals are found in the mountains. (See *Burgundians.*)

Burgundy, circle of; one of the 10 circles of the German empire, as divided by Maximilian in 1512. At first it comprised the Franche-Comté and the 17 provinces of the Netherlands. The 7 Dutch provinces having declared themselves independent, and the Franche-Comté being conquered by France, the Spanish or Austrian Netherlands alone composed the circle.

Burgundy, Louis, duke of, was born at Versailles, in 1682. His parents were the dauphin, son of Louis XIV, and the princess Anne of Bavaria. In his early childhood, he was stubborn, irascible, obstinate, passionately fond of every kind of pleasure, and inclined to cruelty, severe in his satire, attacking with great penetration the follies of those about him. The education of the prince was intrusted, in the seventh year of his age, to Fenelon, Fleury, and Beauvilliers. They succeeded in gaining his affection, and in giving him a right turn of mind. From this alteration in his character, he became amiable, humane and modest, and faithful in the discharge of his duties. In 1697, he married the intelligent and amiable princess Adelaide of Savoy, who was the ornament of her court, and was beloved by her husband with the tenderest affection. In 1699, Louis XIV ordered an encampment at Compiegne for the instruction of his grandson, to whom, in 1702, he gave the command of the army in Flanders, under the direction of marshal Boufflers. In a battle between the cavalry, near Nimeguen, he showed determination and courage. Afterwards, under the most difficult circumstances, he was appointed commander-in-chief of all the forces in Flanders, but with instructions which made him dependent on the duke of Vendôme; Marlborough and prince Eugene having command of the opposing army. The differences which arose between the prince and Vendôme drew after them the most disastrous consequences. All France accused the prince as the author of these misfortunes, censuring his timid character and his religious scruples. He, however, appears to have succeeded in justifying his conduct in the eyes of the king. Vendôme, on the contrary, who had behaved very insolently towards the heir to the throne, fell into disgrace, but was favored by the opposition party. In 1711, the duke of Burgundy became dauphin, by the death of his father, and now began to attract the attention of the court, and the confidence of his sovereign, who appointed him a counsellor of state. France expected, from the virtues and excellent intentions of this prince, to enjoy a long and general rest from her troubles; but he was suddenly taken away, Feb. 18, 1712, by a disease to which his wife and eldest son had already fallen victims, the one 6, the other 20 days before. In less than one year, France had seen three dauphins; and the fourth, the youngest son of the duke of Burgundy, and the only heir to the throne, afterwards Louis XV, was also in a dangerous situation. The public voice loudly accused the duke of Orleans, afterwards regent, as the cause of these misfortunes, of which, however, Louis XIV himself declared him innocent.

Burgundy Wines are produced in the former provinces of Upper and Lower Burgundy (q. v.), in a soil of a light-black or red loam, mixed with the *débris* of the calcarious rock on which it reposes. In richness of flavor and perfume, and all the more delicate qualities of the juice of the grape, they are inferior to none in the world. It is to the great skill with which

the cultivation of the vine and the fermentation of the liquor are managed, that they owe those generous qualities, which gave to the dukes of Burgundy the title of *princes des bon vins*, and which, as Petrarch more than hints, contributed not a little to prolong the stay of their holinesses at Avignon. They are remarkable for their spirituosity and powerful aroma, and are, therefore, more heating than some other wines which contain more alcohol. The exhilaration they produce is, however, more innocent than that resulting from heavier wines. The finer wines of Burgundy do not bear removal except in bottles; and, as they are not produced in great abundance, they are rarely, if ever, met with in foreign countries. It is the inferior growths which are sold under that name. The Burgundy wines are generally exported between January and May, chiefly in double casks. They keep only four or five years, and are very apt to acquire a bitter taste, which Chaptal attributes to the developement of the acerb principle, and Henderson to that of citric ether. It may sometimes be partially removed by new sulphuring and fining. The most numerous are the red wines of Burgundy. The finest growths of these are the Romanée-Conty, the Chambertin (the favorite of Louis XIV and Napoleon), the Closbougeot, the Richebourg, the Romanée de St. Vivant, &c. They are distinguished for their beautiful color, and exquisite flavor and aroma, combining more than any other wines lightness and delicacy with richness and fulness of body. Of the second class are the *vins de primeur*, of which the Volnay and Pomard are the best; those of Beaune, distinguished above all by their pure flavor, and formerly considered the most choice of the Burgundy wines; the Macon wines, remarkable for their strength and durability; those of Tonnerre and Auxerre, &c. The white wines of Burgundy are less numerous, but not inferior in aroma and flavor. The famous Montrachet is equal to the finer red wines, and is distinguished for its agreeable nutty flavor. Of the second class are the *Goutte d'or*, so called from the splendor of its tint; La Perrière, &c. (See Jullien's *Classification des Vins*, and Henderson's *Ancient and Modern Wines*.)

Burial. Great care should be taken not to bury the body too soon after death. The ancient nations endeavored to satisfy themselves, by many precautions, that death had really taken place. The ancient Egyptians embalmed their dead; the Romans cut off one of their fingers, before they burnt them; other nations repeatedly washed and anointed them. Interments should never be allowed before the most undoubted symptoms of putrefaction have taken place. We should wait at least three days in winter, and two whole days in summer, unless the hot weather requires a quicker interment. It would be well to introduce the custom of exposing the corpse to the inspection of a person regularly instructed for this purpose, who should carefully and repeatedly examine it, and none should be interred without the certificate of this inspector. In many cases, it is troublesome, and even dangerous, to keep the body long, as in case of contagious diseases, or of want of room. In many places, to obviate this inconvenience, houses are erected, where the corpse is brought a few hours after the decease. (See *Trance*; also *Burying-Places* and *Sepulture*).

Buriats, Burats, or Buratti. This nomadic Tartar nation consists of 77 tribes. They submitted to the Russian sceptre in 1644, and form the second principal branch of the Calmucs. They rove about in the southern part of the government of Irkutsk. Their number is upwards of 100,000. They can furnish 32,000 archers, and choose their own princes and elders. Their choice is confirmed, however, by the government of Irkutsk. They support themselves by their flocks, by hunting, and the mechanical arts, particularly the forging of iron. Their dress is leather bordered with fur. The B. protect their huts, which are hexagonal or octagonal, from heat and cold by covering them with leather. These huts they call *jurtes*. The religion of this people is partly Lamaism and partly Shamanism. They call their supreme God *Octorgon Burchan*, or *Tingiri Burchan* (God of heaven). The planets are inferior gods; and the chief of the evil spirits is called *Ockodol*. The idols of Lamaism, like those of Shamanism, are sometimes painted on cloth, and sometimes made of wood, metal, felt and sheep-skin. The smoke of the *jurtes* makes the idols, disgusting in themselves, still more disgusting. The worshippers of the Grand Lama have this peculiarity, that male forms are the basis of their idols. As the female sex in this nation is considered unclean, they may not approach the place where the household gods are arranged. The male B. always burn incense, to purify any place where a woman has been sitting, before they sit

there themselves. The poor B. sometimes go over to the Greek church, but continue to use their old ceremonies in reference to their new objects of worship. Their number, in 1783, was estimated at 49,764 males, and 47,932 females.

Burin, or Graver; an instrument of tempered steel, used for engraving on copper. It is of a prismatic form, having one end attached to a short wooden handle, and the other ground off obliquely, so as to produce a sharp point. In working, the burin is held in the palm of the hand, and pushed forward so as to cut a portion of the copper. The expressions *brilliant* burin, *soft* burin, are used to characterize the manner of a master. (See *Engraving*.)

Burkard, Waldis, a fabulist of the 16th century, was born at Allendorf, on the Werra. In his earlier years, he was a monk. After having travelled over Europe, he became a zealous Protestant, and died, in 1555, in the office of preacher at Abterode. His Æsop, in rhyme, contains 400 fables and amusing stories, partly from Æsop and other fabulists and novelists, partly original. They are written in a strain of happy humor and well-directed satire, and in an easy and often peculiar style. Eschenburg published a collection of them in 1776.

Burke, Edmund, a writer, orator and statesman of great eminence, was born in Dublin, Jan. 1, 1730. His father was an attorney of reputation, and he received his education under Abraham Shackleton, a Quaker, at Ballitore. In 1744, he was entered at Trinity college, Dublin, as pensioner, where he chiefly occupied himself with a plan of study of his own, the principal objects of which were the classics, logic, metaphysics, morals, history, rhetoric, and composition. He left Trinity college, after taking a bachelor's degree, in 1749; and not much is recorded of this period of his life, except that he made an unsuccessful application for the professorship of logic at Glasgow. At this period, he had planned a refutation of the metaphysical theories of Berkeley and Hume. In 1750, he first entered the great theatre of London, as a law student at the Temple, where he soon became the admiration of his intimates, for the brilliancy of his parts, and the variety of his acquisitions. Applying more to literature than to law, he supported himself by his pen, and, by intense occupation, brought himself into a state of ill health. This illness, by making him a guest to doctor Nugent, an eminent physician, led to his marriage with that gentleman's daughter. In 1756, he published, without a name, his first avowed work, entitled a Vindication of Natural Society, in a Letter to Lord ****, by a noble Lord. This work exhibited so complete an imitation, although ironical, of the style of Bolingbroke, that many persons were deceived by it, not perceiving B.'s intention to prove that the same arguments with which that nobleman had attacked religion, might be applied against all civil and political institutions whatever. In the same year, he published his Essay on the Sublime and Beautiful. The elegance of its language, and the spirit of philosophical investigation displayed in it, introduced the author to the best literary acquaintances. In 1758, he suggested to Dodsley the plan of the Annual Register, and took upon himself the composition of the historical part, which he continued for a number of years. He was thus gradually forming himself for a statesman. His political career may be said to have commenced in 1761, when he went to Ireland as confidential friend to William Gerard Hamilton, then secretary to the lord lieutenant, lord Halifax. For his services in this unofficial capacity, he was rewarded with a pension of £300 per annum, on the Irish establishment. On his return, in 1765, he was introduced to the marquis of Rockingham, then first lord of the treasury, who made him his private secretary; and, through the same interest, he became M.P. for the borough of Wendover. The marquis also made him a nominal loan, but real gift, of a large sum, which placed him in easy circumstances, and enabled him to purchase his elegant seat near Beaconsfield. His first speech in parliament was on the Grenville stamp act; and it was at his advice, that the Rockingham administration took the middle and undecided course of repealing the act, and passing a law declaratory of the right of Great Britain to tax America. This ministry was soon dissolved, to make room for a new cabinet, under Mr. Pitt. B. concluded his official labors by his pamphlet, entitled Short Account of a late short Administration. In the proceedings against Wilkes, he joined the remonstrants against the violation of the rights of election, and, in 1770, published his Thoughts on the Causes of the present Discontents, the sentiments of which are consistent with his future doctrines and conduct. He opposed the ministerial measures antecedent and consequent to the American

war; and the whole powers of his eloquence were exerted, first to prevent, and then to heal, the fatal breach between the mother country and her colonies. In 1774, he was chosen member for Bristol; and it is to his credit that he subsequently ventured to give offence to his Bristol friends, by his support of the Irish petitions for free trade, and for moderating the penal statutes against the Roman Catholics. He soon, however, recovered all the ground thus lost by his famous reform bill, which he unsuccessfully advocated with an extraordinary union of wit, humor, and financial detail. In 1783, lord North's ministry was dissolved; and, on the return of the marquis of Rockingham and his party to power, B. obtained the lucrative post of paymaster-general of the forces, and a seat at the council board. He also embraced the auspicious opportunity to re-introduce his reform bill, which passed, but not without considerable modifications. On the death of the marquis of Rockingham, and the succession of lord Shelburn, B. resigned, and joined the coalition: the India bill formed the ostensible cause for dismissing this ill-judged combination; and Mr. Pitt succeeded to the helm, and dissolved the parliament. The next great political event of his life was his share in the prosecution of Mr. Hastings, which trial, indeed, originated with him. The Report of the Committee on the Trial of W. Hastings, 1794, was by B. His conduct in this affair gained him little in the public estimation, except increased fame as an orator. On the settling of the regency, in 1788, he argued against the principle of the ministers, that the regency was elective, and not hereditary. The last great act of his political life was, the part he took in the French revolution. He early manifested his dislike to it, and, in 1790, loudly condemned the principles and conduct of the revolutionists. His famous Reflections on the Revolution in France appeared in the following October; and no work ever attracted more attention, or produced more effect. It exhibits both the merits and defects of the writer, and contains much justness of argument, profundity of observation, and beauty of style; but it is equally obvious that he commits the very fault which he intended to reprobate, in his Vindication of Natural Society, by making his arguments applicable to the defence of all establishments, however tyrannical, and censure of every popular struggle for liberty, whatever the oppression. It had an unprecedented sale, and obtained unbounded praise from all who trembled for establishments, or were alarmed at the odious character which the French revolution was beginning to assume. On the other hand, it met with severe and formidable critics and opponents, and, among other things, produced the celebrated Rights of Man, of Thomas Paine. B. followed up this attack with a Letter to a Member of the National Assembly (1791); an Appeal from the New to the Old Whigs; Letter to a noble Lord on the Subject in Discussion with the Duke of Bedford (1796); Letters on a Regicide Peace, &c. In all these productions, he displayed unabated powers of mind. In 1792, he published a Letter to Sir Hercules Langrishe, on the Propriety of admitting Roman Catholics to the Elective Franchise, and, in 1794, withdrew from parliament, and was succeeded in the representation of Malton by his only son, whose death soon after hastened the decline of nature which he was beginning to experience. Decay, by gradual approaches, terminated his life on July 8, 1797, in the 68th year of his age. He preserved his senses to the last; and, a few hours before he died, he had read to him Addison's paper in the Spectator, on the immortality of the soul. Amiable in private life, and exemplary in his domestic and social relations, he was greatly beloved by his friends. His conversation was delightful and instructive. He was exceedingly charitable and beneficent, and founded a school for the children of French emigrants, the permanent support of which formed one of his latest cares. His public character will be best collected from a study of his political career, and his powers of mind from his publications. His oratory was preëminently that of a full mind, which makes excursions to a vast variety of subjects, connected by the slightest and most evanescent associations, and that in a diction as rich and varied as the matter. In delivery, however, the effect of his speeches was by no means proportioned to their absolute merit; their length, their copiousness, abundance of ornament, and wide field of speculation, producing impatience in men of business absorbed in the particular subject of debate; added to which, his manner was indifferent, his voice harsh, and his action, though forcible, inelegant. On the whole, though the greatest genius, he was by no means the most effective orator, in the house of commons. The entire works of this great man have been

published by his executors, in 5 vols., 4to., and 10 vols., 8vo. (See *Memoir of Burke, by J. Prior*, 2d edition, 2 vols., London, 1826.)

Burleigh, Lord. (See *Cecil.*)

Burlesque signifies the low comic arising from a ludicrous mixture of things high and low. High thoughts, for instance, are clothed in low expressions, or noble subjects described in a familiar manner, or *vice versa*. The burlesque style allows of the mixture of foreign and domestic words, the introduction of provincialisms, colloquial phrases, &c. Its object may be, simply, to excite laughter, or to provoke derision and ridicule.

Burletta; a light, comic species of musical drama, which derives its name from the Italian *burlare*, to jest. It originated in Italy, from whence it passed to the Transalpine countries.

Burlington; a post-town of Vermont, and capital of Chittenden county, situated on a bay, to which it gives name, on the south side of the entrance of Onion river into lake Champlain; 38 miles W. by N. of Montpelier, 100 S. of Montreal. Lat. 44° 27′ N.; lon. 73° 15′ W. Population in 1820, 2,111. B. is the most considerable commercial town in Vermont. Its trade is principally with the city of New York, with which it has a water communication by means of lake Champlain, the Champlain canal, and the river Hudson. The village is very finely situated, lying in the form of a parallelogram, with its shortest side on the lake, and extending back, up a gradual ascent, to the distance of a mile from the water. It contains a court-house, a jail, a bank, 3 houses of public worship, an academy, and a university.—The university of Vermont was incorporated and established at B. in 1791, but it did not go into operation till 1800. It is finely situated on the east side of the village, a mile distant from lake Champlain, on ground elevated 245 feet above the surface of the water, and commands an extensive and delightful prospect, embracing a view of the lake, with the high mountains beyond on the west, and the Green mountains on the east. A large college edifice of brick, which was completed in 1801, was consumed by fire in 1824; since which time three brick edifices have been erected, two of them containing rooms for students, the other containing a chapel, and other public rooms. The university possesses considerable endowments, consisting chiefly of lands; but the number of students has never been large. Its officers are, a president, a professor of mathematics and natural philosophy, a professor of the learned languages, a tutor, and four medical professors.

Burman Empire. (See *Birman Empire.*)

Burmann; the name of a family of learned men, originally from Cologne—Francis B., born in 1632, was professor at Leyden and Utrecht, where he died in 1769, and author of several theological writings.—His son Peter, born at Utrecht, in 1668, studied there and at Leyden. He became doctor of law in 1688. After travelling in Germany and Switzerland, he began the practice of the law, without, however, deserting the study of the ancients, as is proved by his treatise *De Vectigalibus Pop. Rom.* In 1696, he was made professor of history and rhetoric at the university of Utrecht. At a later period, he became professor of the Greek language and politics. From this time, he published, annually, either some classic author, with notes, or masterly Latin verses, or some pamphlet against his adversaries, of whom he had made many by his intolerant vehemence. His editions of the classics are not so much distinguished for taste, as for learning and accuracy. He became professor of eloquence, history, and the Greek language, in Leyden, 1715, and died in 1741. His younger brother, Francis, died in 1719, while professor of theology at Utrecht, and was the author of several theological writings. He left four sons, distinguished likewise as scholars.—John, born in 1706, died 1780, at Amsterdam, was a physician, and professor of botany. Linnæus makes honorable mention of his writings.—Peter, born in 1713, devoted himself, like his uncle, to philological pursuits. In 1734, he was made doctor of law at Utrecht. In the following year, he became professor of eloquence and history at the university of Franeker. In 1742, he went to Amsterdam, as professor of history and ancient languages, where he became, in succession, professor of poetry, librarian, and inspector of the gymnasium. Like his uncle, he has published many good editions, particularly of the Latin classics; like him, he was distinguished by learning, by his talent for Latin poetry, and by his hasty disposition. He died in 1778.—Nicolaus Laurentius B. succeeded, in 1781, his father, John B., as professor of botany, for which science he did much by his own writings, and by aiding the undertakings of others. In particular, he encouraged Thunberg to visit the cape

of Good Hope and Japan. He died in 1793.

Burmann, Gottlob William, originally *Bormann*, born in 1737, at Lauban, in Upper Lusatia, resided in Berlin in great poverty. He was small of figure, meagre, lame and deformed, but was endowed with sensibility for every thing sublime and beautiful.—He was highly eccentric. His poems were irregular, and deficient in taste and finish. His merits were obscured by his singularities, and his vigorous mind was forgotten before he died. He had a rare talent of improvisation. Struck with palsy, he passed the last ten years of his life in great misery. His most celebrated works are his fables, songs, and his poems without the letter *r*. He died in 1805.

Burmhan. (See *Birman Empire.*)

Burnet, Gilbert, was born at Edinburgh, in 1643, and, having studied at Aberdeen, he travelled into Holland in 1664. On his return, he was made fellow of the royal society, in London, and ordained at Edinburgh in 1665. In 1669, he was made professor of divinity at Glasgow, where he published his Conference between a Conformist and a Nonconformist; also, Memoirs of the Duke of Hamilton; and was offered a Scottish bishopric, which he refused. His Vindication of the Church and State of Scotland, so inconsistent with the general tenor of his conduct and opinions, was much approved at court, and a bishopric was again offered him, and refused. In 1673, he was made chaplain in ordinary to the king; and was in high credit, both with Charles and the duke of York. In consequence of the machinations in favor of popery, he inclined to the opposition party in the Scottish parliament, and afterwards removed to London, where he was coldly received by the king, and struck out of his list of court chaplains. The nation being alarmed on account of the progress of popery, B. undertook a History of the Reformation in England. He gave a first volume to the public in 1679, when the affair of the popish plot was in agitation. It procured for the author the unprecedented honor of thanks from both houses of parliament. The second volume appeared in 1681; the third, which was supplementary, in 1714. This is esteemed the most valuable of his writings. The high character of B. as a divine caused him to be sent for by the witty and profligate earl of Rochester, when, exhausted by a course of libertinism, he was sinking into the grave, at the early age of 33. The result of his conferences with the dying nobleman he gave to the world in his celebrated Account of the Life and Death of the Earl of Rochester. About this time, he wrote a letter to the king, censuring his public mis-government and private vices. His connexion with the opposition party was now very intimate, and he attended lord Russel to the scaffold, whose speech there it is thought that he penned. He published, during this period, several works in favor of liberty and Protestantism, and wrote the lives of bishop Bedell and sir Matthew Hale. On the accession of James II, he made a tour in France and Italy, of which he published an account in letters addressed to Mr. Boyle. At the close of his travels, he was invited to the Hague by the prince and princess of Orange, and had a great share in the councils relative to England. James caused a prosecution for high treason to be commenced against him in England, and demanded his person from the states, who refused to deliver him up. In the revolution, he took an active part, accompanying the prince of Orange to England as chaplain, and was rewarded for his services with the bishopric of Sarum. On taking his seat in the house of lords, he displayed his usual moderation in regard to the nonjuring clergy and dissenters. As a prelate, bishop B. distinguished himself by fervor, assiduity and charity. In 1699, he published his Exposition of the Thirty-nine Articles. The scheme for the augmentation of poor livings out of the first fruits and tenths due to the crown originated with B. He died in March, 1715, in the seventy-second year of his age, leaving behind him his well-known History of his own Times, with an Account of his Life (2 vols. fol., 1723—1724). He merits the praise of depth, vigor, and variety of knowledge, but was hasty and rough in his composition. He was ardent, active and open, benevolent, liberal and disinterested; but vain, self-important and garrulous. He was the author of numerous works besides those mentioned. William, his eldest son, originally bred to the law, became governor, first of New York and New Jersey, and subsequently of Massachusetts and New Hampshire.

Burnet, Thomas, a learned divine and philosopher, was born at Croft, in Yorkshire, about 1635, educated under doctor Ralph Cudworth, at Cambridge, and afterwards travelled as tutor to several young noblemen. In 1681, he made himself known by his *Telluris sacra The-*

oria, which he subsequently translated into English. After the revolution of 1688, B. was appointed chaplain in ordinary and clerk of the closet to king William. In 1692, he published his *Archæologia Philosophica, sive Doctrina antiqua de Rerum Originibus*. The freedom of opinion displayed in this work led to the removal of the author from the clerkship of the royal closet. He died in September, 1715, and was interred in the charter-house chapel. Two posthumous works of this author appeared in 1727—a treatise *De Fide et Officiis Christianorum*; and another, *De Statu Mortuorum et Resurgentium*. All the works of B. exhibit him as an ingenious speculator, rather than as a patient and sober inquirer concerning the moral and natural phenomena of which he treats. His great work, the Theory of the Earth, is one of the many systems of cosmogony, in which Christian philosophers have attempted to reconcile the Mosaic account of the creation, paradise, and the deluge, with the traditions of the ancients, and the principles of modern science. His speculations are recommended by sublimity of description and eloquence of style. In his *Archæologia Philosophica*, the doctor has combatted the literal interpretation of the history of the fall of man; and, to expose its improbability, he has introduced an imaginary dialogue between Eve and the serpent, which, as coming from the pen of a divine, is singular enough. It is only to be found in the first edition of the work.

Burnett, James; better known by his official title of *lord Monboddo*, as judge of the court of session in Scotland. He was born, in 1714, at the family seat of Monboddo, in Kincardineshire. After studying at Aberdeen, he went to the university of Gröningen, whence he returned in 1738, and commenced practice as an advocate at the Scottish bar. In 1767, he was raised to the bench on the decease of his relative, lord Miltown. He distinguished himself by his writings as a metaphysician, having published a Dissertation on the Origin and Progress of Language (1774–1792, 6 vols., 8vo.); and Ancient Metaphysics (1778, &c., 6 vols., 4to.) Lord Monboddo was an enthusiastic admirer of ancient literature, and especially of the works of Plato, and other Grecian philosophers. His works contain many interesting observations, but also exhibit some strange and paradoxical opinions. Thus he seriously advocates the existence of satyrs and mermaids; and has advanced some whimsical speculations relative to a supposed affinity between the human race and the monkey tribe, which exposed him to a good deal of ridicule on the first publication of his theories. Both his official and his private character were extremely respectable; and he was, notwithstanding his eccentricities, a man of considerable learning and ability. He died, in consequence of a paralytic stroke, at Edinburgh, May 26, 1799.

Burney, Charles, a celebrated composer and writer on music, born at Shrewsbury, in 1726, began his studies at Chester, under the organist of the cathedral there, continued them at Shrewsbury, under the direction of his half-brother, Burney, and completed them in London, between 1744 and 1747, under doctor Arne. In the latter year appeared his first compositions. His musical pieces Alfred, and Queen Mab, composed in 1749, made him known. In 1751, he obtained the place of organist at Lynn Regis, in Norfolk. Here he commenced his General History of Music, and determined to visit all the institutions in Europe, at which he could obtain important information for his work. In 1760, he returned to London, at the request of the duke of York, where his compositions, and the musical skill of his eldest daughter, then eight years of age, excited admiration. In 1769, the university of Oxford bestowed on him the honorary degree of doctor of music. In 1770, he visited France and Italy, and, two years afterwards, the Netherlands and Germany, for the sake of his great work. He published an account of both tours. After his second return, he became a fellow of the royal society. In 1776 appeared the 1st volume of his General History of Music from the earliest Ages to the present Period (4to.); the 2d in 1779, and the 3d and 4th in 1789. He is the author also of several other valuable works, among which are the Memoir of Handel, and several musical compositions. He died in April, 1814, in the office of organist at Chelsea college. He wrote most of the musical articles in Rees' Cyclopædia. B. had a numerous family, several members of which have highly distinguished themselves. His second daughter, Francisca d'Arblay, is the authoress of the well-known novels Evelina, Cecilia, and Camilla.

Burney, Charles; second son of the historian of music; a classical scholar and critic of high reputation. He was born

at Lynn, in Norfolk, in 1757, and received his education at the charter-house school, and the universities of Cambridge and Aberdeen; distinguished himself as a writer in the Monthly Review, to which he contributed many articles on classical literature; subsequently entered into holy orders, and obtained some preferment in the church. He died in December, 1817; and his valuable collection of books, many of them enriched with manuscript notes, was purchased by parliament for the British museum. B. published an appendix to Scapula's Greek Lexicon from the MSS. of doctor Askew; a valuable edition of the choral odes of Æschylus, the Greek tragedian; the Greek Lexicon of Philemon; remarks on the Greek verses of Milton; an abridgement of Pearson's exposition of the creed; and a sermon preached at St. Paul's: besides which he printed, for private distribution, a small impression of the Latin epistles of doctor Bentley and other learned scholars.

Burning-Glass; a lens which unites the rays of light that fall upon it in so narrow a space as to cause them to kindle any combustible matter coming in their way, like fire. The same name has been sometimes given, though improperly, to the burning-mirror. (*See the next article.*) The lenses commonly used as burning-glasses are convex on both sides; these bring the rays upon a point with the greatest force, because of the shortness of their focal distance. The effects of a burning-glass are more powerful in proportion as its surface is greater, and its focus smaller. That such a glass may produce its greatest effect, it is necessary that the rays of the sun should fall upon it in a perpendicular direction, which is the case when the image of the sun, that appears at the moment of burning, is circular. If a second lens, of a smaller focal distance, is placed between the first and its focus, so as to intercept the rays which pass through the first, they are still more condensed, and united in a still narrower compass, so that the effect is greatly augmented. The Greeks and Romans seem to have been acquainted with burning-glasses, or, at least, with a kind of transparent stones similar to them. They became more known in the 13th century. At the close of the 17th, von Tschirnhausen caused the largest burning-glasses, consisting of one piece, that are known, to be polished with incredible pains. Two of them, still in Paris, are 33 inches in diameter, and the weight of one amounts to 160 pounds. Both glasses produce an effect equal to that of the most intense fire. They kindle wood which is both hard and wet in a moment, and make cold water, in small vessels, boil in an instant; metals, placed upon a plate of china, are melted and vitrified by them; tiles, slates, and similar objects, become instantly red-hot, and vitrified. As Tschirnhausen's glasses, however, are not perfectly clear, and the effect is thus considerably lessened, Brisson and Lavoisier undertook, in 1774, to put together two lenses, resembling those used for watch glasses, filling up the space between them with a transparent fluid. In this manner, veins and impurities may be avoided, at less expense. They succeeded in making a burning-glass of 4 feet in diameter, the greatest thickness of which, in the centre, amounted to 8 inches, and which, of itself, had a much greater power than the glasses of Tschirnhausen, in connexion with a smaller lens, or collective glass, but produced an extraordinary effect if joined to a collective glass.—The experiments made by means of large burning-glasses are important in chemistry and physics. The power of a burning-glass, however, is almost four times less than that of a burning mirror, or reflector (q. v.), of equal extent and equal curvature. This reflects more light than the glass allows to pass through it; has a smaller focal distance, and is free from the dissipation of the rays, which takes place in the burning-glass, since it reflects them all nearly to one point, while the burning-glass refracts them to different points. On the other hand, the burning-glass is much more convenient, on account of the place of its focus, which is behind the glass. The burning point (focus) is an image of the sun; its diameter is equal to the 108th part of the focal distance, and its centre is the *focus*, properly so called. In the higher branches of geometry and conic sections, the *foci* are points in the parabola, ellipsis, and hyperbola, where the rays, reflected from all parts of these curves, meet. Several accidents in modern times have shown, that conflagrations may be caused by convex window-glasses or water-bottles, &c., which have the form of burning-glasses, if the rays of the sun are concentrated by them upon combustible substances lying within their reach. Since the casting and polishing of large lenses are attended with great difficulties, Buffon's plan of casting them in pieces, or zones, and afterwards putting

them together, has lately been practised. Lenses of this last kind have been ingeniously applied, by Becquey, for augmenting the light on light-houses, according to the suggestion of Fresnel. (See *Pharos.*) For the history of burning instruments, see the article *Burning Mirrors.*

Burning Mirrors, or Reflectors; mirrors, the smoothly polished surface of which reflects the rays of the sun that fall upon it in such a direction, that they unite at some distance from the mirror, in a more limited space, and act upon substances within this space like the most powerful fire. Concave mirrors cause the rays that fall upon them in a direction parallel to their axes to converge. Spherical mirrors of this kind are the most common; but parabolic ones are also used; and even plane mirrors may be employed like concave ones, if several of them are combined in a proper manner. In order that a burning mirror should produce its whole effect, its axis must be directed exactly towards the centre of the sun's disk. This is the case if the light, intercepted by a plane, perpendicular to the axis of the mirror, at its focal distance, forms a circle. The focus then lies in a straight line between the sun and the mirror. The ancients were acquainted with such mirrors, as is manifest from several of their writings still extant. It is impossible, from the nature of things, that Archimedes, during the siege of Syracuse by Marcellus, should have set on fire the fleet of the latter by means of concave mirrors: it would be more credible, that it had been effected by a combination of plane mirrors. Various experiments have shown, that great effects may be produced, at a considerable distance, by the latter instrument. Kircher placed five plane mirrors, of an equal size, in such a position as to reflect the rays upon a spot one hundred feet distant, and thereby produced a great heat. Buffon, in 1747, effected a combination of 168 plane mirrors, each of which was 6 inches broad, and 8 long. With 40 of these mirrors, he set on fire, almost instantaneously, a board of beech wood, covered with tar, at a distance of 66 feet; and, with 128 mirrors, a board of pine wood, likewise covered with tar, at a distance of 150 feet. With 45 mirrors, he melted a tin bottle, at a distance of 20 feet, and, with 117 mirrors, small pieces of money. He afterwards burned wood with this machine, at the distance of 200 feet, melted tin at the distance of 150, lead at the distance of 130, and silver at the distance of 60 feet. During the last century, several large mirrors were made in Italy, two of which are still in Paris and Cassel. Von Tschirnhausen also manufactured one in 1687, 3 Leipsic ells (about 5½ English feet) in diameter, and the focal distance of which was 2 ells ($3\frac{7}{10}$ English feet).* It consists of a thin plate of copper, highly polished, and is now in the mathematical hall in Dresden. This mirror sets wood on fire, makes water boil, melts tin three inches thick, as well as lead, vitrifies bricks, bones, &c. Besides metals, wood, pasteboard, glass, and other materials, serve for burning mirrors, if their surface be polished. Burning mirrors have of late been used as reflectors (q. v.), to throw light at a great distance, and may be very usefully employed in light-houses. If, for instance, a lamp is placed in the focus of a parabolic mirror, the rays of light which fall on it are all reflected in a direction parallel to the axis; thus the reflectors of Lenoir appear like stars of the first magnitude at the distance of 80,000 feet. (For further information on burning-glasses and burning mirrors, see Priestley's *History and present State of Optics;* and the 5th vol. of the new edition of Gehler's *Physikalisches Lexicon*, Leips. 1825).

Burning of houses. (See *Arson.*)

Burnisher is a blunt, smooth tool, used for smoothing and polishing a rough surface by pressure, and not by removing any part of the body. Other processes of polishing detach the little asperities. Agates, tempered steel, and dogs'-teeth, are used for burnishing. It is one of the most expeditious methods of polishing, and one which gives the highest lustre. The burnishers used by engravers are formed to burnish with one end, and to erase blemishes with the other.

Burns, Robert; a celebrated Scottish poet, whose history affords a memorable example of the miseries arising from the possession of extraordinary talents, unaccompanied by habits of prudence and self-control. He was the son of William Burnes or Burns, a gardener and small farmer, near the town of Ayr, and was born January 25, 1759. He was brought up to rustic labor; but his education was not neglected, as he was, at an early age, instructed in English grammar, by Mr. Murdoch, (who died not long since in London), to which he added an acquaintance with the French language and practical mathematics. Smitten with a passion for

* Another account gives diameter, 4½ French feet, focal distance, 12 feet.

reading, he devoted every moment he could spare to the perusal of such books as fell in his way, and, among them, meeting with the works of some of the best English poets, he was enabled to cultivate and improve a taste for poetry and romantic fiction; which was, perhaps, first inspired by the chimney-corner tales of an old woman in his father's family, whose memory was plentifully stored with adventures of fairies, witches, warlocks, ghosts and goblins, which she religiously believed, and therefore detailed with the most impressive effect to her admiring auditors. Burns's first poetical effusions were prompted by love, a passion of which he was peculiarly susceptible. Having begun, he continued to make verses, which attracted the notice of his neighbors, and gained him considerable reputation. His company was consequently much sought—a circumstance which led him to an indulgence in habits of dissipation, and a disgust at the plebeian occupation to which he seemed destined by fortune. He then engaged in business as a flax-dresser, in the town of Irvine; but his premises were destroyed by fire, and he was obliged to relinquish the undertaking. His father dying, he took a small farm in conjunction with a younger brother; and this scheme also proved unsuccessful. In the mean time, he had formed a connexion with a young woman, whom, on her becoming pregnant, he would have married; but his ruined circumstances induced her friends to object to it. Thus unsuccessful at home, he engaged himself as assistant overseer to a plantation in Jamaica. To obtain the funds necessary for the voyage, he was induced to publish, by subscription, a volume of his poetical effusions. It was accordingly printed at Kilmarnock in 1786, and Burns, having derived from the publication the assistance he expected, was about to set sail from his native land, when his purpose was prevented by the communication of a letter from doctor Blacklock to a friend of the Ayrshire poet, recommending that he should visit Edinburgh, in order to take advantage of the general admiration his poems had excited, and publish a new edition of them. This advice was eagerly adopted, and the result exceeded his most sanguine expectations. After remaining more than a year in the Scottish metropolis, admired, flattered and caressed by persons of eminence for their rank, fortune or talents, he retired to the country with the sum of £500, which he had realized by the second publication of his poems. A part of this sum he advanced to his brother, and, with the remainder, took a considerable farm near Dumfries, and at the same time procured the office of an exciseman. He also now completed his matrimonial engagement with the female to whom he had been contracted. His convivial habits ere long prevented him from paying a proper attention to his farm; and, after a trial of three years and a half, he found himself obliged to resign his lease, and remove to the town of Dumfries, to follow his employment as an exciseman. He continued to exercise his pen, particularly in the composition of a number of beautiful songs, adapted to old Scottish tunes, for a periodical work, published at Edinburgh. His disposition to intemperate indulgence was too deeply rooted to be overcome; and, in spite of the remonstrances of his friends, and his own acknowledged conviction of the folly of his conduct, he persisted in the use of inebriating liquors till he had ruined his constitution, and brought on a disease, which occasioned his death, July 21, 1796. The poems of B. are none of them of any great length, nor do they appertain to the higher kinds of poetical composition. It appears, indeed, from his correspondence, that he at one time meditated an epic or dramatic effort, but the mode of spending his time, to which he had become habituated, utterly prevented the necessary application. Whatever he has done, however, he has done well. His songs, his tales, and his poetical epistles, display pathos, humor, a vigor of sentiment, and a purity and elegance of style, which, in spite of their being clothed in what may be termed a provincial dialect, will not only ensure a permanent fame to their author, but advance him high in the records of native genius. His prose compositions, which consist entirely of private letters, never intended for the press, are altogether as extraordinary productions as his poems; and those literary men who were acquainted with him have asserted, that his conversation was not less calculated to leave a powerful impression of the extent and accuracy of his knowledge and observation, and the strength and vivacity of his genius. He left a wife and four children unprovided for; but his friends raised a subscription for their support; and an edition of the works of Burns, in 4 vols. 8vo., was published for their benefit, in 1800, with a life of the author, by doctor Currie, of Liverpool.

Burrampooter, or Bramapootra, is the largest river in India. Its sources, not yet explored, seem to be situated near lake Manasarovara, in Thibet, near those of the Indus. In Thibet, it is called the *Sanpoo*, flows by Lassa, the residence of the Grand Lama, and, after being lost to European knowledge, re-appears in Assam. In its rise and fall, its periods coincide nearly with those of the Ganges. Its navigation is rendered difficult by shifting sand-banks, and trunks of trees sticking in its bed. After entering Bengal, it joins the Ganges, at Luckipoor, where the united rivers form a wide gulf, communicating with the sea of Bengal. The course of the B. is estimated at about 1650 miles. Rising from opposite sides of the same mountains, and separating to a distance of 1200 miles, the B. and the Ganges are destined to mingle their waters again in the same channel.

Burrill, James, a distinguished senator of the U. States, was born in Providence, Rhode Island, April 25, 1772. He received his education at the college in Providence, now Brown university, and was graduated in Sept. 1788. He then pursued the study of the law, and was admitted to practise in the supreme court of the state before he reached his majority. In a few years, he stood at the head of his profession in Rhode Island. In October, 1797, he was elected, by the general assembly, attorney-general of the state, and annually after, by the people, for seventeen successive elections. The decay of his health, and other causes, induced him to resign that office in May, 1813. In 1816, he was appointed, by the general assembly, chief justice of the supreme court, having been, for several years previous, speaker of the house of representatives of Rhode Island. In the next year, he was placed in the senate of the U. States, of which he remained a highly esteemed member until the period of his decease, December 25, 1820.

Bursa, a city of Natolia, in Asiatic Turkey, with a population of about 60,000 Turks, Greeks, Armenians and Jews, engaged in commerce, and the manufacture of satins, silk stuffs, carpets, gauze, &c. The bazars are filled with merchandise, and the caravans, passing from Aleppo and Smyrna to Constantinople, promote its commerce. It contains 140 mosques, two of which are magnificent, and is adorned with an immense number of fountains. It is one of the most beautiful cities in the empire, situated in a fertile and finely-wooded plain, which is enclosed by the ridges of Olympus, and abounds in hot springs. The castle, which is about a mile in circumference, is supposed to be the Prusa of the ancients, built, according to Pliny (v. 22), by Hannibal. In the 14th century, it was taken by the Turks, and became the capital of the Ottoman empire previous to the capture of Constantinople. Its port is Montagna, or Mondania, on the sea of Marmora, 75 miles S. W. of Constantinople. Lon. 29° 12′ E.; lat. 40° 11′ N.

Burschen; the name given to one another by the students at the German universities. It is derived from *bursales* or *bursarii*, the name which the students bore in the middle ages, from the buildings (*bursæ*) in which they lived in common. (See *Universities.*)

Burton, Robert; a writer of the 17th century. He was born at Lindley, in Leicestershire, 1576, educated at Oxford, embraced the ecclesiastical profession, and became rector of Segrave, in Leicestershire. His learning, which was various and extensive, is copiously displayed in the Anatomy of Melancholy, by Democritus Junior, first published in 1621, and repeatedly reprinted. B. died in 1640, and was buried at Christ church, with the following epitaph, said to have been his own composition:

> Paucis notus, paucioribus ignotus,
> Hic jacet Democritus Junior;
> Cui vitam pariter et mortem
> Dedit *Melancholia.*

He was a man of integrity and benevolence, but subject to strange fits of hypochondriac melancholy, which rendered his conduct flighty and inconsistent. Sometimes he was an agreeable and lively companion, delighting those around him with perpetual sallies of wit and humor; while, at other times, devoured with spleen and *ennui*, he sought relief by listening to the jests of the bargemen on the river near Oxford. He is reported also to have undertaken the composition of his Anatomy of Melancholy with a view to the dissipation of his morbid feelings. Among those who have been most deeply indebted to B. is the facetious author of Tristram Shandy; who has, however, been perhaps too harshly censured for a fault which every man of general and extensive reading knows to be common to almost all great writers.

Burton-upon-Trent; a town of England, on the north bank of the Trent, which is here crossed by a fine old bridge

of 36 arches. B. is a borough, and the inhabitants have the privilege of exemption from county juries. It is mentioned early in Saxon history, and suffered much in the civil wars. It is chiefly celebrated for its excellent ale, of which vast quantities are made, both for home consumption and exportation. Contrary to common usage, the brewers, in preparing it, employ hard instead of soft water. (See *Brewing*.) Population, in 1821, 6700. Lon. 1° 36′ W.; lat. 52° 50′ N.

Bury St. Edmund's; a town in Suffolk, England, formerly surrounded with walls. It contains two fine churches, with numerous monuments, and, before the reformation, had five hospitals. Of many benevolent institutions, the principal is a free school founded by Edward VI. It is one of the greatest corn markets in the kingdom, and its great fair, in October, which lasts three weeks, is attended by the nobility and gentry of the neighborhood. The town is a borough, returning two representatives. It is an ancient place, and is supposed to have derived its name from St. Edmund, a king of the East Angles, who was buried here. The barons, in John's reign, met here, and formed a league against him. B. has been the seat of two parliaments, and contains the remains of an abbey, the most wealthy and magnificent in Britain, "with gates of brass, towers and high walls, so that one might think the monastery alone a city." Barren women, desirous of offspring, offered a white bull at the shrine of St. Edmund's. 72 miles N. N. E. of London. Lat. 52° 50′ N.

Burying-Places. The custom of burying the dead in public places prevailed among the most ancient nations. The Romans had this custom in the earliest times. Afterwards, in the flourishing periods of the republic, they burnt their dead, and only buried the ashes, collected in urns (*urnæ*). The ancient Germans buried their dead in the groves consecrated by their priests. With the introduction of the Christian religion, consecrated places were appropriated for the purpose of general burial; and it was regarded as ignominious not to be buried in consecrated earth. The deprivation of the rites of burial was, therefore, part of the punishment of excommunication. The Romans were accustomed to provide their sepulchres at least with a stone, upon which was inscribed the name of the deceased, and the wish, May he rest in peace (*Sit illi terra levis*, that is, May the earth rest lightly upon him). This custom was preserved by the Christians. The sepulchres in churches originate from an inclination, common to men of all times and nations, to honor their relations, even in the grave. The Egyptians, Greeks and Romans erected over the graves of men of rank, or persons otherwise remarkable, pyramids, *mausolea* or temples. After the introduction of Christianity, little churches, called *chapels*, were erected over the dead. The early Christian martyrs were buried in caverns, which, by degrees, were enlarged to spacious subterranean vaults, and called *chambers of repose*. In the sequel, others considered themselves happy if their bones were allowed to repose near the ashes of a martyr. The sepulchres of the martyrs were, on this account, distinguished by a white altar over them. When the Christians were allowed the public exercise of their religion, they erected churches, and the heathen temples became places of Christian worship. As early as the 4th century, they built churches over the sepulchres of the holy martyrs; and, in the belief that a place was sanctified by their ashes, they anxiously sought out, on the erection of new churches in cities, or the transformation of heathen temples into Christian churches, the remains (relics) of the martyrs, and buried them under the altar of the new church, to communicate to it a character of greater sanctity. It gradually came to be universally considered, among the Christians, a privilege to be buried in the neighborhood of a saint. The emperor Constantine, who died in 337, was the first person that we know of, who ordered his sepulchre to be erected in a church. This was done in the church of the apostles at Constantinople, of which he was the founder, and therefore, probably, considered himself as peculiarly entitled to this privilege. He was soon imitated by the bishops, and, in the sequel, all those who had enriched the church were distinguished by this honor. The emperors Theodosius and Justinian, indeed, forbade the erection of sepulchres in churches, but in vain. Leo the Philosopher again permitted them to every body. It is only in later times that men have become convinced how injurious it is to the health of the living to remain, for a long time, in the vicinity of the dead; particularly if the corpses remain standing in simple coffins, and are not placed deep in the earth, as is commonly the case in the sepulchral vaults of churches. From these the effluvia of putrefaction escape easily, and diffuse

themselves in the air. On the occasion of opening such sepulchral vaults, those who stood near them have sometimes fallen dead on the spot, and no one could venture into the church, for a long time after, without exposing himself to dangerous consequences. At present, the burying in churches is almost everywhere suppressed, or, at least, permitted only under certain restrictions. Even in Naples and Rome, the general practice of erecting sepulchres in churches was forbidden in 1809, and the foundation of burial-places without the city was provided for. The custom of the communities of Moravian Brothers, who form their burial-places into gardens, is worthy of imitation. Several Catholic church-yards in Germany are also distinguished by their pleasing aspect; for instance, one in Münich, where every grave is covered with a bed of flowers, which the relations of the deceased water from a fountain dug for the purpose. The Quakers, it is well known, erect no tomb-stones. The beautiful name of the German Moravian Brothers, *friedhof*, or *field of peace*, is becoming more and more common in Germany. The celebrated burying-place of *Père la Chaise*, near Paris, is one of the most beautiful and interesting spots in the world.

Busaco; a convent in Portugal, in the province of Beira. The monks are Carmelites, and the prospect from the summit of the Sierra de Busaco is one of the finest in Portugal. It is memorable for the battle, Sept. 27, 1810, between Massena and lord Wellington, who, on a retreat before the superior forces of the former, availed himself of the favorable position of the Sierra for checking the pursuit. Two attacks, one on the right wing, consisting of British, and the other on the left, composed chiefly of Portuguese, were repulsed; but, Massena having detached a force to march round the mountain, and cut off the British troops from Coimbra, Wellington retreated towards that city, and afterwards to the lines of Torres Vedras. (q. v.)

Busbecq, or Busbequius, Augier Ghislen; the natural son of a nobleman; born in 1522, at Comines, in Flanders; legitimated by Charles V. After having studied in the most celebrated universities of Flanders, France and Italy, he accompanied Peter Lassa, ambassador of Ferdinand, king of the Romans, to England. In the next year (1555), that prince made him his ambassador to Soliman II. His first negotiation was not very successful. He obtained only an armistice for six months, and a letter, which he delivered immediately to Ferdinand. He then returned to his post, and this time his negotiations were completely successful. After seven years, he returned home, and was made tutor of the sons of Maximilian II. When this prince became emperor, B. was sent to accompany the archduchess Elizabeth (who was to be married to Charles IX) on her journey to France. B. remained there in the character of steward with Elizabeth, and, when she left France, after the death of her husband, he continued there as ambassador of Rodolph II. In 1592, he set out on his return to Flanders, and was attacked, on the way, by a party of the Leaguers. As soon as they had seen his passports, they permitted him to continue his journey unmolested, from respect to his character of an ambassador; but the terror which he had suffered threw him into a violent fever, of which he died several days afterwards. We have remaining two important works of his:—1. *Legationis Turcicæ Epistolæ quatuor*, in which the policy, the power and the weakness of the Porte are so profoundly and clearly explained, that, even at present, information may be drawn from them; and, 2. *Epistolæ ad Rudolphum II, Imp. e Gallia scriptæ* (*editæ a Houwaert*), a very important work for the history of those times. His style is pure, elegant and simple. During his stay in Turkey, he collected Greek inscriptions, which he communicated to Andreas Schott, Justus Lipsius and Gruter. We are indebted to him for a copy of the celebrated *monumentum Ancyranum*, which he had transcribed and brought to Europe. More than a hundred Greek manuscripts, which he had collected, were presented by him to the library of Vienna.

Büsching, Anthony Frederic; born, 1724, in Stadthagen, in Lippe; studied theology in Halle, in 1744, where he found a friend and protector in Baumgarten. On his travels, as tutor of the young count of Lynar, he became convinced of the defects of existing geographical treatises, and resolved to write a new one, which he began, on his return to Germany (1752), by publishing a short Description of Sleswic and Holstein, as a specimen. In 1754, he was made professor of philosophy in Göttingen. In 1755, he married Christiana Diltey, a lady who was remarkable as a member of the Göttingen learned society. Notwithstanding some difficulties about his hete-

rodox opinions, he received an invitation to become pastor in a Lutheran church at Petersburg. In 1766, he was made director of the united gymnasiums of Berlin and of the suburb Köln, and discharged his duties with great diligence. He died in 1793. He is chiefly distinguished as a geographer. Before his great work, *Allgemeine Erdbeschreibung*, which he began to publish in 1754, in separate volumes, and which, though not entirely completed by the author, passed through eight legal editions during his life, neither the Germans nor any other nation had a thoroughly scientific geographical work.

Busembaum, Hermann, a Jesuit, famous for his *Medulla Theologiæ moralis, ex variis probatisque Auctoribus concinnata*, born at Nottelen, in Westphalia, 1600, rector of the Jesuits' colleges at Hildesheim and Münster, died in 1668. His work was much used in the seminaries of the Jesuits, and had passed through 50 editions, when father Lacroix published it, increased from a single duodecimo to two folios by his own commentaries and the additions of father Collendall. It was published at Lyons, in 1729, with further additions by father Montausan. The latter edition was reprinted, in 1758, at Cologne. It was now found to contain principles concerning homicide and regicide, which appeared the more reprehensible on account of the recent attempt on the life of Louis XV, by Damiens. The parliament of Toulouse caused the work to be publicly burnt, and summoned the superiors of the Jesuits to appear at their bar for trial. They disavowed the doctrines of the book, declared themselves ignorant of the author, and denied that any Jesuit had any share in it. The parliament of Paris was satisfied with condemning the book. Against both these sentences, father Zacharia, an Italian Jesuit, with the permission of his superiors, stepped forward as the defender of B. and Lacroix; but his defence was condemned by the parliament of Paris. B. was also the author of *Lilium inter Spinas, de Virginibus Deo devotis eique in Sæculo inservientibus.*

Bushel; an English dry measure, containing 8 gallons or 4 pecks. It is also used in the North American U. States. The standard English bushel (12 Henry VII) contains 8 gallons of wheat, each of 8 pounds troy, each of 12 ounces, each of 20 pennyweights, each of 32 corns of wheat that grew in the middle of the ear. In 1696, a duty being laid upon malt, it became necessary to ascertain the exact contents of the *Winchester bushel*, as that of Henry VII was called. It was found that the capacity was 2151.7 cubic inches of pure water, equivalent to 1131 oz., 13 dwts. troy. (See J. Q. Adams's *Report upon Weights and Measures*, Washington, 1821.) The capacity of the *Imperial bushel*, prescribed by the act of uniformity (5 Geo. IV, c. 74), which took effect Jan. 1, 1826, is, for coal, potatoes, fruits, and other goods sold by *heaped measure*, 2815 cubic inches, the goods to be heaped up in the form of a cone, to a height above the rim of the measure of at least three fourths of its depth. The imperial bushel for all liquids, and for corn and other dry goods *not heaped*, contains 2218.20 cubic inches, and holds 80 lbs. avoirdupois of pure water.

Bushire, or Abushehr; the principal seaport of Persia, situated on the Persian gulf, with 5000 inhabitants. The principal exports are carpets, wine of Shiraz, rose-water, drugs, pearls and cotton. The English East India company have a factory here. Lon. 50° 43′ E.; lat. 28° 59′ N.

Bushmen, or Boshmen; the common name of that wild race of people, who dwell in the western part of South Africa, in the immense plains bordering on the north side of the colony of the cape of Good Hope, and are lost in the unknown regions of the interior. Janssens, formerly Dutch governor at the cape, gives the following account of them:—The Bushmen are a wild, rude, cruel and miserable people. So far from forming a nation, they do not even form societies. They live together in single families, and unite in great numbers only for defence or for pillage. They do not cultivate the land, and have no domestic animals except the dog. Their usual food is locusts. They endure hunger for a long time, but indemnify themselves by their voracity if they are so fortunate as to kill any wild game, or steal an ox or a sheep. They are entirely destitute of huts and household furniture. The scorching heaven is their tent, and the hot sand their bed. Their weapons consist of a small bow and poisoned arrows, which they shoot, with astonishing accuracy, to a great distance. Their language is exceedingly poor. It consists of a certain rattling with the tongue, and harsh, gurgling tones, for which we have no letters. They are, for the most part, of low stature; their skin is of a dark-yellow; and their hair, which resembles wool, is twist-

ed together in small tufts. (See *Hottentots.*)

Bushwanas, or Boshuanas, or Betjouanas; an African people, occupying the country lying between 20° and 25° S. latitude, divided into several tribes. Though under the government of separate chiefs, who are often at war with each other, these tribes are united by language, manners and customs. Less tall than the Caffres, and as well proportioned, their form is even more elegant. Their skin is of a brown tint, between the shining black of the Negro and the yellow color of the Hottentots. They surpass the Caffres in civilization and the arts of life. Some of their towns are considerable. Kurechanee was visited by Campbell in 1821, who estimated the population at 16,000. Inoculation for the smallpox is practised there. Old and New Leetakoo contain each 4000 inhabitants. The Bushwanas are inquisitive and intelligent; without any settled occupation, yet always active. Their principal food is the curds of milk and the produce of the chase: they rarely kill cattle, and have an invincible aversion to fish. The ashes in which their meat is cooked serve them for salt. Their clothes are made of the skins of animals: the women cover the breast, and leave the belly exposed. Their ornaments are rings and bracelets of ivory and brass. Their houses are light, clean, airy, and generally of a circular form. They are very skilful in tempering iron, and making their arms, which consist of a *hassagay* (javelin), a shield and a club. Polygamy is established among them; a young man buys a wife for 10 or 12 oxen: her first business is to build a house, for which she fells the necessary quantity of wood. The erection of the stable, the cultivation of the fields, and all the household work, falls to her. As soon as he can afford it, the Bushwana buys a second wife, who, in like manner, must build a house and stable, and cultivate a piece of ground. Honesty, loyalty and courage are the highest virtues, in their estimation. They have an idea of a soul, and believe in an invisible Lord of nature, the sovereign Dispenser of good and evil, whom they call *Mourimo.* Their principal ceremonies are circumcision and the blessing of cattle. They divide the year into 13 lunar months, and distinguish the planets from the fixed stars. Christianity has been introduced among them by missionaries, and with it some degree of civilization.

Buskin (in Greek and Latin, *cothurnus*); a kind of high shoe worn upon the stage, by the ancient actors of tragedy, in order to give them a more heroic appearance. It was introduced by Sophocles, and, from this use, the word is figuratively employed, by the classic authors, for tragedy itself (Juvenal, xv. 29), or for a lofty and elevated style (*grande munus Cecropio cothurno*, Hor. Od. ii. 1, 12). The buskin was also worn, by both sexes, particularly by the ladies, for ornament (Juv. vi. 505). The Melpomene in the Villa Borghese has the buskin. Hunters and soldiers used a different kind, resembling the half-boot.

Bust (Italian, *il busto*, from the Latin *bustum*), in sculpture; the representation of that portion of the human figure, which comprises the head and the upper part of the body. Busts are of different extent: 1. such as consist of the head, the upper part of the neck, and the upper part of the shoulders; 2. heads with the upper part of the chest, to the end of the breastbone (*busts* properly so called); and, 3. heads with the whole chest to the middle of the body, often to the hips. Between the bust and its pedestal is sometimes a column, or a square prop; such a bust is called *Herme.* The figure is sometimes in relief. The origin of the bust may be derived from the Herme, and from the custom of the Greeks and Romans to decorate their shields with portraits, and their vestibules with the images of their ancestors. Busts were afterwards used for the images of their gods, as being less expensive. The greater part have been found in Rome and Italy. Some remarkable ones have been obtained from Herculaneum, in bronze. The chief difficulty in the execution of busts arises from this circumstance, that we are accustomed to estimate the size of the head by comparing it with the whole body. In a bust, therefore, the head appears disproportionately large, and the artist is obliged to yield, in some measure, to this ocular deception, by lessening its natural proportion.

Bustard; the trivial name of a species of wader belonging to the genus *otis*, L., and to the family *pressirostres*, C. The great bustard (*otis tarda*, L.) is the largest of European land-birds, the male weighing, on an average, 25 pounds. It is four feet in length, and measures nine feet from tip to tip of the wings. The head and neck are ash-colored, and there is a tuft of feathers about five inches long on each side of the lower mandible. The

back is transversely barred with black and bright ferruginous colors, and the primaries are black. The tail consists of 20 feathers, broadly barred with red and black. The belly is white, the legs dusky, naked, and without a hind toe. The female is but half the size of the male, and has the crown of the head of a deep orange color, traversed by red lines; the remainder of the head is brown. She otherwise resembles the male, except that the color of her plumage is less bright. This species is found in most of the open and level countries of the south and east of England, where they are occasionally seen, in autumn, in flocks of 50 and upwards. They are very shy and vigilant, and by no means easy to shoot. They run with great speed, and aid their course with their wings, like the ostrich. Although they rise on the wing with difficulty, they are said to fly many miles without resting. They feed on grain, seeds, worms, &c., and lay two eggs, as large as those of a goose: these are of a pale olive tint, with dark spots. The nest is merely a hole scraped in the earth. They do not wander far from their accustomed haunts, seldom going to a greater distance than 20 or 30 miles. Their flesh is considered fine eating.

Butchers have been much the same in all ages and countries, and we know not of any great improvements that modern art or science has introduced into the practice of slaughtering animals. The ancient Scythians, and their Tartar descendants, seem to be peculiar in their taste for horse-flesh. The Romans appear to have loved beef, and veal, and mutton, as well as the modern Europeans and their American descendants: *cara omnia*, is the complaint of the old comic writer, *agninam caram*, *caram bubulam*, *vitulinam*, *porcinam*, *omnia cara*. In Paris, the butcheries, formerly receptacles of filth, and injurious to health, were removed by Napoleon, in 1809, to the outskirts of the city. They are called *abattoirs* (*abattre*, to fell), and consist of spacious buildings for the reception of the cattle, preparing the tripe, tallow, &c, and reservoirs of water for the service of the establishments. Of these there are five, in which are slaughtered annually 75,000 black cattle, with a proportionate number of sheep, &c. The larger animals are felled by a blow on the head, and the jugular vein is immediately separated with a knife. The flesh is then *blown* (*gonflé*), by injecting air into the vessels through a bellows, which gives it a plump appearance. Every part of the animal—bones, horns, hoofs, blood, intestines, hide, tallow—is used for the fabrication of glue, jelly, Prussian blue, sal-ammoniac, &c. In London, the carcass butchers kill the meat, and sell it out in great quantities; the retail butchers sell it out to the consumers. The average number of oxen sold at Smithfield annually is 156,000; sheep and lambs, 1,500,000; calves, 22,000; hogs, 20,000. The Jews in London have their own butchers, who are licensed by the rabbis. They cut the throats of the animals, never knocking them down, according to the usual practice. In some countries, the method of slaughtering cattle by penetrating the spinal marrow is practised.

Bute; a small island of Scotland, lying at the mouth of the Clyde, with an area of 29,000 acres, belonging principally to the marquis of Bute. The climate is moist and mild. The herring fishery is a profitable employment. The only town is Rothesay, the ruins of the castle of which, formerly inhabited by the Scottish monarchs, still remain. It gave the title of *duke of Rothesay* to the heir apparent of Scotland. The title is now transferred to the prince of Wales.

Bute (John Stuart) earl of; a British statesman, born in the beginning of the 18th century, in Scotland. His ancestors had been elevated to the peerage in 1703, and were connected with the old kings of Scotland. In his youth, B. seemed devoted to pleasure, and little inclined to engage in politics; nevertheless, in 1737, after the death of a Scottish peer, he was chosen to fill his seat in parliament. In consequence of his opposition to the measures of the ministry, he was left out when a new parliament was convened, in 1741. Offended by this neglect, B. retired to his estates, and lived there, wholly secluded, till the landing of the Pretender in Scotland, 1745, induced him to go to London, and offer his services to the government. Notwithstanding this manifestation of zeal, he would not have been brought forward again, if he had not attracted the notice of the prince of Wales, at an exhibition of private theatricals, in consequence of which he was invited to the court. Here he soon gained influence, and succeeded in making himself indispensable to the prince. At his death, in 1751, he was appointed, by the widowed princess, chamberlain to her son, and was intrusted by her with his education. B. never lost sight of his pupil, and possessed so much more influence with the princess

of Wales than her son's particular tutors, the earl of Harcourt and the bishop of Norwich, that they resigned their offices. Lord Waldegrave and the bishop of Lincoln, who were chosen in their stead, opposed him unsuccessfully. George II died Oct. 25, 1760, and, two days after, B. was appointed member of the privy council. In March, 1761, the parliament was dissolved. B. was made secretary of state, in the place of lord Holderness, and appointed Charles Jenkinson, afterwards lord Hawkesbury and earl of Liverpool, his under-secretary. Legge, chancellor of the exchequer, was removed. Pitt (the great Chatham), who saw his influence in the new council annihilated, gave in his resignation the same year. This event made an unfavorable impression on the nation; but B., possessing the unbounded confidence of his king, stood at the head of the state. Soon after, he removed the old duke of Newcastle, then first lord of the treasury, and the only one of the former ministry remaining in office, and immediately took this important post upon himself, receiving, at the same time, the order of the garter. After a severe contest in parliament, he concluded a peace with France. The terms for England were perhaps not disproportionate to the successes obtained during the war; but it was disgraceful that the king of Prussia, in violation of former treaties, should have been left to his fate. B. was obliged to hear the most bitter reproaches; yet he succeeded in winning the popular favor, and every thing seemed to promise the power of the minister a long continuance. He had rendered the whigs objects of suspicion to the king, and excluded them from the administration; on the contrary, he favored the tories, even the former Jacobites, and thus surrounded the king with persons whose principles coincided with his own, especially with his Scotch countrymen. The people murmured, and numberless pamphlets attacked the minister with bitterness, who was slowly gaining the confidence of the public, when new causes of dissatisfaction produced a great irritation against him. To discharge the debt contracted by the war, he was obliged to negotiate a loan, the interest of which was to be paid by a tax on cider, perry, &c. In spite of the opposition, the bill passed both houses. The city of London in vain petitioned the king to refuse his consent. The influence of B. seemed unbounded, when it was made known, contrary to expectation, that he had resigned his office as prime minister, and was, in future, to live as a private man. George Grenville succeeded him in the ministry. B. soon perceived the weakness of the administration, and endeavored to unite himself with Pitt. The plan failed, and the exasperation of the people was redoubled. B. was still considered as the soul of the royal resolutions, and particularly as the author of the stamp act, which kindled the first flame of discord between Great Britain and the North American colonies. Certain it is, that his friends spoke zealously against its repeal. Those ministers who did not support B.'s views were removed. His adherents, who called themselves friends of the king, formed a powerful party. They were stigmatized with the old name of *cabal*, and were denounced as the authors of all the present evils. In 1766, B. declared, in the house of lords, that he had wholly withdrawn from public business, and no longer saw the king; still it was not doubted that his great influence continued. On the death of the princess of Wales, 1772, he seems first to have given up all participation in the affairs of government. The public hatred towards him ceased, and he was forgotten. He spent his last years on his estate. A costly botanical garden, a library of 30,000 volumes, excellent astronomical, philosophical and mathematical instruments, afforded him occupation. His favorite study was botany, with which he was intimately acquainted. For the queen of England, he wrote the Botanical Register, which contained all the different kinds of plants in Great Britain (9 vols., 4to.). This work is remarkable, both for its splendor, in which it excels all former botanical works, and for its rarity. Only 12 copies were printed, at an expense of more than £10,000 sterling. B. died in 1792. He had more pretension than ability. By engaging in politics, for which he had neither talent nor knowledge, he lost his own quiet, and his imprudent measures brought trouble and confusion on the nation. He was reproached with haughtiness; but this was the fault of a noble spirit; and he steadily refused, during his ministry, to employ venal writers. Distrustful and reserved, he has been described as harsh, imperious and obstinate; yet he was generally irresolute, and even timid. His morals were irreproachable. In private life, he displayed an amiable simplicity.

Butler, James, duke of Ormond; an eminent statesman in the reigns of Charles I and II. He was born at London; suc-

ceeded his grandfather, in 1632, and, although all his connexions were Catholics, his wardship being claimed by James I, he was brought up a member of the church of England, to which he ever after constantly adhered. When Strafford became lord-lieutenant of Ireland, B. was made commander of the army, which consisting of only 3000 men, he could do little more than keep the enemy in check, and was obliged to agree to a cessation of hostilities; after which, having been created a marquis, he was appointed lord-lieutenant. On the ruin of the royal cause, he retired to France. After the execution of Charles, he returned to Ireland, with a view of raising the people; but, on the landing of Cromwell, he again returned to France. While abroad, he exerted himself to further the restoration of Charles; and, when that event was brought about by Monk, returned with the king. Before the coronation, he was created duke, and assisted at that ceremony as lord high steward of England. In 1662, he was again appointed lord-lieutenant of Ireland, which country he restored to comparative tranquillity, and was an active benefactor to it, by encouraging various improvements, particularly the growth of flax and manufacture of linen. On the exile of lord Clarendon, his attachment to that nobleman involved B. in much of the odium attached to him, and although, on his recall from Ireland, nothing, on the most rigorous inquiry, could be proved against him, he was removed by the machinations of Buckingham. In 1670, a desperate design was formed by the noted colonel Blood, whom he had imprisoned in Ireland, to seize his person, and hang him at Tyburn. The project succeeded so far, that he was one night forcibly taken out of his coach in St. James's street, placed behind a horseman, and carried some distance; but at length he threw the man and himself from the horse by his personal exertions, and obtained assistance before he could be replaced. The king sent lord Arlington to request the duke to forgive the insult; who calmly replied, that, "If his majesty could pardon Blood for his attempt to steal the crown, he might easily pardon that upon his life;" adding, that "he would obey the king, without inquiring his reason." For six years, he was deprived of court favor, but at length was again appointed lord-lieutenant of Ireland, which place he held during the remainder of the reign of Charles; but soon after resigned, his principles not suiting the policy of James. He died at his seat in Dorsetshire, in 1688, leaving behind him the character of a man who united the courtier and the man of honor and integrity better than any nobleman of the time.

Butler, Joseph; an English prelate of distinguished eminence as a writer on ethics and theology. He was born in 1692, at Wantage, in Berkshire, where his father was a shopkeeper, and a Presbyterian dissenter. After some previous education at a grammar-school, he was sent to an academy at Tewkesbury, with a view to ordination as a minister among the dissenters. While occupied by his studies, he gave a proof of his talents by some acute and ingenious remarks on doctor Samuel Clarke's Demonstration of the Being and Attributes of God, in private letters addressed to the author. He likewise paid particular attention to the points of controversy between the members of the established church and the dissenters, the result of which was a determination to be no longer a nonconformist; and he therefore removed to Oxford, in 1714. Having taken orders, he was, in 1718, appointed preacher at the Rolls chapel, and, in 1736, he was appointed clerk of the closet to the queen. The same year, he published his celebrated work, the Analogy of Religion, Natural and Revealed, to the Constitution and Course of Nature. In 1738, doctor B. was promoted to the bishopric of Bristol, on the recommendation of queen Caroline; and, in 1750, obtained his highest preferment—the bishopric of Durham. He died in 1752, and was interred in Bristol cathedral. A charge, delivered to the clergy of the diocese of Durham, on the subject of external religion, together with the circumstance of his setting up a marble cross in his chapel at Bristol, gave rise to suspicions that he was inclined to the principles of popery; and, after his death, a report was spread that he had died in the Catholic faith; but this story was satisfactorily contradicted by archbishop Secker.

Butler, Samuel, a celebrated English poet, was the son of a farmer in Strensham, in Worcestershire, where he was born in 1612, and educated at Cambridge. He resided some time with sir Samuel Luke, a commander under Cromwell. In this situation, B. acquired the materials for his Hudibras, by a study of those around him, and particularly of sir Samuel himself, a caricature of whom constituted the celebrated knight Hudibras.

The first part of Hudibras was published in 1663, and was brought into the notice of the court by the well-known earl of Dorset. It immediately became highly popular with the prevailing party in church and state, and served as a general source of quotation; the king himself perpetually answering his courtiers out of Hudibras. Celebrated as it rendered its author, it did nothing towards extricating him from indigence. All the bounty of Charles was a gratuity, said to amount to £300. Thus unpatronised, but respected for his integrity, and beloved for his social qualities, he died in 1680, and was buried in St. Paul's church, Covent garden, at the expense of his friend Mr. Longueville, of the Temple. A monument was, 40 years after, erected to his memory in Westminster abbey, by alderman Barber, the printer, lest, as the inscription observes, *ne cui vivo deerant fere omnia, deesset etiam mortuo tumulus* (he who, when living, wanted every thing, should, when dead, also want a tomb). Of Hudibras it is scarcely necessary to observe, that, both in its style and matter, it is one of the most original works that was ever written, and that it exhibits the faculty especially denominated *wit*, meaning the power of rapid illustration by remote contingent resemblances, to a most remarkable degree. Possessed of much wit, of great knowledge of life, and extensive learning, B. united in himself all the requisites for his very peculiar undertaking. As a work intended to ridicule the Puritans, the attraction of Hudibras was great, but temporary. As applicable to classes of character which exist for ever, its satire always will be relished. Fanaticism, hypocrisy, and time-serving venality, are of all ages. Its diction, though coarse and negligent, is adapted for the conveyance of the odd and whimsical notions and associations with which the work abounds. In fact, the originality of B., as to matter, elicited equal originality in its delivery. In 1759, appeared the Genuine Remains, in Prose and Verse, of Mr. Butler, from the original Manuscripts, formerly in the Possession of W. Longueville, Esquire (2 vols., 8vo.).

Butter; an oily substance, produced from the milk of kine. *Cream* is composed of an oily substance, a caseous matter, and serum or whey. If it be agitated about an hour in a churn, a separation of these parts takes place, and a solid, called *butter*, and a liquid, called *butter-milk*, consisting of the whey and the caseous matter, are the products. The proportions of these products, in 100 parts of cream, are,

Butter,	4.5
Cheese,	3.5
Whey,	92.0
	100.0

Chemical analysis gives stearine, elaine, and a small quantity of acid and coloring matter, as the component parts of butter. Beckmann (History of Inventions, 372) comes to the conclusion that butter is not of Grecian nor of Roman invention; but that the Greeks received it from the Scythians, Thracians and Phrygians, and that the Romans derived it from the people of Germany, and used it as a medicine, rather than as a culinary luxury. In warm countries, the place of butter is still, for the most part, supplied by oil. In Italy, Spain, Portugal, and the south of France, it is to be purchased in the apothecaries' shops. The difficulty of keeping it any length of time is, indeed, an effectual barrier to its general use. The ancients appear to have been wholly deficient in the art of giving it consistency. The European countries, in which oil or butter is used, says Malte-Brun (*Géog.*, liv. xcv), may be separated by a line extending along the Pyrenees, the Cevennes, the Alps and mount Hæmus. To the north, the pasturage is better; cattle abound, and the food is chiefly derived from them. The olive-groves to the south supersede the use of butter by that of oil. The butter, beer, and animal food, of the north of Europe, give way to oil, wine and bread, in the warmer regions. The word *chameah*, translated *butter*, in the English version of the Bible, means some liquid preparation of milk or cream. It was in general use among the Celts:—*Spuma id est lactis, concretiorque quam quod* serum *vocatur, barbararum gentium lautissimus cibus.* (*Pliny*, ix, 41, and xxviii, 9.) The Hindoos make use of *ghee*, which means butter clarified by boiling. They boil the milk two or three hours, which, when cool, is fermented with curdled milk, left to sour, churned, and, when it is sufficiently rancid, is boiled, and mixed with salt, or betel-leaf, and ruddle, to improve its taste and color.

Butterfly. (See *Papilio.*)

Buttmann, Philip Charles; born at Frankfort, in 1764; studied at Göttingen; was tutor of the princes of Dessau; and, in 1800, professor of the gymnasium of Joachimsthal; at present, second librarian and member of the academy of sciences in Berlin. (See Löwe's *Autobiography of*

learned Men in Berlin (*Selbstbiographie von Berl. Gelehrten*), 1807, 3d number.) B. is one of the most distinguished philologists of the present time, uniting with comprehensive learning, penetration, perspicuity and conciseness of style. His grammatical writings are known and used in all the best schools. The first edition of his abridged Greek Grammar appeared at Berlin (1792), the seventh, in 1824; the tenth edition of the larger Grammar was published in 1822; an English translation of the School Grammar, by Everett, appeared in 1822 (Boston, N. E.), 2d ed., 1826; reprinted in England, with the name of the American translator struck out. This work owes its popularity to the philosophical clearness, order and unity with which the elements of the language are illustrated and combined. The philosophical treasures, which were excluded by the limits of a school book, are deposited in two other works; his *Lexilogus*, particularly intended for the explanation of Homer and Hesiod (1st vol., Berlin, 1818, and 2d ed., 1825); and his Complete Greek Grammar (Berlin, 1819—1825). He was also actively engaged in editing the classics, and in many works on the mythological periods of antiquity. They are spirited and elegant.

Buttons are of almost all forms and materials—wood, horn, bone, ivory, steel, copper, silver, similor, &c. The tailor covers them with stuffs, and the female artisan envelopes them with a texture of thread, silk, cotton and gold or silver thread. The non-metallic buttons, called also *moulds*, are made of the substances first mentioned, by sawing them into little slips, of the thickness of the button to be made, which are then cut into the form required, by an instrument adapted to the purpose. Metallic buttons are cast in moulds, or cut by a fly-press. Any figure or inscription may be impressed on them at the same time that they are cut. The little wire ring, by which they are attached to a garment, is called *shank*, and is soldered separately on each button. The details of smoothing, polishing, boiling, &c., would occupy too much room. The face of the button is generally plated or gilt. Doctor Church, an American, obtained a patent, in England (1829), for an improved manufacture of buttons with a metallic shank, the face being either of polished metal, or covered with any fabric. The various operations of shaping the discs, forming the shanks, cutting the cloth, and covering the faces of the buttons, are all effected by one revolving shaft.

Buttresses, in Gothic architecture, are lateral projections on the outside of the walls of an edifice, extending from the top to the bottom, at the corners and between the windows. They are necessary to support the walls, and prevent them from spreading under the weight of the roof.

Buttura, Antonio; an Italian poet, born at Verona, 1771. When the combined Austrian and Russian armies overthrew the young Italian republics in 1799, B. took refuge in France. At this time, he was known in his own country by some pleasing sonnets, and an Italian translation of Arnault's tragedy of the Venetians. In Paris, he translated Boileau's *Art Poëtique* into Italian verse, with a strict adherence to the ideas of the original. The attempt was the more difficult, as Boileau had so harshly censured the master-work of Tasso. Nevertheless, the translation met with approbation in Italy. This approbation of the public induced him to translate, also, Racine's *Iphigénie en Aulide* into Italian verse. In 1811, he printed a volume of poems, mostly odes, full of enthusiasm for France. His Essay on the History of Venice, in Italian prose, received the highest approbation in Italy and France, as likewise did his *Tableau de la Littérature Italiénne*, which is merely an introduction to his lectures at the *Athenée*, in Paris.

Buxhöwden, Frederic William, count of; descended from an ancient Livonian family; born on the isle of Moen, near Osel; was educated at St. Petersburg, and engaged in the war against the Turks in 1769, and for some time subsequent. In 1783, he was made colonel, owing his promotion chiefly to his marriage with Natalia Alexijeff, 1777. In 1790, he defeated the Swedish generals Hamilton and Meyerfeld, and rescued Fredericksham and Viborg. In Poland, he commanded a Russian division in 1792 and 1794. At the storming of Praga, he restrained, as far as he was able, the fury of the soldiers. Suwaroff intrusted him with the command of Warsaw and the administration of Poland. His moderation and disinterestedness gained him the esteem of the Poles. While military governor in Petersburg, he fell into disgrace under the emperor Paul. Alexander made him inspector of the troops in Livonia, Esthonia and Courland, with the dignity of governor-general. In 1805, he commanded the left wing at Austerlitz, which advanced, whilst the centre and the right wing were beaten. In 1806, he

commanded 50,000 Russians, and withstood the French in the eastern part of Prussia. After the defeat of Pultusk, he was unjustly superseded by count Bennigsen. After the battles of Eylau and Friedland, he was again made commander-in-chief. In 1808, with 18,000 Russians, he conquered Finland, obliged Sweaborg to capitulate, and terminated the war at Tornea. In 1809, he resigned on account of his health, and died in 1811.

Buxton; a market-town in the county of Derby, England, situated in a valley, celebrated for its mineral waters. The springs discharge 60 gallons a minute: the temperature of the water is 82°. It is colorless, and devoid of taste or smell. It contains calcarious earth, vitriolic selenite and sea-salt, and is an active remedy in nephritic and bilious complaints. It is used both externally and internally. The Crescent is an extensive edifice, divided into three hotels, and a private lodging-house. The lowest story forms a colonnade, extending the whole length of the front, the span of which is 257 feet. The season for the Buxton waters is from June to the end of October. It was known to the Romans; and the unfortunate Mary Stuart, while in captivity, resided some time at the Hall. She left it with the farewell,

Buxtona,
Forte mihi posthac non adeunda, vale!

B. is 159 miles N. N. W. of London.

Buxton, Jedediah, an extraordinary calculator, was born in Eberton, in Derbyshire. His education was wholly neglected: he was never taught to read or write; and how he first learned the proportions of numbers, their powers and denominations, he never could remember. His power of abstraction was so great, that no noise whatever could disturb him; and, when asked any question, he would reply, and immediately return to his calculation, without the least confusion. He was once asked this question:—In a body, whose three sides are 23,145,789 yards, 5,642,732 yards, and 54,965 yards, how many cubical eighths of an inch? He immediately set to work, though in the midst of a hundred laborers, and, in about five hours, produced the exact answer. His application to figures prevented his making the smallest progress in any other branch of knowledge; and, on other subjects, his ideas were as confined as those of a child. In 1754, he walked to London, and was introduced to the royal society. He was also taken to see Richard III, at Drury lane, where, instead of paying attention to the entertainment, he was engaged in counting how many words Garrick uttered, and the steps of the dancers. He died at about 70 years of age.

Buxtorf, John, an eminent Calvinistic divine, was born in 1564, at Camen, in Westphalia. Being very learned in Hebrew and Chaldaic, in the acquirement of which he obtained the assistance of many learned Jews, he was engaged, by the magistrates of Basil, in the professorship of those languages, which he taught with great success. He died at Basil, in 1629. His works are, *Lexicon Chaldaicum Thalmudicum et Rabbinicum; Thesaurus Linguæ Hebraicæ;* Hebrew Bible, with the Rabbinical and Chaldaic Paraphrases, the Massora, &c.; Hebrew and Chaldaic Dictionary; Hebrew Grammar; *Synagoga Judaica*, a Collection of Modes and Ceremonies; *Bibliotheca Rabbinica; Institutio Epistolaris Hebraica; Concordantiæ Hebraicæ*, &c. &c.

Buxtorf, John, son of the preceding, was born at Basil, in 1599, and was made professor of the Oriental languages there. He published a Chaldaic and Syriac Lexicon; *Tractatus de Punctorum Vocalium et Accentuum in Libris veteris Testamenti Hebraicis Origine, Antiquitate et Auctoritate;* and *Anti-critica, seu Vindiciæ Veritatis Hebraicæ;* in the two last of which he defended his father's opinions concerning the Hebrew vowel points. He was also the author of Dissertations on the Old and New Testament; *Florilegium Hebraicum; Exercitationes Philologico-criticæ*, &c. He died at Basil, in 1664. There were two other Buxtorfs—John James, and John—relations of the former, who both were professors in the same chair at Basil, and both writers on Hebrew literature.

Buyukdere (i. e., *great valley*, from *buyuk*, great, and *dere*, valley); a charming little town on the western side of the Bosphorus, not far from Constantinople and the Black sea, so called from the great valley in which it lies, whence also the stream passing through it is called B. The valley, as well as the river, is called Βαθυκολπος, i. e., the *deep-bosomed.* It was formerly called the *fair land* (καλος αγρος). This splendid walk is now called the *meadows* (*Libadia, la prairie*). In the lower part of this meadow is one of the most splendid groups of trees on the Bosphorus, consisting of seven plane-trees, which are called, together, *Jedi Kardasch*, i. e., the *seven brothers.* According to a tradition not well substantiated, Godfrey

of Bouillon encamped in these meadows, in 1096, with an army of crusaders. The place consists of the lower and the upper town. In the former are the houses of the Greeks, Armenians, and some Turks. In the upper part are the summer-houses and gardens of the European ambassadors, besides which, many also have houses in Belgrade. Among these houses, the most splendid is the palace of the Russian ambassador, with its gardens. This and several other palaces lie together on the beautiful quay, which is one of the most frequented walks of the people of B. A long and handsome street, running through the place, consists of two rows of houses, built, for the most part, in the European fashion. Foreigners often pass the winter here, on account of the beauty of the country. B. is also the general resort of the higher classes, if a contagious disease prevails in Constantinople, Galata or Pera, as well as when an insurrection of the people is apprehended. (See Frankland's *Journey to and from Constantinople*, London, 1829.)

Buzzard (*vultur aura*, Wils.; *cathartes aura*, Illig.; commonly called *turkey-buzzard*, or *turkey-vulture*). This bird is found over a vast extent of territory on the American continent, in the West India islands, and in the southern parts of Europe and Asia. In the U. States, they are most numerous in the southern parts, and appear in the Northern States only during the summer.—The turkey-buzzard is a perfectly harmless creature, and derives its food exclusively from the putrid carcasses which are to be found within its range. It is, therefore, seldom disturbed by man, and does not exhibit much timidity, though by no means in the habit of frequenting the immediate vicinity of human dwellings, like its allied species, the black vulture, or carrion crow of the south. The turkey-buzzard is gregarious, and flocks of considerable size are always found to feed and roost together. For the latter purpose, they generally choose the limbs of dead trees, upon which they may be seen sitting, with both wings outspread, in the morning, as if for the purpose of giving the fresh air free access to their bodies.—When their favorite carrion is to be obtained, they are very voracious, gorging themselves until actually unable to contain more, and even, for a time, rendering themselves unable to fly. Under such circumstances, it is unadvisable to approach them, as they are sure to be revenged upon their disturbers by vomiting over them a torrent of horribly disgusting filth. This is the only mode in which they attempt to defend themselves; and they especially resort to it when any one interferes with their nests.—The turkey-buzzard flies in a very beautiful manner, rarely flapping the wings, except in rising from the earth, but sailing and dipping in beautiful curved lines, traversing a vast space with wonderful celerity and ease, or soaring to the higher regions of the atmosphere, until entirely lost to sight. Like all the birds of their class, the buzzards possess strong powers of vision; but the sense of smelling is that by which they are principally guided to their food. This they are capable of thus discovering from immense distances, and the most striking facts illustrative of the acuteness of their olfactory organs are on record. Notwithstanding these, and the obvious evidence afforded by the structure of their smelling apparatus, a recent writer has undertaken to assert that they are possessed of little or no power of smelling.—The places chosen by the turkey-buzzard for laying are generally in remote and solitary swamps, or dense forests, where a hollow stump or rotten log serves for a nest. The eggs are from two to four, of a dull-white or cream color, splashed with chocolate and black, the patches of this being largest and thickest towards the larger end. The egg resembles that of a goose, but is blunter at the small end: it is two inches and three fourths long by two broad. The young are covered by a whitish down, somewhat similar to that upon a young gosling.—Some years since, we obtained a young buzzard while still covered with long, white down, with the exception of the wings, which were partly feathered. It was unable to fly, and had advanced to a party of wood-cutters, while at work, having apparently wandered too far from the nest to retrace its steps. As it seemed hungry, one of them gave it some meat, which it greedily swallowed, and afterwards remained with them until they returned home, and brought it with them. This young buzzard speedily became domesticated, and as importunately demanded food as any of the regular tenants of the poultry-yard. It ate all sorts of meat and garbage, uniformly preferring the most filthy. As it acquired full plumage, it began to kill and devour the young ducks and chickens, placing one foot upon the victim, and leisurely tearing it to pieces with the bill. As this buzzard learned to fly, he frequently made excursions, and returned to

roost upon a kitchen chimney. At length he one day joined a flock which was soaring over his residence, and never after returned.—The turkey-buzzard is two feet and a half long, and his wings are six feet two inches from tip to tip. The head and neck, for an inch and a half below the ears, are furnished with a reddish, wrinkled skin, beset with short, black hairs, which also cover the bill, as far as the anterior angle of the nostrils, which are oval. The plumage is black, the neck feathered equally all round, and the wings not reaching beyond the tail. The tail is rounded. There is no obvious difference between the male and female.

Buzzard's Bay; a bay on the south coast of Massachusetts, opposite Barnstable bay. It runs up between Seakonnet point on the west, and Chatahunk, one of the Elizabeth islands, on the east; is 35 or 40 miles long, and 7 wide. It approaches within 3½ miles of Barnstable bay. It has been contemplated to unite these bays by a canal. Lon. 70° 33′ to 71° 10′ W.; lat. 41° 25′ to 41° 42′ N.

By-Law is a particular law made by a corporation, or by any other distinct portion of the community, for the regulation of the affairs of its members in such of their relations as are not reached by the general law of the land. Such private laws may legally be made by all incorporated bodies, as civic corporations, trading companies, &c., and even by the body of the inhabitants of a town or parish, provided they involve the infraction of no public laws, but are merely calculated to supply their want of application in the particular instance. These private laws are binding only on the members of the body for which they are framed, and will not be recognised as valid unless they appear to be intended for the general good of that body, and not for the mere furtherance of private or personal interests.

Byles, doctor Mather, was born in Boston in 1706, and educated at Cambridge. After completing his studies in theology, he was ordained the first pastor of the church in Hollis street, Boston. B. contributed many essays to the New England Weekly Journal, and several occasional poems, some of which were collected in a volume. He corresponded with Pope, Lansdowne and Watts. In 1776, his connexion with his congregation was dissolved, on account of his toryism, for any disaffection to the cause of the colonies could no longer be tolerated. In 1777, he was denounced, in town-meeting, as an enemy to his country, and afterwards was tried before a special court. The charges against him were, that he remained in the town during the siege, that he prayed for the king, and received the visits of the British officers. He was sentenced to confinement, with his family, on board a guard-ship, and to be sent to England with them. On being brought before the board of war, he was treated with respect, and was ordered to be confined to his own house for a short time. He possessed, in a remarkable degree, a ready and powerful wit, which he sometimes exerted where good nature would have refrained, and left a lasting sting by a transient jest. He exhibited this love of ridicule in various ways. On one occasion, when sentenced, under suspicion of toryism, to be confined to his own house, with a sentinel over him, he persuaded this sentinel to go on an errand for him, promising to take his place. The sentinel consented to the arrangement, and, to the great amusement of all who passed, B. was seen very gravely marching before his own door, the musket on his shoulder, keeping guard over himself. During his confinement in his own house, a guard was placed over him, and then removed. On some further complaint, a sentinel was again placed over him. He was soon freed, and no further noticed. In speaking of these transactions, he said, "he had been guarded, reguarded, and disregarded." Directly opposite to his house there was a very bad slough in wet weather. It happened one day, that two of the select-men, who had the care of the streets, stuck fast in this hole, and were obliged to get out in the mud to extricate their vehicle. B. came out, and, making them a respectful bow, said:—"Gentlemen, I have often complained to you of this nuisance, without any attention being paid to it, and I am very glad to see you stirring in this matter now." A ship from London brought out 300 street lamps for the town of Boston. It chanced that, on the same day, a female neighbor, who was a *new light*, with a weak mind and a whining manner, called to see him. Wishing to get rid of the visitor, he soon asked, with a tone calculated to excite curiosity, if she had heard the news. "O, no! dear doctor, what news?" "Why, 300 *new lights* have come over in the ship that arrived this morning from London, and the select-men have wisely ordered them to be put in irons immediately." His

visitor at once hurried away, in great anxiety, to make further inquiries. B. lived in retirement the last 12 years of his life, and died July 5, 1788, at the age of 82.

Byng, John, served under his father, admiral George B., and by his merits, as well as the influence of his name, was raised to the rank of admiral. His attempts to relieve fort St. Philip, in Minorca, when blockaded by a French fleet under La Galissoniére, proved abortive; and his hesitation in engaging the enemy, when a bold attack might have perhaps gained him the victory, excited the clamor of the nation against him. The ministry, who wished to avert the public odium from their unsuccessful measures, beheld with seeming satisfaction the unpopularity of B.; and, when he was condemned by a court martial, they suffered him, though recommended to mercy, to be sacrificed to the general indignation, and he was shot at Portsmouth, March 14, 1757, meeting his death with calm resignation.

Bynkershoeck, Cornelius van; a Dutch lawyer, born at Middleburg in 1675. He studied at the university of Franeker, and, after practising as a barrister at the Hague, became professor of law at Leyden, and president of the council of Holland. He died in 1743. B. was one of the most learned among modern civilians. His works were published at Geneva in 1761, and at Leyden in 1766. They are written in Latin; and his treatise *De Foro Legatorum competente* was translated, by Barbeyrac, into French, under the title of *Du Juge compétent des Ambassadeurs*, 1728, 4to. B. edited a periodical publication, called *The New Mercury of the Hague*, which was suppressed, owing to the offence taken at the strain of satire which it exhibited.

Byron (George Gordon) lord, an English peer and poet of elevated genius, was born at London, Jan. 22, 1788. He was the grandson of admiral John B. (q. v.), and succeeded his great uncle, William lord B., while at school, in 1798. His father was the admiral's only son, captain John B. of the guards, notorious for his gallantries and reckless dissipation. By the eccentricity and misconduct of the old lord B., and of the captain his nephew, the reputation of the family of B., so ancient and honorable in English history, had been considerably tarnished. The former was tried by his peers for killing his relation, Mr. Chaworth, in a combat with swords, after a tavern dispute, under circumstances so equivocal, that he was indicted for murder, and only saved from the penalty attendant on manslaughter by pleading his peerage—an escape which did not prevent him from being consigned, by public opinion, to a life of seclusion and obscurity. Captain B., the poet's father, was so dissipated, that he obtained the name of the *mad Jack Byron*. He was one of the handsomest men of his day, but so immersed in all the fashionable vices, that, at length, to be seen in his company was deemed discreditable. In his 27th year, he seduced Amelia, marchioness of Carmarthen, daughter of the earl of Holdernesse, to whom, on a divorce following, he was united in marriage. This ceremony the ill-fated lady did not survive more than two years, when he took, for a second wife, Miss Gordon, whose fortune he quickly dissipated, leaving her a destitute widow, in 1791, with a son, the celebrated subject of this article, then only three years of age. Previously to the death of her husband, having been deserted by him, Mrs. B. retired, with her infant son, to Aberdeen, where she lived in narrow circumstances and great seclusion. The singular circumstances attendant upon the early childhood of B. seem to have operated very materially in the formation of his very striking character. Until seven years of age, the care of his education rested solely on his mother, to whose excusable, but injudicious indulgence, some of the waywardness, by which it was subsequently marked, was, even by himself, attributed. Being then of a weakly constitution, that disadvantage, added to a slight malconformation in one of his feet, naturally rendered him an object of peculiar solicitude; and, to invigorate his constitution, he was not sent to school, but allowed to brace his limbs upon the mountains in the neighborhood; where he early acquired associations, and encountered a mass of legendary lore, which indisputably nurtured his poetical tendencies. At the age of seven, he was sent to the grammar-school at Aberdeen, where he was more distinguished for great occasional exertions, in order to make up for the intervals of absence, rendered necessary by his delicacy of health, than by his general application. In all boyish sports, however, the ardor of his temperament enabled him to surmount his natural disadvantages. In 1798, the death of his great uncle, without issue, gave him the titles and estates of the family; on which, being then ten years of age, he

was removed from the immediate care of his mother, and placed under the guardianship of the earl of Carlisle, who had married the sister of the late lord B., a lady of considerable poetical abilities. On this change, the youthful lord was placed at Harrow, where he distinguished himself more by his love of manly sports, and by his undaunted spirit, than by attention to his studies, or submission to school discipline; but, although, in a subsequent part of his life, he indulged in some animadversion upon the tendency of the system in public schools, he always cherished an affectionate remembrance of Harrow, and of its master, doctor Drury. While yet at school, he fell deeply in love with Miss Chaworth, the daughter and heiress of the gentleman who had fallen by the hand of his great uncle, whom he met with on his occasional visits to Newstead. This lady, to whom he very beautifully alludes in a well-known poetical Dream, although some interviews and billets seem to have passed between them, ultimately married another and more mature suitor. This disappointment exceedingly wounded the ardent spirit of the youthful lover. When between 16 and 17, he was entered of Trinity college, Cambridge; and here, as at Harrow, his dislike of discipline drew upon him much unavoidable rebuke, which he repaid with sarcasm and satire; and, among other practical jokes, kept a bear, which, he observed, he was training up for a degree. At 19, he quitted the university, and took up his residence at the family seat of Newstead abbey, where he employed himself chiefly in amusement, and especially in aquatic sports and swimming. In 1807, while still at Newstead, he arranged his early productions, which he caused to be printed at Newark, under the title of Hours of Idleness, by George Gordon Lord Byron, a Minor. These poems, although exhibiting some indication of the future poet, also betrayed several marks of juvenility and imitation, which induced the Edinburgh reviewers to indulge in a celebrated attack, much less distinguished for wit or acumen, than for unreasonable causticity and ill-nature. The ridicule produced by this critique roused the anger of the poet, who took revenge in his celebrated satire of English Bards and Scotch Reviewers. The spirit of resentment is seldom very just; and the anger, rather than the judgment of B., guided his pen on this occasion. It happened, too, singularly enough, that, owing to party and other predilections, a number of the persons satirized in this poem, no long time after, were numbered among the friends of the author; for which reason, after it had passed through 4 editions, he suppressed it. It is unpleasant to relate, that, about this time, B. gave into a career of dissipation, too prevalent among the youthful possessors of rank and fortune, when altogether uncontrolled. Thus his fortune became deeply involved before he had attained legal maturity, and his constitution much impaired by the excesses in which he spent it. This, however, was not a course to last; and, in the year 1809, he determined to travel. Accordingly, in company with his fellow collegian, John Cam Hobhouse, Esq., he embarked at Falmouth for Lisbon, and proceeded through the southern provinces of Spain to the Mediterranean. His subsequent peregrinations in Greece, Turkey, &c., need not be detailed here, having been rendered so famous by his fine poem of Childe Harold's Pilgrimage. He returned home in June, 1811, after an absence of two years, and had not long arrived, before he was summoned to Newstead, in consequence of the dangerous illness of his mother, who breathed her last before he could reach her. In 1812, he gave to the world the two first cantos of Childe Harold's Pilgrimage. This assumption of the character of a wayward libertine, satiated, by an over cultivation of pleasure, into misanthropy, tedium and listlessness, and that in such a manner, that the application would necessarily be made to himself, afforded proof both of the perverted feeling and of the originality of B. There was, however, a boldness in the repulsive personification, and a force and an energy in the mode of supporting it, so indicative of great powers, that it at once produced its impression. Eulogy now flowed in from all quarters. Even the readers who disapproved the misanthropy and sombre views of human nature, displayed in this extraordinary production, confessed its genius. Thus the feelings of admiration became general, and, the strong current of fashion turning directly in his favor, his acquaintance was widely, not to say universally, courted; and his first entry on the stage of public life may be dated from this era. Nor were the manners, person and conversation of B. of a nature to dissipate the charm with which his talents had invested him. Although easy and affable in his general manners, the latent reserve of conscious genius was

always observable; added to which, the associations connected with his identification with his own Childe Harold excited a mysterious and indefinable curiosity. Even his physiognomy was eminently calculated to keep up the interest which he otherwise inspired; the predominating expression of his fine features being that of deep and habitual thought, although, when engaged in interesting discussion, they as forcibly exhibited gayety, indignation and satire. Thus, in the imitative world of fashion, the enthusiastic looked on him to admire, the serious to admonish, and the soft with a desire to console. The latter sympathy he excited too powerfully in certain quarters, and a course of noxious intrigue was the consequence. It is more gratifying to observe, that, in the midst of all this license, he was capable of delicate and generous actions, of which a number of well authenticated instances are on record. The quick and scrutinizing glance which he had cast on Eastern character and manners was now manifested in the Giaour, the Bride of Abydos, the Corsair (the copyright of which, as well as that of Childe Harold, he gave to Mr. Dallas), Lara, and the Siege of Corinth, which followed one another in quick succession. For parliamentary duties he seems to have had a decided distaste; and it was not until his return from the continent, that he ventured to speak. He made his maiden speech in February, 1812, from the opposition bench, against the frame-work bill, and was argumentative and lively, if not very original. Having now become a character whose support might be of considerable consequence, he was congratulated accordingly. Another time, he addressed the house in support of Catholic emancipation, and a third and last time on presenting a petition from major Cartwright. On the 2d of January, 1815, he married Anna Isabella, only daughter of sir Ralph Milbanke Noel, baronet, to whom he had proposed himself a year before, and been rejected. The fortune received with his lady was not large, and, his own having been previously much enthralled, the reckless system of splendor which succeeded the marriage could not be long maintained; and, after enduring considerable embarrassments, it was finally settled, that lady B., who had presented his lordship with a daughter on the 10th of December, should pay her father a visit, until better arrangements could be made. From this visit lady B. ultimately refused to return, and a formal separation ensued. This rupture produced a considerable sensation in the world of fashion, and the most contradictory rumors prevailed, in the midst of which B. left England, with an expressed resolution never to return. He crossed over to France, through which he passed rapidly to Brussels, taking, on his way, a survey of the field of Waterloo. He then visited the banks of the Rhine, Switzerland, and the north of Italy, and, for some time, took up his abode at Venice. Here he was joined by Mr. Hobhouse, who accompanied him on a visit to Rome, where he completed his third canto of Childe Harold. Not long after appeared the Prisoner of Chillon, a Dream, and other Poems; and, in 1817, Manfred, a tragedy, and the Lament of Tasso. In one of his excursions from Italy, he resided, for some time, at Abydos, and thence proceeded to Tenedos and the island of Scio, where he likewise staid three months; during which time he visited every classical scene, and frequently slept in the peasants' cottages, to whom his liberality made him a welcome guest. He also visited several other islands, and at length repaired to Athens, where he sketched many of the scenes of the fourth and last canto of Childe Harold, which poem was published in 1818, and sustained the high reputation of the author. In the same year appeared the *jeu d'esprit* of Beppo, in the mixed and pointed manner of the Italian style of poetical humor, and marked by a tone of loose morality, which ripened into licentiousness in Don Juan. In 1819 was published the romantic tale of Mazeppa, and the same year was marked by the commencement of Don Juan, which his bookseller, Mr. Murray, declined openly to publish. Of this celebrated production, it is as vain to deny the profligacy as the genius. In 1820 was published Marino Faliero, Doge of Venice, a tragedy, written with an avowed attention to the exploded system of the dramatic unities, which too frequently subtracts from the interest all that it gives to more cold and classical qualities; nor did this effort of B.'s prove an exception. The next year. he addressed a letter to Mr. W. Lisle Bowles, in defence of the poetical character of Pope, which had been rated very low in that writer's life of him. This dispute arose out of a disposition, in certain critics, to ground poetical character exclusively on a tendency to deal with the primary associations connected with natural objects and affections,

rather than on the more complex and factitious combinations produced by art and cultivation. This school not unfrequently pushes its theory to an extreme, as in the case of Pope, whom B., on the other hand, may have somewhat hyperbolically exalted. In the same year appeared the drama of Sardanapalus, indisputably the finest of his tragic offspring; the Two Foscari, a tragedy; and Cain, a mystery. The last is a production of much power, but marked by the same rashness of speculation and recklessness of moral effect, which disfigure many of the author's productions.—When B. quitted Venice, after visiting several parts of the Italian dominions of Austria, he settled at Pisa; where he became connected with the Gamba family, in whose behalf he endured some inconvenience, which ended in the banishment of the counts Gamba, and the open residence of the countess with B. In 1822, in conjunction with Mr. Leigh Hunt, who, on invitation, had become his guest, and Mr. Percy Bysshe Shelly, the periodical publication called the *Liberal* was commenced, which, principally owing to the unhappy fate of Mr. Shelly (who perished by the upsetting of a boat in the Mediterranean), extended only to four numbers. In this work first appeared the Vision of Judgment, caused by the singularly ill-judged performance, under the same title, of Mr. Southey. The publisher was prosecuted, and fined £100. Heaven and Earth, a mystery, also first appeared in the Liberal. It is founded on the supposed intercourse between angels and the daughters of earth before the flood, and possesses great force and beauty. The later cantos of Don Juan, with Werner, a tragedy, and the Deformed Transformed, a fragment, bring up the rear of B.'s performances. In the autumn of 1822, he quitted Pisa, and wintered at Genoa, and now began to indulge those feelings, in regard to the efforts of the Greeks to throw off the Mohammedan yoke, which determined him to lend them the aid of his person, purse and influence. It would also appear, by some noble verses which have been printed since his death, that a secret consciousness of his career of action having too long been unworthy of him, induced him to seek a nobler species of distinction than one of mere self-engrossment and successful gallantry. It is unnecessary to dwell upon the general tendency of powerful minds, at a particular stage of existence, to break from the enthralments of pleasure and the senses, because it has been the great theme of allegory ever since allegory was invented. In addition to being satiated with the usual enjoyments of a dissipated man of rank, and disgusted with the sameness of common-place life, many circumstances contributed to render B. an enthusiast for Greece. In common with many more, the associations connected with its illustrious history doubtless served to stimulate his concern for its modern degradation; but in him these feelings were quickened by an acquaintance with its grand and beautiful scenery, its various races of wild and picturesque manners, and by the personal interest which he had already excited there. Whatever may have been the exact combination of motive, in August, 1823, he embarked, accompanied by five or six friends, in an English vessel, which he had hired for the purpose, and arrived at the commencement of the third campaign. He established himself some time in Cephalonia, and despatched his friends, Messrs. Trelawney and Hamilton Brown, with a letter to the Greek government. The result of their information induced him to advance £12,000 for the relief of Missolunghi. The dissensions among the Greeks gave him great pain, and involved him in considerable difficulties. At length he sailed from Argostoli with two Ionian vessels, and, taking considerable specie on board, proceeded to Missolunghi, where, after considerable hazard and danger, and the loss of one of his vessels, he finally arrived, and was received with every mark of honor Grecian gratitude could devise. His influence was immediately salutary in the mitigation of the ferocity with which the war was waged on the part of the Greeks; but it was much more difficult to produce union among their leaders. He immediately began to form a brigade of Suliotes, 500 of whom were taken into his pay, with a view to an expedition against Lepanto; but such was the disorderly and unsettled temper of these troops, that he was obliged to postpone it. This unexpected disappointment preyed on his spirits, and, Feb. 15, he was attacked with a severe fit of epilepsy. He had, subsequently, other attacks, but at length the violence of the disorder began to yield to the skill of his physician, and he was recommended to remove, for a while, from the flat, marshy and unhealthy site of Missolunghi, to Zante. This step, with his usual tenacity, he refused to take. "I cannot quit Greece (he wrote to a friend) while there

is a chance of my being even of (supposed) utility. There is a stake worth millions such as I am, and while I can stand at all, I must stand by the cause. While I say this, I am aware of the difficulties, dissensions and defects of the Greeks themselves; but allowance must be made for them by all reasonable people." On the expedition against Lepanto being given up, other projects were proposed with reference both to military operations and to congresses for uniting Eastern and Western Greece; but, unhappily, the fatal moment was at hand which was to deprive the Greek cause of its firm and energetic friend. On the 9th of April, B., while riding out, got extremely wet; and, scarcely recovered from the effects of his former disorder, a fever ensued, which, it is thought, might have yielded to copious bleeding in the first instance, but which, owing either to his own objection or the inaccurate opinion of the physician of the nature of the disease, was destined to prove fatal on the evening of the 19th of April, 1824. During his illness, some fine traits of humanity and feeling for his attendants were exhibited by B., and nearly his last words, previous to sinking into the lethargy which ended in death, were, "My wife, my child, my sister!—you know all—you must say all." His utterance then failed him, as it had previously done in referring to the same near connexions. Thus, in his 37th year, prematurely died this extraordinary genius, to the deep affliction of the people whose cause he had espoused, who decreed every possible public testimony of their sorrow. Nor was his death a subject of less regret to many, who looked for a noble recompense, in the maturity of his life, for the faults of its commencement and preceding progress. Many of his errors were evidently the result of a too early release from all discipline and control, and the neglect which family circumstances had thrown round him. In other respects, the vices and failings of B., undeniable, it is true, were much magnified by the peculiarity of his genius and character, which attracted an intensity of observation to all which concerned him. The disposition of the public at once to admire and condemn, accompanied as it was with an involuntary tendency to confound the character of the poet with some of the most romantic creations of his imagination, however it might annoy him in the first instance, in the sequel too obviously nurtured a degree of personal vanity, which formed one of the greatest weaknesses of his character. Commonplace censure produces little effect when coupled with great admiration, and still less is effected by the virulence of party attack, or by direct personal hostility. The morals of B., on the score of gallantry, his carelessness of female reputation, and hasty and vindictive spirit of resentment, are altogether indefensible; but it is certain that they were mixed up with great humanity, benevolence and generosity. It was evident, too, from his death, and many other circumstances, that, whatever his pride and resentment at being so decisively abandoned, he nurtured the natural feelings of a husband and father deep in his bosom. In respect to several disputed points of his conduct, the Memoirs, by himself (which he gave to Mr. Moore to raise a loan from Mr. Murray, the bookseller, and which that gentleman, at the instance of his family, thought proper to destroy), would, doubtless, have given much information to the world. As it is, certain journals of visitors, and of temporary companions, professing to record his conversation, but poorly supply their place. The body of B. was brought to England, and laid in state in London. It was subsequently interred near his own seat of Newstead abbey, where a plain marble slab merely records his name and title, date of death, and age. Besides his only legitimate child and heiress, B. left another daughter in Italy, to whom he bequeathed £5000, on the condition of her not marrying an Englishman. The successor to his estate and title was his cousin, captain George Anson Byron, of the royal navy.

Byron, John, an English commodore, born in the year 1723, embarked, at the age of 17, in one of the ships of lord Anson, which was fitted out for a voyage round the world, but was wrecked on the coast of the Pacific, north of the straits of Magellan. B., with some of his unfortunate companions, was conducted, by the Indians, to Chili, and remained there till 1744, when he embarked on board a ship of St. Malo, and, in 1745, returned to Europe. In 1758, he commanded three ships of the line, and distinguished himself in the war against France. George III, who wished to explore the part of the Atlantic ocean between the cape of Good Hope and the southern part of America, gave B. the command of a frigate, with which he set sail, June, 1764, having under his order the frigate Tamar. Both ships touched at Madeira and the Cape

Verd islands, and proceeded thence to the Rio Janeiro, opposite the city of that name. B. then sailed to the southern part of the Atlantic ocean, and, after having searched in vain for Pepys' islands, he visited the Falkland islands, and, passing through the straits of Magellan, continued his voyage in the South sea. Here he fell in with Bougainville, who was engaged in founding a colony in the Falkland islands. B. directed his course northward to the island of Masafuero; then, sailing westward, he passed the Dangerous Archipelago, lying on the east of the Society islands, and discovered the isles of Disappointment and King George's islands. Thence he directed his course north-west, and discovered the islands called Danger and Byron's island; sailed by the Carolinas into the Chinese sea; thence proceeding southerly, he passed through the straits of Banca to Batavia; from whence he set sail at the close of the year 1765, and, in May, 1766, arrived in England. Although B.'s voyage was not fruitful in discoveries, it still deserves an honorable place in the history of voyages round the world, since he was the first of those renowned circumnavigators of the globe, including Wallis, Carteret and Cook, whose enterprises were not barely mercantile, but were directed to scientific objects.

Byron's Island; a small island in the Pacific, about 12 miles in length, abounding in cocoa-trees. It was discovered by commodore Byron (q. v.) in 1765. Lon. 173° 16′ E.; lat. 1° 18′ S.

Byssus (*gossypion* and *xylon*), cotton, was brought from India about the time of Herodotus, and still earlier from Egypt. In this latter country, it was used in embalming, and the mummies are still found wrapped in it. As an article of dress, it was worn only by the rich. Dives, in Christ's parable (*Luke* xvi, 19), was clothed in byssus, and it is mentioned among the riches of fallen Babylon (*Rev.* xviii, 12). Byssus was formerly erroneously considered as a fine kind of linen. The fine stuff manufactured from the byssus is called, more particularly, *sindon*. Foster derives the word *byssus* from the Coptic. *Byssus* was also used by the ancients, and is still used, to signify the hair or thread-like substance (called *beard*), with which the different kinds of sea-muscles fasten themselves to the rocks. The *pinna marina*, particularly, is distinguished by the length and the silky fineness of its beard, from which very durable cloths, gloves and stockings are still manufactured in Sicily and Calabria. (See Foster *De Bysso Antiquorum*, 1776.)

Byzantine Empire. The Byzantine or Eastern Roman Empire comprehended, at first, in Asia, the country on this side of the Euphrates, the coasts of the Black sea, and Asia Minor; in Africa, Egypt; and in Europe, all the countries from the Hellespont to the Adriatic and the Danube. This survived the Western Empire 1000 years, and was even increased by the addition of Italy and the coasts of the Mediterranean. It commenced in 395, when Theodosius divided the Roman empire between his two sons, Arcadius and Honorius. The Eastern Empire fell to the elder, Arcadius, through whose weakness it suffered many misfortunes. During his minority, Rufinus was his guardian and minister, between whom and Stilicho, the minister of the Western Empire, a fierce rivalry existed. The Goths laid waste Greece. Eutropius, the successor, and Gainas, the murderer, of Rufinus, were ruined by their own crimes (399). The latter lost his life in a civil war excited by him (400). Arcadius and his empire were now ruled by his proud and covetous wife, Eudoxia, till her death (404). The Isaurians and the Huns wasted the provinces of Asia and the country along the Danube. Theodosius the Younger succeeded his father (408), under the guardianship of his sister Pulcheria. Naturally of an inferior mind, his education had made him entirely imbecile and unfit for self-command. Pulcheria, who bore the title of *Augusta*, administered the kingdom ably. Of the Western Empire, which had been ceded to Valentinian, Theodosius retained West Illyria (423). The Greeks fought with success against the king of the Persians, Varanes. The kingdom of Armenia, thrown into confusion by internal dissensions, and claimed, at the same time, by the Romans and the Persians, became now an apple of contention between the two nations (440). Attila laid waste the dominions of Theodosius, and obliged him to pay tribute (448). After the death of her brother, Pulcheria was acknowledged empress (450). She was the first female who attained this dignity. She gave her hand to the senator Marcian, and raised him to the throne. His wisdom and valor averted the attacks of the Huns from the frontiers, but he did not support the Western Empire, in its wars against the Huns and the Vandals, with sufficient energy. He afforded shelter to a part of the Germans and Sarmatians, who were

driven to the Roman frontiers by the incursions of the Huns. Pulcheria died before him, in 453. Leo I (457), a prince praised by contemporary authors, was chosen successor of Marcian. His expeditions against the Vandals (467) were unsuccessful. His grandson Leo would have succeeded him, but died a minor shortly after him, having named his father, Zeno, his colleague (474). The government of this weak emperor, who was hated by his subjects, was disturbed by rebellions and internal disorders of the empire. The Goths depopulated the provinces till their king Theodoric turned his arms against Italy (489). Ariadne, widow of Zeno, raised the minister Anastasius, whom she married, to the throne (491). The nation, once excited to discontents and tumults, could not be entirely appeased by the alleviation of their burdens and by wise decrees. The forces of the empire, being thus weakened, could not offer an effectual resistance to the Persians and the barbarians along the Danube. To prevent their incursions into the peninsula of Constantinople, Anastasius built the *long wall*, as it is called. After the death of Anastasius, the soldiers proclaimed Justin emperor (518). Notwithstanding his low birth, he maintained possession of the throne. Religious persecutions, which he undertook at the instigation of the clergy, and various crimes, into which he was seduced by his nephew Justinian, disgrace his reign. After his early death, in 521, he was succeeded by the same Justinian (q. v.), to whom, though he deserves not the name of the *Great*, many virtues of a ruler cannot be denied. He was renowned as a legislator, and his reign was distinguished by the victories of his general Belisarius; but how unable he was to revive the strength of his empire, was proved by its rapid decay after his death. Justin II, his successor (565), was an avaricious, cruel, weak prince, governed by his wife. The Lombards tore from him part of Italy (568). His war with Persia, for the possession of Armenia (570), was unsuccessful; the Avari plundered the provinces on the Danube, and the violence of his grief at these misfortunes deprived him of reason. Tiberius, his minister, a man of merit, was declared Cæsar, and the general Justinian conducted the war against Persia with success. The Greeks now allied themselves, for the first time, with the Turks. Against his successor, Tiberius II (578), the empress Sophia and the general Justinian conspired in vain. From the Avari the emperor purchased peace, from the Persians it was extorted by his general Mauritius or Maurice (582). This commander Tiberius declared Cæsar in the same year. Mauritius, under other circumstances, would have made an excellent monarch, but, for the times, he wanted prudence and resolution. He was indebted for the tranquillity of the eastern frontiers to the gratitude of king Chosroes II, whom, in 591, he restored to the throne, from which he had been deposed by his subjects. Nevertheless, the war against the Avari was unsuccessful, through the errors of Commentiolus. The army was discontented, and was irritated, now by untimely severity and parsimony, and now by timid indulgence. They finally proclaimed Phocas, one of their officers, emperor. Mauritius was taken in his flight, and put to death (602). The vices of Phocas, and his incapacity for government, produced the greatest disorder in the empire. Heraclius, son of the governor of Africa, took up arms, conquered Constantinople, and caused Phocas to be executed (610). He distinguished himself only in the short period of the Persian war. During the first 12 years of his reign, the Avari, and other nations of the Danube, plundered the European provinces, and the Persians conquered the coasts of Syria and Egypt. Having finally succeeded in pacifying the Avari, he marched against the Persians (622), and defeated them; but, during this time, the Avari, who had renewed the war, made an unsuccessful attack on Constantinople, in 626. Taking advantage of an insurrection of the subjects of Chosroes, he penetrated into the centre of Persia. By the peace concluded with Siroes (628), he recovered the lost provinces and the holy cross. But the Arabians, who, meanwhile, had become powerful under Mohammed and the caliphs, conquered Phœnicia, the countries on the Euphrates, Judea, Syria and all Egypt (631—641). Among his descendants there was not one able prince. He was succeeded by his son Constantine III, probably in conjunction with his step-brother Heracleonas (641). The former soon died, and the latter lost his crown in a rebellion, and was mutilated. After him, Constans, son of Constantine, obtained the throne (642). His sanguinary spirit of persecution, and the murder of his brother Theodosius (650), made him odious to the nation. The Arabians, pursuing their conquests, took from him part of Africa, Cyprus and Rhodes, and defeated him even at sea

(653). Internal disturbances obliged him to make peace. After this, he left Constantinople (659), and, in the following year, carried on an unsuccessful war against the Lombards in Italy, in which he lost his life, at Syracuse (660). Constantine IV, Pogonatus, son of Constans, vanquished his Syracusan competitor, Mezizius, and, in the beginning of his reign, shared the government with his brothers Tiberius and Heraclius. The Arabians inundated all Africa and Sicily, penetrated through Asia Minor into Thrace, and attacked Constantinople, for several successive years, by sea (669). Nevertheless, he made peace with them on favorable terms. But, on the other hand, the Bulgarians obliged him to pay a tribute (680). Justinian II, his son and successor, weakened the power of the Maronites (685), but fought without success against the Bulgarians (688) and against the Arabians (692). Leonitius dethroned this cruel prince, had him mutilated and sent to the Tauric Chersonese (695). Leonitius was dethroned by Apsimar, or Tiberius III (698), who was himself dethroned by Trebelius, king of the Bulgarians, who restored Justinian to the throne (705); but Philippicus Bardanes rebelled anew against him. With Justinian II the race of Heraclius was extinguished. The only care of Philippicus was the spreading of monotheism, whilst the Arabians wasted Asia Minor and Thrace. In opposition to this prince, who was universally hated, the different armies proclaimed their leaders emperors, among whom Leo the Isaurian obtained the superiority (713—714). Leo repelled the Arabians from Constantinople, which they had attacked for almost two years, and suppressed the rebellion excited by Basilius and the former emperor Anastasius. From 726, the abolition of the worship of images absorbed his attention, and the Italian provinces were allowed to become a prey to the Lombards, while the Arabians plundered the eastern provinces. After his death (741), his son Constantine V ascended the throne—a courageous, active and noble prince. He vanquished his rebellious brother-in-law Artabasdus, wrested from the Arabians part of Syria and Armenia, and overcame, at last, the Bulgarians, against whom he had been long unsuccessful. He died (775), and was succeeded by his son Leo III, who fought successfully against the Arabians, and this latter by his son Constantine VI (780), whose imperious mother, Irene, his guardian and associate in the government, raised a powerful party by the restoration of the worship of images. He endeavored, in vain, to free himself from dependence on her and her favorite, Stauratius, and died in 796, after having had his eyes put out. The war against the Arabians and Bulgarians was long continued; against the first it was unsuccessful. The design of the empress to marry Charlemagne excited the discontent of the patricians, who placed one of their own order, Nicephorus, upon the throne (802). Irene died in a monastery. Nicephorus became tributary to the Arabians, and fell in the war against the Bulgarians (811). Stauratius, his son, was deprived of the crown by Michael I, and he, in turn, by Leo IV (813). Leo was dethroned and put to death by Michael II (826). During the reign of the latter, the Arabians conquered Sicily, Lower Italy, Crete and other countries. He prohibited the worship of images; as did also his son Theophilus. Theodora, guardian of his son Michael III, put a stop to the dispute about images (841). During a cruel persecution of the Manichæans, the Arabians devastated the Asiatic provinces. The dissolute and extravagant Michael confined his mother in a monastery. The government was administered, in his name, by Bardas, his uncle, and, after the death of Bardas, by Basil, who was put to death by Michael (867). Basil I, who came to the throne in 867, was not altogether a contemptible monarch. He died 886. The reign of his learned son, Leo V, was not very happy. He died 911. His son, Constantine VIII, Porphyrogenitus, a minor when he succeeded his father, was placed under the guardianship of his colleague, Alexander, and, after Alexander's death, in 912, under that of his mother, Zoe. Romanus Lakopenus, his general, obliged him, in 919, to share the throne with him and his children. Constantine subsequently took sole possession of it again, and reigned mildly, but weakly. His son Romanus II succeeded him in 959, and fought successfully against the Arabians. To him succeeded, in 963, his general Nicephorus, who was put to death by his own general, John Zimisces (970), who carried on a successful war against the Russians. Basil II, son of Romanus, succeeded this good prince. He vanquished the Bulgarians and the Arabians. His brother, Constantine IX (1025), was not equal to him. Romanus III became emperor (1028) by a marriage with Zoe, daughter of Constantine. This dissolute but able

princess caused her husband to be executed, and successively raised to the throne Michael IV (1034), Michael V (1041) and Constantine X (1042). Russians and Arabians meanwhile devastated the empire. Her sister Theodora succeeded her on the throne (1053). Her successor, Michael VI (1056), was dethroned by Isaac Comnenus in 1057, who became a monk (1059). His successor, Constantine XI, Ducas, fought successfully against the Uzes. Eudocia, his wife, guardian of his sons, Michael, Andronicus and Constantine, was intrusted with the administration (1067), married Romanus IV, and brought him the crown. He carried on an unsuccessful war against the Turks, who kept him for some time prisoner. Michael VII, son of Constantine, deprived him of the throne (1071). Michael was dethroned by Nicephorus III (1078), and the latter by Alexius I, Comnenus (1081). Under his reign the crusades commenced. His son, John II, came to the throne (1118), and fought with great success against the Turks and other barbarians. The reign of his son, Manuel I, who succeeded him (1143), was, also, not unfortunate. His son, Alexius II, succeeded (1180), and was dethroned by his guardian, Andronicus, as was the latter by Isaac (1185). After a reign disturbed from without and within, Isaac was dethroned by his brother, Alexius III (1195). The crusaders restored him and his son, Alexius IV; but the seditious Constantinopolitans proclaimed Alexius V, Ducas Murzuphlus, emperor, who put Alexius IV to death. At the same time, Isaac II died. During the last reigns, the kings of Sicily had made many conquests on the coasts of the Adriatic. The Latins now forced their way to Constantinople (1204), conquered the city, and retained it, together with most of the European territories of the empire. Baldwin count of Flanders was made emperor, Boniface marquis of Montferrat obtained Thessalonica as a kingdom, and the Venetians acquired a large extent of territory. In Attalia, Rhodes, Philadelphia, Corinth and Epirus, independent sovereigns arose. Theodore Lascaris seized on the Asiatic provinces, bore the title of *emperor* at Nice, and was, at first, more powerful than Baldwin. A descendant of the Comneni, named *Alexius*, established a principality at Trebisond, in which his great-grandson John took the title of *emperor*. Neither Baldwin nor his successors were able to secure the tottering throne. He himself died in captivity, among the Bulgarians (1206). To him succeeded Henry, his brother, with Peter, brother-in-law of Henry, and his son Robert (1221). With the exception of Constantinople, all the remaining Byzantine territory, including Thessalonica, was conquered by John, emperor of Nice. Baldwin II, brother of Robert, under the guardianship of his colleague, John Brienne, king of Jerusalem, died in 1237. Michael Palæologus, king of Nice, conquered Constantinople in 1261, and Baldwin died in the West, a private person. The sovereigns of Nice, up to this period, were Theodore Lascaris (1204); John Ducas Patatzes, a good monarch and successful warrior (1222); Theodore II, his son (1259), who was deprived of the crown by Michael Palæologus (1260). In 1261, Michael took Constantinople from the Latins. He labored to unite himself with the Latin church, but his son, Andronicus II (1282), renounced the connexion. Internal disturbances, and foreign wars, particularly with the Turks, threw the exhausted empire into confusion. Andronicus III, his grandson, obliged him to divide the throne (1322), and, at length, wrested it entirely from him. Andronicus died a monk (1328). Andronicus IV, who ascended the throne in the same year, waged war unsuccessfully against the Turks, and died 1341. His son John was obliged to share the throne with his guardian, John Cantacuzene, during 10 years. The son of the latter, Matthew, was also made emperor. But John Cantacuzene resigned the crown, and Matthew was compelled to abdicate (1355). Under the reign of John, the Turks first obtained a firm footing in Europe, and conquered Gallipolis (1357). The family of Palæologus, from this time, were gradually deprived of their European territories, partly by revolt, partly by the Turks. The sultan Amurath took Adrianople (1361). Bajazet conquered almost all the European provinces except Constantinople, and obliged John to pay him tribute. The latter was, some time after, driven out by his own son, Andronicus, who was succeeded by his second son, Manuel (1391). Bajazet besieged Constantinople, defeated an army of western warriors, under Sigismund, near Nicopolis (1396), and Manuel was obliged to place John, son of Andronicus, on his throne. Timur's invasion of the Turkish provinces saved Constantinople for this time (1402). Manuel then recovered his throne, and regained some of the lost provinces from the contending sons

of Bajazet. To him succeeded his son John (1425), whom Amurath II stripped of all his territories except Constantinople, and extorted a tribute from him (1444). To the emperor John succeeded his brother Constantine. With the assistance of his general, the Genoese Justinian, he withstood the superior forces of the enemy with fruitless courage, and fell in the defence of Constantinople, by the conquest of which, May 29, 1453, Mohammed II put an end to the Greek or Byzantine empire. In 1461, David Comnenus, emperor of Trebisond, submitted to him, and, at a subsequent period, was put to death. (See *Comneni.*)

Byzantine Historians; a series of Greek authors, whose works relate to the history of the lower Greek empire, from the fourth century until the conquest of Constantinople by the Turks, and to the Turkish history until the end of the 16th century. These authors display the faults of a degenerate period; but they contain, also, the relics of former excellence. They are the principal source of the history of the decay of the Roman empire, and a correct delineation of the condition and character of the modern Greeks requires an intimate acquaintance with them, of which D'Anse de Villoison is an example. They contain, besides, an inexhaustible store of materials relative to the great migration of the nations, and the new political system to which it gave rise in the north of Asia and in Europe, and illustrative of ecclesiastical history. These too much neglected authors have been collected in an edition, published at Paris—*Corpus Scriptorum Historiæ Byzantinæ* (Paris, royal press, 1645—1702, 23 vols.); reprinted at Venice, with a different arrangement of the works (1729—1733), and explained by several French scholars, particularly by Du Cange, who have rendered great service by their commentaries and glossaries. These collections, however, are rarely to be found complete. Hase has enlarged the list of these writers, by his edition of *Leo Diaconus* (*Leonis Diaconi Caloensis Historia, etc., e Bibl. Regia nunc primum in Lucem edid. ill.* C. B. Hase, Paris, 1819, folio), which, in form and the value of the contents, approaches the great Paris edition. He has promised, also, to publish *Psellus.* Stritter, keeper of the royal archives at Moscow, under Paul, has proved, by an excellent extract (*Memoriæ Populorum ad Danubium, Pontum Euxinum, Paludem Mœotidem, Mare Caspium et inde magis ad Septentrionem Incolentium*, Petersb., 1771—79, 4 vols., 4to.), their importance as sources of ancient Russian history. Four of them form a continued history of the Byzantine empire to the year 1470, viz.: 1. Zonaras; 2. Nicetas Acominatus Choniates; 3. Nicephorus Gregoras; 4. Laonicus, or Nicholas Chalcondylas of Athens. The other authors, who have treated only single parts of the Byzantine history, are almost all to be found in the *Corpus Byzantinum*, which appeared at Paris, in 1648, from the royal press, in three splendid folio volumes. The most remarkable among these are in chronological order: 1. Procopius of Cæsarea, rhetorician at Constantinople. We have from him eight books of histories, viz., *Persica*, in four books, and *Gothica*, in four books, published separately by Höschel (Augsburg, 1607); and Secret History (*Anecdota*), in nine books (in which, contrary to the opinions expressed in his first work, he shows himself very inimical to the emperor Justinian), published by Reinhard, at Erlangen and Leipsic (1753).—2. Agathias, after the death of Justinian, wrote an account of his reign, in five books, published at Paris (1660, folio).—3. Theophylact of Egypt. We have from him a history of the emperor Maurice, in eight books, to 604 (Paris, 1644).—4. Nicephorus, patriarch of Constantinople, who has left several learned theological writings. His *Breviarium Historicum* extends from the death of the emperor Maurice to 770 (Venice, 1759).—5. Joh. Scylitzes held several offices at Constantinople. We have from him an abridgment of history, from 811 to the time of Isaac Comnenus (1057.) It appeared in a Latin translation (Venice, 1570). The same work he continued to the time of Alexander Comnenus, 1081. The continuation is yet in manuscript.—6. Anna Comnena, daughter of the emperor Alexius I, died about 1150. She wrote an *Alexias*, or a work on the history of her father, Alexius Comnenus, in 15 books, edited by Höschel in Augsburg, 1610. (A more complete edition, Paris, 1651, folio) —7. George Acropolita, a statesman in Constantinople, wrote an abridgment of the Byzantine history, from the capture of Constantinople by the Latins, 1204, to its recapture, 1260 (Paris, 1651).—8. George Pachymer held high offices in church and state in Constantinople. He wrote Byzantine History, in thirteen Books, from the Birth of Michael Palæologus, 1158, to 1308 (Frankfort, 1568, folio).—9. John Cantacuzenus, the emperor, is the author of Byzantine History, in four Books, from 1320—54 (Paris, 1645).—10. George Co-

dinus, intendant of the palace in Constantinople. We have from him several works on the antiquities of Constantinople. The most important of them is On the Offices and Services appertaining to the Court and the Church of Constantinople (Paris, 1648, folio).—11. Constantinus Porphyrogennetus, or Porphyrogenneta, emperor, wrote the life of his grandfather Basilius Macedo, edited by John Meursius. We have also a work of his on government, written for his son, and on the provinces of the Eastern and Western Empire, besides other writings and collections. The most important treats of the ceremonies of the Byzantine court. It was edited by Leich and Reiske (Leipsic, 1751—54, 2 vols.).—12. After the capture of Constantinople, Ducas wrote a Byzantine history, from 1341 to the capture of Lesbos, 1462.—13. Anselm Banduri, a Benedictine monk, left an extensive work on the antiquities of Constantinople, in which several works of more ancient writers are contained.—14. Peter Gilles. From him we have three books on the Thracian Bosphorus, and four books on the topography and antiquities of Constantinople.—15. Zosimus wrote a Roman history, in six books, from Augustus to Honorius. This work is of particular importance for the later epochs; published by Reitmeyer (Leipsic, 1784).—16. George Phranza died, after the capture of Constantinople, in a monastery of Corfu. We have from him a chronicle of the Byzantine history, in four books, from 1401—77, published by Alter (Vienna, 1796).

A new and highly-improved edition of this important collection was commenced, in 1828, by that distinguished scholar, Mr. Niebuhr, to be published by Weber, the well-known bookseller at Bonn in Germany. Three volumes of this edition, in octavo, have been received in the U. States, and will fully justify the high expectations entertained by the learned of this Herculean undertaking. By a singular concurrence of circumstances, the college at Cambridge, Massachusetts, happens to be possessed of a valuable manuscript of one of the Byzantine historians, Michael Glycas, which, as we are informed by a gentleman who has cursorily examined it, appears never to have been collated, and will furnish several *various readings* of importance in the emendation of the text. This MS. is one of a number purchased in Constantinople, and brought to the U. States by the Hon. Edward Everett, in the year 1819, and a particular account of which is given by him in the Memoirs of the American Academy, vol. 4, p. 413. It is on parchment, and is supposed to have been written as early as the 13th century. A collation of it is now begun, as we are informed, for the purpose of being transmitted to the learned editor in Germany.

Byzantine School of Art. After Constantine the Great had made the ancient Byzantium the capital of the Roman empire, and ornamented that city, which was called after him, with all the treasures of Grecian art, a new period commenced in the history of art. From this time it became subservient to Christianity, as the religion of the state. All the productions of heathen artists, which formed suitable ornaments for Christian cities and temples, were now employed in the service of the invisible God, and art began, by slow degrees, to rise from its degeneracy, under the influences of Christianity. At the time when Constantine converted Byzantium into an imperial residence, splendor and ornament had already supplanted the simplicity of ancient taste. Asiatic luxury had become predominant, and this laid more stress on richness of material and decoration than on purity of conception. Architecture, which adorned the *forum Augusteum*, in Byzantium, with a fourfold colonnade, and created splendid *curiæ*, imperial palaces, baths, theatres and porticoes, preserved, for a long time, the grand forms of classic times, and deviated from them slowly and gradually, at first in the Christian churches, as a model for which Justinian built the church of St. Sophia, and decorated it with Oriental magnificence, in 537. But, even in architecture, the costliness and color of the marble was soon considered as of more importance than the proportion of the parts and the distribution of the columns. There are, however, as late as the ninth century, admirable works of Greek architecture, particularly those of Theodosius the Great and Justinian. This period was still less favorable to the simplicity of sculpture. The mythology of ancient Greece afforded sacred subjects to the statuary. Gods appeared in the human form, and the human figure, in the Grecian model, was raised to the classical ideal. On the introduction of the Christian religion, sculpture was confined to the imitation of nature; afterwards to portraits, and to mere purposes of ornament; for Christianity is averse to sensible representations of the Divinity. Statues of emperors, of great statesmen and generals, became the

subjects of the sculptor, and seem, eventually, to have given rise to the introduction of the worship of images in the Christian churches, since the custom of erecting monuments and statues to the emperors, and distinguished bishops, was extended to martyrs and saints, and was afterwards followed by the superstitious worship of them. (See *Iconoclasts.*) Though images of this kind became more frequent in the third and fourth centuries, there were yet many Christian teachers, who, like Tertullian (q. v.), at an early period, declared the fine arts inventions of the devil, and the pagan statues possessed by demons. This superstition often caused the destruction of the noblest statues of the Grecian gods by popular violence. It was not until after many difficulties, that, in the ninth century, the worship of images was established in the Greek empire, and after that time appeared the first known traces of Christian sculpture and painting in the East. But even those statues, to which sculpture was now confined, no longer displayed the freedom and dignity of ancient art. The pride of the emperors demanded statues of gold and silver, as long as their treasury, filled by exhausting their subjects, could supply them. Images of bronze and marble were despised. And how seldom could the artist be inspired by his subject, when flattery erected monuments and busts to the most worthless of men! It was natural, that, with the loss of elevated subjects, the dignity of art should be lost in petty technical details. Heyne, in his treatise on the later works of art, under the Byzantine emperors (*Commentat. Soc. Götting.*, vol. xi), observes, that the representations of the emperors, of distinguished men, or of saints, were uniform in figure and character. The vestiges of genius were nowhere seen in free creations and ideal forms, in the desire of truth and expression. From the time of Justinian downwards, the true measure and proportion of the parts, and the correctness of the outlines, were so much neglected, that the representations became constantly more like masks, spectres and monsters. The old Roman faces were seldom represented: the forms appeared to belong to quite another race—to some new nation; and it was often necessary to write the names under them. In the perspective of the figures no rules were observed. It became, at this time, the great object to imitate the costly robes of the emperors, bishops, and other noble persons, who gratified their vanity not only with purple garments, but by the extravagant use of pearls and precious stones, which were worn in long pendants from the ear, in bracelets and in necklaces. The whole mantle was often garnished with precious stones, and round the edge ran a double row of pearls. Such garments the emperors used to change several times a day. As such exterior ornaments are foreign from sculpture, which prefers the naked figure, or a simple drapery, it is easy to see why the production of statues ceased so soon. In the lists of Byzantine works of sculpture given by authors of the first centuries, there are no images of Christ, no statues of apostles and saints. Instead of them, we find only crucifixes, painted, or ornamented with mosaic work. If there were any such images in earlier times, they must have been destroyed in the time of the Iconoclasts (q. v.), as was the case with the bronze statue of Christ, near that of Constantine, which was demolished by Leo, the general destroyer of images, and the representations of the *Good Shepherd*, praised by Eusebius, and that of *Daniel among the Lions*, with which Constantine adorned the public fountains. An image of the Savior, surrounded by angels, and worked in mosaic, is described by Photius. We also find mention of the images of two angels upon the forum of Constantine, the representation of Adam and Eve, the bronze statue of Moses, with which Justinian is said to have ornamented the *curiæ*, and that of Solomon, of an earlier date. According to Eusebius, the roof of the palace in Constantinople was also decorated with rich mosaics of gold and costly stones, representing scenes from the passion of Christ; and another, which Justinian erected, in Chalcis, contained representations of events in the war against the Vandals. The most celebrated of all the mosaics in the interior of St. Sophia's church in Constantinople has been preserved in fragments to modern times. The taste of those times inclined, in general, more to mosaic works than to sculpture; because the former were rendered attractive by the costliness and colors of the stones. Sculpture was employed particularly in ornamenting altars, tabernacles, holy vessels and urns, which were made of the most precious marble. The art of engraving on stones was also long preserved. In the art of painting, which was imitated in mosaic, the taste of this age was the same as in sculpture—pleased with gold and lively colors, but careless about truth of representation, and beauty and grandeur of

conception. The first germ of a Christian style of art was, however, developed in the Byzantine pictures. The ideal representations of human figures, which the ancient Grecian artists had exhibited in their master-works, were necessarily given up by Christian artists: another ideal was to be formed, which should not recall the odious features of paganism. But the ideal of the Savior, of the mother of Christ, and of his apostles, could be formed only by degrees. The artists, who had nothing real and material before them, but were obliged to find, in their own imaginations, conceptions of the external appearance of sacred persons, could give but feeble sketches of their ideas by means of their imperfect art. In their representations of Jesus and his apostles, they finally adopted the national features of the Jews. In the figure, and sometimes even in the countenance, they imitated the external appearance of some revered bishop. The hands were often lifted, as in blessing, or one hand was laid upon the breast, or holding a book. Thus the figures of the founders of the Christian church were first represented in paintings. They were also exhibited in mosaic, but not in marble. Christian subjects, indeed, are generally more suited to painting, which gives the outward expression of the mind, by means of light, and shade, and colors, than to sculpture, which, on the contrary, elevates the external form to a kind of spiritual dignity. As the artists cared but little for a faithful imitation of nature, but were satisfied with repeating what was once acknowledged as successful, it is not strange that certain forms, introduced by the authority of some celebrated artists, and approved by the taste of the time, should be made, by convention, and without regard to truth and beauty, general models of the human figure, and be transmitted as such to succeeding times. In his treatise on the continuation of the arts in Constantinople (*Comment. Soc., Götting.*, vol. xiii), Heyne remarks, that art continued to be exercised here, as far as it consists in mechanical skill, in the use of instruments, in particular rules and general precepts; but taste, and a sense for truth and simple beauty, had vanished. Delicacy, elegance and gracefulness in design, proportion of parts, harmony of the figures, and beauty of form, were lost. The artists did not even aim at an accurate representation, but were contented with rude and general outlines, as may be seen in the coins of the time. These deformed and meagre figures were slavishly copied, and labor was lavished on costly, and often tasteless, ornaments. A certain propensity to the grotesque prevailed, even in architecture. The influence of ancient works of art continually decreased as their number was diminished by the violences of war, by superstition, by avarice, and by the hand of time. Most of the then existing works of antiquity perished in the capture of Constantinople, during the crusades of 1204 and 1261; and thus the city had long been deprived of its most beautiful ornaments, when it was taken by the Turks, in 1453.—This was, in general, the state of art in the Byzantine empire. Its influence has been felt ever since; in earlier times, by the connexion of the imperial residence in the East with the Western Empire, and afterwards by commercial intercourse and the crusades.—Let us first consider this connexion of the lower Greek art with the west of Europe, and, in particular, with Italy. According to Stieglitz (on German Architecture), the character of the lower Greek architecture was tranquillity and simplicity, originating from poverty of ideas and materials, and terminating in heaviness. But this architecture, which prevailed till the earlier part of the middle ages, preserved the seed, from which, in later times, a new and better style sprung up. Constantinople became a school of architecture, from which artists issued to all parts of the Roman empire, as far as Britain, to erect churches after the model of St. Sophia. They also penetrated into the countries of the East, introducing their art among the Arabians, who applied it to the erection of their mosques, and among the Moors in Spain, who formed their own style from it. The lower Greek or Byzantine style kept itself pure and uncorrupted in Italy, under the Lombards, as well as under the Goths, whose artists came from the East; and thence it spread, during the reign of Charlemagne, to Germany, Gaul and England. The style of architecture introduced by Charlemagne into Germany, was a corruption of that prevailing in the lower Greek empire, from which, together with the Arabian and German style, sprang the true German or Gothic architecture, which flourished from the 13th to the 16th century. (See *Architecture, History of.*) The *basso-relievos* on the oldest churches in Germany, and some pictures in them, still show the traces of the lower Grecian art. There are also to be found in Gori (e. g., *Diptych*, vol. 3, p. 33 and 270, tab. iv and xxiii) and Ciampini (*Vet. Moniment.*, part

ii, p. 104, tab. xxix), representations of Italian and Gallic sculpture, which, in their drapery, ornaments and architectural forms, betray a Byzantine origin. In regard to painting, we are indebted to the Byzantines for the preservation of some portion of its ancient excellence. As, in the early period of Christianity, Grecian and Roman art, in general, differed but little, since both sprung from the ruins of ancient art, so, in painting, no striking difference is to be observed between them. They became, however, constantly more and more distinct, in later times, as Greece and Italy became more and more separated. Short, thick bodies, stiff and forced attitudes, exaggeration of the characteristic parts, in particular of the eyes, faces contracted above and broad below, and marked with overcharged tints, short thick hair, highly-arched eyebrows, awkward drapery, loaded with unnatural folds, distinguish the Greek pictures as far back as the fifth century. The better paintings, which are found particularly in manuscripts, show a neat, accurate and diligent execution. When art declined in Italy, particularly in the ninth century, painting was still cultivated by the Greeks, who, driven from home by the disputes concerning images, carried it into Italy and other countries, and adorned the churches there. Thus the lower Greek or Byzantine school was the mother of the old Italian school, and of the lower Rhenish, which preceded the German. The relation of both is seen in the similarity of the Italian pictures to those of the lower Rhenish school. According to the common statement, several Grecian artists passed over into Italy, in the beginning of the 12th century, and adorned the churches of Florence and Venice with their works. These were joined by the Italian artists, who founded, in the 13th century, a school of art and painting (see *Italian Art*), which, in its developement, acquired a peculiar character, distinguished by beauty both of conception and execution. The lower Rhenish school, however, which is also called the *school of Cologne*, as it flourished chiefly, from the beginning of the 14th to the beginning of the 15th centuries, in the city of Cologne, appears to have retained still more closely the Byzantine character than the Italian did, since there are traces of it even in the later German school, exhibited in the symmetrical and pyramidal grouping of the objects, in the close drapery, and in the love of ornament and splendor, shown particularly in the golden back-grounds. The collection of the brothers Boisserée (q. v.) contains the most excellent works of this school. John Van Eyck first set the example of a more individual representation of natural objects, in opposition to the general representations of the lower Greek, and the ideal style of the old Roman school. More exact accounts are wanting of the historical connexion of the lower Rhenish and of the old Italian school with the Byzantine style of art. (On the earlier times of the Byzantine art, see *Histoire de l'Art par les Monumens depuis sa Décadence au 14me Siecle, jusqu'à son Renouvellement au 16me*; Paris, 1810, folio).

Byzantium (from its original founder, Byzas), lying on the Thracian Bosphorus, on a triangular promontory, the present *Constantinople*, even in ancient times a flourishing city, was at first a Megarian colony, and was afterwards enlarged and embellished by the Milesians and other Greeks. Near it was a small bay of the Propontis, called *Keras*, forming three harbors. The situation of B. was highly favorable to trade, and gave it the command of the commerce of other nations in the Black sea, and the opportunity of imposing tolls and duties. These circumstances increased the resources of the city; but it suffered much from the attacks of the Thracians, Bithynians, Gauls, and even the Greeks. It was severely treated in the Peloponnesian war, but afterwards rose again, and, under the emperors, was in the most flourishing condition. From the time of Constantine, it was the second city in the Roman empire, and the residence of the emperor, who endeavored to give it the splendor of old Rome. It was, like Rome, divided into 14 districts; had an amphitheatre, a Roman forum, a circus, and a multitude of splendid buildings and statues, some of which had been brought from Rome. (See *Constantinople*.)

C.

C, THE third letter of the alphabet in most of the European dialects. "In English," says Ben Jonson, "it might well have been spared, for it has no peculiar sound." It has the simple power of *k*, before *a*, *o*, *u*, and most of the consonants; and the power of *s*, before *e*, *i*, *y*. The Greeks had no *c* in their alphabet, and they supplied the use of it in Roman words by Κ or Σ, as the Romans often indicated the *kappa* and *sigma*, in Greek words, by a *c*. The earlier Romans also used it in many words which were at a later period written with a *g*; as, *leciones* for *legiones*. This renders it probable that it was originally the Greek *gamma*, as the form of the letters, in ancient inscriptions, is very similar. The Roman *g* was invented, according to Plutarch, by Spurius Carvilius. Q and C are often interchanged on monuments; thus we find *Q V M* for *C V M*, *cotidie* for *quotidie*. Its arithmetical significations, and its principal uses in abbreviations, have been explained in the article *Abbreviations* (q. v.). On medals, it stands for many names of persons, as, *Cæsar*, *Caius*, *Cassius*, &c.; of officers, as, *censor*, *consul*; of cities, as, *Carthago*, &c.; also for *cives*, *civitas*, *colonia*, *cohors*, *clypeus*, *castra*, *circensis*. In the calendars and *fasti*, it denoted the days in which the *comitia* might be held. In trials, the opinions of the judges were given by writing on a little cube or die (*tessera*) the initial C, *condemno*, A, *absolvo*, or N L, *non liquet*. For this reason, Cicero (pro Mil. 6.) calls C, *littera tristis*, and A, *littera salutaris*.—C, in music; the name of that note in the natural major mode, to which Guido applied the monosyllable *ut*, but which has long since been relinquished by the Italians for that of *do*, as softer and more vocal. C sometimes, in Italian music, stands for *canto*, as C 1. *canto primo*. It stands, likewise, when placed at the clef, for common time, and, with a line run through it perpendicularly, for cut time, or a quicker kind of movement.

CABAL; the infamous English ministry under Charles II (q. v.), which consisted of five men famous for their intrigues—Clifford, Ashley, Buckingham, Arlington, and Lauderdale, whose initial letters form this word. (Burnet, *Own Times*, *An.* 1672.) Some think the use of the word *cabal*, to denote an intrigue, or a body of intriguers, is derived from this circumstance. "Never," says Hume (ch. 65), "was there a more dangerous ministry in England, nor one more noted for pernicious counsels. Ashley (more known as the earl of Shaftesbury), bold, ambitious, eloquent, insinuating, subtle, united great industry with a sound judgment of business and of men. Buckingham, with the advantages of a graceful person, high rank, splendid fortune, and a lively wit, but without prudence or principle, sacrificing, in turn, honor to interest, interest to pleasure, and pleasure to caprice, dissipated his fortune, and ruined his health, by his riot and debauchery, and destroyed his character, in public life, by his want of secrecy and constancy. Lauderdale, tyrannical, ambitious, implacable, insolent, yet abject, had a great ascendency over the king. Clifford, daring, impetuous, yet artful, and eloquent, and Arlington, of moderate capacity, without courage or integrity, were, secretly, Catholics. Shaftesbury was at once a deist, and addicted to astrology; Lauderdale a bigoted, and, earlier, a furious Presbyterian."

Cabal; a beverage made in Portugal, by bruising 20 pounds of raisins, and saturating them with white wine during 3 months. The mixture is rich, clear and agreeable.

CABALA, or CABBALA, (i. e. *oral tradition*), is used by the Jews to denote sometimes the doctrines of the prophets, sometimes the traditions of their ancestors, sometimes, and most commonly, their mystical philosophy. The opinions of scholars respecting the origin of the cabalistic philosophy are very various. The Jews derive the cabalistic mysteries from the most ancient times of their nation, nay, even from Adam himself. But, although a secret doctrine existed among the Hebrews in the earliest ages, this had reference merely to religious worship. The origin of the philosophical *cabala* is to be sought for in Egypt, and dates from the times of Simeon Schetachides, who conveyed it from Egypt to Palestine. It

was first committed to writing in the 2d century, that it might not be lost with the dispersion of the Jewish nation. Later expositors have mingled with it much foreign matter. The *cabala* is divided into the symbolical and the real. The symbolical portion treats principally of letters, to which it gives mystical significations. The real, which is opposed to the symbolical, and comprehends doctrines, is divided into the theoretical and practical. The aim of the theoretical is to explain the Holy Scriptures according to the secret traditions, and to form therefrom a philosophical system of metaphysics, physics and pneumatology. The practical portion, on the other hand, pretends to teach the art of performing miracles, and that merely by an artificial application of the divine names and sentences in the Sacred Scriptures. After the revival of science, many scholars studied the *cabala*. The most famous modern cabalists are Henry Morus and Christian Knorr, the last of whom has made a compilation of the most important parts of the cabalistic writings, in two Latin volumes, in 4to. (Respecting the mysteries of the *cabala*, see Pet. Beer's *History of the Doctrines and Opinions of all the Jewish Sects, and of the Cabala*, Brünn, 1822, 2 vols.; also Brucker's *History of Philosophy*, by doctor Enfield, vol. ii. Allen's *Modern Judaism*, ch. v.; and Buddæi *Introductio ad Historiam Philosophiæ Hebræorum*.)

Cabanis, Peter John George, physician, philosopher, and *literateur*, born at Cognac, 1757, went to Paris in his 14th year, and devoted himself with zeal to the sciences. In his 16th year, he went to Warsaw as secretary of a Polish lord. The proceedings of the stormy diet of 1773 filled him with melancholy and contempt of mankind. He began at Paris a complete translation of the Iliad. In Auteuil, near Paris, he became acquainted with madame Helvetius, and, through her, with Holbach, Franklin and Jefferson, and became the friend of Condillac, Turgot and Thomas. In his *Serment d'un Médecin*, he formally took leave of the belles-lettres. He professed the principles of the revolution, and was intimately connected with Mirabeau, who made use of his ideas, and obtained from him the work on public education, which Cabanis published himself, in 1791, after the death of Mirabeau. He lived in still closer intimacy with Condorcet. At the time of his death, May 5th, 1808, he was a member of the senate. His *Rapports du Physique et du Moral de l'Homme* (Paris, 1802, 2 vols., improved in 1805), are highly esteemed. His works appeared in Paris, 1824, complete, in 4 vols.

Cabarrus, François, count of, born 1752, at Bayonne, was destined for commerce by his father, who sent him to a commercial friend, Galabert, at Saragossa, whose daughter he married in secret, against the will of both families, in 1772. His father-in-law, however, gave him the charge of a soap manufactory, near Madrid. The nearness of the city enabled him to become acquainted with several learned men and metaphysicians, as Olavides and the count of Campomanes. During the North American war, in which Spain took part against England, and was consequently cut off from her resources in America, C. advised the minister of the finances to make an issue of paper money, payable with interest, of which 10,000,000 piastres were put in circulation with the greatest success. He afterwards established the bank of San Carlos, 1782, and a company to trade with the Philippine islands. After the death of Charles III, in 1788, he fell into disgrace. In 1790, he was arrested; in 1792, released, and made a nobleman; and, in 1797, appointed minister plenipotentiary at the congress of Rastadt. He died in 1810, in the office of minister of finance, to which he had been appointed by Joseph Bonaparte. He had a daughter equally celebrated for beauty and talents.

Cabbage. The cabbage, including many species of the numerous genus of *brassica*, is a biennial plant, too well known to need description, and constitutes one of our most valuable classes of vegetables. There are several species of the wild or original stock, from which the garden cabbage has been derived by cultivation. These are natives of various parts of Europe, Africa, &c., and, although very remote in appearance from the full, round head, which our plants present, are scarcely more so than are the kale, cauliflower, brocoli, &c., all of which belong to the cabbage family. In general terms, we may consider this plant as divided into three classes—the common headed cabbage of the field and garden; the cauliflower, brocoli, &c., which form their stalks into a loose head; and the kale, colewort, &c., which grow in a natural branching way, without forming any heads at all. Of these, the common cabbage is by far the most valuable, both to man and to the beasts, by whose assistance he is able to make the earth so fer-

tile. It is also the most productive; for it is believed that an acre of ground will yield a greater weight of green vegetable matter (and thus be more profitable to the farmer), in the shape of cabbage, than in that of any other vegetable whatever. It is very abundantly produced by clay soils, which are unfit for turnips, and the farmers who cultivate such soils will find it a vegetable worthy of much attention. The cabbage furnishes green fodder for cows and sheep, which is, at least, as good as turnips or carrots, fattening the animals equally fast, and rendering their milk, butter, &c., to the full as sweet; and is far preferable, as it keeps later in the spring, and thus supplies green food when no other can be procured. It is eaten by men in three forms, all of which have their admirers, but which vary much in respect to their wholesomeness and digestibility. These forms are, the sliced raw cabbage, plain boiled cabbage, and salted cabbage or sour-crout, the favorite dish of the whole German nation. In the first form, of raw cabbage, sliced fine, and eaten with vinegar, whether entirely cold, or hot enough merely to wilt the vegetable, it is one of the lightest and most wholesome articles of vegetable food, and, in this shape, will supply a green summer vegetable through the whole of the winter. Its use cannot be too highly recommended. Boiled cabbage, is, on the contrary, one of the worst articles of diet that a weak stomach can be tried with, and is rarely got rid of without a troublesome colicky pain. Sour-crout, or, properly, *sauer-kraut*, is much eaten by the Germans in the U. States, and they consider it very wholesome, although it is nearly, if not quite, as difficult of digestion as boiled cabbage. It is prepared in the following manner:—Cabbage is sliced up fine, and a layer of it placed in the bottom of a barrel, which is plentifully salted; it is then well bruised with a heavy mall or pestle, or is trodden down by a pair of heavy boots, till the barrel is half filled with the froth that arises from this operation. Successive layers of cabbage and salt are added in this manner, each receiving the same treatment, till the vessel is nearly full. Some cold water is then poured in, and the top of the barrel is pressed down with heavy stones. The contents undergo a brisk fermentation, which continues for a week or two, during which time the brine must be drawn off, and replaced by new, until it remains perfectly clear, when the process is finished. It must be kept covered with brine, and is thus simply a fermented, or half sour, salted mass of cabbage. The other forms of cabbage, as the cauliflower, &c., supply the epicures of all countries with some of their greatest delicacies, while the hardy kale, which endures all degrees of cold, affords the poor, and the farmers of poor soils, a valuable fodder for cattle of all kinds.

CABBALA. (See *Cabala.*)

CABELLO. (See *Porto Cabello.*)

CABENDA; a sea-port of Africa, in Cacongo; lon. 12° 30′ E.; lat. 5° 40′ S. It is situated on the coast, a little to the north of the river Zaire, and has a safe and easy landing. It is a great emporium for trade in slaves. The situation is so distinguished for beauty and fertility, that it has been called the paradise of the coast.

CABIN; an apartment in a ship for officers and passengers. In large ships, there are several cabins, the principal of which is occupied by the commander. In small vessels, there is only one cabin, which is in the stern. The bed-places in ships are also called *cabins*, or, more commonly, *berths*. *Berth* is used, likewise, for the room where a number of men mess and reside.

CABINET; 1. a small apartment adjoining a larger one; 2. the most retired part of a private dwelling, designed for work, for amusement, or for collections of valuable articles. 3. In the abode of a prince, the cabinet is a room set apart for the ruler's particular use; also, the apartment where he transacts government business, advises with his privy counsellors, and issues his decrees. Hence, in political language, the cabinet is put for the government; as the cabinet of London, of Vienna, of the Tuileries, &c. 4. Finally, a cabinet is any part of a building, or one or more whole buildings, where are preserved valuable collections from the kingdoms of nature or art; as paintings, plants, animals, coins, minerals, and curiosities of every description; and, by metonymy, the name is applied to the collections themselves. A work of art, and sometimes of nature, of uncommon beauty, and fitted from its size to be placed in a cabinet, is called a *cabinet-piece*. A *cabinet painter* is one who executes small highly-finished pictures, suitable for cabinets.

CABIRI; sacred priests or deified heroes, venerated by the pagans as the authors of religion and the founders of the human race. The multiplicity of names applied to the same character, the interchange of the names of the deities them-

selves with those of their priests, the oracular law, which enjoined the preservation of ancient barbaric names, and thus led to a double nomenclature, sacred and profane, together with the profound secrecy of the rites, have involved the subject in great obscurity. Some have thought that the Eastern mythology and the Druidism of Western Europe contain traces of the Cabiri. Herodotus (ii. 51) says that their worship was brought to Samothrace by the Pelasgi. Strabo (x. 472) says they are the same as the Corybantes. Others have identified them with the Titans, the Dii Magni, the Penates, the Dioscuri, &c. Some say there were 6, 3 male and 3 female, children of Vulcan and Cabira, daughter of Proteus. Others make 2, sons of Jupiter or Bacchus. In Samothrace, 4 were venerated. In Egypt, their temple was never entered by any but the priests. In Phœnicia, Rome (where, according to Pausanias, they had an altar in the *circus maximus*), and other countries of Europe and Asia, traces of their worship are found. But the mysteries (*Cabiria*) celebrated at Samothrace were the most famous. The mysteries of Isis, Ceres, Mithras, Trophonius, Bacchus, Rhea, Adonis, Osiris, and all the similar customs of Egypt, Greece, Hindostan and Britain, seem to be merely varieties of the Samothracian rites, which were celebrated in the obscurity of night, and with the most profound secrecy. (See Faber on the *Mysteries of the Cabiri*, Oxford, 1803, 2 vols. 8vo.; Potter's *Grecian Antiquities*, ii. c. 20.) After a previous probation of abstinence, chastity and silence, the candidates for initiation were purified by water and blood; they then offered a sacrifice of a bull or ram, and were made to drink of two fountains, called *Lethe* (oblivion) and *Mnemosyne* (memory), to wash away the memory of their former guilt, and to enable them to remember the new instructions. They were then transported into a dark tower or cavern, where their ears were assailed by the most appalling sounds, the rushing of waters, the roar of thunder, dreadful yells, with occasional gleams of light flashing through the darkness, and displaying the most horrible phantoms, with a dead body exposed on a bier. Thus filled with terror, they were suddenly hurried into other scenes; light and cheerful music succeeded to darkness and the dismal sounds, the dead body revived, and the temple resounded with rejoicings. The hidden doctrines and secret rites were now communicated. Dances and orgies, in which the mystic *phallus* or *lingam*, and the *yoni* (*αἰδοῖον γυναικεῖον*), were introduced, closed the ceremony.

Cable, in architecture; 1. wreathed circular mouldings, resembling a robe; also, the staff which is left in the lower part of the flutings of some examples of the Corinthian and Composite orders.—2. In naval affairs, it is a long, thick rope, formed of 3 strands of hemp, which is employed for confining a vessel to its place by means of an anchor or other fixed body. The long and heavy chains, which have been recently introduced for this purpose, are also called *cables*. Large vessels have ready for service 3 cables—the *sheet* cable, the *best bower* cable, and the *small bower* cable. They should be at least 100—120 fathoms in length. A best bower cable, of 25 inches in circumference, is formed of 3240 threads. The invention of iron cables is of recent date, and they have supplanted those of hemp in ships of war. They are stronger, less liable to be destroyed on rocks, &c. It is sometimes desirable to cut the cable when of hemp: this contingency is provided for in iron cables by a bolt and shackle at short distances, so that, by striking out the bolt, the cable is easily detached.—*Cable's length* is used to signify the measure of 120 fathoms, the usual length of a cable.

Caboose; the cook-room or kitchen of a ship. In smaller vessels, it is an enclosed fireplace, hearth or stove, for cooking, on the main deck. In a ship of war, the cook-room is called a *galley*.—Caboose also signifies the box that covers the chimney in a ship.

Cabot, George, was born in Salem, Massachusetts, in the year 1752, and early manifested distinguished talents. He spent the early part of his life in the employment of a shipmaster. But he did not neglect the improvement of his mind, even amid the restlessness and danger of a seafaring career. Before he was twenty-six years of age, he was chosen to the provincial congress, which met at Concord, with the visionary project of ordaining a *maximum* of prices, in order that commodities might be cheapened by constraining the owners to sell at reduced and fixed rates; and there he first displayed that intimate acquaintance with the true principles of political economy, for which he was thenceforward preëminent. Before Adam Smith was known in the U. States, and Say and the other continental writers had formed any correct notions on the subject, Mr. Cabot maintained the present enlightened doc-

trines, and strenuously contended for the entire liberty of domestic and international commerce. Mr. Cabot was a prominent member of the state convention assembled to deliberate on the adoption of the federal constitution, and, soon after that event took place, was elected a senator of the United States, an office which his sense of public duty caused him to accept, although against his inclinations. In that station, he enjoyed the unlimited confidence, not only of the august body of which he was a member, but also of Washington and Hamilton; and to his commercial knowledge and profound views of finance and political economy, the latter was greatly indebted in the formation of his financial system. With Fisher Ames, also, Mr. Cabot was long linked by ties of the most affectionate friendship. At a recent period, when, in the late war, the exigencies of the country seemed to him to require his co-operation, he presided over a body of delegates from New England, who, in a season of extreme solicitude, attempted to provide means for averting a dreadful storm of public calamity. Mr. Cabot died at Boston, April 18, 1823, in the 72d year of his age. He was the delight and veneration of all who knew him, and his talents seemed the most extraordinary, his virtues the most bright, to those who had the happiness to see him most familiarly. His mind was capacious and elevated. In public life, he was pure and disinterested, all his exertions tending to one single object--public good; in private, he was endeared to his family and his friends by his kindness, urbanity and benevolence. The study of political economy and the science of government was his favorite pursuit. His eloquence, which was oftener displayed in private than in public, was remarkable for its beauty and simplicity. As a Christian, he was sincere and devout; and the manner of his death suited the exemplary character of his life.

Cabot, Sebastian, a navigator of great eminence and abilities, was born at Bristol, about the year 1477. He was the son of John Cabot, a Venetian pilot, who resided at Bristol, and was highly esteemed for his skill in navigation. Sebastian was early instructed in the mathematical knowledge required by a seaman, and, at the age of 17, had made several voyages. In 1495, John Cabot obtained from Henry VII letters patent empowering him and his three sons, Lewis, Sebastian and Sanctius, to discover unknown lands, and conquer and settle them. In consequence of this permission, the king supplied one ship, and the merchants of London and Bristol a few smaller ones, and, in 1496, John and Sebastian sailed to the north-west. In July of the same year, they discovered Newfoundland, and explored it up to latitude 67°. The accounts of this voyage are attended with much obscurity; but it seems, that, in a subsequent voyage, the father and son sailed as far as cape Florida, and were actually the first who saw the main land of America. Little, however, is known of the proceedings of Sebastian Cabot for the ensuing 20 years; but it seems, that, in the reign of Henry VIII, by the patronage of sir Thomas Peart, vice-admiral of England, he procured another ship to make discoveries, and attempted a southern passage to the East Indies, in which he failed. This disappointment is supposed to have induced him to quit England, and visit Spain, where he was treated with great respect, and appointed pilot-major. An opulent company of Spanish merchants soon after gave him the command of an expedition to the Spice islands, through the newly-discovered straits of Magellan. Accordingly, in 1525, he sailed from Cadiz to the Canaries and Cape de Verd islands; and, failing, from the opposition of his crew, in his view of reaching the Spice islands, he proceeded to the river La Plata, where he discovered St. Salvador, and erected a fort there. He subsequently reached the great river Paraguay, and remained on the American coast a considerable time, with the view of forming an establishment. Being disappointed in the expected aid from Spain, he ultimately returned home with all his crew, but was not very favorably received, owing to his failure in respect to the Spice islands, and his severe treatment of the mutineers of his crew. He notwithstanding continued in the service of Spain for some years longer, but at length returned to England towards the latter end of the reign of Henry VIII. At the beginning of the reign of Edward VI, he was introduced, by the protector Somerset, to the young king, who took much pleasure in his conversation, and settled a pension on him as grand-pilot of England. From this time, he was consulted on all questions relating to trade and navigation; and, in 1552, being governor of the company of merchant adventurers, he drew up instructions, and procured a license for an expedition to discover a passage to the East Indies by the north. These instructions, which are preserved in Hackluyt's collection of

voyages, form a very honorable proof of his sagacity and penetration. He was also governor of the Russian company, and was very active in their affairs. He is supposed to have died in the year 1557, at a very advanced age, leaving behind him a high character, both as a skilful seaman and a man of great general abilities. He was the first who noticed the variations of the compass; and, besides the ordinances to be found in Hackluyt, he published a large map of the world, as also a work under the title of *Navigazione nelle parte Septentrionali, per Sebastiano Cabota* (fol., Venice, 1583).

Cabrera; one of the Balearic isles in the Mediterranean, belonging to Spain; lon. 3° E.; lat. 39° 7′ N. (See *Baleares.*)

Cabul, or Caubul, capital of the kingdom of Afghanistan, is a very ancient city, situated in a spacious and well-watered plain, enclosed on three sides by a semicircular range of hills, on the summit of which is a fortification. The Bala Hissar, or Upper Fort, contains the palace and other public buildings. The houses are mean, the bazars well supplied, and crowded by Usbecks, Afghans and Hindoos. The vicinity is famous, in the East, for flowers and fruits. Cabul is a great mart for horses from Tartary, which are brought for exportation to Hindostan. (See Elphinstone's *Caubul*, ch. viii—xi.) Lon. 69° 15′ E.; lat. 33° 30′ N.

Cabulistan. The country comprehended under this name has already been described in the articles *Afghanistan* and *Belujistan*. It is sometimes called *Cabul*, or *Caubul*, from the capital; sometimes *Cabulistan*; sometimes *Candahar*, from another capital. It was formerly, also, called *Ghizne*, from another city, for the same reason. The origin of the name *Afghans* is unknown. Their own name for their nation is *Pooshtoon*, whence, probably, the Indian name for them, *Patans* (See *Afghans.*)

Cacao. Chocolate is a kind of cake, or hard paste, the basis of which is the pulp of the cacao, or chocolate-nut, a production of the West Indies and South America. The cacao-tree (*theobroma cacao*), both in size and shape, somewhat resembles a young cherry-tree, but separates, near the ground, into four or five stems. The leaves are about four inches in length, smooth, but not glossy, and of a dull green color. The flowers are saffron-colored, and very beautiful. The fruit of the cacao-tree somewhat resembles a cucumber in shape, but is furrowed deeper on the sides. Its color, while growing, is green; but, as it ripens, this changes to a fine bluish-red, almost purple, with pink veins; or, in some of the varieties, to a delicate yellow or lemon color. Each of the pods contains from 20 to 30 nuts or kernels, which, in shape, are not much unlike almonds, and consist of a white and sweet pulpy substance, enveloped in a parchment-like shell. These are the cacao or chocolate-nuts.—Plantations of cacao are numerous on the banks of the river Magdalena, in South America. They are usually formed in morassy situations, and are sheltered from the intense heat of the sun by larger trees, which are planted in them. There are two principal crops of cacao in the year; the first in June, and the second in December. As soon as the fruit is ripe, it is gathered, and cut into slices; and the nuts, which are, at this time, in a pulpy state, are taken out, and laid in skins, or on leaves to be dried. They have now a sweetish acid taste, and may be eaten like any other fruit. When perfectly dry, they are put into bags, each containing about a hundred weight, and, thus packed, are exported to foreign countries. Previously to being formed into chocolate, these nuts are generally toasted or parched over the fire in an iron vessel, after which process their thin external covering is easily separated. The kernel is then pounded in a mortar, and subsequently ground on a smooth, warm stone. Sometimes a little arnatto is added; and, with the aid of water, the whole is formed into a paste. This is put, whilst hot, into tin moulds, where, in a short time, it congeals; and in this state it is the chocolate of the shops. In South America and Spain, other modes are adopted: the chocolate is mixed with sugar, long pepper, vanilla, cinnamon, cloves, almonds, and other ingredients, according to the taste of the respective inhabitants. Mr. Edwards was of opinion, that the cakes of chocolate used in England were made of about one half genuine cacao, and the remainder of flour or castile soap. That from Caraccas is considered the best.—By the natives of South America, the chocolate-nuts are used for food. A white, oily matter, about the consistence of suet, is also obtained by bruising them, and boiling the pulp. The oil is by this means liquified, and rises to the surface, where it is left to cool and congeal, that it may the more easily be separated. This, which is called *butter of cacao*, is without smell, and, when fresh, has a very mild taste. Its principal use is as

an ingredient in pomatums. From the nuts, when slightly roasted, an oil is sometimes obtained by pressure, which is occasionally used in medicine.

Cachao, Kacho, Hecho, or Bac-king; capital of the kingdom of Tonquin, on the river Songkoi, about 100 miles from its mouth. It is an open, straggling town, with wide streets, the houses of mud, or wood thatched with straw. It was formerly the residence of the king; and the English and Danes had factories there. It is a commercial place of some consequence. Gold, beautiful silks, and the finest lackered ware, is exported. Lat. 21° 25′ N.; lon. 105° 12′ E.

Cachelot. (See *Whales.*)

Cachet, Lettres de; secret warrants, by means of which, under the former kings of France, and their ministers, any body could be imprisoned or banished to a certain place, without any reason given. The introduction of them is ascribed to the famous Capuchin padre Joseph, under the ministry of cardinal Richelieu. In this sense, the term *lettres de cachet* is commonly used, but it has, in fact, a more extensive signification. All despatches from the royal state-chancery were issued either openly, as *lettres patentes*, or sealed, as *lettres closes*, or *de cachet*. The first were always written upon parchment, the name of the king signed by a minister of state, countersigned by the minister, not folded, but only the lower part turned over, and stamped with the great seal of state. They commenced with the words *A tous présens et à venir Salut!* and ended with the form *Car tel est notre plaisir*. In this shape, all edicts, ordinances, charters, privileges, &c. were issued, but all had to be recorded by the parliament of the district to which they referred. The representations of the parliament often prevented these *lettres patentes* from being carried into effect. The others, the *lettres closes*, were only written on paper, some in the name of the king (who spoke in the first person, and concluded with the formula *Sur ce je prie Dieu, qu'il vous ait dans sa sainte et divine garde*, and signed with his name), some by commission from the king. In the latter case, they began with the words *De par le roi: il est ordonné à*, and were signed by a minister. They were then closed, and sealed with the small royal seal, so that the contents could not be seen. The *lettres closes* were used for many purposes besides that of arrests. All the orders sent to officers and private individuals (e. g., to report opinions, to repair to a certain place, to leave their place of residence, or go into banishment) were issued in this form. Warrants also were often issued in this form, because the courts, and particularly the police, could not have acted without such authority in urgent cases. To the *lieutenant-général de la police* of Paris a number of them were always given, to fill out the blanks as occasion might require. Without them, he would not have been authorized to arrest suspected persons. Frequently the arrest by *lettre de cachet* was a favor on the part of the king, as it withdrew the accused from the severer punishment to which he would have been liable upon a trial before the courts. (See Linguet's *Memoirs sur la Bastille*, London, 1783, and Mirabeau's *Des Lettres de Cachet et des Prisons d'État*, 1782.) These letters were detestable instruments of arbitrary power, hostile to every principle of right. (See *Bastile.*)

Cacique; in some parts of America, the title of the native chiefs at the time of the conquest by the Spaniards.

Cacodemon. (See *Demon.*)

Cacophony; a fault of style, which consists in a harsh and disagreeable sound, produced by the meeting of two letters or two syllables, or by the too frequent repetition of the same letters or syllables. It destroys the harmony of the whole period; it is unpleasant in prose and intolerable in verse. Thus the Roman was shocked with the

O fortu*natam natam*, me consule Romam;

and, according to Juvenal, a few more such cacophonies would have saved Cicero's head. A French ear is offended with Voltaire for the expression *glaça sa main*. Pope says,

And oft the ear the open vowels tire.

Cactus, in botany; a genus of succulent plants, containing 28 species, permanent in duration, singular and various in structure, generally without leaves, having the stem or branches jointed, for the most part armed with spines in bundles, with which, in many species, bristles are intermixed. They are natives of South America and the West Indies. Several of the species are cultivated in other countries, for curiosity, in green-houses. Gardeners divide them into, 1. *melon-thistles;* these are of a roundish form: 2. *torch-thistles;* erect, supporting themselves: 3. *cereuses;* creeping with lateral roots: 4. *prickly-pears*, or *Indian figs;* compressed, with proliferous joints.

The two first sorts appear like large, fleshy, green melons, with deep ribs, set all over with strong, sharp thorns, setting close to the surface of the earth, and differing in height, from a foot to a yard. When these plants are cut through the middle, their inside is found to be a soft, pale-green, fleshy substance, very full of moisture, the taste of which is agreeably acid. The fruits are frequently eaten in the West Indies. One of the most remarkable species of cactus is the *C. grandiflorus*, or night-flowering creeping cereus, belonging to the third class. The flower of this species, though very short-lived, is a splendid production. It begins to open in the evening, between seven and eight o'clock, is fully blown by eleven, and by three or four in the morning begins to fade; soon after which, it hangs down in a state of irrecoverable decay. When the plants are large, several flowers will open in the same night, and there will be a succession of them for several nights together. The calyx, when expanded, is about six inches, sometimes nearly a foot, in diameter, yellow within, and dark-brown without. The petals are many, and of a pure white, and the great number of recurved stamina surrounding the style in the centre of the flower make a grand appearance. It generally flowers in July.

Cacus, a robber in Italy, the terror of the Aventine wood, of the surrounding inhabitants and of strangers, a monstrous giant, according to some, vomiting fire, of enormous strength and terrible appearance, was a son of Vulcan. A deep, winding cavern was his residence, over the entrance of which hung the heads and arms of those whom he had slain. This cave he closed with a stone, which 20 pair of oxen could not remove. When Hercules was driving the herds of Geryon through Italy, C. robbed him of some of them, and, to conceal their tracks, dragged them backwards into his cave. But their lowing betrayed them; upon which Hercules attacked the robber, and, after a terrible conflict (see Virgil's *Æneid*, b. 8), killed him with his club. To express his gratitude for his victory, Hercules erected the *ara maxima*, and Evander, with his Arcadians, performed divine honors to Hercules as their benefactor.

Cadalso, José, a man of very respectable standing among the later writers of Spain, was born at Cadiz, in 1741, of an ancient and noble family, and educated in Paris, where he made himself master of Greek and Latin, and the principal languages of modern Europe. He afterwards travelled through England, France, Portugal, Germany and Italy. At the age of 20, he returned home, and joined the Spanish forces then employed against Portugal. He remained in the army till his death, in 1782, attentive to his military duties, though devoted to literature. He was the friend of the most distinguished writers then living in Spain, and, by his advice and example, contributed much to bring out the talent of several among them. He was killed by a shell at the siege of Gibraltar, in 1782. He is the author of *Cartas Marruecas*, a series of letters written in the character of a Moorish traveller in Spain, and containing reflections upon Spanish institutions and manners. It is a work of much merit. C. also wrote a satire called *Eruditos á la Violeta*, in ridicule of sciolists; also a tragedy, and several poetical pieces under the title of *Ocios de mi Juventud*.

Cada Mosto, or Ca da Mosto, Louis da, born at Venice, about 1432, devoted himself to commerce, after receiving a careful education, and made many voyages into the Mediterranean sea and Atlantic ocean. In 1454, he sailed in the ship of his countryman, Marco Zeno, for Flanders. Contrary winds stopped the progress of the vessel in the straits of Gibraltar, and she was compelled to lie to near cape St. Vincent, where prince Henry had retired to devote himself to his studies, and to promote discoveries along the coast of Africa. C., a young man full of the spirit of enterprise, offered his services to the prince, and obtained a ship of 90 tons. In 1455, he departed from Lagos, sailed into the river Senegal, which had been discovered five years before, proceeded yet farther along the coast, and visited prince Damel, whose states extended from the Senegal to cape Verd. After trading in slaves and gold, he steered for cape Verd, where he joined two other discovery-ships of the prince, and visited, in company with them, the mouths of the Gambia, the riches of which had been greatly extolled. As they were attacked by the inhabitants, and the mariners, weary of their long voyage, had become discouraged, the commanders were compelled to return to Portugal. In 1456, C., in company with two other ships, made a second voyage to the Gambia. On the way thither, they discovered the cape Verd islands. When they entered into the Gambia this time, they were well received; but the quantity of gold which they obtained did not

answer their expectations. The three ships continued their course as far as the river Casamansa and the Rio Grande, and returned to Portugal. C. remained there till 1463, in which year prince Henry died. The description of his travels, *Prima Navigazione per l' Oceano alle Terre de' Negri della Bassa Etiopia, di Luigi Cada Mosto* (Vicenza, 1507, and Milan, 1519), the oldest of the voyages of the moderns, is a master-piece. The arrangement is admirable, the narrative interesting, the descriptions clear and accurate.

Cade, John (better known as *Jack Cade*); a man of low birth, who had been obliged to fly into France for his crimes. Observing the discontents of the people on his return to England (1450), in the reign of Henry VI (q. v.), he took the name of *John Mortimer*, published complaints against the abuses of government, and soon found himself at the head of 20,000 men, common people of Kent. Having defeated a force sent against him, he advanced to London, which opened its gates; but the riotous disposition of his followers alarmed the citizens. They drove out and defeated the rebels, who soon dispersed, and Cade was killed by one Iden, a gentleman of Kent.

Cadence, or Reprise; a pause or suspension at the end of an air, to afford the performer an opportunity of introducing a graceful extempore close. The word *cadence* is also frequently applied to the embellishment itself.

Cader Idris; a mountain of Wales; the commencement of a chain running north-easterly. There are here several small lakes, abounding in fish. The height of the mountain is 3550 feet above the level of the sea. It is three miles south of Dolgelly, Merionethshire.

Cadet (*French*); 1. a younger brother. —2. In the French service, a cadet was a gentleman who served in the ranks without pay, for the purpose of learning the art of war.—3. It is now applied, in England and the North American U. States, to the pupils of a military academy. (q. v.)

Cadet de Vaux, Antoine Alexis, a chemist, member of the French *collège de pharmacie*, and of many learned German societies, born in Paris, 1743, was at first an apothecary, but for many years has been a successful practical agriculturalist, and active, even in his old age, in improving the soil and the manufactures of his country. He has discussed the effect of the destruction of mountain forests in diminishing the copiousness of the springs in the valleys, the improvement of vineyards, the cultivation of foreign plants, and the providing of substitutes for the usual articles of food in times of scarcity. He is one of the principal editors of the *Journal d'Économie rurale et domestique*, and of the *Cours complet d'Agriculture pratique*. He has also been engaged in politics.

Cadi, in Arabic; a judge or jurist. Among the Turks, *cadi* signifies an inferior judge, in distinction from the *molla*, or superior judge. They belong to the higher clergy, as the Turks derive their law from their prophet.

Cadiz, the principal port, and one of the handsomest cities of Spain, is situated at the extremity of a long tongue of land projecting from the island of Leon. The narrowness of the land communication prevents its capture by a military force, while the garrison is master of the sea. This was exemplified in the long blockade of 1810, 11, 12. It is walled, with trenches and bastions on the land side, and, the population being large (70,000), the houses have been built high, and the streets are narrow. It has been much extended, and adorned with handsome buildings, since 1786. The chief buildings are the great hospital, the custom-house, the churches, and 13 monasteries. From the harbor, the town has a fine appearance. The bay of C. is a very fine one. It is a large basin enclosed by the main land on one side, and the projecting tongue of land on the other. It is from 10 to 12 leagues in circumference, with good anchorage, and protected by the neighboring hills. It has 4 forts, 2 of which form the defence of the grand arsenal, La Caraca, in which are 3 basins and 12 docks. This bay is the great rendezvous of the Spanish navy. C. was the centre of Spanish American trade, and the commerce of the port was very extensive, before the separation of the colonies. An important branch of industry in the vicinity is the preparation of salt: the pits belong to the government, and supply many of the fishermen of different countries of Europe. The city was taken by the earl of Essex in 1596, and from its bay Villeneuve sailed, previous to the battle of Trafalgar, in 1808. In 1809, it became the seat of the central junta, and afterwards of the cortes. It sustained a long blockade from the French (Feb. 6, 1810, to Aug. 25, 1812), which was not raised till after the battle of Salamanca. In 1823, the French entered it (Oct. 3), after a short siege. In 1829, it

was declared a free port. On the island of Leon, the village of Las Cabezas is also situated, where Riego began the military revolution, Jan. 1, 1820. (See *Spain.*)

Cadiz, Straits of; that part of the Atlantic which has the coasts of Algarve and Andalusia on the north, those of Fez and Morocco on the south, and the straits of Gibraltar on the east.

Cadmus; the name of several persons in mythology and history. The most famous is the son of Agenor and grandson of Neptune. With his brothers, he was sent, by his father, to seek for his sister Europa, who had been carried away by Jupiter, and he was not to return without her. After several adventures, C. inquired of the oracle at Delphi, which commanded him to desist from further search, to intrust himself to the guidance of a heifer, and where she should stop to build a city. He accordingly went to Bœotia, where he wished to sacrifice the cow to Minerva. But his companions, in attempting to fetch water from the fountain of Mars, for the purpose of the sacrifice, were slain by the dragon that guarded it. C. killed the dragon, and, at the command of Minerva, sowed its teeth in the earth; armed men immediately sprang up, whom he called *Sparti* (the sowed), but who perished in a contest with each other, excepting only five. With the remainder, he built the city of Cadmea or Thebes (see *Thebes*). Jupiter then married him to Harmonia, and all the gods were present at his nuptials. He became, by this marriage, the father of Antinoë, Ino, Semele, Agave and Polydorus. After ruling, for a time, the city which he had built, and the state which he had founded, he proceeded, at the command of Bacchus, with Harmonia, to the Enchelæ, conquered their enemies, the Illyrians, became their king, and begat another son, Illyrius. Jupiter finally changed him and Harmonia into serpents, or, as some say, into lions, and transported them to Elysium. Tradition states, that C. came to Bœotia from Phœnicia, 1550 B. C., conquered the inhabitants who opposed him, and, in conjunction with them, founded the above-mentioned city. To promote the improvement of his new subjects, he taught them the Phœnician alphabet, the employment of music at the festivals of the gods, besides the use of copper, &c.—Another C. of Miletus, a son of Pandion, was regarded, among the Greeks, as the first who wrote in prose. He lived about 600 years before Christ.

Cadsand; an island near the coast of Flanders, at the mouth of the Scheldt; lon. 3° 18′ E.; lat. 51° 23′ N. This island is preserved by lofty dikes, constructed at a vast expense, from the inundations of the sea; and yet is scarcely free from danger when the N. W. wind blows with violence. The land is fertile, and the corn is equal to any produced in the United Provinces; the meadows are luxuriant, and the farmers make a large quantity of excellent cheese.

Caduceus, a wand of laurel or olive, with two little wings on the upper end, about which two serpents are twisted, with their heads turned towards each other, and their crests not bristled, served for a symbol of peace. It was borne by the heralds, whose persons were then sacred and inviolable. The fable tells us, that Apollo gave this staff to Mercury, in consideration of his resigning to him the honor of inventing the lyre. As Mercury entered Arcadia with this wand in his hand, he saw two serpents fighting together; he threw the staff between them, and they immediately wound themselves around it in friendly union. The serpents which adorn this staff were, according to Böttiger, originally, emblems of the knots with which the oldest merchants of the Mediterranean sea secured their chests and goods. The C. is Mercury's peculiar mark of distinction. With this he conducted the shades to the lower world, and from it received the name *Caducifer;* yet we find it, on ancient coins, in the hands of Bacchus, Hercules, Ceres, Venus and Anubis. Among the moderns, it serves principally as an emblem of commerce.

Cadwalader, John, was born in Philadelphia, and, at the commencement of the revolution, commanded a volunteer corps, of which almost all the members received commissions in the line of the army. He was afterwards appointed colonel of one of the city battalions, from which rank he rose to that of brigadier-general, and was intrusted with the command of the Pennsylvania troops in the winter campaign of '76—'77. He acted in this command, and as a volunteer, in the battles of Princeton, Brandywine, Germantown, Monmouth, and on other occasions, and received the thanks of general Washington, whose confidence and esteem he always possessed. C. was appointed to command one of the divisions into which the army was separated when Washington determined to attack the enemy at Trenton; but, in conse-

quence of the ice in the river, neither he nor general Irvine, the commander of another division, could cross the river in time. But, the day after Washington's return, he effected the passage, supposing him still on the Jersey side, and pursued the vanquished enemy to Burlington. In 1778, he was appointed by congress general of cavalry—an appointment which he declined on the score of being more useful in the station which he occupied. He died Feb. 10, 1786, in the 44th year of his age.

Cælius Mons, one of the hills of the city of Rome, received its name from Cælius Vibenna, an Etruscan, to whom it was assigned. The palace of Tullus Hostilius was on this mount. In the time of Tiberius, it received the name *Augustus*. It is at present covered with ruins, which serve to excite the curiosity and baffle the ingenuity of antiquaries.

Caen; a large and well-built town of France, the ancient capital of Lower Normandy, and the chief place in the department of Calvados. According to Dupin (*Forces productives commerciales de la France*, 1828), it is one of the most important cities of the west of France, with a population of 37,890 inhabitants, the centre of an important domestic trade, the market of a rich agricultural district, a seaport and a manufacturing city. Its institutions, literary, charitable and scientific, are numerous, and very well organized. The antiquarian society, the Linnæan society, the agricultural society, and the academy of science, arts and literature, are distinguished. C. also contains one of the 26 academies of the university (*académie universitaire*), a royal college, a large and valuable public library, an academy of drawing, architecture and sculpture, a gallery of paintings, and many other useful and liberal institutions. The hospital of the *abbaye-aux-dames* is one of the best regulated in France. The noble hospital of the *bon-sauveur* is divided into the asylum for the insane, the dispensary for the sick and wounded, the school for the deaf and dumb, the lying-in-hospital, a boarding school for young ladies, and a free school for 120 destitute girls. The whole is administered by 125 charitable females (*soeurs hospitaliers*). The streets are less narrow and crooked than is usual in France, and the houses are mostly of white stone. It has 12 parish churches, of which the principal are the *abbaye-aux-hommes*, built by William the Conqueror, who lies buried in it, and *notre-dame*. The city was formerly fortified, but the fortifications are now in ruins. Henry VI of England founded a university here in 1431, C. having been in the possession of the English, of whom it is now a favorite retreat, from 1417 to 1448. Admiral de Coligni captured it for the Protestants in 1562, and, in 1815, it was occupied by the Prussians. Linen, serges, particularly rich lace, with stockings, caps, paper-hangings and oil, are the principal articles of manufacture. A sugar refinery has lately been established, in which a steam-engine is employed. A large fair is held here annually, and an exhibition of the manufactures of the department biennially. Malherbe, De Laplace, Vauquelin, were born in this city or in its vicinity. It is 132 miles N. W. of Paris. Lon. 21′ 38″ W.; lat. 49° 11′ 12″ N.

Caerleon; a small town in England, 26 miles from Bristol, on the Usk, in which the tide rises 30 feet. (See *Bristol Channel.*) It was the site of the *Isca Silurum*, the chief Roman station in the country of the Silures. The ruins of baths, temples and a theatre were to be seen here in the 12th century; and Roman coins, statues and sepulchral monuments are yet found. There are also the vestiges of an amphitheatre, which the inhabitants call *king Arthur's round table*, from a tradition that he instituted the round table in this place. Population, in 1821, 1062.

Caermarthen; chief town of Caermarthenshire, South Wales. It is situated on the Towy, the picturesque beauties of the vale of which are seen to great advantage from the celebrated Grongar hill and the ruins of Dynevor castle. The streets are many of them steep and irregular. The river is navigable for vessels of 300 tons burden. In the history of romance, C. is famed as the birthplace of Merlin, and three miles from the town is a spot called *Merlin's grove*, in which tradition relates that the Lady of the Lake intombed the unhappy magician (*Faerie Queen*, iii. 3). Merlin's chair, from which he uttered his prophecies, is also shown. Roman roads, coins and sepulchral antiquities are found in the neighborhood. About eight miles from the town there is an immense cairn, 18 feet high and 150 in circuit, covered with turf. The top is hollow, with a stone chest in it, covered with an oval stone nine feet long. Between the Towy and the Cowen there is a barrow with a stone chest in it. C. is 212 miles west from London. Population, in 1821, 8906.

Caernarvon, the principal town of North Wales, stands on the Menai strait, with a good harbor, but difficult of access. It is built in the form of a square, enclosed on three sides with walls. Edward I built it in 1282, and his son, Edward II, first prince of Wales, was born here. C. stands near the site of the ancient *Segontium* of Antoninus, the *Caer Seiont* of the Britons. Being formerly a strong hold, it was frequently attacked in the wars between the Welsh and English, and in the civil wars. Population, 5788. Distant 253 miles N. W. from London.

Caerphilly, or Caerphili; a small market-town in the county of Glamorgan, distinguished for the ruins of one of the most magnificent castles in Great Britain. The date of its foundation is unknown; but, till the time of Henry III, it was called the *castle of Senghenydd*. The great hall, 70 feet by 30, and the hanging tower, nearly 80 feet high, and inclining about 11 feet from the perpendicular, are remarkable objects. The position of the latter was produced by the steam of a quantity of water which was thrown upon a furnace of melted iron beneath the tower. Distant 158 miles west from London.

Caerwent; a village of England, supposed to have been the *Venta Silurum* of Antoninus. The vestiges of a large Roman camp are visible. A mosaic pavement of blue, white, yellow and red was discovered here some years ago. Distant 17 miles N. W. of Bristol.

Caerwys, a small town of North Wales, is noted for the celebration of the *Eisteddfod*, or competition of the bards (q. v.). They recited their odes, or performed on the harp, in presence of judges appointed by the native princes. The prize was a small silver harp. Distant 212 miles N. W. from London.

Cæsar was the family name of the five first Roman emperors. With Nero the imperial family became extinct (A. D. 68), and *Cæsar* became merely a title of dignity. The emperor, who bore the title of *Augustus*, appointed his successor, with the title of *Cæsar*. On medals and monuments we find the title *Cæsar* preceding the name of the emperor, as, *Imp. Cæsar Nerva Trajanus Augustus*, and following that of the designated successor, as, *Marc. Aurel. Antonin. Cæsar*. In the lower Greek empire, a new dignity of *Sebastocrator* was conferred, and that of *Cæsar* became the third rank in the state.

Cæsar, Caius Julius, a great general, statesman and historian, was born July 10th (*Quinctilis*), B. C. 100. He was the son of the pretor Caius Julius Cæsar, and of Aurelia, a daughter of Aurelius Cotta. From his earliest boyhood, he discovered extraordinary talents. He had a penetrating intellect, a remarkably strong memory, and a lively imagination; was indefatigable in business, and able, as we are told by Pliny, to read, write, hear and dictate, at the same time, from four to seven different letters. When the party of Marius gained the ascendency in Rome, Cinna gave his daughter Cornelia in marriage to C., with the view thereby to establish his own power more firmly. Sylla, when he came to Rome, tried to prevail on him to repudiate her. His refusal provoked the anger of the usurper, who was prevented only by the earnest entreaties of his friends from putting him under proscription. The saying of Sylla, that "he saw in this stripling many a Marius," hastened the departure of C. from Rome. He travelled into the Sabine territory, was seized by the soldiers of Sylla, and was obliged to procure his release by a bribe of two talents. He then proceeded to the court of Nicomedes, king of Bithynia. Thence he went to M. Minucius Thermus, the pretor in Asia, who intrusted him with the command of the fleet which was to blockade Mitylene. In the execution of this trust, C. distinguished himself highly, although but 22 years old. He next visited Rhodes, and placed himself under the instruction of Apollonius, to fit himself for speaking at the bar. On the way, he was taken by pirates, and compelled to pay 50 talents for his release. To revenge himself, he fitted out some vessels at Miletus, overtook the pirates, made the greatest part of them prisoners, and had them crucified before Pergamus. He now returned to Rome, and became military tribune, questor and edile. At the same time, he had the address to win the favor of the people by affability, by splendid entertainments and public shows; and, trusting to his popularity, he ventured to erect again the statues and trophies of Marius, who was hated by the senate and the patricians. By means of one of his relations, L. Julius Cæsar, whom he had aided in obtaining the consulship, he caused many of Sylla's followers to be banished or put to death. In the conspiracy of Catiline he certainly had a secret part. He defended the conspirators, who were arrested, and succeeded in raising a tumult against Cato, who strongly opposed him, so that he was obliged to quit the rostrum, and even his life was endanger-

ed. Cato, however, prevailed, and C. was for a time kept out of the pretorship. But he was soon after chosen pontifex maximus, and was about to go as governor to Farther Spain. His creditors refusing to let him depart, Crassus became his bondsman for the enormous sum of 830 talents. It was on his journey to Spain, that he expressed, on seeing a miserable village, the well-known sentiment, that "he would rather be first there, than second at Rome." In Spain, he made several conquests, and returned to Rome with money enough to pay off his debts. In order to gain the consulship, he now found it expedient to bring about a reconciliation between Pompey and Crassus, whose enmity had divided Rome into two parties. He succeeded in his design, and all three agreed to divide the sovereign power between them. This was the first triumvirate in Roman history (B. C. 60.) C. then became consul with M. Calpurnius Bibulus, confirmed the measures of Pompey, and procured the passage of a law, in opposition to the senate and his colleague, to distribute certain lands among the poor citizens. This brought him into the highest favor with the people. With Pompey he formed a still more intimate connexion by giving him his daughter Julia in marriage, and gained the favor of the equestrian order by remitting a third part of their taxes. In vain did the heads of the patriotic party, Cicero and Cato, raise their voices against the triumvirate: they only drew upon themselves their vengeance. When the year of his consulship had expired, C. obtained the government of Gaul for five years, with the command of four legions. After his marriage with the accomplished Calpurnia, the daughter of one of the new consuls, Calpurnius Piso, he repaired to Gaul, compelled the Helvetians, who had invaded that province, to retreat to their native country, subdued Ariovistus, who, at the head of a German tribe, intended to settle in the country of the Ædui, and conquered the Belgians. In nine years, he reduced all Gaul, crossed the Rhine twice (B. C. 55 and 53), and twice passed over to Britain, defeated the gallant natives of this island in several battles, and compelled them to give him hostages. The senate had continued his government in Gaul for another period of five years, while Pompey was to have the command of Spain, and Crassus that of Syria, Egypt and Macedonia for five years also. But the death of Crassus, in his campaign against the Parthians, dissolved the triumvirate; and the death of Julia, which took place about the same time, cooled the friendship between C. and Pompey. Meanwhile the power and authority of Pompey were constantly increasing. C., too, strove to strengthen and enlarge his own party in the capital by enormous bribes. He made Gaul a Roman province, and governed the conquered lands with policy and kindness. Pompey, on the other hand, promoted C.'s enemies to the consulship, and persuaded the senate to pass a decree, by which C. was to leave his army, and resign his government of the province. He declared himself ready to obey, if Pompey would do the same. Hereupon the senate ordered that C. should resign his offices and command within a certain time, or be proclaimed an enemy to the state, and appointed Pompey general of the army of the republic. Upon this, C. urged his soldiers to defend the honor of their leader, passed the Rubicon (49 B. C.), and made himself master of Italy without striking a blow, as Pompey, destitute of troops to meet him, had left the city with the consuls, senators and magistrates. C. then levied an army with the treasures of the state, and hastened into Spain, which he reduced to submission without coming to a pitched battle with Pompey's generals. He next conquered Marseilles, and returned to Rome, where he was appointed dictator by the pretor, M. Æmilius Lepidus. At the same time, he was chosen consul for the following year by the people. In the meanwhile, Pompey had collected an army in the east, and his rival hastened to Epirus with five legions by land. But when the vessels which were intended to transport the rest of his troops had been captured by Pompey's fleet, C. proposed an accommodation, which, however, was refused. Meanwhile C. received the expected reënforcements, and challenged his antagonist to battle. Pompey declined coming to an engagement, but, at last, being surrounded in his camp, was forced to take a decisive step, in order to break through the enemy's line. This measure was successful, and C. retreated to Pharsalia, where, in a bloody but decisive engagement (48 B. C.), he gained the victory. Pompey fled to Asia, and then to Egypt, to raise a new army. As his party was only weakened, but not destroyed, C. hastened after him, passed over the Hellespont, where Cassius surrendered to him with his fleet, and then went to Egypt. Here he received

intelligence of the murder of Pompey. He shed tears at the tragical end of his rival, gave his body an honorable burial, and loaded his followers with favors, by which many of them were won to embrace his cause. Being detained by contrary winds, he made use of the time to compose the differences between Ptolemy and his sister Cleopatra (q. v.). In Rome, the senate and the people strove eagerly to gain the favor of the victor. They appointed him consul for five years, dictator for a year, and tribune of the people for life. Pharnaces, king of Pontus, a son of Mithridates the Great, having attempted to recover the territories of his father in Asia, C. marched against him, pardoned king Dejotarus, an adherent of Pompey, on his way, and finished the war so speedily, that he announced his success to his friends in the famous words *Veni, vidi, vici.* Returning to Rome, he granted an amnesty to all the followers of Pompey, and gained, by his clemency, the universal love of the people. When his dictatorship had expired, he caused himself to be chosen consul again, and, without changing the ancient forms of government, ruled with almost unlimited power. In Africa, however, the friends of the republic had gathered under the standard of Cato and other generals. C. passed over with an army, and fought several battles with various success, till the victory at Thapsus over Scipio Metellus decided the contest in his favor. Cato, who was in Utica, stabbed himself, and the city surrendered to the conqueror. C. then made Mauritania and Numidia Roman provinces, and gave orders for the rebuilding of Carthage and Corinth, which was accomplished in a year. In Rome, he was received with the most striking marks of honor. The term of his dictatorship was prolonged to 10 years, the office of censor conferred on him alone; his person was declared inviolable, and his statue placed by that of Jupiter in the capitol. In a speech to the people on this occasion, he declared his resolution to use his power for the good of the state; and put an end to the apprehensions, which some still entertained, by the pardon of Marcellus, one of his most open and bitter enemies. He soon after celebrated the four triumphs which had been decreed him over Gaul, Egypt, Pharnaces and Juba, all in one month, and among the most magnificent ever witnessed in Rome. He now passed many useful laws, and invited the learned men of foreign countries to Rome. Amongst other things, he undertook the reformation of the calendar (q. v.). During these peaceful occupations, the sons of Pompey had collected new forces in Spain, so that C. took the field in person against them. Corduba was captured after a most obstinate resistance; and, soon after, the parties came to a general engagement at Munda. A fortunate accident decided the battle in favor of C., after victory had been for a whole day doubtful. In seven months, Spain was conquered, and C. entered Rome in triumph. He was now made perpetual dictator, and received the title of *imperator*, with full powers of sovereignty. He continued, meanwhile, to conciliate his enemies by clemency, and to heap honors upon his friends. The number of senators he increased from 300 to 900. But this degradation of the senate offended the Romans, and their displeasure was increased by the arrogance with which he conducted towards that order. On one occasion, as he was sitting in the rostrum, in his chair of gold, Mark Antony offered him a royal diadem. He refused it, however, and his refusal drew shouts of applause from the people. The next morning, his statues were decked with diadems. The tribunes of the people, who had them taken off, and imprisoned the persons who had done the act, were deposed from their office by C. This was the occasion of an animosity, which ended in a conspiracy, of which Caius Cassius was the prime mover. C., having no suspicion of the danger which threatened him, was forming new projects. He resolved to subdue the Parthians, and then to conquer all Scythia, from the Caucasus to Germany and Gaul. C.'s friends gave out, that, according to the Sibylline books, the Parthians could be conquered only by a king, and, therefore, proposed that C. should retain the title of *dictator* with regard to Italy, but should be saluted with that of *king* in all the conquered countries. For this purpose, a meeting of the senate was appointed for the 15th of March; and this was the day fixed on by the conspirators for the execution of the plot. A soothsayer warned C. of his danger; and his wife, disturbed by a frightful dream, conjured him not to go to the senate-house. His doubts, however, were overcome by Decimus Brutus, one of the conspirators, and he proceeded to the capitol. On his way thither, a billet was handed him, giving him information of the conspiracy; but, in the crowd, he put it by without reading it. The conspirators had concerted, that Metellus

Cimber should entreat a pardon for his brother, and, if C. should refuse, he was to tear the mantle from his shoulders, which was to be the signal for their rushing upon him with their daggers. All was done as they had planned. Casca's dagger first pierced him in the neck. Scarcely had C. turned, and uttered the words "Accursed Casca, what doest thou?" when the conspirators rushed upon him from all sides. He defended himself, however, undauntedly. But, when he descried Brutus among the conspirators, he exclaimed, "And thou, too, my son?" covered his face with his mantle, and fell, pierced with 23 wounds, at the foot of Pompey's statue. Thus died this remarkable man, the best who ever aspired to sovereignty in Rome, the victor in 500 battles, and the conqueror of a thousand cities, B. C. 44, 15th of March, in the 56th year of his age.—Of C.'s writings, we have his history of his wars with the Gauls and with Pompey, written in a simple, noble style. The most esteemed editions are those of Clarke (London, 1712, fol.), Grævius (Leyden, 1713, 2 vols.), and Oudendorp (Leyden, 1737, 2 vols. 4to.) One of the best modern small editions is that of Oberlin (Leipsic, 1805).

Cæsarea; the ancient name of many cities.—1. C. Philippi, or Paneas, built by Philip, tetrarch of Galilee, son of Herod the Great.—2. C. Stratonis, on the shores of the Mediterranean, about 75 miles north-west from Jerusalem. Herod the Great enlarged it, and it became the metropolis of Palestine, and the seat of the Roman proconsul. (Joseph. *Arch.* 15, 9, 6.) It is the place where Herod Agrippa was smitten by the angel (*Acts* xii. 20—23), where Cornelius the centurion resided (x.), and St. Paul was imprisoned two years (xxiii.—xxv). It is now, according to Clarke, in utter desolation.—3. The capital of Cappadocia, and now called *Kaisarich*. It was once supposed to contain 400,000 inhabitants. Lucas (2d Voyage, xviii.) says that all the mountains in the environs are perforated with grottoes, which served as summer residences, and that there are 200,000 little pyramids in the vicinity. It has now 25,000 inhabitants, and considerable trade in cotton.—There were many other towns of this name.

Cæsarean Operation. (See *Midwifery.*)

Cæstus; the boxing-glove of the Grecian and Roman pugilists. The original Greek cæstus was merely a raw hide, fastened to the hand, and reaching to the wrists, intended for defence. It was afterwards enlarged, so as to reach to the elbow, and loaded with metal, to increase the weight of the blow. The combat with the cæstus was not more dangerous than a common English boxing-match. Theocritus (*Idyll.* 22) has described one of these combats.

Cæsura, in Latin verse; the separation of the last syllable of any word from those which preceded it, and the carrying it forward into another foot. It always renders the syllable on which it falls long, and is accompanied by a slight pause, hence called the *cæsural pause*, as in the following line:

Ille la*tus* niveum molli ful*tus* hyacintho.

In English poetry, it is equivalent to a pause. (See *Versification.*)

Caf; a mountain, which, if we believe the Mohammedans, environs the whole earth, which is thus set within it like a finger in a ring. Its foundation is the stone Sakhral, one grain of which enables its possessor to work miracles. The agitation of this stone, which is an emerald, whose reflection gives the sky its tints, is the cause of earthquakes. The Dives, or giants, and the Peri, or fairies, dwell in it.

Café. (See *Coffee-Houses.*)

Caffa; one of the principal ports of the Crimea, formerly a large and rich city, now much reduced. On the south stood the Genoese town, of which ruined walls and massive magazines remain. On some neighboring heights was the Armenian town, and near this the Tartar city, its magnificent baths and mosques falling into decay. It was called, by the Tartars, *Little Constantinople;* but, from the time of its capture by the Turks, in 1475, it began to decline. When Clarke visited it, in 1800, its population was diminished to 50 families. In 1783, it was ceded to Russia, and called *Feodosia*, from its ancient name, *Theodosia.*

Caffa, strait of, anciently the *Cimmerian Bosphorus*, discharges the turbid waters of the sea of Azoph (*Palus Mœotis*) into the Black sea. It is about 15 leagues in length and 3 in breadth.

Caffarelli. (See *Majorano.*)

Caffarelli du Falga. Among five brothers of this name, all of whom have distinguished themselves in different departments of politics and literature, the best known are,—1. Louis Marie Joseph Maximilian, born in 1756. He was killed in 1799, before St. Jean d'Acre, while general of division. His works, which gained him a place in the national insti-

tute, relate to mathematics, the necessity of better public instruction, and various political and philosophical subjects. His whole life was devoted to learning, and to the welfare of mankind. He adopted the principles of the revolution, and served as a captain in the army of the Rhine; but, when the national convention made known to the armies the condemnation of Louis XVI, in 1793, he declared his disapprobation of it, and was, on that account, deprived of his office, and imprisoned 14 months. He was afterwards set at liberty, employed in the department of war, and finally returned to the army of the Rhine. The loss of a leg did not prevent him from engaging in the expedition to Egypt, as chief of the corps of engineers.—2. His brother Augustus, lieutenant-general, born in 1766, served first in the Sardinian troops, and afterwards in almost all the campaigns of the revolutionary war, under the standard of France. In 1804, Napoleon sent him to Rome to induce the holy father to go to France, to anoint him at his coronation. He was then made governor of the Tuileries, received a command in the army, and was, from 1806 to 1810, minister of war in the kingdom of Italy, and afterwards in active service in the war in Spain. Napoleon gave him the command of the first military division during the "hundred days."

Caffé, Daniel; a painter in crayons; born at Kustrin, 1750. After having passed his childhood and youth in want, he left a comfortable office from his love to painting, and was received, at the age of 32 years, as a pupil of the academy of painting in Dresden. Here he studied, chiefly, the pictures of Mengs, and soon acquired a great reputation by his portraits. He also established a manufactory of crayons. He copied many pictures in the galleries of Dresden, with a vigor and warmth uncommon in a painter in crayons. He died in 1815.

Caffila; a company of merchants or travellers who join together for security, in some eastern countries. It differs from the *caravan* by being in the employ of some sovereign or company, while the former is composed of merchants trading each on his own account.

Caffraria; a name adopted, by the Portuguese, from the Arabs, who called all the African continent, southward from Sofala (their most southerly settlement), the *land of Cafirs* (infidels). It was first applied to the whole width of the continent, from cape Corrientes on the east to cape Negro on the west. As the names of particular states and people became known, the extent of C. diminished; and the term is now applied only to the territory on the north-eastern borders of the Cape Colony. C. is but imperfectly known. (See *Caffres.*)

Caffres. In the south-eastern part of Africa, there is a race distinguished from the Negroes by a larger facial angle (the head being formed like that of Europeans), a high nose, hair frizzled, but less woolly than that of the Negroes, and a brown or iron-gray complexion, differing from the shining black of that race. They have many Arab words in their dialects, and the custom of circumcision prevails among them. These people were called, by the Portuguese, *Caffres*, mistaking the Mohammedan term *Cafir* (heretics) for a national appellation. It is now retained, by geographical writers, to denote the savage tribes, whose physical characteristics have already been described, extending from Quiloa southward, and the Cape Colony eastward. The history, origin and actual extent of this race is unknown, and is reserved to instruct or confound future explorers in these unknown regions. In a more limited sense, this name has been given to the tribe whose true name is *Koussas*, living on the confines of the Cape Colony. They are a handsome, vigorous race, of simple habits, their principal food being milk in the form of curd. They use no salt: water is their only drink. They are all passionately fond of tobacco. Their dress is made of the skins of sheep. Ivory rings, worn on the left arm, are their chief ornaments. The women have their backs, arms and breasts furrowed by tearing up the skin with a sharp instrument. Both sexes paint the whole body red. Their dwellings are low, circular cabins, constructed by the women. Plurality of wives is allowed, but it is rare that they have more than two. Cattle are of the first importance, and the chief object of affection to a Caffre. They obey and follow their master like dogs. The ground is cultivated by the women. At the age of 12, the boys are appointed to the care of cattle, and exercised publicly in the use of the javelin and the club. The girls, under the inspection of the chiefs' wives, are taught to perform the work of the hut and the garden. The Caffres are of a peaceful disposition, but display great activity and skill in the use of arms, when necessary. Their weapons are the *hassagay*, the shield and the club. Previous to commencing hostili-

ties, they send heralds to the enemy. They are fond of the chase, pursuing the lion and the elephant. Each horde has a hereditary and absolute chief. The cupidity of the English colonists has found pretences for depriving them of their finest territory (1821), now called *Albany*; and this lately kind and happy people seem destined to extinction, or to a miserable and degraded condition. (See Lichtenstein's *Travels in Southern Africa.*)

Caftan; the well-known national dress of the Turks, in the form of a night-gown, and generally white, with pale-yellow flowers. It is made of woollen or silk, and sometimes lined with costly fur. Such caftans are presented as gifts, by the Turkish court, to the Christian ambassadors, or to other persons on whom a particular honor is to be conferred. And ambassadors, if they are not expressly permitted to appear in the dress of their nation, are compelled to wear a caftan at the audiences that are given them.

Caglia, cape. (See *Matapan, cape.*)

Cagliari, the capital of the island of Sardinia, is situated on a hill near the sea. It consists of four parts,—1. the castle, on the top of the hill; 2. the Marina; 3. Estempache; 4. the Villa Nuova. It is strongly fortified, and is the residence of the viceroy, of an archbishop, and the seat of a university with 300 students, which was revived and remodelled in 1765. It contains a royal society for the promotion of agriculture, established in 1805, a museum of natural history, and one of antiquities. Population, 28,000. It has some manufactures. C. is the emporium of all the Sardinian trade. Here are the dock-yards and the quarantine-ground. Its spacious and safe harbor is defended by several forts.

Cagliari, Paul; known under the name of *Paul Veronese;* a painter of Verona, born, 1532. His father, who was a sculptor, wished to educate his son for the same profession; but the young man betrayed a greater inclination for painting, and was, therefore, placed under the care of his uncle, Antonio Badile, a painter. Under this able instructer, Paul made considerable progress; but, as the school of Verona already possessed distinguished artists, such as Forbicini, Giolsino, Ligozzi, Brusasorci and Farinato, he obtained, at first, but little celebrity. He went to Mantua and Vicenza, and afterwards to Venice. Here he imitated Titian and Tintoretto, but, at the same time, appeared desirous of surpassing them by a more studied elegance, and a richer variety of ornament. It soon became evident, from his works, that he had studied the casts of ancient statues, and the etchings of Parmesan and Albert Dürer. In his first great works, which are in the church of St. Sebastian, in Venice, his pencil is yet timid. The *History of Esther*, in *fresco*, which he afterwards painted in this church, excited general admiration; and the execution of important works was intrusted to him, among which are many that adorn the library of St. Mark's. He afterwards accompanied the Venetian ambassador Grimani to Rome, where he saw, with enthusiasm, the beautiful models of Raphael and Michael Angelo, and painted, after his return, his fine *Apotheosis of Venice.* His numerous banquetting pieces are also excellent. Six, at least, of these are found at Venice, in the refectories of the monasteries, among the best of which are the *Marriage at Cana*, comprising 120 figures, many of which are portraits, and the *Feast of Christ with Simon.* In the former piece, the extravagant display of Asiatic pomp, and the confusion of different persons and dresses, have been justly censured. In the latter, the air of pride in the aspect of Christ, instead of a simple expression of dignity, the placing of the principal personage in a corner of the picture, and the running into each other of the white table-cloth and the architecture of the background, have been considered blemishes. In his *Pilgrims of Emmaus*, Paul violated all the unities of time, place and action. But, with all these faults, he displays splendid talents and great fruitfulness of conception. His portraits are spirited and noble, and his coloring splendid. He died in 1588. His scholars were, Charles and Gabriel, his sons, and Benedetto, his brother, besides Michael Parrasio, Naudi, Maffei Verona, Francesco Montemezzano.

Cagliostro, count of (real name *Giuseppe Balsamo*), was born in 1743, at Palermo. His father died when he was young, and he was educated by his maternal relations. He entered the order of the Brothers of Mercy, where he found an opportunity to cultivate his talents for medical science, by which he afterwards distinguished himself. But he showed, at the same time, a great love of dissipation, and was, at last, compelled to separate from the order. He returned to Palermo, where, among other tricks, he deceived some credulous persons by his pretended skill in magic and the finding of hidden treasures. He also showed

himself adroit in counterfeiting handwriting, and attempted to get possession of a contested estate by means of a forged document, but was discovered, and obliged to flee. He now determined to go to Rome, and, in his journey through Calabria, became acquainted with the beautiful Lorenza Feliciani, daughter of a beltmaker. She appeared to him intended by fortune to assist his designs. He formed an intimacy with her, and soon compelled her to assist in the accomplishment of his purposes by the loss of her virtue. They now began their travels, in which he assumed the character of a man of rank, first appearing under the name of the *marquis Pellegrini*, and finally under that of the *count Cagliostro*. He travelled through many countries of Europe, stopped in the capital cities, and, by his chemical mixtures, by his tricks, and by the amours of his lady, gained considerable sums. We find him in Madrid, Lisbon, Paris, London, and many other cities. He knew how to cheat with great ingenuity, and was always fortunate enough to preserve himself by an early flight, if men's eyes began to be opened, or waking justice threatened him with imprisonment. The discovery of the philosopher's stone, the preparation of a precious elixir vitæ, &c., were the pretences, under which he extracted from credulous people considerable sums in ready money. Many had recourse to his assistance, not, indeed, to be initiated into the mysteries of magic, but to purchase, at a high rate, different kinds of medicine, one of which was the *water of beauty*. This profitable business employed our hero many years; but, with the fading charms of his lady, many sources of wealth failed. His trade in medicine also began to grow less lucrative, and he determined to seek his fortune as the founder of a new and secret sect. In pursuance of this plan, he passed himself off, during his second residence in London, for a freemason, and played the part of a magician and worker of miracles, in which character he drew upon himself the eyes of all the enthusiasts in Europe. The countess C., on her part, did not remain idle. She was the first and most perfect scholar of her husband, and played the part of a priestess to this new order in as able a manner as she had before played that of a priestess to another goddess. His plan for reviving an old Egyptian order, the founders of which he declared to be Enoch and Elias, contained a mass of the greatest absurdities and nonsense. But his pretensions to supernatural power, the mystery with which his doctrines were enveloped, his pretended ability to work miracles, his healing the sick without pay, with the greatest appearance of generosity, and the belief that, as the *great Kophtha* (this name he had taken, as the restorer of Egyptian masonry), he could reveal the secrets of futurity, gained him many friends and supporters. C. again travelled through Europe, and attracted great attention in Mittau, Strasburg, Lyons and Paris. While in this last city (1785), he had the misfortune to be implicated in the scandalous affair of the necklace, and was banished the country as a confidant of cardinal Rohan. He now returned to London, and sent many epistles to his followers, wherein he bitterly complained of the injury he had received in France, and painted the French court in the blackest colors. From London, where he could not long remain, he went to Bâle, and other cities in that quarter. But, at length, listening to the repeated entreaties of his wife and other friends, he returned (1789) to Rome. Here he busied himself about freemasonry; but, being discovered, and committed to the castle of St. Angelo, he was condemned, by a decree of the pope, to imprisonment for life, as a freemason, an arch-heretic, and a man very dangerous to religion. He died, in the summer of 1795, in the castle of St. Leo, a small city in the States of the Church. A biography of madame von der Recke, in the *Zeitgenossen*, No. xi, contains an account of C.'s residence in Riga, and his connexion with madame von der Recke; and in Casanova's memoirs there is some interesting information concerning him.

Cagnoli, Anthony, astronomer, member of the French national institute, and president of the Italian academy of sciences, was born at Zante, and was attached, in his youth, to the Venetian embassy at Paris, where, after the year 1776, he showed more love for astronomy than for diplomacy. Having settled in Verona in 1782, he constructed an observatory in his own house, by his observations in which he enriched the science of astronomy with many discoveries. After the destruction of his observatory by the French (1798), who, however, compensated him for his loss, his instruments were transferred to the observatory of Brera, in Milan, and he was appointed professor of astronomy in the military school at Modena. In 1814, he went

back to Verona, and died there in 1816. His best works are, *Notizie Astronomiche adat. all' Uso comune* (Modena, 1802, 2 vols., with plates); and his *Trigonometria Piana e Sferica* (2d edition, Bologna, 1804, with plates); translated into French by Chompré (2d edition, Paris, 1804, 4to.).

Cagots; an unfortunate race of men, resembling the Cretins. They are found in the south of France, near the Pyrenees. They are mostly poor beggars, performing the meanest offices, and covered with leprosy, king's evil, and vermin; confined to the coarsest food, wandering about without habitation, without clothes or fire in the depth of winter, barely covered with dirty rags, retiring, in the night, to barns and hovels; of a thin and pale aspect, generally mutilated, lamed in their limbs, despised, insulted, or pitied; cast out of the race of men as unworthy of life; given up to the most beastly excess, and accused of the most horrid crimes with which the human race can be stained. In former ages, they were shut out from society as lepers, cursed as heretics, abhorred as cannibals and pederasts; their feet were bored with an iron, and they were forced to wear an egg-shell on their clothes, by way of distinction. The very name of Cagot, which Scaliger derives from *canis gottus*, is a proof of the detestation in which they were held. Opinions are much divided with regard to the origin of this miserable race, living in the midst of a highly cultivated people. The most plausible conjecture is that which derives them from some northern barbarians, who migrated into the south of Europe in the 3d or 4th century. More accurate researches have established the fact, that they are not without capacity to become useful members of human society; and that, to accomplish this, it is only necessary to remove them from the condition in which they suffer so much misery and contempt, which alone would be sufficient to hinder them from developing their talents, if, indeed, they are inferior to those of other men.

Cahoes, or Cahoos Falls. (See *Mohawk*.)

Cahors Wine is that wine which is used to improve the Pontac and other red French wines. It is consumed in Bourdeaux and other places, where the lighter and cheaper French wines find a ready market.

Caiaphas, a Jew, was the high priest at the time when Jesus Christ was crucified by the Romans. In the dismay which the resurrection of Lazarus produced among the priests and Pharisees, he proposed the death of that obnoxious person (*John*, xi. 49, 50); and, when the officers of the Jewish hierarchy arrested Jesus, they carried him first to Annas, and then to C., from whom he was transferred to the hands of the civil authority. C. was deposed, A. D. 35, and Jonathan appointed in his stead.

Caic, or Caique; a skiff of a galley. It was pointed at both ends, and was 25 feet long by 6 broad and 2½ deep. It went out of use with the galley. The name is now applied, in the Levant, and particularly in the Black sea, to small barks. (In the latter sea they are manned by Cossacks.) It is also used in the French navy for a small vessel.

Caicos, or Cayos; a cluster of small islands or rocks, called *Little* and *Great Caicos*, between Hayti, or St. Domingo, and the Bahama islands. The largest, called *Grand Caico*, is 60 miles long, and 2 or 3 broad. St. George's Key is the principal harbor. Population in 1803, 40 whites, and about 1200 slaves. Lon. 72° W.; lat. 21° 36′ N.

Cailas, or Cailasa; the loftiest ridge of the Himalaya mountains. (q. v.) On its eastern side is a remarkable peak, called the *Lingam of Siva* or *Mahadeva*, an object of great veneration to his votaries. It is the favorite abode of Siva, and blooms with eternal spring.

Caillaud, Frederic; a French traveller in Africa, who explored the situation of the ancient Meroë, and penetrated to the southern part of the kingdom of Sennaar. He travelled in Africa during the years 1819, 1820, 1821, and 1822. (See *Meroë*.)

Caillé, René; a French traveller, and the only European who has returned from Timbuctoo or Ten-Boctoo. In 1819, he accompanied major Gray in his exploring expedition, and, being on the Senegal in 1824, determined to attempt to reach Timbuctoo and Jenna by his own exertions. Having adopted the Arabian dress, and embraced the religion of the country, he joined a caravan, and set out from Kakondi (Kokundi), April 19, 1827. He crossed the Joliba (Niger), and spent some time at Kankan, whence he travelled about 200 miles eastwardly, to Timé. Leaving this place, where he was detained five months by sickness, Jan. 10, 1828, and taking a northerly direction, he again fell in with the Joliba, March 10, and, crossing an arm of that stream, arrived at Jenna. Having embarked, March 23, on the Niger, and passed, on

his way, the lake Delo (misplaced, on the maps, under the name of *Dibbie*), he reached Timbuctoo April 20. Leaving this city May 4, he crossed the Great Desert, and reached Tafilet, July 23, whence he passed through Fez to Tangiers. Thus this intrepid young traveller, at the age of 28 years, has achieved alone, and by his own resources, what the exertions of powerful societies, the aid of governments, and the most devoted efforts of experienced travellers, had in vain attempted. This account is the substance of the report of a committee of the geographical society of Paris, by whom his accounts have been examined. The prize offered by that society to the first traveller who should reach Timbuctoo has been awarded to him; the king has bestowed on him the cross of the legion of honor, and 3000 francs, with a pension of 3000 francs for the years 1829 and 1830, to enable him to pursue the studies necessary to prepare him to renew his visit to those hitherto unknown regions.

Caille, Nicholas Louis de la, born at Rumigny, not far from Rosoy, in Thiérache, 1713, studied at the college at Lisieux, and wished to dedicate himself to the service of the church. But, at this time, his attention was directed to astronomy, and he carried the spirit of geometry into the scholastic philosophy, and even into theology, of which he wished to reform the language, and treat the propositions after the manner of Euclid. He soon renounced theology altogether. Cassini and Maraldi were his friends, and with them he drew up a description of the coast of France, from Nantes to Bayonne. On account of the accuracy and skill which he displayed in this operation, he was selected to take part in the verification of the meridian, which was then beginning to be a subject of interest. He began this great work April 30, 1739, and, in this year, finished all the triangles from Paris to Perpignan; measured the bases of Bourges, Rhodez and Arles; observed the azimuths and zenith distances of the stars at Bourges, Rhodez and Perpignan, and took the principal share in the measurement of the degree of longitude which terminates at the harbor of Cette. During the severe winter of 1740, he extended his triangles over the principal mountains of Auvergne, to connect with the meridian a new basis measured at Riom. The object of this excursion was to procure additional information for the purpose of clearing up the doubt which he entertained concerning the basis of Juvisy, measured by Picard in 1669. He had discovered and demonstrated that this basis was a thousandth part too long, from whence it follows, that the toise used by Picard was at least a line shorter than the toise of the academy. This assertion of his, so long contested, was now placed beyond doubt. During his absence, he was made professor of mathematics in the college of Mazarin, in consequence of which, the continuation of the meridian in the north was delayed till the next autumn. C. ended his surveys in the course of some months; during which he measured two bases more, and made the astronomical observations at Paris and Dunkirk. After his return, he commenced the calculations for which he had prepared the materials by these long operations, and, by a comparison of the different arcs which he had measured, he showed that the degrees increase from the equator to the poles—a result diametrically opposite to the old measurement. His works on geometry, mechanics, astronomy and optics, which followed each other in a few years, show with what ability he discharged the duties of professor. His *Ephemerides*, and the numerous and able memoirs which he presented to the academy of sciences, and his calculations of the eclipses for 1800 years, in the first edition of his *Art de verifier les Dates*, prove with what ardor he pursued his astronomical studies. He had undertaken the correction of the list of stars, according to the method of corresponding heights. In 1746, he was in possession of an observatory erected for him at the *collége Mazarin*. True to the laborious method which he believed the best, C. spent his days and nights, for 14 years, in making observations on the sun, the planets and the stars, to rectify the astronomical catalogues and tables. He had received the two six-foot sectors, with which he had verified the meridian of France. Desirous of observing the stars of the southern hemisphere, which never appear above the horizon at Paris, he formed the plan of a voyage to the cape of Good Hope. He saw immediately the advantage to be derived from this change of place, in determining the parallax of the moon, of Mars and Venus, and the refraction of the rays of light. Lalande (q. v.), then 19 years old, was sent to Berlin, which lies nearly under the same meridian as the cape, to take corresponding measures at the same time. This astronomical undertaking cost four years of journeys and labor. C. determined the

position of about 10,000 stars, in 127 nights, with wonderful accuracy. As his departure from the cape was delayed, he employed the interval in measuring a degree of the southern hemisphere. He also received orders to superintend the construction of an accurate chart of the Isle of France and the Isle of Bourbon, though one had recently been executed by the celebrated navigator d'Après. After his return, he employed himself, with great assiduity, in comparing the different methods which had been proposed for solving the problem of the longitude. (See *Longitude*, *Geograph.*) He chose, for this purpose, the distances of the moon from the sun or the stars, showed the advantage of this method, and proposed a plan for a nautical almanac, since universally adopted. For the use of navigators with but little knowledge, he contrived ingenious and graphic means of assistance, by which they were made acquainted, in an easy manner, with a method which must otherwise have terrified them by the length of the calculations. C. divided his time between his observatory, his calculations, his duties as an academician and professor, and the publication of his different works. Now appeared his tables of the sun, his *Astronomiæ Fundamenta novissima Solis et Stellarum observat. stabil.* (Paris, 1757), the continuation of his *Ephemerides*. He was particularly engaged in observations of the moon, and the stars of the zodiac. Finding the method of corresponding heights too slow for the vast plan which he had formed, he fixed in his observatory a meridian telescope, which gave him the right ascension of the stars with much more ease. But, in order to attain the degree of accuracy at which he aimed, he made it a rule to admit no star into his new catalogue, which he had not observed for three or four days, comparing it each time with several of those, the places of which he had previously determined with so much care. He thus attained a greater degree of accuracy than his celebrated rivals, Bradley and Mayer, who were furnished with better instruments, and generally contented themselves with a single observation of the stars of lesser magnitude. It is to be regretted, that this great work has not been edited with greater accuracy by the friend and scholar of C. Engaged in so many employments, C. still found time for other labors. From the manuscripts of Bouguer, who had intrusted them to him at the time of his death, he published *Traité de la Gradation de la Lumière*, and wholly revised the *Traité de Navigation*. He afterwards published the observations of the landgrave of Hesse-Cassel and Walther, the travels of Chazelle to Egypt, and Feuillée's voyage to the Canary islands. A violent attack of the gout having interrupted his labors, he resumed them, as soon as he was able, with too much eagerness, exhausted his weak frame, and died in 1762. He bequeathed his manuscripts to his friend Maraldi, who published the *Ciel Austral*, preceded by an *éloge* of the author, by Brotier. Never was there a greater friend of labor and truth than C. The number, as well as the accuracy of his observations, is worthy of admiration, more particularly if we consider that all his astronomical labors took place within 27 years. His *Journal du Voyage fait au Cap de Bonne Espérance* was edited by Carlier (Paris, 1763).

Caimacan (*lieutenant*); a title of the grand signior, the grand vizier, and the governor of Constantinople.

Caiman. (See *Cayman Islands.*)

Caiman. (See *Alligator.*)

Cain; the eldest son of Adam and Eve; the first murderer. Jealous of the favor shown to his younger brother (see *Abel*), he murders him in the field. The avenging voice of conscience asks him the terrible question, "Cain, where is thy brother?" which he vainly endeavors to evade—"Am I my brother's keeper?" The curse is pronounced upon him; he is declared a fugitive and a wanderer on the face of the earth. His remorse and despair fill him with the apprehension of retribution—of death from the hand of whoever shall meet him. But a mark is set upon him, as a sign, lest any one should kill him. He then, continues Moses (*Gen.* iv. 16—24), went out and dwelt in the land of Nod, on the east of Eden. (q. v.) His wife bore him a son, Enoch, who built a city. Jabal, one of his descendants, is called the father of those who live in tents (*scenites*). Jubal, brother of Jabal, was the first musician, and Tubal-cain, another brother, was the first smith. This is the last information which the Mosaic history gives of the family of Cain, unless we suppose the beautiful daughters of men (*Gen.* vi. 2), or the giants (*Gen.* vi. 4), to be his posterity. The conciseness of the sketch of antediluvian history in Genesis has left a wide field for conjecture. Why was Abel's offering preferred? What was the sign which indicated the acceptance of

the one and the rejection of the other? What was to be the effect of this preference? Did Abel manifest a more lively faith? Was his offering consumed by a fire from heaven? Were the privileges of primogeniture transferred to him from the eldest born, as was frequently done in the patriarchal times? Who were the avengers whom he feared? Preadamites, as some have gravely conjectured (*Bayle*, art. *Cain*), or descendants of Abel? Was the mark set upon Cain, or does the original signify that a sign was given him to inspire him with confidence in the promise? Josephus relates, that he became the leader of a band of robbers, committed all sorts of licentiousness, corrupted the simplicity of primitive manners by his luxury, established the right of property by setting up landmarks, and was the inventor of weights and measures.

Caique, Grand; a small island among the Bahamas; lon. 70° W.; lat. 19° 50′ N. The Little C. lies south-west of the former.

Ça-Ira. These famous revolutionary couplets were written on the occasion of the celebration of the capture of the Bastile, when the civic oath was taken before the altar of the country. The celebration took place on the Champ de Mars, July 14, 1790, in the midst of torrents of rain. The refrain, or chorus, runs thus:—

> Ah! ça ira, ça ira, ça ira,
> En depit d' z'aristocrat' et d' la pluie,
> Ah! ça ira, &c.
> Nous nous mouillerons, mais ça finira.

This, it will be seen, was directed against the aristocrats. The famous *Marseillaise*, or Marseilles hymn, which resounded throughout Europe during the wars of the young republic against the coalition of sovereigns, was directed against foreign, as the *ça-ira* was against the domestic, enemies of the revolution. The author and composer of the *Marseillaise* (Rouget de l'Isle), an officer of the engineers, narrowly escaped with his head, during the reign of terror. (See *Poésies Rev. et Anti-Rev.*, Paris, 1821, 2 vols.) These poems were proscribed by the directory in 1797, and have not, of course, been restored to favor by the consulate, the empire, or since the restoration.

Cairn; a name given to heaps of stones, common in Great Britain, particularly in Scotland and Wales, generally of a conical form, and crowned by a flat stone. They are of various sizes, and were probably constructed for different objects. Some are evidently sepulchral, containing urns, stone chests, bones, &c. Others were erected to commemorate some remarkable event, and others appear to have been intended for religious rites. (See *Tumuli*.)

Cairngorm, or Blue Mountain; a mountain of Scotland, belonging to the Grampian hills. It is particularly celebrated for the crystals found on it, called *cairngorms*, of various colors and sizes. They have now become scarce. They are, in general, of a smoky or yellowish hue (smoky quartz and yellow quartz), and are used for seals and other trinkets.

Cairo (in Arabic, *Kahira*, which signifies *victorious*); the capital city of Egypt, and one of the largest cities in the world. It lies on the east bank of the Nile, in a sandy plain, and contains Old Cairo, Boulac (*the harbor*), and New Cairo, which are, to a considerable degree, distinct from each other. The city itself, separate from the gardens and plantations which surround it, is 3¼ leagues in circuit, has 31 gates, and 2400 irregular, unpaved streets, which, during the night, are closed at the end of the quarter, to prevent disturbances; also 25,840 houses, for the most part built of brick, with flat roofs, and more than 200,000 inhabitants—Arabs or Mohammedans, Coptish Christians, Mamelukes, Greeks, Syrians, Armenians, Jews, and natives of various countries of Europe. The castle, situated on a rock containing Joseph's well, 276 feet deep, is the residence of the pacha. There are 80 public baths, 300 mosques, 2 Greek, 12 Coptish, and 1 Armenian church, 36 synagogues, and many silk, camlet, tapestry, gunpowder, leather, linen and cotton factories. The commerce of the city is very great, since it is the centre of communication between Europe, the Mediterranean sea, Asia, and the north of Africa. Here is also a Mohammedan high-school, a printing-office, and a library of 25,000 volumes. A line of telegraphs extends from hence to Alexandria, about 255 miles distant, by which intelligence is communicated in 40 minutes. In the neighborhood is an aqueduct of 317 arches; also Boulac, the harbor of C., which contains an institution for 100 scholars, supported by the pacha, and a printing-office. In 1798, C. was taken by the French. (See *Egypt*.)

Caisson; 1. a chest filled with combustibles, and buried under ground, in order to explode at a particular time. It is also a covered wagon for the provisions and ammunition of an army.—2. In architecture, a kind of chest, case, or flat-bot-

tomed boat, used in the construction of bridges, large enough to contain an entire pier, which is built in it; the caisson is then sunk to the bed of the river, and the sides removed from the bottom, which is left as a foundation for the pier.—Floating vessels, under the same name, are used to close the entrances of docks and basins. A groove is worked in the masonry of the entrance, and a vessel of the shape of the opening, with a projection corresponding to the groove, a hanging scuttle on each side, and furnished with pumps, is floated into it at high tide. The scuttles being opened, the caisson sinks, and fills up the groove. The scuttles are then shut, and the water is prevented from entering the dock, or from discharging itself from the basin. If the dock is to be filled, the scuttles are opened, till the water is nearly on a level on each side, when the scuttles are again shut, the caisson emptied by the pumps, and then floated off.

Caius, or, in the Greek manner of writing, Gaius; a learned lawyer of the time of Adrian and Antoninus Pius (117—161), of whose life but very little is known. Of his numerous works, his *Institutes* are particularly important; first, as having been, for centuries, down to the time of Justinian, one of the most common manuals of law; secondly, as having been the foundation of the official compendium of the law, which occupies an important place in the reform of the judicial system by Justinian; and, thirdly, as the only tolerably full, systematic and well-arranged source of the old Roman law. Some parts of this work have been known for a considerable time. Two leaves of a manuscript of it were discovered in the library of the cathedral chapter at Verona, as early as the beginning of the last century, by Scipio Maffei; but the manuscript itself was first discovered in 1816, by Niebuhr, who staid two days at Verona, on his way to Rome as Prussian ambassador. The parchment, on which the *Institutes* of C. were written, had been used to copy the letters of St. Jerome. Maffei had perceived it to be a *Codex Rescriptus*, without, however, having very accurately examined it. Niebuhr saw that an old juridical work lay here concealed, and von Savigny, professor of law in Berlin, at that time at Paris, happily conjectured that it might be the *Institutes* of C. The academy of sciences at Berlin sent, in 1817, two professors, Bekker, the philologist, and Göschen, the jurist, to Italy, to investigate this discovery with accuracy. The present professor, Bethmann Hol-weg offered his services to them, and, by their united efforts, the greatest part of the book has been brought into order, and that part which was before illegible wholly restored. The fragments of C. were printed at Berlin, 1820. The manuscript has been again examined, by professor Blume, and many additional discoveries have been made, which have been introduced into a new edition (Berlin, 1825). They have opened new views upon many points of the history of Roman law, and have also destroyed many acute and learned hypotheses.

Cajeput Oil; the volatile oil obtained from the leaves of the cajeput-tree—the *cajeputa officinarum* (the *melaleuca leucadendron* of Linnæus). The tree which furnishes the cajeput oil is common on the mountains of Amboyna, and the other Molucca islands. It is obtained, by distillation, from the dried leaves of the smaller of two varieties. It is prepared, in great quantities, in the island of Banda, and sent to Holland in copper flasks. As it comes to us, it is of a green color, very limpid, lighter than water, of a strong smell, resembling camphor, and of a strong, pungent taste. It burns entirely away, without leaving any residuum. It is often adulterated with other essential oils, colored with the resin of milfoil. In the genuine oil, the green color depends on the presence of copper; for, when rectified, it is colorless.

Calabar, Old; a country of Africa, on a river of the same name, in Upper Guinea. Duke Town, the principal place on the river, is in lon. about 8° E., lat. 5° 4′ N., and contains 2000 inhabitants. Creek Town, eight miles N., contains 1500 inhabitants. Old Town was formerly the capital. The inhabitants are represented as cruel, treacherous and dishonest. New Calabar, situated on a river of the same name, 80 miles W. of Old C., contains about 300 houses, and is the centre of the Dutch commerce in this country.

Calabash-Tree. The calabash-tree (*crescentia cujeta*) is a production of the West Indies and the continent of America, about the height and dimensions of an apple-tree, with crooked, horizontal branches, wedge-shaped leaves, pale-white flowers on the trunk and branches, and a roundish fruit, from two inches to a foot in diameter. The uses to which the fruit of the calabash-tree is applied are very numerous. Being covered with a greenish-yellow skin, which encloses a thin, hard, and almost woody shell, it is employed for various kinds of domestic

vessels, such as water-cans, goblets and cups of almost every description. So hard and close-grained are these shells, that, when they contain any fluid, they may even be put several times on the fire as kettles, without any injury. When intended for ornamental vessels, they are sometimes highly polished, and have figures engraven upon them, which are variously tinged with indigo and other colors. The calabash contains a pale-yellow, juicy pulp, of an unpleasant taste, which is esteemed a valuable remedy in several disorders, both external and internal.

Calabrese; the appellation of a painter, by name *Mattia Preti*, a native of Calabria; born 1643, died 1699.

Calabria; a mountainous country, lying on the sea-coast, about 164 miles in length, and from 20 to 60 broad, forming the southern part of the Italian peninsula. It extends, in the southern part of Naples, along the Apennines and the Tyrrhenian sea, to the capes of Spartivento and Squillace on the south, and to the gulf of Tarento in the Mediterranean sea on the east. In a space of 6800 square miles, it contains more than 890,000 inhabitants, among whom are many Arnauts. The accurate accounts of this country, so famous in fable and history, but hitherto not very accessible to travellers, we owe to the war which the French, under Joseph and Jerome, carried on against the proud and fanatical natives, until 1810. In ancient times, C. was a part of Magna Græcia, the residence of Pythagoras, the birth-place of Charonidas, of Zaleucus, Praxiteles, Agathocles, and other distinguished men. The country where the luxurious Sybaris once flourished is now sunk in deep barbarism. The climate was much esteemed in antiquity; but, in some places, the stagnant waters, to the draining off of which no one pays any attention, produce contagious diseases in the hot season. The heavy dews preserve, during the greater part of the year, a delightful verdure, which is increased by numerous springs and streams. Pliny extols the fertility of the dark soil, which, with the exception of the great plain Marcesato, resembling an entire waste, covers the calcarious rocks of C. Beautiful groves of pine, fir and larch, the pitch-bearing trees of the wood of Sila, famous in ancient times, shade the sides of the Apennines. The evergreen-oak, the Oriental plane-tree, the Indian chestnut, the beech, the aloe, the fig, various nut-trees, and others, flourish here. The Calabrian ash affords manna. The fields are beautifully adorned with herbage, the cinnamon rose and sage, and the hills with strawberries and raspberries. On the coast grow the evergreen tamarisk and arbutus. With all the rich fruits of the torrid zone, we find here some of those which belong to the north of Europe—we wander amid orchards of fine apples, and through green Alpine meadows, with their soft herbage. In the valleys, the thorny caper mingles its bright flowers with the dark-green rosemary, and the laurel overshadows all the streams. From the rush (*sarrachio*) the Calabrian manufactures his ship-tackle, his baskets, his mats, his ropes and his nets, in which he catches the tunny. The lazy and ignorant inhabitant of this beautiful land has forgotten the Grecian mode of culture, which produced excellent wines and good oil. He has corn and rice, saffron, anise, liquorice, madder, flax and hemp. He cultivates olives, figs, almonds and cotton. The noble sugar-cane will come to perfection here. The silk of this country is good. The sheep, horned-cattle and horses are numerous. The waters contain tunnies and eels. Near Reggio a kind of muscle is found, called *pinna marina*, from whose silky beard a splendid fabric is manufactured, which is as light as it is effectual in affording protection against the cold. Coral is also fished up. The quarries and pits afford alabaster, marble, gypsum, alum, chalk, rock-salt, lapis lazuli, and the fine copper, renowned since the time of Homer. The condition of the people is a subject of astonishment to all observers. The Calabrian, scarcely 40 leagues from the gates of the capital, is wild as a Tartar, cruel as a Moor, rude and ignorant as a Negro of Senegal; yet he has some good qualities. He is honest, hospitable, and tender of his honor. The corruption of a race of men, naturally so energetic, is the fault of the government, the church, and the feudal system now abolished. A few rich individuals are found here among a great number of miserable poor. The peasant labors little, and subsists almost entirely on the spontaneous productions of nature. His habitation resembles the pig-sties of the rest of Europe. The feudal lords formerly exercised a dreadful tyranny over their vassals, who, weary of suffering, fled to the mountains, and lived by robbery. Ignorance, love of revenge, cruelty and cunning are the principal traits in the character of the people. Once offended, a Calabrian is irreconcilable. Hereditary hatred, therefore, divides

most of the families, and an individual never goes abroad without carrying arms under his black mantle. In the night, they barricade their houses. They have no idea of social pleasures, and the rich think only of scraping together money. The females are not beautiful: they marry early, and soon fade. Even those of the higher classes cannot, in general, read or write. The husbands are so jealous, that they always confine their wives, and treat them severely. The recourse to lawsuits and chicanery is common, although the administration of justice is wretchedly defective. The clergy are as ignorant as they are corrupt, and superstition rules all classes. Even the robber carries relics in his bosom, which he supplicates for assistance in his enterprises. The people are naturally intelligent. Their language is a corruption of the Italian, difficult to be understood, but full of original and pointed expressions. The classes which are in some degree well informed express themselves with great ease and warmth. Their gestures are extremely lively. They have great powers of persuasion. If they cannot attain their end in this way, they revenge themselves by murder. They are well-formed, muscular, and of a brown complexion. They have animated countenances, and eyes full of fire and expression, but passionate hearts and giddy heads. They are, like the Sardinians and the Corsicans, the savages of Europe. (See *Sejour d'un Officier Français en Calabre*, Paris, 1810.) In regard to government, the country is divided into Calabria Citra on the north, and Calabria Oltra I and II on the south. The former contains Cosenza, which has 15,000 inhabitants; the latter, Reggio, which has 16,500, and Catanzaro, the capital city, which has 11,000. These, alone, among the few cities, are of importance, on account of their manufactures and commerce. There are some silk manufactories at Monteleone (the Grecian *Hipponium*, called, by the Romans, *Vibona*, now containing 15,000 inhabitants, and the ruins of a temple of Ceres). The seaport Crotona has some commerce. The city of Gerace is built of the ruins of Locri. Pizzo, where Murat was seized, Oct. 13, 1815, is called, from that event, the *most faithful city*, and is freed from all city taxes and excise. Many marks of the earthquake, which, in February, 1783, laid waste the southern part of C., destroyed 300 cities and villages, and buried 30,000 men, are still to be seen.

Calahorra (anciently *Calagurris*); a town of Spain, in Old Castile, near the south side of the Ebro, on the borders of Navarre; 136 miles N. N. E. of Madrid; lon. 2° W.; lat. 42° 16′ N.; population, 7200. It is a bishop's see, and contains three parish churches and three convents. In the year of Rome 682, this town, then called *Calágurris*, siding with Sertorius, was besieged by Afranius, one of Pompey's generals, and the inhabitants reduced to such extremity, that they fed on their wives and children; whence the Romans were wont to call any grievous famine *fames Calagurritana*. Quintilian was born here.

Calais; a French sea-port on the channel which separates England from France, called by the French the *Pas de Calais* and *La Manche*; by the English, the *English channel*. This strongly-fortified city is protected by a citadel and the fort of Nieuvelet. It contains 8,500 inhabitants, and has a harbor which is too shallow for large ships, and is important only because passage boats run continually from here to Dover. The strait is 24 miles wide, and the passage by the steam-boat seldom exceeds 5 hours. In 1346, C. was taken by Edward III, king of England, after such a bold defence as made the siege one of the most remarkable in history. It remained in the possession of the English until 1558, when it was lost, together with all the English possessions in France. Near the harbor a monument has been erected to commemorate the return of Louis XVIII, April 24, 1814. In the year 1819, 15,577 travellers landed here, and 11,033 embarked from this port.

Calais, *Pas de* (i. e., *straits of Calais*); a department of France, formerly the province of Artois, lying east of the channel, and south of the straits. Population, in 1827, 642,969; chief place, Arras. (See *Departments*.)

Calais, straits of. (See *Dover, straits of.*)

Calaite. (See *Turquoise*.)

Calamanco; a woollen stuff, principally manufactured in the Netherlands. The English manufactures of it have declined of late years. The warp is sometimes mixed with silk or goats' hair. This stuff is made plain, colored, striped or watered.

Calamata. (See *Greece*.)

Calamine. (See *Zinc*.)

Calamines, or Calamianes; a cluster of islands in the Indian sea, among those called the *Philippine islands*. They are 17 in number, one of which is 30 miles

long, and 12 broad, divided between the king of Borneo and the Spaniards, with some independent natives in the interior parts, who live without chiefs and without laws: they are black, and have no fixed places of abode. About 1200 on the sea-coast have submitted to the Spaniards, who have a garrison at a place called *Tatay*. The country is mountainous, and produces some rice, and great quantities of wax and honey. Lon. 120° 20′ E.; lat. 12° N.

Calamus; a reed.—1. The *C. pastoralis* was a simple reed or cane, used as a musical instrument. The *fistula*, or shepherd's pipe, was made of this substance: it is hence figuratively used by the poets for the pipe itself.—2. The *C. scriptorius*, or *chartarius*, was used by the ancients to write on materials which the style would injure, as papyrus, parchment, &c. It was generally made of the Egyptian, sometimes of the Persian reed. It was sharpened with a knife, or a rough stone, and split like our pens.—3. The *C. aromaticus* (the *acorus* of botanists) is an odoriferous reed, formerly brought from India, now found also in the north of Europe, and in North America. It is used by the distillers of Dantzic to correct the empyreumatic odor of spirits, and to give them a peculiar flavor.

Calandra. (See *Mosaic.*)

Calas, John. This unfortunate man, who died on the scaffold, a victim of fanaticism, was born, 1698, in Lacaparéde, near Chartres, in Languedoc, educated in the Protestant religion, and established as a merchant in Toulouse. He had three sons and three daughters, whom he educated himself, and was held in general esteem, when, in his 68th year, he was suddenly accused of the dreadful crime of murdering his son. In 1761, his oldest son, Marc Antoine, was found strangled in his father's house. It was reported that the unfortunate youth had been put to death by his father, because he had become a Catholic. John C. and his whole family were arrested, and a prosecution instituted against him, in support of which numerous witnesses, whose insufficiency was apparent, appeared against him. In vain did the old man plead his affection for his son, and that son's melancholy; in vain did he assert that he had another son, who had embraced the Catholic religion, who still received his yearly allowance; that it was impossible for him, a weak old man, to execute such a deed of violence on a youth full of strength, and that he had not murdered a Catholic maid-servant whom he had in the house. The parliament of Toulouse condemned him, by 8 voices against 5, to be tortured, and then broken on the wheel; and, on the 9th of March, 1762, the sentence was executed. He suffered the torture with firmness, and ascended the scaffold with these words:—"I die guiltless; my judges have been deceived; but Christ, who was himself guiltless, suffered a death even more dreadful." The youngest son was banished for ever, but the mother and the maid were acquitted. The family of the unhappy man retired to Geneva. Voltaire, who was then at Ferney, became acquainted with them, and formed the design of defending the memory of C. He brought the cause before the bar of public opinion, and directed the attention of men to the defects of the criminal law. The widow and children of C. solicited a revision of the trial. Fifty judges once more examined the circumstances, and declared C. altogether innocent. The king, by his liberality, sought to recompense the family for their undeserved losses, and people of the first rank emulated each other in endeavoring to relieve them.

Calatrava. (See *Orders.*)

Calcar, John van; a Dutch painter of the school of John van Eyk, born about 1500, at Calcar, in Cleves. His paintings are true to nature. He studied so thoroughly the works of Titian, that their pictures cannot always be distinguished. The *Mater dolorosa*, in the collection of Boisserée (q. v.), in Stuttgard, a perfect work of art, is by him. Another small picture of his, the *Infant Christ with the Shepherds*, was a favorite of Rubens. In this piece, the light is represented as proceeding from the child. He designed almost all the portraits in Vasari's Lives, and the figures for the anatomical work of Vesalius. He died in Naples, 1546.

Calcarious Spar. (See *Lime.*)

Calchas; son of Thestor; priest and prophet of the Greeks at the time of the Trojan war. When the fleet destined for Troy assembled in the harbor of Aulis, the Greeks, before their departure, attempted to propitiate the favor of the gods by sacrifices on an altar under a plane-tree, when a serpent, creeping from under the altar, crawled up the tree, devoured a sparrow on her nest, with 8 young ones, and was then changed into a stone. The prophet now foretold to the Greeks that Troy would not be subdued by them till the 10th year of the siege. He himself accompanied the army to Troy. During the siege, the Greeks were attacked by a

plague, and C. declared that it was the effect of Apollo's anger, because they had deprived his priest of his daughter Chryseis, whom Agamemnon had selected as his mistress. He counselled the Greeks to appease Apollo by restoring the damsel; and it was at his advice that they afterwards built the wooden horse. He prophesied that the Trojan Æneas would found an empire in Italy. After C.'s death, an oracle was dedicated to him on mount Drium in Daunia.

Calcination. Calcination, as commonly understood, consists in heating bodies in a steady fire, at a greater or less temperature. The product is a powder which is called *calx*. In a narrow sense, we understand by this process a change of metals into a metallic calx, or metallic earth. Metals are calcined in two ways—by the dry method, which consists in burning them in the open air, or by the wet method, which consists in dissolving the metal, and precipitating its calx. Take, for instance, a quantity of lead, and melt it in the open air in a flat vessel; it soon assumes a grayish hue, the earthy substance forming a coat on the surface. Upon the removal of this, the metal appears, having a brilliant lustre, and, after some time, the same gray coat reappears. It may be removed as long as any lead remains. This substance is the calx. Calcined lead is specifically lighter than the metal, but its absolute weight is considerably greater, so that 10 pounds of metal make 11 pounds of calx. Platina, gold and silver are not affected in this way in so great a degree, on which account they are called the *perfect metals*. Chemists are now convinced, that, in this process, the atmospheric air is decomposed, and a portion absorbed by the metal, which accounts for its increase of weight. Calcination is, therefore, nothing but oxydation; and, as the body is not saturated with oxygen, no acid is formed, but the result is a metallic oxyde.

Calcography. (See *Engraving*.)

Calculus. The lower or common analysis (q. v.) contains the rules necessary to calculate quantities of any definite magnitude whatever. But quantities are sometimes considered as varying in magnitude, or as having arrived at a given state of magnitude by successive variations. This gives rise to the higher analysis, which is of the greatest use in the physico-mathematical sciences. Two objects are here proposed: First, to descend from quantities to their elements. The method of effecting this is called the *differential calculus*. Second, to ascend from the elements of quantities to the quantities themselves. This method is called the *integral calculus*. Both of these methods are included under the general name *infinitesimal analysis*. Those quantities which retain the same value are called *constant*; those whose values are varying are called *variable*. When variable quantities are so connected that the value of one of them is determined by the values ascribed to the others, that variable quantity is said to be a *function* of the others. A quantity is *infinitely great* or *infinitely small*, with regard to another, when it is not possible to assign any quantity sufficiently large or sufficiently small to express the ratio of the two. When we consider a variable quantity as increasing by infinitely small degrees, if we wish to know the value of those increments, the most natural mode is to determine the value of this quantity for any one instant, and the value of the same for the instant immediately following. This difference is called the *differential* of the quantity. The *integral calculus*, as has been already stated, is the reverse of the *differential calculus*. There is no variable quantity expressed algebraically, of which we cannot find the differential; but there are differential quantities, which we cannot integrate: some, because they could not have resulted from *differentiation*; others, because means have not yet been discovered of integrating them. We have made these elementary observations for the purpose of introducing the history of the discovery of this mighty instrument. For a full examination of the subject, we refer to Lacroix's works, Carnot's *Métaphysique du Calcul Infinitesimal*, Lagrange's *Calcul des Fonctions*. Newton was the first discoverer, having pointed out the principles in a treatise written before 1669, but not published till many years after. Leibnitz, meanwhile, made the same discovery, and published it to the world before Newton, and independently of Newton's prior discoveries, with a much better notation, which is now universally adopted. The methods analogous to the infinitesimal analysis previously employed were that of *exhaustions*, known to the ancients, that of *indivisibles* of Cavalieri, and Descartes' method of *indeterminates*. Leibnitz considered the differences of the variable quantities as infinitely small, and conceived that he might reject the higher powers of those differences without sensible error; so that none of those powers but the first remained in the differential

equation finally obtained. Instead of the actual increments of the *flowing* or variable quantities, Newton introduced the *fluxions* of those quantities; meaning, by fluxions, quantities which had to one another the same ratio which the increments had in their ultimate or evanescent state. The *fluxions* of Newton corresponded with the *differentials* of Leibnitz; and the *fluents* of the former with the *integrals* of the latter. The fluxionary and the differential calculus are therefore two modifications of one general method. The problems which relate to the *maxima* and *minima*, or the greatest and least values of variable quantities, are among the most interesting in mathematics. When any function becomes either the greatest or the least, it does so by the velocity of its increase or decrease becoming equal to nothing: in this case, the fluxion which is proportional to that velocity must become nothing. By taking the fluxion of the given function, and supposing it equal to nothing, an equation may be obtained in finite terms, expressing the relation of the quantities when the function assigned is the greatest or least possible. The new analysis is peculiarly adapted to physical researches. The momentary increments represent precisely the forces by which the changes in nature are produced; so that this doctrine seemed created to penetrate into the interior of things, and take cognizance of those powers which elude the ordinary methods of geometrical investigation. It alone affords the means of measuring forces, when each acts separately and instantaneously, under conditions that can be accurately ascertained. In comparing the effects of continued action, the variety of time and circumstance, and the continuance of effects after their causes have ceased, introduce uncertainty, and render the conclusions vague and unsatisfactory. The analysis of infinites here goes to the point; it measures the intensity or instantaneous effort of the force, and removes all those causes of uncertainty. It is by effects, taken in their nascent or evanescent state, that the true proportion of causes must be ascertained.

Calculus. Little stones, anciently used for computation, voting, &c., were called *calculi*. The Thracians used to mark lucky days by white, and unlucky by black pebbles; and the Roman judges, at an early period, voted for the acquittal of the accused by a white, and for condemnation by a black calculus: hence, *niger* or *albus calculus*, a favorable or unfavorable vote. Sometimes the ballots were marked with characters, and then were made of wood. *Calculi lusorii* or *latrones* were counters used in a game, something like backgammon. *Calculus Minervæ* was an expression employed to signify that the accused escaped by an equal division of the votes of the judges. He was said to be acquitted *calculo Minervæ* (by the vote of Minerva), because Orestes was acquitted by the vote of that goddess when the judges were equally divided.

Calculus, or Stone, is the name given to all hard concretions, not bony, formed in the bodies of animals. Calculi may be divided into two classes, according as they are found in the gall-bladder or in the urinary bladder. The first are called *biliary calculi*, the second *urinary calculi*.—*Biliary calculi* are of a lamellated structure, and are composed of a substance which is considered, by M. Chevreul, as a peculiar principle, which he has named *cholesterine* (from χολη, bile, and στερεος, solid). It is described as a white, crystalline substance, with much lustre, insipid and inodorous, much resembling spermaceti, but differing in being less fusible, and in not forming a soap with alkalies. It is also converted, by the action of nitric acid, into a peculiar acid, called *cholesteric acid*. This is slightly soluble in water, and forms soluble salts with the alkalies. Cholesterine consists of carbon 85.095, oxygen 3.025, and hydrogen 11.88. It has lately been detected in the bile itself, both in that of animals and of man. Besides cholesterine, biliary concretions contain a portion of inspissated bile, and the yellow coloring matter of the bile in a concentrated state, which, from the beauty of its hue, and its permanence, is much valued as a pigment.—*Urinary calculi* are of very variable characters and composition. The following substances enter principally into their composition: uric acid, urate of ammonia, phosphate of lime, phosphate of ammonia and magnesia, oxalate of lime, silex, sometimes oxyde of iron and animal matter—these being more or less pure or mixed, and being often diversified by mechanical structure, so as to render it difficult to constitute well-defined species. The six following species embrace the principal varieties of urinary calculi:—1. that composed chiefly of uric acid; 2. that consisting chiefly of the triple phosphate of ammonia and magnesia; 3. the bone-earth calculus, formed, almost entirely, of phosphate of lime; 4. the fusible calculus, composed of the two preceding intermixed; 5. the mulberry cal-

culus, consisting of oxalate of lime; and, 6. a rare species, the cystic oxyde calculus. Two others, still more rare, are, the xanthic oxyde and fibrinous calculus, discovered by doctor Marcet; and, lastly, calculi have been met with formed of carbonate of lime. In all these calculi, besides the saline matter, there is present a portion of animal matter, which is conceived to be the mucus of the bladder. This seems to give them color and induration. It is found even in those which are white and crystalline. In the mulberry calculus it is present in a larger proportion than in the others. The ingredients of calculi are often, also, diversified by intermixture in layers. These must, of course, be various, and, as their production is, in some measure, accidental, irregularly arranged. Those which have been the most frequently observed are alternations of uric acid with phosphate of magnesia and ammonia, or phosphate of lime; or of oxalate of lime with uric acid, or with either or both of these phosphates.

Calcutta, the capital of Bengal, and of the whole British East Indies, is situated on the west branch of the Hoogly, an arm of the Ganges, on which the largest East Indiamen may come quite up to the city. The navigation, however, on account of several sandbanks, which are continually changing their size and position, is very dangerous. This place, formerly the insignificant village of Govindpour, rose, in the last century, to the size of a great city. The climate, when the English first made a settlement here, in 1690, was as unhealthy as that of Batavia; but it has been gradually becoming less fatal to settlers, partly by the removal of a forest near the city, partly by greater attention, in the settlers themselves, to their mode of living. Notwithstanding the unhealthiness of the place, it continued steadily to increase, quickly recovered from its losses in 1756, and is now one of the most magnificent cities in the world. In 1802, the population was computed at 600,000; a few years after (including the suburbs), at 1,000,000, of which about one half may be given to the city. The population of the surrounding districts, within a space of 20 miles, was estimated, in the same year, at 2,225,000 inhabitants. The houses of the English, who occupy a separate quarter of the city, are of brick, elegantly built, and many of them like palaces. On account of the heat of the climate, they are not joined together, but stand at some distance from each other, have high and airy apartments, flat roofs, and are surrounded with verandahs. With this part of the city, "the *black town*," so called (the *Peltah*), which is the quarter occupied by the natives, forms a striking contrast. It has extremely narrow and crooked streets, interspersed with gardens and innumerable tanks. Some of the streets are paved. The houses, which are some of brick, some of mud, but mostly of bamboo or straw mats, present a motley appearance. Fort William, not far from the city, was begun by lord Clive, in 1757, and is a magnificent work, in the form of an octagon, but on too extensive a scale for the purposes of defence. It has bomb-proof barracks, large enough for 10,000 men, and would require 600 pieces of cannon for the works. It commands the river. A trench is drawn round the whole, which may be filled, in case of need, with water from the Hoogly, to the depth of eight feet. Between fort William and the city there is a plain, which forms a favorite promenade of the inhabitants. Hindoos, blacks, Europeans, equipages of all sorts, and palanquins, are here seen mixed together in a motley crowd. On the western side stands the new palace, built by the marquis of Wellesley, at an expense of a million pounds sterling, and reminding one, by its grandeur, of the fabled palaces of Arabian story. The old fort is now a custom-house, and the infamous "black hole" has been turned into a ware-house. An obelisk, 50 feet high, at the entrance, contains the names of the unfortunate captives, who, in 1756, when the city was taken and plundered by Suraja Dowla, fell victims to the most inhuman cruelty. Amongst the other public buildings are the court-house, an Armenian and an English church. In the middle of the city is a large tank, for the purpose of supplying the inhabitants during the hot season, when the river-water becomes offensive. Here is the residence of the governor-general of India, and the seat of the supreme court of justice, which decides causes according to the English law, without regard to rank, station or country. Smaller offences are tried by the superintendent of police and justices of the peace. Order is maintained by several companies of seapoys, who make regular patrols through the city. C. is the great emporium of Bengal, and the channel through which the treasures of the interior provinces are conveyed to Europe. The port is filled with ships of all nations. Mercantile en

terprise is nowhere more active than here. There are some houses which trade, annually, to the amount of 4 or 5 million pounds sterling. The trade in sugar, opium, silk, muslin, &c. is very considerable. Large quantities of salt are exported to Assam, and gold, silver, ivory, musk, and a peculiar kind of silky cotton, are brought back in exchange. Cowries, a kind of small shells, passing as coin, are received in exchange for rice from the Maldives. The trade with Pegu, Siam, and the Malay isles, formerly so profitable, has very much declined. The British merchants are, as might be expected, the most numerous; and many of them have acquired fortunes which enable them to live in a style of great splendor. Next to them, in number and respectability, as well as in outward show, are the Armenians. They are peaceable and industrious merchants. Many of them have large capitals, and carry on an extensive trade to China and the ports to the west, as far as the Persian gulf. The Mongols, however, are the wealthiest; and, as they lend only at an enormous interest, their profits, from this source, are three times as great as a capital commonly gives. The Hindoos remain fixed, however rich they may become, in their narrow views, and their accustomed frugality. Their houses and shops are mean, and it is only on occasion of their nuptials and religious festivals, that they indulge in any extraordinary expense. Then they assemble under magnificent, illuminated canopies, distribute rose-water and other perfumes in profusion, and regale themselves with confectionary from golden vessels, while they are entertained by the voices of singing girls, or the exhibition of a pantomime. The petty trade of C. is mostly in the hands of the Banyans and Sarkars, who are constantly on the watch for cheap purchases, and make use of the lowest artifices to impose on their customers. This kind of deception is so far from being in disrepute among their countrymen, that they honor the adepts in it with the title of *pucka adme*, which signifies a man of great talent.—Notwithstanding the high price of all the necessaries of life, and the enormous expenditures of the English merchants, we find a multitude of institutions for the relief of the indigent. Of this kind are, an hospital for those natives who are in want of medical aid, two schools for orphans whose fathers were in the service of the company, a free school, &c. The college of fort William, founded by the marquis of Wellesley, has been changed, in part, from its original plan, which was, not only to instruct the youth in the service of the company in the languages, and other branches of study necessary for their profession, but also to watch over their behaviour, and to guard them from the dangers to which they were exposed by their inexperience. The latter part of the plan is now given up. The Asiatic society, founded by sir William Jones, in 1784, is devoted to the study and explanation of the literature, history, antiquities, arts and sciences of Asia. The papers already published are, generally, of great value. There is a botanical garden belonging to the society on the beautiful island of Garden Reach, the summer residence of the rich English.

Caldara, Polidoro, called *Caravaggio*, born in 1495, at Caravaggio, in the Milanese, went to Rome in his youth, carried bricks, at first, for the masons who worked in the Vatican, and felt a great desire to become a painter, from seeing Giovanni da Udina and the other painters who were occupied in the Vatican. He formed a close friendship with Maturin of Florence, who assisted him with his advice. C. soon surpassed him, and exerted himself to introduce improvements in drawing, having always in view the antiques. Raphael employed him in the galleries of the Vatican, where he painted, under his direction, several excellent friezes. At Messina, he executed an oil-painting, which represents Christ bearing the cross, contains a number of beautiful figures, and proves his ability to treat the most elevated subjects. He has approached, more than any one, to the style and the manner of the ancients, particularly in imitating their *basso-relievos*. His figures are correct, well-distributed and arranged; the positions are natural, the heads full of expression and character. It is evident that he would have acquired great celebrity if he had undertaken greater works. He applied himself to the *chiaro-oscuro*, particularly to that kind of it which is called *sgraffiato*. He showed, also, much talent in his landscapes. At the sack of Rome, in 1527, he fled to Naples, and, on his return from that place to Rome, in 1543, he was murdered by his domestic.

Caldara, a celebrated composer of the 18th century, was born at Venice, 1714, and died 1763. His church compositions are still in repute.

Caldas de Monbuy; a small town in Catalonia, Spain, about 20 miles north

of Barcelona. It contains hot mineral springs, of such a temperature that the inhabitants bring eggs, vegetables, &c., to boil them in the water. When cooled, it is drunk in scrofulous and rheumatic complaints.

CALDER, or CAWDOR; a village and parish in Nairnshire, Scotland, in which are seen the remains of a castle, once the residence of Macbeth, destroyed by Malcolm; 4 miles south of Nairn.

CALDERARI (*coppersmiths*). This name was assumed by one of the many secret societies which have sprung up in Italy, from the political agitation of the times. Of late years, they have been most numerous at Naples, and, indeed, more so in the provinces than in the capital, where they were once united, for a long time, with the Carbonari, but were afterwards opposed to them. All these societies, so far as they have any definite political object, appear to have in view the political union of Italy, and its liberation from foreign dominion, but differ from each other so widely, in regard to the means and the results, that a decided hostility has been the consequence. Of the true character of each of these societies, among which the Calderari and the Carbonari have been the most famous and extensive, it is as difficult to give any certain information, as it is to ascertain their history; for, though they have both, and particularly the Carbonari, published their statutes and proceedings since 1817, yet these sources of information have not all reached us, nor are they entirely to be depended on. Of the Calderari, we are told by count Orloff (*Memoires sur le Royaume de Naples*, vol. ii. 286), that they sprung from the Carbonari, towards the end of the year 1813. It appears that a change was then made in the form of the society, which had become too large, and a great number of its former members were excluded in consequence. These united themselves into a new society, under the name of the *Calderari*, and became the most bitter opponents of their former brethren. After the return of king Ferdinand to Naples, prince Canosa, minister of police, favored the Calderari, that he might more effectually put down the Carbonari, who were objects of his suspicion. For this purpose, he organized them anew, divided them into wards, appointed a central ward in each province to oversee the rest, and gave them the name of *Calderari del contrapeso* (Calderari of the counterpoise). He distributed 20,000 muskets among them; but, when the king was apprized of this hazardous undertaking, which had been begun without his knowledge, a stop was put to any further proceedings by Canosa's dismissal and banishment; but the association was not then abolished. This account has been contradicted from other quarters. Canosa was turned out of his office, which he had held but six months, June 27, 1816; and, three months after his banishment, a royal decree was issued, renewing the prohibitions and penalties against all secret societies, not excepting the Calderari, and commanding their prosecution, although they had lately manifested their attachment to the king and to good order. Canosa himself, in an anonymous work (*I Pifferi di Montagna*, Dublin, 1820), has contradicted the statements of count Orloff with regard to him and the Calderari. According to his account, they sprang up, not in Naples, but in Palermo, when lord Bentinck abolished the companies of tradesmen. This measure excited great dissatisfaction. The 'coppersmiths' or *Calderari*, in particular, declared to the queen their readiness to take up arms against the British, and disturbances ensued, in which the Neapolitan fugitives took a conspicuous part. Lord Bentinck had them sent to Naples, where they became active in the secret associations against Murat; and, on this occasion, one of the old societies, which had hitherto borne the name of *Trinitarians*, assumed that of *Calderari*. When it was proposed, in the ministry of 1816, to take strong measures against them, as the remains of the party of 1799, prince Canosa was for upholding the party, not for any selfish reason, but from the belief that they were a necessary counterpoise to the more numerous and formidable Carbonari. The society, however, has never adopted the name of *Calderari of the counterpoise*; and the story of the distribution of muskets is contradicted by prince Canosa, in the publication abovementioned. The Calderari, who, according to the above accounts, appear to be a continuation of the body got together by cardinal Ruffo, in 1799, are composed, almost entirely, of the lower classes, and, hence, not so much has been published by them, as by the Carbonari. A single unimportant publication, by the jurist Pasqu. Tonelli (*Breve Idea della Carbonaria, sua Origine nel Regno di Napoli, suo Scopo, sua Persecuzione e Causa che fe' nascere la Setta de' Calderari*, Naples, 1820), has a notice of them.

CALDERON. Don Pedro Calderon de

la Barca Henao y Riano, descended from an ancient family, was born at Madrid, Jan. 1, 1601, received his early education in the Jesuits' college of his native city, and studied at Salamanca, where he devoted himself chiefly to history, philosophy and jurisprudence. His poetical genius early discovered itself. Before his 14th year, he had written his first play, *El Carro del Cielo* (vol. 9 of his works). His talent for this species of poetry, which has brought his name down to posterity, and, perhaps, his powers of invention in the preparation of entertainments for festivals, soon gained him friends and patrons. When he left Salamanca, in 1625, to seek employment at the court of Madrid, many noblemen interested themselves in bringing forward the young poet. But, having an inclination for the military profession, he entered the service in 1625, and bore arms with distinction for 10 years in Milan and the Netherlands. In 1636, he was recalled by Philip IV, who gave him the direction of the court entertainments, and, in particular, the preparation of plays for the court theatre. The next year, he was made knight of the order of San Jago, and served in the campaign in Catalonia. The unexpected termination of the war restored him again to his peaceful occupation. The king now conferred on him a monthly pension of 30 *escudos de oro*; but he still employed his talents with unintermitted industry in composing for the theatre and the church. The king spared no cost in the representation of his theatrical pieces. Ten years after, in 1651, he procured permission from the order of San Jago to enter the clerical profession, and, in 1653, obtained a chaplain's office in the archiepiscopal church at Toledo, without quitting, however, his former occupation. But, as this situation removed him too far from court, he received, in 1663, another at the king's court-chapel (being still allowed to hold the former); and, at the same time, a pension was assigned him from the Sicilian revenue. His fame greatly increased his income, as he was solicited by the principal cities of Spain to compose their *autos sacramentales*, for which he was liberally paid. He bestowed particular pains on the composition of these pieces, and, in fact, eclipsed all that the Spanish literature, so rich in this department of fancy, had hitherto produced. These subjects were particularly suited to his religious turn of mind; and he set a peculiar value on his performances of this kind, so as even to disparage his other works, which deserve no mean reputation. Religion is the ruling idea, the central point, of his poems. Whatever subject he handles, he exhibits true poetical genius. Even allowing that he is inferior in richness of invention to Lope de Vega, he certainly excels him in fineness of execution, elevation of feeling, and aptness of expression. If we find in him much that is foreign to our modes of thinking and feeling, to our accustomed views and manner of expression, we shall have occasion much oftener to admire his unrivalled genius. The Spanish nation esteem C. among the greatest poetical geniuses. Many faults in his writings are to be attributed to the age and circumstances of the author. Among his dramatic works are many pieces of intrigue, full of complicated plots, and rich in interesting incidents. There are, besides, heroic comedies and historical plays, some of which merit the name of tragedies. To this class belongs the Constant Prince, which deserves an honorable place among romantic tragedies of the first rank. Besides these, C. has left 95 *autos sacramentales*, 200 *loas* (preludes) and 100 *saynetes* (farces). He wrote his last play in the 81st year of his age. The smaller poems of C., his songs, sonnets, ballads, &c., notwithstanding the applause which they received from his contemporaries, are now forgotten; but his plays have maintained their place on the stage even more than those of Lope de Vega. The number of his collected plays amounts to 128. He wrote, however, many more, some of which were never published. The most complete edition of his works is that published by D. Juan de Vera Tassis y Villarroel (Madrid, 1685, 9 vols.). A. W. Schlegel and Gries have given masterly translations of his pieces into German. The former has published 5 plays in 2 vols. (Berlin, 1803—1806); the latter, 10 plays in 5 vols. (Berlin, 1815—1822). These were followed by the translations of baron Malsburg, of which 6 vols. (Leipsic, 1819—1825) have appeared. Göthe and Schlegel have the merit of having opened the German stage to the genius of C., as Schröder, before them, had done to that of Shakspeare. The Constant Prince shows, perhaps, in the highest degree, the skill of C. as a tragic poet. It turns on one of the most perplexing of all subjects, viz. the idea of destiny, managed in a truly poetical way, in a tragedy terminating happily. The great fertility of C.'s invention has heaped up an abundance of materials, from which foreign

theatres might be much enriched. It is to be regretted that his works have not been chronologically arranged. We might then have traced the growth of mysticism in his mind, and seen it striking root more deeply as he advanced in life. At the age of 62, he was admitted into the fraternity of San Pedro. In 1687, he was elected their *capelan mayor*. He left them all his property, for which they erected a splendid monument to his memory. He died May 25, 1687, aged 87. Among his imitators, Tirso de Molina is worthy of mention, as the author of the Inflexible Stranger, which has been often imitated, and is the groundwork of the celebrated opera of Don Juan.

Caleb, of the tribe of Juda, born B. C. 1530, was sent with Joshua and 10 others to examine the Land of Canaan. When Joshua had conquered the country, C. reminded the Jews of the promise, which had been made by God, that they should enjoy this country. He obtained the city of Hebron for his share of the spoil, besieged and captured it, and drove out three giants, or Anakim. He then marched against Kirjath-Sepher, and offered his daughter Achsah to the first who should enter it. Othniel, his nephew, was the successful aspirant for the fair Jewess.

Caledonia; the ancient name of Scotland. (q. v.)

Caledonia; a town in New York, on the west side of the Genesee, 20 miles south-west of Rochester, 235 west of Albany. The village is situated on the great road from Albany to Buffalo, produces wheat in great quantities, and has several beds of gypsum; also limestone, iron ore, salt and sulphur springs. Great or Big springs, situated on the north side of the village, are regarded as a curiosity. The waters, which are impregnated with sulphur and lime, boil up in great quantities from the earth in a pond or reservoir of five acres. In this pond, except at the places where the water boils up, grows a singular weed, five or six feet high, and so thick as to be almost impenetrable. The surface of the water is covered with a frothy substance, which, when dried, has a very offensive smell. The temperature of the water is always nearly the same, extremely cold, but never freezes. A fine mill-stream issues from this pond; and the quantity of water is little affected by rain or drought.

Caledonia, New; a country of North America, west of the Rocky mountains, extending about 500 miles from north to south, and nearly 400 from east to west. It is mountainous; abounds in lakes, the largest of which are Stuart's lake and Natteotain lake. The largest rivers are Fraser's and Natteotain rivers. The thermometer sometimes falls 32 degrees below zero; but the seasons are generally milder than in the same parallel east of the Rocky mountains. The summer is never very hot. The natives call themselves *Tä-cullies*. The whites call them *Carriers*. They are estimated at 5000.

Caledonia, New; a large island in the Pacific ocean, from 220 to 250 miles long, and 50 broad. It is rendered dangerous of approach by formidable reefs, extending 270 miles beyond the island. The danger is increased by the current setting directly on the breakers. Lon. 163° to 167° E.; lat. 20° to 22° 26′ S. It was discovered by Cook, in his second voyage (1774), who remained on the coast a week. D'Entrecasteaux was the first who sailed completely round it (1792 and 1793). A chain of mountains, 2500 feet high, extends through the island, from the summits of which the sea is visible on both sides. The island produces the bread-fruit-tree, banana, sugar-cane, arum and cocoa, although the soil is by no means fertile. The animals are very few. A spider called *nookee* forms threads so large as to offer a sensible resistance before breaking. They are eaten by the people. Their other articles of food are not more choice. Like the Ottomacs of South America, described by Humboldt, they eat steatite—a soft, friable, greenish earth, containing magnesia, silex and iron. Cook and Forster described them as gentle, simple, kind and honest. D'Entrecasteaux represents them as cruel, perfidious and thievish. The women were hired for a nail. Recent observation has shown them to be cannibals. They are armed with darts and clubs, but do not use the bow. Their huts are small, and filled with smoke, to defend them from insects. Their language is different from that of Polynesia, and is described as harsh and croaking. Their dress is a girdle of fibrous bark. They also wear ornaments of bone or coral, and paint their breasts with wide black streaks. Their hair is nearly woolly, the surface of their bodies shiny and black. Some have the thick lips of the African Negro.

Caledonians; the name of a confederacy of tribes in what is now Scotland (*Britannia Barbara*). Tacitus supposes them to be Germans; others, with more reason, Celts. They are the ancestors of the modern Highlanders.

Calembourg; a kind of pun, in which a word is employed in an unusual sense, or by which, without regard to grammar or orthography, some letters are changed, added or left out, without changing the pronunciation. Thus a *calembourg* is distinguished from the proper *jeu de mot*. A Westphalian count Calemberg, who lived in Paris under Louis XV, is said to have amused the circles there by his blunders in the French language, and occasioned the marquis Biévre to introduce this new kind of witticism. As an instance, we adduce the following:—A robber demanded from a traveller his purse, putting a pistol to his breast, with the words "*La bourse, ou la vie.*" "*Pour l'avis* (*la vie*)," the traveller answered, dryly, "*le meilleur que je puisse vous donner, est de quitter votre métier, sans quoi vous serez pendu, et pour la bourse* (hair-bag) *je n'en ai pas, parceque je porte un cadogan* (hair-knot)." The French language is rich in such puns, because it is poor in words, and these, consequently, may be taken in different significations. (See *Pun.*)

Calenberg; a principality in the kingdom of Hanover, which derives its name from an ancient castle, now in ruins, situated 11 or 12 miles south of Hanover. Its extent is 1050 square miles. It has about 139,222 inhabitants, chiefly Lutherans. (See *Hanover.*)

Calendar; the division of time into years, months, weeks and days; also a register of these divisions. Among the old Romans, for want of such a register, it was the custom for the *pontifex maximus*, on the first day of the month, to proclaim (*calare*) the month, with the festivals occurring in it, and the time of new moon. Hence *calendæ* and *calendar*. The periodical occurrence of certain natural phenomena gave rise to the first division of time. The apparent daily revolution of the starry heavens and the sun about the earth occasioned the division into days. But, as the number of days became too great for convenience, some larger measure of time was found necessary. The changes of the moon, which were observed to recur every 29 or 30 days, suggested the division of time into months. After a considerable period, these also were found to multiply too much, and a still larger measure of time was wanted. Such a one was found in the apparent yearly revolution of the sun round the earth in the ecliptic. The time of this revolution, after several erroneous calculations hereafter to be mentioned, was finally determined to be a little more than 365 days. This was called a *solar year*, or, simply, a *year*, which was divided, according to the former measures of time, into months and days. Now, on account of the great influence of the sun's course in the ecliptic, and its consequent variations of distance from us upon the earth, and the affairs of its inhabitants in all countries, the attention of men would naturally be drawn to this phenomenon. Hence it has happened that all nations, in any degree civilized, have adopted the year as the largest measure of time. It is probable that the Phœnicians first, then the Egyptians, and afterwards the Greeks, made use of this mode of reckoning, from whom it was communicated to other nations. The division of the year, however, into months and days, could not have been very accurate at first, because it can be settled only by long and attentive observation. The calendar of the oldest nations was quite imperfect. They were satisfied with one which enabled them to manage the common business of husbandry. The Greeks were the first who attempted to adjust the courses of the sun and the moon to each other. For this purpose, they reckoned 12½ revolutions of the moon round the earth for one solar year; and, to avoid the fractions of a month, they made the year consist of 13 and 12 months alternately. Solon, perceiving the defects of this arrangement, fixed the number of days in a month at 29½, and made the month consist of 29 and 30 days alternately. Still the length of the month and that of the year were not brought into exact adjustment, and new disorders soon followed. Various plans for the reformation of the calendar were proposed from time to time; but all proved insufficient, till Meton and Enctemon finally succeeded in bringing it to a much greater degree of accuracy, by fixing on the period of 19 years, in which time the new moons return upon the same days of the year as before (as 19 solar years are very nearly equal to 235 lunations). (See *Cycle.*) This mode of computation, first adopted by the Greeks (433 B. C.), was so much approved of, that it was engraven with golden letters on a tablet at Athens. Hence the number, showing what year of the moon's cycle any given year is, is called the *golden number*. This period of 19 years was found, however, to be about six hours too long. This defect Calippus, about 102 years later, endeavored to remedy, but still failed to make the beginning of the

seasons return on the same fixed day of the year.—Among the Romans, their first king, Romulus, introduced a year of 10 divisions or months, of which 4 (namely, March, May, July and October) contained 31 days; the rest (April, June, August, September, November and December), only 30. When he discovered that this mode of reckoning was imperfect, he inserted as many days as were necessary to complete the year, and bring it up to the beginning of the following one. His successor, Numa Pompilius, abolished this method, added 50 days more, took 1 day from each of the 6 months containing 30 days, because even numbers were supposed to be unlucky, and out of the whole 56 days formed 2 new months of 28 days each, which he called *January* and *February*. Thus the year consisted of 12 months, and 350 days; and, to make it agree with the course of the sun, intercalations were made use of, after the manner of the Greeks. These intercalations, however, were left to the discretion of the priests; and, as they made them very arbitrarily, according to the exigences of the state, or their own private views, complaints and irregularities soon arose. Notwithstanding this defect, the arrangement continued to the end of the republican constitution. The calendar of the Romans had a very peculiar arrangement. They gave particular names to 3 days of the month. The first day was called the *calends*. In the 4 months of March, May, July and October, the 7th, in the others, the 5th day, was called the *nones*; and, in the 4 former, the 15th, in the rest, the 13th day, was called the *ides*. The other days they distinguished in the following manner:—they counted from the above-mentioned days backwards, observing to reckon also the one from which they began. Thus the 3d of March, according to the Roman reckoning, would be the 5th day before the *nones*, which, in that month, fall upon the 7th. The 8th of January, in which month the *nones* happen on the 5th, and the *ides* on the 13th, was called the 6th before the *ides* of January. Finally, to express any of the days after the *ides*, they reckoned in a similar manner from the calends of the following month. From the inaccuracy of the Roman method of reckoning, it appears that, in Cicero's time, the calendar brought the vernal equinox almost two months later than it ought to be. According to the last letter of the 10th book of Cicero's Epistles to Atticus, this equinox was not yet past, although it was near the end of May, by their calendar. To check this irregularity, Julius Cæsar, on being appointed dictator and pontiff (A. U. C. 707), invited the Greek astronomer Sosigenes to Rome, who, with the assistance of Marcus Fabius, invented that mode of reckoning, which, after him who introduced it into use, has been called the *Julian calendar*. The chief improvement consisted in restoring the equinox to its proper place in March. For this purpose, two months were inserted between November and December, so that the year 707, called, from this circumstance, the *year of confusion*, contained 14 months. In the number of days, the Greek computation was adopted, which made it 365¼. The number and names of the months were kept unaltered, with the exception of Quintilis, which was henceforth called, in honor of the author of the improvement, *Julius*. To dispose of the quarter of a day, it was determined to intercalate a day every fourth year, between the 23d and 24th of February. This was called an *intercalary* day, and the year in which it took place was called an *intercalary* year, or, as we term it, a *leap* year. This calendar continued in use among the Romans until the fall of the empire, and throughout Christendom till 1582. The festivals of the Christian church were determined by it. With regard to Easter, however, it was necessary to have reference to the course of the moon. The Jews celebrated Easter (i. e., the Passover) on the 14th of the month Nisan (or March); the Christians in the same month, but always on a Sunday. Now, as the Easter of the Christians sometimes coincided with the Passover of the Jews, and it was thought unchristian to celebrate so important a festival at the same time as the Jews did, it was resolved, at the council of Nice, 325 A. D., that, from that time, Easter should be solemnized on the Sunday following the first full-moon after the vernal equinox, which was then supposed to take place on the 21st of March. As the course of the moon was thus made the foundation for determining the time of Easter, the lunar cycle of Meton was taken for this purpose; according to which the year contains 365¼ days, and the new moons, after a period of 19 years, return on the same days as before. The inaccuracy of the Julian year, thus combined with the lunar cycle, must have soon discovered itself, on a comparison with the true time of the commencement of the equinoxes, since the received length

of 365¼ days exceeds the true by about 11 minutes; so that, for every such Julian year, the equinox receded 11 minutes, or a day in about 130 years. In consequence of this, in the 16th century, the vernal equinox had changed its place in the calendar from the 21st to the 10th; i. e., it really took place on the 10th instead of the 21st, on which it was placed in the calendar. Aloysius Lilius, a physician of Verona, projected a plan for amending the calendar, which, after his death, was presented by his brother to pope Gregory XIII. To carry it into execution, the pope assembled a number of prelates and learned men. In 1577, the proposed change was adopted by all the Catholic princes; and, in 1582, Gregory issued a brief abolishing the Julian calendar in all Catholic countries, and introducing in its stead the one now in use, under the name of the *Gregorian* or *reformed calendar*, or the *new style*, as the other was now called the *old style*. The amendment consisted in this:—10 days were dropped after the 4th of Oct., 1582, and the 15th was reckoned immediately after the 4th. Every 100th year, which, by the old style, was to have been a leap year, was now to be a common year, the 4th excepted; i. e., 1600 was to remain a leap year, but 1700, 1800, 1900, to be of the common length, and 2000 a leap year again. In this calendar, the length of the solar year was taken to be 365 days, 5 hours, 49 minutes and 12 seconds. Later observations of Zach, Lalande and Delambre fix the average length of the tropical year at about 27 seconds less; but it is unnecessary to direct the attention of the reader to the error arising from this difference, as it will amount to a day only in the space of 3000 years. Notwithstanding the above improvement, the Protestants retained the Julian calendar till 1700, when they also adopted the new style, with this difference, that they assigned the feast of Easter to the day of the first full moon after the *astronomical* equinox. But this arrangement produced new variations. In 1724 and 1744, the Easter of the Catholics was eight days later than that of the Protestants. On this account, the Gregorian calendar was finally adopted, 1777, in Germany, under the name of the *general calendar of the empire*, or, as it is now called, the *reformed calendar*, in order that the Catholics and Protestants might celebrate Easter, and, consequently, all the movable feasts, at the same time. England introduced the new style in 1752, and Sweden in 1753. Russia only retains the old style, which now differs 12 days from the new.—In France, during the revolution, a new calendar was introduced by a decree of the national convention, Nov. 24, 1793. The time from which the new reckoning was to commence was the autumnal equinox of 1792, which fell upon the 22d of Sept., at 18 minutes and 30 seconds after 9 A. M., Paris time. This day was selected as that on which the first decree of the new republic had been promulgated. The year was made to consist of 12 months of 30 days each, and, to complete the full number of days, 5 *jours complementaires* were added to the end of it, in common years, and 6 in leap years. Each period of 4 years, terminating with a leap year, was called a *franciade*. Instead of weeks, each month was divided into 3 parts, called *decades*, consisting of 10 days each; the other divisions being also accommodated to the decimal system. The names of the months were so chosen as to indicate, by their etymology, the time of year to which they belonged. They were as follows:—Autumn, from the 22d Sept. to the 22d Dec.; *Vendémiaire*, vintage month (Oct.); *Brumaire*, foggy month (Nov.); *Frimaire*, sleet month (Dec.):—Winter, from 22d Dec. to 22d March; *Nivôse*, snowy month (Jan.); *Ventôse*, windy month (Feb.); *Pluviôse*, rainy month (March):—Spring, from 22d March to 22d June; *Germinal*, bud month (April); *Floréal*, flower month (May); *Prairial*, meadow month (June):—Summer, from 22d June to 22d Sept.; *Messidor*, harvest month (July); *Thermidor*, hot month (Aug.); *Fructidor*, fruit month (Sept.).—The 10 days of each decade were called, 1. *Primidi*, 2. *Duodi*, 3. *Tridi*, 4. *Quartidi*, 5. *Quintidi*, 6. *Sextidi*, 7. *Septidi*, 8. *Octidi*, 9. *Nonidi*, 10. *Decadi* (the Sabbath). Besides this, each day in the year had its particular name, appropriate to the time when it occurred; e. g., the 7th of vintage month, *Vendémiaire*, was named *carottes* (carrots). This calendar was abolished, at the command of Napoleon, by a decree of the senate, 9th Sept., 1805, and the common Christian or Gregorian calendar introduced throughout the French empire. (For a pretty full historical account of this subject, see Büsch's *Handbuch der Erfindungen*, vol. vii. p. 152 et seq.; also Gebelin's *Histoire du Calendrier*. There are also astronomical calendars, to which the Astronomical Year-Book of professor Bode belongs, and of which 50 vols. had appeared in 1822. It is still continued. Of

the same class are the Paris *Connoissance des Temps*, and the London Nautical Almanac. See *Almanac* and *Chronology*.)

Calender. Different fabrics, before they leave the hands of the manufacturer, are subjected to certain processes, the object of which is to make them smooth and glossy, to glaze them, to water them, or give them a wavy appearance. This is done, in general, by pressing the fabric between wooden or metallic cylinders, whence the machine is called a *calender*, and the workman a *calender* or *calenderer*.

Calenders; a sect of dervises in Turkey and Persia. They are not very strict in their morals, nor in very high esteem among the Mohammedans. They preach in the market-places, and live upon alms. Their name is derived from their founder. (See *Dervise*.)

Calends, with the Romans, the first days of the month; so called because the *pontifex maximus* then proclaimed (*calavit*) whether the *nones* would be on the 5th or the 7th. This was the custom until the year 450 U. C., when the *fasti calendares*, or calendar (q. v.), were affixed to the wall of public places. The Greeks did not make use of calends; whence the proverbial expression *ad Græcas calendas* (on the Greek calends), meaning *never*. The calends of January were more solemn than the others, and were consecrated to Janus and Juno. On this day, the magistrates entered on their offices, and friends interchanged presents. On the calends, debtors were obliged to pay the interest of their debts; hence *tristes calendæ* (Hor. Serm. 1 Sat. 3. v. 87). The book of accounts was called *Calendarium*. —*Calends*, in ecclesiastical history, denotes conferences, anciently held by the clergy of each deanery on the first of each month, concerning their duty and conduct. (Du Cange, *in voce*.)

Calenture; a violent fever, incident to persons in hot climates, especially to such as are natives of cooler climates. It is attended with delirium; and the patient imagines the sea to be a green field, in which he is tempted to walk by the coolness and freshness of its appearance. This is, at least, the poetical explanation of the matter. The fact seems to be, that the intense inflammation of the fever prompts the patient to plunge into cold water to relieve his sufferings.

Calepin (*French*); a lexicon. The name is derived from Calepino, a famous grammarian and lexicographer of the 15th century, who was the author of a polyglot dictionary, which has passed through numerous editions, and been enlarged by different editors. The most complete edition is that of Bâle, 1590, fol., in 11 languages. This work was usually called the *Calepin*, and such was its celebrity, that the name became a common appellation for a learned lexicon.

Caliber; the interior diameter of the bore of any piece of ordnance, or the diameter of a shot or shell.—*Caliber* or *calliper compasses* are a sort of compasses with arched legs, used in the artillery practice, to take the diameter of any round body, particularly of shot or shells, the bore of ordnance, &c. The instrument consists of two thin pieces of brass, joined by a rivet, so as to move quite round each other. It contains a number of tables, rules, &c., connected with the artillery practice.

Calico; a cotton cloth, which derives its name from Calicut, a city of India, from which it was first brought. In England, white or unprinted cotton cloth is called *calico*. In the U. States, printed cloth only is called by that name. Calico printing is a combination of the arts of engraving and dyeing, and is used to produce, upon woven fabrics, chiefly of cotton, a variety of ornamental combinations, both of figure and color. In this process, the whole fabric is immersed in the dyeing liquid; but it is previously prepared in such a manner, that the dye adheres only to the parts intended for the figure, while it leaves the remaining parts unaltered. In calico-printing, adjective colors are most frequently employed. The cloth is prepared by bleaching, and other processes, which dispose it to receive the color. It is then printed with the mordant, in a manner similar to that of copperplate-printing, except that the figure is engraved upon a cylinder instead of a plate. The cylinder, in one part of its revolution, becomes charged with the mordant, mixed to a proper consistence with starch. The superfluous part of the mordant is then scraped off by a straight steel edge, in contact with which the cylinder revolves, leaving only that part which remains in the lines of the figure. The cloth then passes in forcible contact with the other side of the cylinder, and receives from it a complete impression of the figure in the pale color of the mordant. The cloth is then passed through the coloring-bath, in which the parts previously printed become dyed with the intended color. When it is afterwards exposed and washed, the color disappears

from those parts which are not impregnated with the mordant, but remains permanently fixed to the rest. When additional colors are required, they are printed over the rest, with different mordants, suited to the color intended to be produced. This secondary printing is generally performed with blocks, engraved in the manner of wood-cuts, and applied by hand to the successive parts of the piece.

Calicut; a city of Hindostan, formerly capital of the kingdom of C., which was ceded to the British in 1792. From this port the first vessel was freighted with Indian commodities for Europe, by Vasco da Gama, in 1498. The ancient city, however, is now buried beneath the sea; and, at low tides, the tops of temples and minarets are discernible. The present town stands on a low shore, and has considerable trade. It was taken and destroyed by Tippoo Saib, but was rebuilt when the country fell into the hands of the English. Cardamoms, teak, sandal-wood, pepper and wax are the principal exports. It contains 5000 houses. Lat. 11° 15′ N.; lon. 75° 50′ E. The rajah of the C. district, or the Tamuri rajah, called *Zamorin* by the Europeans, is a Bramin, who pretends to be superior to the other Bramins, and inferior only to the gods. The males of the family are called *Tamburans*, and the females *Tamburetties*. These ladies are married at the age of 10, but it would be scandalous for them to have any intercourse with their husbands. The Namburi Bramins, or the Nairs, are the fathers of their children, who are all, of course, in the dilemma described by Telemachus.

Calif and Califate. (See *Caliph*.)

California, Gulf of; a gulf on the west coast of North America, in Mexico, lying on the east side of the peninsula of California, extending from S. S. E. to N. N. W., between lat. 22° 40′ and 34° N. It is about 800 miles long, and, through most of its length, is less than 100 miles wide. It receives the river Colorado at its northern extremity. It contains numerous islands and shoals, and is of difficult navigation.

California, New; a province of Mexico, on the coast of the N. Pacific ocean, called, by captain Vancouver, *New Albion*. It lies north of the peninsula, which is called *Old California*, and is 600 miles long, and only 30 broad. Square leagues, 2,125. Montery is the capital. There is not any country in the world which more abounds in fish and game of every description. Hares, rabbits and stags are very common here; seals and otters are also found in prodigious numbers. To the northward, and during the winter, the inhabitants kill a very great number of foxes, bears, wolves and wildcats. The land possesses, also, great fertility; farinaceous roots and seeds of all kinds abundantly prosper here. The crops of maize, barley, corn and peas cannot be equalled but by those of Chili. European cultivators can have no conception of a similar fertility. The medium produce of corn is from 70 to 80 for 1; the extremes, 60 and 100. The population, in 1802, including Indians who had settled and begun to cultivate fields, was 15,562.

California, Old; a province of Mexico, comprising a peninsula in the Pacific ocean, united, on the north, to the continent of North America, from which the other part is separated by a narrow sea, called the *gulf of California*, and bounded S. and W. by the Pacific ocean; near 900 miles in length, and, in different places, 30, 60, 90, and 120 miles wide. A chain of mountains extends through the peninsula, of which the greatest height is from 4500 to 4900 feet above the sea. This peninsula is said to have been discovered by sir Francis Drake, and by him called *New Albion;* and the gulf of California has been sometimes called the *Vermilion sea*, or *Purple sea*, or *Red sea*. In a peninsula of so great an extent, which reaches nearly from 23° to 34° N. lat., the soil and climate must naturally be found to vary. Some parts are continually covered with flowers, but the greater part is wild, rugged and barren, overrun with rocks and sand, and destitute of water. From cape St. Lucas to the Colorado, nearly 200 leagues, only two streams run into the gulf of California. Population, in 1803, 9000. The principal places are Santa Maria, St. Ignatio, St. Isidoro, Loreto, St. Estevan, St. Xavier, St. Yago, Rosalio, St. Juan Guadalupe and St. Joseph.

Caligula, Caius Cæsar Augustus Germanicus, son of Germanicus and Agrippina, was born, A. D. 12, in the camp, probably in Germany, and brought up among the legions. Here he received, from the soldiers, the surname of C., on account of his wearing the *caligæ*, a kind of little boots in use among them. He understood so well how to insinuate himself into the good graces of Tiberius, that he not only escaped the cruel fate of his parents and brothers and sisters, but was even loaded with honors. Whether, as some writers inform us, he removed Ti-

berius out of the way by slow poison, is uncertain. When the latter was about to die, he appointed, according to Suetonius, C. and the son of Drusus, Tiberius Nero, heirs of the empire. But C., universally beloved for the sake of his father, Germanicus, was able, without difficulty, to obtain sole possession of the throne. Rome received him joyfully, and the distant provinces echoed his welcome. His first actions, also, were just and noble. He interred, in the most honorable manner, the remains of his mother and of his brother Nero, set free all state-prisoners, recalled the banished, and forbade all prosecutions for treason. He conferred on the magistrates free and independent power. Although the will of Tiberius had been declared, by the senate, to be null and void, he fulfilled every article of it, with the exception only of that abovementioned. When he was chosen consul, he took his uncle Claudius as his colleague. Thus he distinguished the first eight months of his reign by many magnanimous actions, when he fell sick. After his recovery, by a most unexpected alteration, he suddenly showed himself the most cruel and unnatural of tyrants. The most exquisite tortures served him for enjoyments. During his meals, he caused criminals, and even innocent persons, to be stretched on the rack and beheaded: the most respectable persons were daily executed. In the madness of his arrogance, he even considered himself a god, and caused the honors to be paid to him which were paid to Apollo, to Mars, and even to Jupiter. He also showed himself in public with the attributes of Venus and of other goddesses. He built a temple to his own divinity. At one time, he wished that the whole Roman people had but one head, that he might be able to cut it off at one blow. He frequently repeated the words of an old poet, *Oderint dum metuant*. One of his greatest follies was the building of a bridge between Baiæ and Puteoli (Puzzuoli). He himself consecrated this strange structure with great splendor; and, after he had passed the night following in a revel with his friends, in order to do something extraordinary before his departure, he caused a crowd of persons, without distinction of age, rank and character, to be seized, and thrown into the sea. On his return, he entered Rome in triumph, because, as he said, he had conquered nature herself. After this, he made preparations for an expedition against the Germans, passed, with more than 200,000 men, over the Rhine, but returned after he had travelled a few miles, and that without having seen an enemy. Such was his terror, that, when he came to the river, and found the bridge obstructed by the crowd upon it, he caused himself to be passed over the heads of the soldiers. He then went to Gaul, which he plundered with unexampled rapacity. Not content with the considerable booty thus obtained, he sold all the property of both his sisters, Agrippina and Livilla, whom he banished. He also sold the furniture of the old court, the clothes of Marcus Antoninus, of Augustus, Agrippina, &c. Before he left Gaul, he declared his intention of going to Britain. He collected his army on the coast, embarked in a magnificent galley, but returned when he had hardly left the land, drew up his forces, ordered the signal for battle to be sounded, and commanded the soldiers to fill their pockets and helmets with shells, while he cried out, "This booty, ravished from the sea, is fit for my palace and the capitol!" When he returned to Rome, he was desirous of a triumph on account of his achievements, but contented himself with an ovation. Discontented with the senate, he resolved to destroy the greater part of the members, and the most distinguished men of Rome. This is proved by two books, which were found after his death, wherein the names of the proscribed were noted down, and of which one was entitled *Gladius* (Sword), and the other *Pugillus* (Dagger). He became reconciled to the senate again when he found it worthy of him. He supported public brothels and gaming-houses, and received himself the entrance-money of the visitors. His horse, named *Incitatus*, was his favorite. This animal had a house and a servant, and was fed from marble and gold. C. had caused him to be admitted into the college of his priests, and was desirous of making him a consul also. He even had the intention of destroying the poems of Homer, and was on the point of removing the works and images of Virgil and Livy from all libraries: those of the former, because he was destitute of genius and learning; those of the latter, because he was not to be depended upon as a historian. C.'s morals were, from his youth upward, corrupt; he had committed incest with all his sisters. After he had married and repudiated several wives, Cæsonia retained a permanent hold on his affections. A number of conspirators, at the head of

whom were Chærea and Cornelius Sabinus, both tribunes of the pretorian cohorts, murdered him in the 29th year of his life, and the fourth of his tyrannical reign (from A. D. 37 to 41).

Caliph (i. e., *vicegerent*) is the name assumed by the successors of Mohammed, in the government of the faithful and in the high priesthood. *Caliphate* is, therefore, the name given, by historians, to the empire of these princes which the Arabs founded in Asia, and, impelled by religious enthusiasm, enlarged, within a few centuries, to a dominion far superior in extent to the Roman empire. Mohammed (q. v.), in the character of the prophet of God, made himself the spiritual and temporal ruler of his people. After the death of the prophet, the election of a successor occasioned considerable excitement. Abdallah Ebn Abu Koafas, called *Abubeker*, i. e., *father of the virgin* (because his daughter Ayesha was the only one of the wives of Mohammed, whom he had married when a virgin), obtained the victory over Ali, the cousin and son-in-law of Mohammed, and became the first caliph, A. D. 632 (year of the Hegira 11). Victorious over all enemies, by the aid of his general, the brave Caled, he began, as the Koran directs, to spread the doctrines of Mohammed by arms among the neighboring nations. With the watch-word *conversion or tribute*, a numerous army, consisting entirely of volunteers, inspired with zeal for the holy war, penetrated first into Syria. Conquerors in the first battle, they were subsequently several times defeated by the Greeks; but, having once acquired a strong footing in the country by the treacherous surrender of Bosra, they undertook, under Caled, the siege of Damascus, and, having repulsed two large armies, sent by the emperor Heraclius to the relief of the city, they obtained possession of it by a capitulation (A. D. 633, of the Hegira 12), the terms of which were perfidiously broken, Caled pursuing and slaughtering the retreating Christians. Abubeker died after he had filled the place of the prophet two years and four months. By his will, Omar, another father-in-law of the prophet, became second caliph. He intrusted the command of the army of the faithful to the humane Obeidah, instead of Caled, and completed, by his means, though not without a brave resistance on the part of the Greeks, the subjugation of Syria (A. D. 638, of the Hegira 17). Jerusalem having been compelled to surrender (A. D. 636, Heg. 15), Omar proceeded thither in person to fix the terms of capitulation, which have subsequently served as a model in settling the relations of the Moslems to the subject Christians. These terms were carefully observed by the conscientious caliph. Equally successful was another general, Amrou, in Egypt, which was subjected to the caliphate in two years (640). Omar was the first who bore the appellation of *emir al moumenin* (prince of the faithful)—a title inherited by all succeeding caliphs, and perverted into *miramolin* by the ignorant Europeans. After the murder of Omar by a revengeful slave (A. D. 643, Heg. 23), a council, appointed by him on his death-bed, chose Osman, or Othman, son-in-law of the prophet, passing over Ali. Under him, the empire of the Arabs soon attained a wonderful magnitude. In the East, their arms spread the doctrines of the Koran through Persia. At the same time, they advanced along the northern coast of Africa, as far as Ceuta. Cyprus, too (A. D. 647), and Rhodes (A. D. 654) were conquered; but the former was lost again two years after. Thus Alexandria and all Egypt were a second time, though not without difficulty, torn from the Greeks, who had regained their power there by the aid of the natives. These reverses were caused by the measures of Othman, who, far inferior to Omar in wisdom, intrusted the provinces, not to the most capable, but to his favorites. The dissatisfaction thus excited occasioned a general insurrection in the year 654 (Heg. 34), which terminated in his death. Ali, the son-in-law of the prophet by Fatima, became the fourth caliph, by the choice of the people of Medina, and is regarded as the first legitimate possessor of the dignity, by a numerous sect of Mohammedans, which gives him and his son Hassan almost equal honor with the prophet. This belief prevails among the Persians; whence arises the hatred in which they are held by the Turks. Instead of being able to continue the conquests of his predecessors, Ali always had to contend with domestic enemies. Among these was Ayesha, the widow of the prophet, called the *mother of the faithful;* also Tellah, Zobeir, and especially the powerful Moawiyah, governor of Syria, who all laid claim to the government. These were able to create suspicion, and spread the report that Ali had instigated the murder of Othman. In vain did he endeavor to repress the machinations of his enemies, by intrusting the government of the provinces to his friends. Nowhere were the new governors received. The discontented

collected an army, and made themselves masters of Bassora. Ali defeated it, and Tellah and Zobeir fell; but he could not prevent Moawiyah and his friend Amrou from extending their party, and maintaining themselves in Syria, Egypt, and even in a part of Arabia. Three men of the sect of the Khoregites proposed to restore concord among the faithful, by slaying each one of the three heads of the parties, Ali, Moawiyah and Amrou; but Ali only fell (A. D. 660, Heg. 40). He was a man of a cultivated mind. The celebrated moral maxims, and the *Giafa*, as it was termed, are the most famous of his works. His son, the mild, peaceful Hassan, had no desire to defend the caliphate against the indefatigable Moawiyah; but vainly did he hope to obtain security by a solemn abdication of the government. He perished by poison, said to have been administered at the instigation of Moawiyah. Moawiyah I transferred the seat of the caliphate from the city of the prophet, Medina, where it had hitherto always been, to Damascus, in the province of which he had formerly been governor (A. D. 673, Heg. 54). With him begins the series of the caliphs called *Ommiades*, which name this family bore from Moawiyah's progenitor, Ommiyah. Not long after his accession, he was obliged to quell an insurrection of the Khoregites by a campaign, and a rebellion at Bassora by severe punishments. He then seriously meditated the entire subversion of the Byzantine empire. (q. v.) His son Jezid marched through Asia Minor, meeting but little resistance; then crossed the Hellespont, and laid siege to Constantinople, but was obliged to raise it (A. D. 669, Heg. 49). His general Obeidah was more successful against the Turks in Chorasan: he defeated them, and penetrated almost into Turkestan (A. D. 673, Heg. 54). His son Jezid was not altogether a worthy successor of the politic Moawiyah (A. D. 679, Heg. 60). At first, he was not acknowledged by the two holy cities, Mecca and Medina, which, as long as the caliphs had resided in the latter city, had enjoyed a principal voice in their election, but which had not been consulted when Moawiyah, according to the custom of the caliphs, appointed his successor in his life-time. The discontented espoused the cause, either of Houssain, the famous son of Ali, or of Abdallah, Zobeir's son, both of whom laid claim to the crown. A rebellion of the inhabitants of Irak, in favor of Houssain, led by Moslem and Hanni, was suppressed by the prudence and decision of Obeidallah, governor of Cufa; and Houssain, who had accepted the invitation of the conspirators, was killed (A. D. 680, Heg. 61), to the great dissatisfaction of the caliph, who sought to make reparation by acts of beneficence towards the children of Houssain. Abdallah Ebn Zobeir was recognised as caliph in Medina, where Jezid was detested for his voluptuousness and scepticism. On this account, Medina was invested, stormed and sacked; but Houssain's family, residing there, was spared, at the express command of the caliph. After Jezid's death (A. D. 683, Heg. 64), his son, Moawiyah II, a pious youth of the sect of the Motagelites (who rejected the fanaticism of the other Mohammedans), voluntarily resigned the caliphate, after a reign of a few months. As he had chosen no successor, anarchy prevailed. Obeidallah, governor of Irak, sought to found a distinct empire in Bassora, but was soon driven out by the inhabitants themselves, who now, as well as all Irak, Hegiaz, Yemen and Egypt, acknowledged Abdallah Ebn Zobeir as caliph. In Syria, Dehac, regent to Abdallah, was at first chosen caliph; but the people of Damascus appointed Merwan I, of the race of the Ommiades, caliph, who made himself master of all Syria and Egypt. Chorasan separated from the caliphate, and submitted to a prince of its own choosing—the noble Salem. In the following year (A. D. 684, Heg. 65), Soliman Ebn Sarad excited a great rebellion of the discontented in Syria and Arabia, and pronounced both caliphs deposed, but was defeated by the experienced soldier Obeidallah. Merwan had been compelled to promise, on oath, to leave the caliphate to Caled, the son of Jezid; yet he nominated his son Abdalmelek as his successor. Under him (A. D. 684, Heg. 65), Mokthar, a new rebel against both caliphs, was subdued by one of them, Abdallah (A. D 686, Heg. 67); but this only made Abdallah more formidable to Abdalmelek, who, in order to be able to direct all his forces against him, concluded a peace with the Greek emperor, Justinian II, in which, reversing the order of the Koran, he conceded to the Christians a yearly tribute of 50,000 pieces of gold. He then marched against Abdallah, defeated him twice, and took Mecca by assault. In this last conflict, Abdallah fell. Thus he united under his dominion all the Mussulmans; but the resistance of the governors—the curse of all despotisms, and the symptom of the future dissolution of the caliphate—kept

him constantly occupied. He was the first caliph that caused money to be coined. He died A. D. 705 (Heg. 86). Under Walid I, his son, the Arabs conquered, in the East, Charasm and Turkestan (A. D. 707, Heg. 88); in the North, Galatia (A. D. 710); and, in the West, Spain (A. D. 711). (See *Spain*). He died in 716 (Heg. 97). His brother and successor besieged Constantinople, but his fleet was twice destroyed by tempests and the Greek fire. On the other hand, he conquered Georgia. He died 718 (Heg. 99). Omar II, his successor by Soliman's last will, incurred the displeasure of the Ommiades by his indulgence towards the sect of Ali, and was poisoned by them (A. D. 721, Heg. 102). Jezid II, his successor, also, by the disposition of Soliman, died of grief for the loss of a female favorite, of whose death he was the author (A. D. 723, Heg. 104.) The Alide Zeid, grandson of Houssain, now contested the caliphate with his brother Hescham. He was indeed overpowered, and put to death; but another house, the Abbassides, descendants of Abbas, son of Abdalmotaleh, uncle of the prophet, began to be formidable. Under Hescham, an end was put to the progress of the Saracens in the West, by the energy of Charles Martel, who annihilated their armies at Tours in 732, and at Narbonne in 736. The voluptuous Walid II was murdered after a reign of one year (A. D. 743, Heg. 124). After the equally brief reigns of Jezid III, and of the Abbasside, Ibrahim, Merwan II followed, with the surname (respectable among the Arabs) of the *Ass* (al Hemar). Ibrahim, being dethroned and imprisoned by this prince, appointed his brother Abul Abbas his successor, and was, shortly after, murdered in prison. Abdallah, Abul Abbas's uncle, now took up arms against the caliph, who was, at that time, fully occupied by a dangerous rebellion in Persia. Merwan was twice defeated, and fell (A. D. 752, Heg. 133). With him terminates the series of caliphs of the race of Ommiyah. The furious Abdallah treacherously destroyed almost all the Ommiades, by a horrible massacre at a meeting where they were all assembled. Two only escaped. Abderames fled to Spain, where he founded the independent caliphate of Cordova (see *Spain*); another to a corner of Arabia, where he was acknowledged as caliph, and his posterity reigned till the 16th century. Abul Abbas, although innocent of that cruel action, which secured him the throne, derived from it the name of *Saffah* (the Bloody). He died very soon, 18 years of age, of the small-pox (A. D. 753, Heg. 134). His brother, Abu Giafar, called *al Mansor* (the Victorious), was obliged to contend with a rival in his own uncle, Abdallah, whom he, however, overcame. His avarice made him many enemies, whom he succeeded in suppressing by his perfidious cunning. He acquired his surname by his victories in Armenia, Cilicia and Cappadocia. In the year 764 (Heg. 145), he founded the city of Bagdad on the Tigris, and transferred thither the seat of the caliphate (A. D. 768, Heg. 149). He died on a pilgrimage to Mecca, leaving immense treasures (A. D. 775, Heg. 156). Mahadi, his son and successor, a man of a noble character, had to contend with the turbulent inhabitants of Chorasan, under the pretended prophet Hakem, and died A. D. 785 (Heg. 166); and Hadi, his grandson, met with the same opposition from the Ali party, under Houssain, Ali's great-grandson. Hadi caused the Zendists to be exterminated—a sect adhering to the doctrine of two principles of nature. According to the usual order of succession, and Mahadi's provision, Hadi was followed, not by his son, but by his brother Harun (A. D. 786, Heg. 167), who was denominated *al Raschid*, on account of his justice, and is famous for promoting the arts and sciences. He concluded a truce (an actual peace could never be made with Christians) with the Greek empress Irene (788, Heg. 169), who consented to pay him tribute. Jahir, an Alide, disputed with him the possession of the throne, but subsequently submitted. Harun, however, tarnished his reputation by the murder of Jahir, and still more by the murder of his sister Abbassah, and her favorite, the Barmecide Giafar, and by the expulsion and persecution of the whole family of the Barmecides, whose services to the state and himself had been of very great value. Harun divided the empire among his three sons. Al Amin, as sole caliph, was to reign over Irak, Arabia, Syria, Egypt, and the rest of Africa: under him, Al Mamun was to govern Persia, Turkestan, Chorasan, and the whole East; and Motassem was to rule Asia Minor, Armenia, and all the countries on the Black sea. The younger brothers were to succeed Amin in the caliphate. At Thus, in Chorasan, through which Harun was passing, in order to quell a rebellion that had broken out in Samarcand, he was arrested by death, of which he had been forewarned by wonderful dreams (A. D. 809, Heg. 190). Al Amin the Faithful (his proper name was

Mohammed) was undeserving of this name. Untrue to his obligations as a ruler, and addicted to all kinds of sensuality, he left the discharge of his duties to his vizier, Fadhel. The vizier, from hatred of Mamun, persuaded the caliph to appoint his son his successor, and deprive Motassem of his portion of territory. A war arose between the brothers. Mamun's general, Thaher, defeated the armies of the caliph, took Bagdad, and caused Amin to be put to death (A. D. 813, Heg. 194). Mamun was recognised as caliph. Nobler in his inclinations than Amin, he cherished the arts and sciences; but, like his brother, he left the government and armies to his ministers. His measures to secure the caliphate to the Alides, in order to please Riza, his favorite, excited the powerful Abbassides to an insurrection. They declared Mamun to have forfeited the throne, and proclaimed Ibrahim caliph, but submitted again, after the death of Riza, when the caliph had changed his sentiments. The vast empire of the Arabs, embracing numberless provinces in two quarters of the globe, could hardly be held under his sceptre. There is but one step, and that an easy one, under a weak sovereign, from a viceroyalty to a kingdom. The wisdom of the former Abbassides could only retard this evil; the faults of the latter precipitated it. Even under Harun al Raschid, the Agladides had founded an independent empire in Tunis (A. D. 800, Heg. 181), as had likewise the Edrisides in Fez. Thaher, having been appointed governor of Chorasan, made himself independent. From him the Thaherides derived their origin. Mamun sent Thomas, a Greek exile, with an army against the Greek emperor, Michael II, the Stammerer. Thomas depopulated Asia Minor, and laid siege to Constantinople; but a storm destroyed his fleet (A. D. 823, Heg. 207). A second attack on the imperial city was repelled by the aid of the Bulgarians. Thomas was taken prisoner, and executed. Towards the many religious sects, into which the Mussulmans were then divided, Mamun acted with toleration. He died A. D. 833 (Heg. 218). During his government (about 830, Heg. 215), the African Arabs conquered Sicily and Sardinia, where they maintained themselves about 200 years, till the former island was torn from them by the Normans, in 1035, and the latter island by the Pisans, in 1051. Motassem, at first named *Billah* (by the grace of God), Harun's third son, built a new city, Samara, 56 miles from Bagdad, and transferred thither his residence. In his wars against the Greeks and rebellious Persians, he first used Turkish soldiers. From grief at the death of his private physician, Motassem became insane, and died A. D. 842, Heg. 227. Vathek Billah, his son, member of the Motazelite sect, exerted himself to promote the advancement of science; but he was an enervated voluptuary, and died of nervous weakness (A. D. 846, Heg. 232). A contest for the succession, between his brother Motawackel and his son Mothadi, was decided by the already powerful and arrogant Turkish body-guard in favor of the most unworthy competitor, the former. Under Motawackel, it became more and more customary to carry on all wars by means of Turkish mercenaries. Thus the Arabs were rendered unwarlike and effeminate, as must necessarily be the case, in a hot climate, with those who do not live in constant activity. Motawackel manifested a blind hatred of the Alides, not sparing even the memory of the deceased. He moreover evinced a malignant spirit, and a proneness to sensuality and cruelty. His own son, Montassar, educated in the indulgence of both these vices, and often barbarously treated by him, conspired against him with the Turkish body-guards, and effected his murder (A. D. 861, Heg. 247). The Turks, who now arrogated the right of electing the caliphs, called the murderer to the throne of the faithful, and compelled his brothers, who were innocent of the atrocious act, and whose revenge they feared, to renounce the succession which had been designed for them by Motawackel. Montasser died, soon after, of a fever, caused by the goadings of remorse (A. D. 862, Heg. 248). The Turks then elected Mostain Billah, a grandson of the caliph Motassem. Two of the Alides became competitors with him for the caliphate. One of them, at Cufa, was defeated and put to death; but the other founded an independent empire in Tabristan, which subsisted half a century. The discord of the Turkish soldiers completed the dismemberment of the empire. One party raised to the throne Motaz, second son of Motawackel, and compelled Mostain to abdicate. Motaz Billah soon found means to get rid of him, as well as of his own brother, Muwiad. He then meditated the removal of the Turkish soldiers; but, before he found courage to execute his projects, they rebelled on account of their pay being in arrear, and forced him to resign the government. He soon after died (A. D. 869, Heg.

255). They conferred the caliphate on Mohadi Billah, son of the caliph Vathek, but deposed this excellent prince, eleven months after, because he attempted to improve their military discipline. Under Motawackel's third son, the sensual Motamed Billah, whom they next called to the caliphate, his prudent and courageous fourth brother, Muaffek, succeeded in overcoming the dangerous preponderance of these Turks. Motamed transferred the seat of the caliphate from Samara back to Bagdad, in the year 873 (Heg. 259), where it afterwards continued. In the same year, owing to a revolution in the independent government of Chorasan, the dynasty of the Thaherides gave place to that of the Soffarides, who, eventually, extended their dominion over Tabristan and Segestan. The governor of Egypt and Syria, Achmet Ben Tulun, also made himself independent (A. D. 877, Heg. 263), from whom are descended the Tulunides. The brave Muaffek annihilated, indeed, the empire of the Zinghians, in Cufa and Bassora, 10 years after its formation (A. D. 881, Heg. 268); but he was unable to save the caliphate from the ruin to which it was continually hastening. Motamed died soon after him (A. D. 892, Heg. 279), and was succeeded by Muaffek's son, Mothadad Billah. He contended unsuccessfully with a new sect that had arisen in Irak—the Carmathians (A. D. 899, Heg. 286)—against whom his son, Moktaphi Billah (A. D. 902, Heg. 289), was more fortunate. He was still more successful in a war against the Tulunides, as he again reduced Egypt and Syria, in 905 (Heg. 292). Under his brother, Moktadar Billah, who succeeded him at the age of 13 years (A. D. 909, Heg. 296), rebellions and bloody quarrels about the sovereignty disturbed the government of the empire. He was several times deposed and reinstated, and finally murdered (A. D. 931, Heg. 319). During his reign, Abu Mohammed Obeidallah rose in Africa, who, pretending to be descended from Fatima, daughter of the prophet (therefore from Ali), overthrew the dynasty of the Agladides in Tunis, and founded that of the Fatimites (A. D. 910, Heg. 298). Not satisfied with reigning independent of the caliph, this party, as descendants of the prophet, asserted themselves to be the only lawful caliphs. Shortly afterwards, the dynasty of the Bouides, in Persia, rose to authority and power (A. D. 925, Heg. 315). Chorasan was still independent. The only change was, that the Samanides had taken the place of the Soffarides. In a part of Arabia the heretic Carmathians ruled; in Mesopotamia, the Hamadamites. In Egypt, which had just been recovered, Akschid, from a governor, was called to be a sovereign. From him descended the Akschidites. Kaher Billah, Mothadad's third son, merited his fate, on account of his malice and cruelty. The Turkish soldiers, having recovered their power, drove him from the throne into exile (A. D. 934, Heg. 322), in which he perished five years afterwards. Rhadi Billah, his brother, bore the dignity of an *emir al omra* (captain of the captains), with which the exercise of absolute power, in the name of the caliph, was united; and thus the caliph was more and more thrown into the back-ground. The first who was invested with this dignity was Raik; but it was soon torn from him by the Turk Jakan, by force of arms, in the year 939 (Heg. 327). Jakan extended the power of the office to such a degree as to leave the caliph nothing but the name of his temporal sway, and even assumed the right of determining the succession to the throne. Raik was indemnified by receiving Cufa, Bassora and Irak Arabi, as an independent government. The next caliph, Motaki Billah, Moktader's son, made an effort to regain his independence by the murder of Jakun; but he was soon compelled, by the Turkish soldiers, to appoint Tozun, another of their countrymen, emir, who made this office hereditary. He formally devised it to a certain Schirzad, but it soon came into the possession of the Persian royal house of the Bouides, whose aid the succeeding caliph, Mostaki Billah, solicited against the tyranny of Schirzad. The first Bouide emir, Moezeddulat, left it as an inheritance to his posterity. Not the caliph, but the emir, now reigned in Bagdad, though over only a small territory. In every remote province, there were independent princes. To continue the catalogue of the names of those who were henceforward caliphs, would be superfluous, for these Mussulman *popes* had not by any means the power of the Christian. It would be too tedious to pursue the branches into which the history of the caliphate is now divided; but we must briefly show the great changes which the different states and their dynasties have undergone, and which gave rise to the dominion of the Ottoman Porte. During the minority of the Akschidite Ali, the Fatimite Morz Ledinillah, at that time caliph in Tunis, subjugated Egypt in 969 (Heg. 358), and founded Cairo, which he made the seat of his caliphate.

There were, consequently, at this time, three caliphs—at Bagdad, Cairo and Cordova—each of which declared the others heretics. But the Fatimites, as well as the Abbassides, fell under the power of their viziers, and, like them, the Ommiades in Cordova were deprived of all power by the division of Spain into many small sovereignties, till they were entirely subverted by the Morabethun. (See *Spain.*) Ilkan, king of Turkestan, having conquered Chorasan, and overthrown the Samanides, was expelled again by Machmud, prince of Gazna, who founded there the dominion of the Gaznevides, in 998 (Heg. 388), who were soon, however, overthrown in turn by the Seldjook Turks, under Togrul Beg, in 1030 (Heg. 421). This leader conquered also Charasm, Georgia, and the Persian Irak. Called to the assistance of the caliph Kajem Bemeillah, at Bagdad, against the tyranny of the Bouide emirs, he proceeded to Bagdad, and became emir himself in 1055 (Heg. 448), by which means the dominion of the Turks was firmly established over all the Mussulmans. To his nephew, Alp Arslan (who defeated and took prisoner the Greek emperor Romanus Diogenes), he left this dignity, with so great power, that these Turkish *emirs al omra* were frequently called the *sultans of Bagdad.* Turkish princes, who aspired to be sovereigns in the other provinces, were, at first, satisfied with the title of *atabek* (father, teacher), such as the atabeks of Irak and Syria, of Adherbidschan, Farsistan (Persis) and Laristan. It was the atabeks of Syria and Irak, with whom the crusaders had principally to contend. The first was called *Omadeddin Zenghi;* by the Franks, *Sanguin.* They were afterwards termed *sultans.* The caliph of Bagdad was recognised by all as the spiritual sovereign of all Mussulmans: his temporal authority did not extend beyond the walls of Bagdad. Noureddin, Zenghi's son, being requested, by the Fatimite caliph Adhed, to protect Bagdad against his vizier, sent to Cairo, in succession, the Curds, Schirkueh and Salaheddin or Saladin; but the latter overthrew the Fatimites (as schismatic *anti-popes*), and usurped the authority of sultan of Egypt in 1170 (Heg. 556), with which he united Syria, after Noureddin's death. This is the great Salaheddin (Saladin), the formidable enemy of the Christians, the conqueror of Jerusalem. The dynasty which commenced with him was called, from his father, Ayoub, the *Ayoubites.* They reigned over Egypt till expelled by the Mamelukes in 1250. The Seldjook sultans of Irak were overthrown, in 1194 (Heg. 590), by the Charasmians; and, as those of Chorasan were extinct, there remained of the Seldjook dominions nothing but the empire of Iconium or Roum, in Asia Minor, from which the present Turkish empire derives its origin. (See *Ottoman Empire.*) The Charasmian sultans extended their conquests far into Asia, until their territories were invaded by the Tartars, under Zenghis Khan, in 1220 (Heg. 617). They were finally totally destroyed by his son Octai. Bagdad, also, the remains of the possessions of the caliphs, became the easy prey of a Mongul horde, under Holagou, in 1258 (Heg. 636), by the treachery of the vizier al Kami, and a slave, Amram, under the 56th caliph, Motazem. The nephew of the cruelly-murdered Motazem fled to Egypt, where he continued to be called caliph, under the protection of the Mamelukes, and bequeathed the Mohammedan *popedom* to his posterity. When the Turks conquered Egypt, in 1517, the last of these nominal caliphs was carried to Constantinople, and died, after returning to Egypt, in 1538. The Turkish sultans subsequently assumed the title of *caliph*, and the padishah or grand signor at Constantinople retains it to the present day, with the claim of spiritual supremacy over all Mussulmans, though this claim is little regarded out of his own dominions, and strongly disputed by the Persians.

Calixtins, or Utraquists; a sect of the Hussites in Bohemia, who differed from the Catholics principally in giving the cup in the Lord's supper to laymen. (See *Hussites.*) Under George of Podiebrad, from 1450 to 1471, who declared himself for them, the C. obtained the ascendency. Under Wladislaw, they maintained their religious liberties, and, from the time of the reformation in the 16th century, shared the doctrines as well as the fate of the Protestants in Bohemia. Their refusal to fight against their own sect in the Smalkaldian war, at first drew upon them severe persecutions; but Ferdinand I, though unfavorable to them in other respects, permitted them to participate in the advantages of the religious peace of 1556 with his other Protestant subjects, and the excellent Maximilian II granted them perfect liberty in the exercise of their religious belief. Their situation became more critical under Rodolph II, and they found it difficult to prevail on him publicly to acknowledge the Bo-

hemian confession, presented by them in connexion with the Bohemian Brethren and the Lutherans, and to confirm the church government, under which they had hitherto possessed teachers, churches and schools of their own, and a separate consistory at Prague. When Matthias made many encroachments on the privileges thus granted, the united Protestants, under the count of Thurn, in 1617, undertook to defend themselves. This finally kindled the 30 years' war. After a short triumph under Frederic of the Palatinate, whom they had chosen king, they were defeated, in 1620, near Prague, and the Protestant cause completely overthrown. Ferdinand II caused many C., Lutherans and Calvinists to be executed as rebels, and drove others into banishment; and Ferdinand III did not extend the benefits of the peace of Westphalia to the Protestants in Bohemia. His successors were not more favorably disposed towards the Protestants; and the edict of toleration of Joseph II, 1782, first restored to the Protestants in Bohemia their religious liberty, of which they had been deprived during 162 years, and which is enjoyed to the present day by the Calvinists and Lutherans, among whom the remains of the old C. have been lost.

Calixtus; the name of several popes. —1. The first was a Roman bishop from 217 to 224, when he suffered martyrdom. —2. Guido, son of count William of Burgundy, archbishop of Vienna, and papal legate in France, was elected, in 1119, in the monastery of Clugny, successor of the expelled pope Gelasius II, who had been driven from Italy by the emperor Henry V, and had died in this monastery. He received the tiara at Vienna. In the same year, he held councils at Toulouse and at Rheims, the latter of which was intended to settle the protracted dispute respecting the right of investiture. As the emperor Henry V would not confirm an agreement which he had already made on this subject, C. repeated anew the excommunication which he had pronounced against him as legate, at the council of Vienna, in 1112. He excommunicated, also, the anti-pope Gregory VIII, and renewed former decrees respecting simony, lay investiture and the marriage of priests. Successful in his contest with the emperor on the subject of investiture by means of his alliance with the rebels in Germany, in particular with the Saxons, he made his entrance into Italy in 1120, and, with great pomp, into Rome itself; took Gregory VIII prisoner, in 1121, by the aid of the Normans, and treated him shamefully. He availed himself of the troubles of the emperor to force him, in 1122, to agree to the concordat of Worms. (See *Investiture* and *Concordat*). He died in 1124.— C. III, chosen in 1168, in Rome, as anti-pope to Paschal III, and confirmed by the emperor Frederic I, in 1178, was obliged to submit to pope Alexander III. As he was not counted among the legal popes, a subsequent pope was called *C. III.* This was a Spanish nobleman, Alphonso Borgia, counsellor of Alphonso, king of Arragon and the Sicilies. He was made pope in 1455. He was at this time far advanced in life, but equalled in policy and presumption the most enterprising rulers of the church. In order to appease the displeasure of the princes and nations, occasioned by the proceedings of the councils of Constance and Basil, he instigated them to a crusade against the Turks, and supported Scanderbeg, for this purpose, with money and ships. His intention was counteracted in Germany by the discontent of the states of the empire with the concordat of Vienna, and in France by the appeals of the universities of Paris and Toulouse against the tithe for the Turkish war. King Alphonso, moreover, was indignant at the refusal of the pope to acknowledge his natural son Ferdinand as king of Naples. The Romans, also, were displeased at the favors which he conferred on his worthless nephews. After his death, in 1458, a treasure of 115,000 ducats was found, destined for the Turkish war.

Calixtus (properly *Callisen*), George, the most able and enlightened theologian of the Lutheran church in the 17th century, was born in 1586, at Meelby, in Holstein, and educated at Flensborg and Helmstadt. In 1607, in the latter university, he turned his thoughts to theology; in 1609, visited the universities of the south of Germany, in 1612, those of Holland, England and France, where his intercourse with the different religious parties, and the greatest scholars of his time, developed that independence and liberality of opinion, for which he was distinguished. After a brilliant victory, in 1614, in a religious dispute with the Jesuit Turrianus, he was made professor of theology, and died in 1656. His treatises on the authority of the Holy Scriptures, transubstantiation, celibacy, supremacy of the pope, and the Lord's supper, belong, even according to the judgment of learned Catholics, to the most profound and acute

writings against Catholicism. But his genius, and the depth of his exegetic and historical knowledge, exposed him to the persecutions of the zealots of his time. His assertion, that the points of difference between Calvinists and Lutherans were of less importance than the doctrines in which they agreed, and that the doctrine of the Trinity was less distinctly expressed in the Old Testament than in the New, and his recommendation of good works, drew upon him the reproaches of crypto-papism. His heresy was termed *Syncretism.* (q. v.) The elector John George I of Saxony protected him, in 1655, at the diet of Ratisbon, against the Lutheran theologians. His historical investigations and his philosophical spirit shed new light on dogmatic theology and the exegesis of the Bible, and gave them a more scientific form. He made Christian morality a distinct branch of science, and, by reviving the study of the Christian fathers and of the history of the church, prepared the way for Spener, Thomasius and Semler. He educated his son Frederic Ulrich Calixtus, and many other enlightened theologians.

Calk; to drive a quantity of oakum into the seams of planks, to prevent the entrance of the water. After the oakum is driven in, it is covered with melted pitch or resin, to preserve it from the action of the water.

Calkar. (See *Calcar.*)

Calkoen, Jan Frederic van Beek, a Dutch scholar and astronomer, born 1772, at Grōningen, died in 1811. He was a member of many learned societies, professor at Leyden, and afterwards at Utrecht. His Euryalus, on Beauty, and another work on the Time-Pieces of the Ancients, are deserving of mention. His essay against the work of Dupuis, *Origine de tous les Cultes*, obtained the Taylerian prize.

Call is the cry of a bird to its young, or to its mate in coupling time, which, in most instances, is a repetition of one note, and is generally common to the cock and hen. Calls are also a sort of pipes used by fowlers to catch birds, by imitating their notes. They are commonly formed of a pipe, reed or quill, and blown by bellows attached to it, or by the mouth. Hares are also sometimes taken by a call.

Callao; a seaport town of Peru, on a river of the same name, near the Pacific ocean. It is the port of the city of Lima, from which it is six miles distant. Lon. 77° 4′ W.; lat. 12° 3′ S.; population, about 5000. The road is one of the most beautiful, the largest and safest, in the South sea. Two islands, named *St. Laurence* and *Callao*, and the peninsula, which nearly reaches them, defend vessels from south winds: towards the west and north is open sea, but the winds from these points are never violent; the water is always tranquil; is deep, and without rocks. C. is the rendezvous of from 16 to 17,000 tons of shipping, 5000 of which are reserved for the navigation of the Pacific ocean. The town was fortified by 10 bastions and some batteries, and defended by a garrison. There are two fauxbourgs inhabited by Indians. In 1746, this town was destroyed by an earthquake, when, of 4000 inhabitants, only 200 escaped. Since that time, C. has been rebuilt upon the same plan, but a little farther from the sea.

Callimachus, a Greek poet and grammarian, born at Cyrene, in Lybia, of a noble family, flourished under the reign of Ptolemy Philadelphus, about 250 years before Christ. He opened, in Alexandria, a school of grammar, i. e., of the belles-lettres and liberal sciences, and could boast of several scholars of distinguished attainments, such as Eratosthenes, Apollonius Rhodius, Aristophanes of Byzantium, &c. Ptolemy Philadelphus presented him with a place in the museum, and gave him a salary, as he did other men of learning. After the death of Philadelphus, he stood in equal favor with Ptolemy Euergetes. Under these circumstances, he wrote most of his works, the number of which was very considerable. With the exception of some fragments, all that we have of these is 72 epigrams and 6 hymns. His poem on the hair of Berenice (*comæ Berenices*) has been preserved in the Latin translation of Catullus. C.'s poems bear the stamp of their age, which sought to supply the want of natural genius by a great ostentation of learning. Instead of noble, simple grandeur, they exhibit an overcharged style, a false pathos, and a straining after the singular, the antiquated, the learned. His elegies are mentioned by the ancients with great praise, and served Propertius as models. The best edition of C. is by J. A. Ernesti (Leyden, 1761, 2 vols.), which, as well as the edition of Grævius (Utrecht, 1697, 2 vols.), contains Spanheim's learned commentary. Valckenaer also published *Elegiarum Fragmenta*, by this author (Leyden, 1799).

Calliope; one of the muses (q. v.); daughter of Jupiter and Mnemosyne. She presided over eloquence and heroic

poetry. She is said to have been the mother of Orpheus by Apollo. She was represented with an epic poem in one hand, and a trumpet in the other, and generally crowned with laurel.

Callisen, Henry, a physician and surgeon, born in 1740, at Pentz, in Holstein, son of a poor clergyman, educated himself by his own exertions, served in the army and in the fleet, afterwards in the hospitals at Copenhagen, was made, in 1771, chief surgeon in the Danish fleet, and, in 1773, professor of surgery at the university in Copenhagen. He wrote, in 1777, his *Institut. Chirurgiæ hodiernæ*, which was received with applause by all Europe. In Vienna, and at the Russian universities, lectures are given on them. There are also excellent essays by him in the medical journals. He died at Copenhagen, February 5, 1824, at the age of 84 years.

Callisthenes, a Greek philosopher and historian, a native of Olynthus, was appointed to attend Alexander in his expedition against Persia. His republican sentiments rendered him unfit for a courtier, added to which he had no small share of vanity. But his unpardonable crime was his opposition to the assumption by that conqueror of divine honors. The conspiracy of Hermolaus affording a pretext for a charge of treason, he was apprehended. Historians disagree as to his fate; but most of them admit that he was for some time carried about with the army in the ignominious character of a convicted traitor. Aristotle states that he died of a disease contracted under this treatment. Ptolemy asserts that he was crucified; Justin, that he was disfigured and confined in a cage, with a dog for his companion, until Lysimachus enabled him to terminate his sufferings by poison. He wrote a History of the Actions of Alexander, and other historical works.

Callisthenics. (See *Gymnastics.*)

Callisto; a nymph of Diana, daughter of Lycaon, king of Arcadia. Jupiter loved her, assumed the shape of Diana, and seduced her. The fruit of her amour, called *Arcas*, was hid in the woods, but preserved. She was changed, by the jealousy of Juno, into a bear. Jupiter placed her, with her son, among the stars, where she still shines as the Great Bear.

Callot, Jacques, born in 1594, at Nancy, vanquished, by perseverance, every obstacle which obstructed his perfection in his art. He twice ran away from his parents, who intended him for another profession, fled to Italy, and learnt drawing, in Rome, under Giul. Parigi, engraving under Philip Thomassin, and became afterwards, at Florence, a disciple of Canta-Gallina, and, at Nancy, of Claude Henriet. He soon gave himself up entirely to his love for engraving, and preferred etching, probably, because his active and fertile genius could, in that way, express itself more rapidly. In the space of 20 years, he designed and executed about 1600 pieces. (See the catalogue in the *Cabinet de Singularités d'Architecture, Peinture, Sculpture et Gravure*, by Le Comte, vol. 2, p. 376 to 392, and Gersaint's *Catalogue de Lorangère.*) In the composition, the disposition of the parts, and in the distribution of light, C. is not particularly eminent; but, in the single parts of his pieces, he is very successful. His drawing is correct; the attitudes mostly pleasing; the groups have considerable variety; harsh contrasts are avoided; the expression is vigorous; and the execution displays the ease of a master. He is particularly distinguished by the drawing of the little figures with which he has filled all his pieces. Most of them, except sacred subjects, are representations of battles, sieges, dances, festive processions. The *Misères et Malheurs de la Guerre*, in 18 pieces, are considered the best. He executed works of this kind for Cosmo II of Florence, Louis XIII of France, and the duke of Lorraine. He was so strongly inclined to the comic, that this disposition appears even in his representations of sacred subjects, for instance, in the *Temptation of St. Anthony.* He not only introduced some burlesque and grotesque figures in his engravings, but executed whole pictures in this style, in which his whole art is displayed. His *Fair* and his *Beggars* are called his best pieces. He was the first who used, in his etchings, the hard varnish—the *vernice grosso dei lignaiuoli* of the Italians. He died at Nancy, in 1635. He was distinguished for piety, magnanimity, and regularity of life. (See the biography of C. by Gersaint, or that of Husson, Paris, 1766.)

Callus is a preternatural hardness, whether carneous or osseous. The new growth of bony substance between the extremities of fractured bones, by which they are united, is an instance of the latter. External friction or pressure produces the former, as in the hands of laborers, and the feet of persons who wear tight shoes. (See *Corns.*)

Calmar, the principal city of Sma-

land, in Sweden, on the Baltic sea, is situated opposite to Oland, on the island of Quarnholm, and contains 4500 inhabitants. It has a small but good harbor, and carries on considerable trade in timber, alum and tar. It has also manufactures of woollen cloth, and is the residence of a bishop, and of the governor of the province. The well-fortified castle of C. lies outside of the city, on the strait of Oland. (For the ordinance called the *Union of Calmar*, see *Margaret, queen of Denmark and Norway.*)

Calmet, Augustine, distinguished as an exegetical and historical writer, born in 1672, at Mesnil-la-Horgne, in the diocese of Toul, entered, in 1688, into the Benedictine order at Toul, and studied chiefly in the abbey of Moyen-Moutier. Here he became, in 1698, teacher of philosophy and theology; in 1728, abbot of Senones, in Lorraine, and died, in 1757, at Paris. He was a judicious compiler of voluminous works, such as *Commentaire sur tous les Livres de l'Anc. et de Nouv. Test.* (Paris, 1707—16, 23 vols. 4to.), *Dictionnaire Hist. et Crit. de la Bible* (4 vols.), *Histoire Eccl. et Civile de Lorraine* (4 vols.) Acuteness and taste are wanting in his writings, and they have been censured both in France and in other countries.

Calms, Region of. In the Atlantic ocean, between the tropic of Cancer and lat. 29° N., and on the confines of the trade-winds, between 4° and 10° N. lat., calms of long duration prevail; and hence these tracts are called the *calm latitudes*, or the *regions of calms*. In the latter tract, particularly, these perpetual calms are accompanied by a suffocating heat, by thunder-storms and floods of rain, so that it is sometimes called the *rainy sea*. The only winds that occur are sudden squalls of short duration and little extent. In these calms, the provisions are corrupted, the seams open, and the stagnant air breeds disease. When a ship is in this position, if the currents set in towards rocks, and the sea is too deep to cast anchor, her destruction is almost inevitable. In the Mediterranean, where there are no tides, *dead calms* are more common than in the open ocean; but they are often the presages of approaching storms.

Calmucs (*Oelot*, *Eleuthes*); the most remarkable branch of the Mongol race. They themselves maintain, that their primitive residence was situated between the Koko-Noor (the Blue Lake) and Thibet. Long before the time of Genghis Khan, a part of this people is said to have made an expedition to the west, as far as Asia Minor, and to have lost themselves there among the mountains of Caucasus; but the rest, who had remained in Great Tartary, received, from their Tartar neighbors, the name of *Khalimik* (the separated). In fact, they call themselves, to this day, *Khalimik*, though *Oelot*, which signifies the same thing, continues to be their proper appellation. They have been divided, at least since the dismemberment of the Mongol empire, into four principal branches, called *Khoschot*, *Derbet*, *Soongar*, and *Torgot*. The greater portion of the Khoschot Calmucs has remained in and around Thibet and on the Koko-Noor, and is said to have been under the protection of the Chinese since the downfall of the Soongar Calmucs. The smaller portion of this tribe had, long before, retired to the Irtish, and finally fell under the dominion of the Soongar horde, with which it took part in the war against China, and was dispersed with them. The horde of the Khoschots (warriors), which is still united under the Chinese sovereignty, received its name from the courage which it displayed under Genghis, and is rated at 50,000 souls. For this reason, and also because the family of their princes derives its origin immediately from the brother of the great Genghis, the Khoschots maintain the first rank among the Calmuc tribes. A part of them, about 1800 families, settled on the Wolga in 1759, and voluntarily submitted to the Russian sovereignty. At the dismemberment of the Mongol empire, the Soongar Calmucs constituted but one tribe with the Derbets, which was afterwards divided between two brothers of their princely family. In the 17th century, and the beginning of the 18th, this horde subjected a great part of the other Calmuc tribes, especially the Khoschot, Derbet and Khoit, and carried on bloody wars, both with the Mongols and with the Chinese empire, which terminated in their entire subjugation and dispersion. They were regarded as the bravest, richest and most powerful horde. The Derbet Calmucs, whose pasture-grounds were originally situated in the region of the Koko-Noor, departed from thence on account of the Mongol disturbances towards the Irtish, and separated into two parties. One of them became united with the Soongars, and was finally destroyed with them. The other settled on the Ural, Don and Wolga, and the majority of them joined the Torgots, but afterwards separated from them. The Torgot (Wolgaic) Calmucs seem to have

been formed into a distinct horde, later than the other Calmuc branches. In the very beginning, they separated from the restless Soongars, and settled on the Wolga; for which reason, the Russians, to whom they submitted in 1616, called them the *Wolgaic* Calmucs. But, the oppression of the Russian government having excited dissatisfaction among them, they returned to Soongary in 1770, and put themselves under the Chinese protection. Here, however, strict measures were at first adopted against them. All these different tribes were formerly, or are at present, under the rule of their own khans, who are tributary to the government under which the horde lives. There is also a colony of baptized Calmucs, to which the Russian government has granted a fertile territory, with the city Stavropol, in the Orenberg district of the government Ufa. This colony has been much augmented of late. In the same district, there is likewise a small colony of Mohammedan Calmucs, formed of proselytes which the Kirghises have made and received among themselves.

Calomel. (See *Mercury*.)

Calonne, Charles Alexander de, born in 1734, at Douai, where his father was first president of the parliament, studied at Paris, devoted himself to the duties of an advocate at Artois, went as attorney-general (*procureur général*) to the parliament of Douai, and was, in 1763, appointed *maître des requêtes*, in 1768, intendant of Metz, and afterwards of Lille. This was his situation on the death of Louis XV. The minister Maurepas, returning from a long exile, had placed successively in the office of minister of finance, Turgot and Necker, Fleury and Ormesson. In November, 1783, after the death of Maurepas, they were succeeded by C., who found the finances already in disorder. Besides the loans and the arrears accumulated under preceding ministers, 176 millions had been raised in advance. C. concealed his embarrassment, and assumed an appearance as if all was well. He despised the expedient of retrenchment, paid the instalments which were due, supported the public paper by secret advances of money, hastened the payment of the interest of the public debt, made great improvements in the farming of the royal monopolies and of the public lands, established the credit of the *caisse d'escompte*, projected a sinking-fund, and undertook a new coinage of gold money, as if no difficulties existed. At first, he followed the system of loans, which was begun before him. According to his estimate, the government had, from 1776 to 1786, borrowed 1250 millions. The annual deficit amounted, however, to 115 millions. This, nevertheless, was to be reduced, in 1797, to 55 millions. To this end, the revenues of the state, which might then amount to 475 millions, should have been increased to 590 millions. C.'s first operations were calculated only for the moment; the national debt rested on no good security. To provide this, the only means was a new system of taxation, and C. proposed it. His two principal instruments were a general land-tax, payable in kind, and an increase of the stamp-tax. Since, however, it was foreseen, that the execution of a plan which called for sacrifices from the two highest ranks of the nation, till this time unheard of, would meet with much opposition from them, and yet a general assembly of the states seemed too dangerous, C. chose a middle course, which seemed to be favorable to the accomplishment of his design. He proposed an assembly of the notables, chosen from the most respectable members of the two first orders, the magistrates and the heads of the most important municipalities. On the 22d of February, 1787, the notables held their first session at Versailles. The report of the minister of finance was impatiently expected. He delivered it with all the ability of which he was capable; but this could not diminish the ill impression of his explanations. The deficit of 115 millions was greater than had been feared. C. traced the origin of this from the administration of Terray; asserted that it amounted then to 40 millions; that, from 1776 to 1783, it had increased about as much more; and, at last, confessed that he himself had increased it about 35 millions from that time till 1786. Lafayette appeared at the head of those numerous complainants who now came forward against C.; but the king seemed, at first, to support his minister. The keeper of the great seal, C.'s constant adversary, was dismissed. This triumph was, however, of short duration. Independently of the friends of Lafayette and Necker, a third party came forward against him—that party which brought into the ministry the archbishop of Toulouse, Loménie-Brienne. The court was alarmed at the delays of the assembly of the notables, and the ferment which it excited. C. was deprived of his office, and banished to Lorraine. Thence he went to England, where he received a flattering invitation from the empress

Catharine II. He now employed himself in refuting the charges which were brought against him. In his petition addressed to the king about the end of 1787, he takes a review of all his ministerial operations, and endeavors to prove that he had always for his object the improvement of the finances. The archbishop of Toulouse, his successor, had informed him of the personal displeasure of the king; the parliaments of Grenoble, Toulouse, Besançon, had made him the object of public animadversion; the parliament of Paris had come forward formally against him. C. defended himself against all these attacks. He besought the king to declare, that he had constantly acted by his express command or with his consent, and offered, in case the king should be silent, to justify himself before the tribunal of peers, before which he had been accused. To all the charges brought against him, his friends opposed this fact, which is certainly true, that he retired from the ministry poor. In a letter of C. to the king, Feb. 9, 1789, containing political reflections, and principally directed against Necker, he manifested the intention of offering himself a candidate for the states-general. He actually made his appearance in the electoral assembly of the nobility of Bailleul, but returned to London without effecting his purpose, where he employed himself in writing on the state of affairs in France. The revolution had, in the mean time, begun. C. took part in it with a zeal which seemed to exceed his powers. His negotiations, his journeys to Germany, Italy and Russia, his perseverance, his attachment to their cause, made him invaluable to the party which he served. In order to assist his unfortunate party with the pen, he wrote his *Tableau de l'Europe en Novembre*, 1795, remarkable on account of its warmth, and its faithful delineation of events. From that time he lived in London, principally occupied with the fine arts, which he had always cultivated with taste. In 1802, he returned to Paris, where he died in October of the same year. Such was the career of a minister who gave the first impulse to the French revolution. He possessed, in a high degree, the qualities requisite to a great statesman—an accurate acquaintance with details, together with comprehensive views, and the power of conceiving extensive projects. But, if wisdom which matures the conceptions, if a prophetic glance which foresees all the impediments, if consistency and a spirit of method which provides for the success of the execution, are essential to a statesman, then C. can lay no claim to that title. A knowledge of human nature was wanting in his character. His morals were far from being strict. His works, among which his speeches and memorials to the notables deserve the first place, are valuable contributions to the history of financial administration.

Caloric is the name given, in chemistry, to that agent which produces the phenomena of heat and combustion. It is hypothetically regarded as a subtile fluid, the particles of which repel one another, and are attracted by all other substances. It is imponderable, and, by its distribution, in various proportions, among the particles of matter, gives rise to the three general forms of gas, liquids and solids. The particles of water, by losing caloric, have their cohesion so much increased, that they assume the solid form of ice; by adding caloric, they again become fluid; and by a still further addition, they are converted into vapor.—Caloric exists in two different states—*free* or *uncombined*, and *in a state of combination*. In the former condition, it creates the sensation of heat, and produces expansion in other bodies. The power which any body has of exciting the sensation of heat, and occasioning expansion, is understood by the expression of its *temperature*. This is supposed to vary with the quantity of free caloric in a given quantity of matter; a high temperature being ascribed to the presence of a large quantity of free caloric, and a low temperature to that of a small quantity. We are ignorant, however, of the extremes of temperature, and may compare it to a chain, of which a few of the middle links, only, are exposed to our observation, while its extremities are concealed from our view.—The *expansion of bodies* is one of the most universal effects of an increase of temperature. This increase in bulk, however, is not the same in all bodies. The same increase of temperature causes liquids to expand more than solids, and aëriform bodies much more than either. On this principle are constructed the various instruments for measuring temperature; since the degree of expansion produced by caloric bears a sufficient proportion to its quantity to afford us the means of ascertaining it with tolerable accuracy. Our senses, it is obvious, are quite inadequate to afford us this information; for we compare our sensations of heat, not with any fixed or

uniform standard, but with those sensations which we have had immediately previous. Hence, the same portion of water will feel warm to a hand removed from contact with snow, and cold to another hand which has been heated before the fire. To convey precise notions of temperature, therefore, we are obliged to describe the degree of expansion produced in some one body which has been previously agreed upon as a standard of comparison. The standard most generally adopted is quicksilver, which is contained in a glass ball, terminating a long, narrow tube. This instrument is called a *thermometer*. If quicksilver, or, indeed, any other substance except the gases, suffered equal expansion by equal increments of the calorific power, then this instrument would be perfect; but the same increase of bulk is not effected in the same liquid or solid, at all temperatures, by adding similar quantities of heat; for bodies expand, by equal increments of caloric, more in high than in low temperatures, because the force opposing expansion is diminished by the interposition of caloric between the particles of bodies; and, therefore, when equal quantities of caloric are added in succession, the last portions meet with less resistance to their expansive force than the first. In gases, on the contrary, which are destitute of cohesion, equal increments of heat appear to be attended with equal augmentations of bulk.—The *tendency to an equilibrium* is a characteristic of free caloric. Any number of different bodies, unequally heated, when exposed, in an apartment, to the same temperature, gradually arrive to an equality of temperature. It is in obedience to this law, that we experience the sensations of heat and cold when we touch bodies which are warmer or colder than ourselves. There exists much diversity in the rapidity with which different substances abstract caloric when in contact with a body in which it is accumulated. Common air and gases abstract it but tardily, while wood, stones and metals acquire it more rapidly. According to their power of conducting it off under these circumstances, bodies are divided into *conductors* and *non-conductors* of caloric; and, in general, the power of conduction varies with the densities of bodies. But this tendency of caloric to an equilibrium is not established solely by the agency of intermediate bodies or communication. A part of it moves through the atmosphere, like light, in right lines, and with immeasurable velocity, and has, therefore, been called *radiant caloric*. The comparative quantities lost by radiation and by conduction may be approximated by observing what time it takes to cool any body through the same number of degrees in air and *in vacuo*. Thus doctor Franklin imagined he had ascertained that a body, which requires five minutes to cool *in vacuo*, will cool in air, through the same number of degrees, in two minutes. Count Rumford's experiments, with a Torricellian vacuum, give the proportions of five to three.—Radiant caloric passes only through transparent media, or free space. When, in its passage, its rays impinge upon the surface of a solid or a liquid substance, they are either reflected from it, and thus receive a new direction, or they lose their radiant form altogether, and are absorbed. In the latter case, the temperature of the receiving substance is increased; in the former, it is unchanged.—The nature of the surface of a body has been found to influence powerfully both the radiation and absorption of caloric. The energy of calorific emanation from a cubical tin vessel, coated with different substances, and containing warm water (as determined by the differential thermometer of Leslie), gave, with a covering of

Lampblack,	100
Isinglass,	75
Tarnished lead,	45
Polished iron,	15
Tin-plate, gold, silver or copper,	12

Similar results were obtained simply by noting the rates of cooling in vessels of similar shapes and capacities with various surfaces. Useful lessons have been derived from these discoveries. Tea and coffee-pots, which are intended to retain their heat, are made of bright and polished metals; and steam-pipes, intended to convey heat to distant apartments, are kept bright in their course, but darkened where they reach their destination. The power of different surfaces to absorb caloric was found, by coating one of the bulbs of the differential thermometer successively with different substances, and presenting it to an uniformly heated substance, to follow the same order as the radiating or projecting quality.—With regard to *combined caloric*, it has been shown that solids, during liquefaction, imbibe a quantity of caloric, which ceases to be obvious, both to our senses and to the thermometer. The same is also true of solids and liquids in their conversion

into vapors or gases; a portion of caloric, which is essential to the elasticity of the new product, ceases to become apparent. Whenever this effect takes place, *cold* is said to be produced; by which we are only to understand the passage of caloric from a free to a latent form. The reverse of these phenomena has also been satisfactorily established; viz. when the density of bodies is increased, either by chemical or mechanical means, caloric is evolved. For example, a high temperature is produced by mingling cold sulphuric acid and water; metals become intensely heated by the augmentation of their density through hammering; liquids, by becoming solids, or gases by conversion into liquids, also evolve caloric. A pound of water, condensed from steam, will render 100 pounds of water at 50° warmer by 11°; whereas, a pound of boiling water will produce the same rise of temperature in no more than about 13.12 pounds; and, since steam and boiling water affect the thermometer in the same manner, this effect can be produced only from the existence of a much greater quantity of caloric in the former than in the latter. —The *sources of caloric* are six; viz. the sun's rays, combustion, percussion, friction, the mixture of different substances, and electricity.

Calorimeter; an instrument to measure the capacity of a body for caloric, or its specific caloric. The thermometer (q. v.) measures merely the variations of temperature, or sensible heat. The body in the calorimeter is placed in the innermost of three concentric vessels, the two outer ones containing ice; the quantity of water produced by the cooling of the body a given number of degrees, determines its specific caloric. This instrument was invented by Lavoisier and Laplace. In the C. invented by Rumford, water is used; the capacity of the body is determined by the number of degrees which the temperature of the water is raised, in cooling the body a given number of degrees.

Calorimotor. (See *Galvanic Battery.*)

Calottists, or the Régiment de la Calotte; a society which sprung up at Paris, in the last years of the reign of Louis XIV, and formed a regiment under the name *La Calotte*, signifying a flat cap of a peculiar shape, which was the symbol of the society. All were admitted whose ridiculous behavior, odd character, foolish opinions, &c., had exposed them to public criticism. They had a singular coat of arms, on which was the sceptre of Momus, with bells, apes, rattles, &c.: on their principal standard were the words "*Pavet Momus, luna influit.*" Every one who made himself particularly ridiculous received letters-patent, and those who were most angry were most laughed at. On the death of Torsac, the colonel of the Calottists, the *éloge* (a spirited satire on the academical style), which the Calottists pronounced on this occasion, was suppressed. Aimon, colonel of the guards, hastened to marshal Villars with their complaints, and concluded with the words, "My lord, since the death of Alexander and Cæsar, the Calottists have not had any protector besides you," and the order was retracted. They became, however, too bold, attacked the ministers, and even foreign kings; and the regiment was, in consequence, dissolved. Of a similar character is the *Academy of Fools*, which, for many years, has existed in Duisburg. Some act of folly is necessary to procure a man admission as a member.

Caloyers; Greek monks, who chiefly reside on mount Athos, and lead a very solitary and austere life, eating no meat, and observing the fasts of the Greek church very rigidly. They do not even eat bread, unless they have earned it. During their 7 weeks of Lent, they pass the greatest part of the night in weeping and lamentations for their own sins and for those of others. The Turks sometimes call their dervishes by this name.

Calpe. (See *Abyla* and *Gibraltar.*)

Calprenède, Gauthier de Costes de la, born in Tolgou, in Gascony, died at Paris in 1663, in the office of royal chamberlain. He was one of the authors who, in the 17th century, brought into fashion a new kind of voluminous and long-spun romances of chivalry. Events from the Greek and Roman history were treated in the spirit and manner of the old romances of chivalry. C. wrote Cassandra, in 10 vols., Cleopatra, in 12 vols., Pharamond, in 7, besides some tragedies. His tragedies obtained little reputation by the side of those of Corneille, but his romances were highly celebrated, and are, certainly, the best of their kind. He is not destitute of poetical imagination, and his characters are often dignified and well drawn, though his Artaban has become a proverbial name for exaggeration. He wrote with great rapidity. His plots, however, are constructed with care, and his stories, long as they are, are not deficient in keeping. His lady has surpassed him in boldness of romantic narration in *Les Nouvelles de la Princesse Alcidiane.*

Calpurnius, Titus Julius, a native of

Sicily, lived in the 3d century. We have 7 idyls written by him, which are not without merit, and approach near to those of Virgil, although they are inferior to them in elegance and purity, as well as to those of Theocritus in simplicity and conformity to nature. The best edition is that of Beck (Leipsic, 1803).

Caltrop; a kind of thistle, armed with prickles, which grows in France, Italy and Spain, and is troublesome by running into the feet of cattle. Hence, in the military art, C. is an instrument with 4 iron points, disposed in a triangular form, 3 of them being turned to the ground, and the other pointing upwards. They are used to impede the progress of cavalry.

Calumet; the Indian pipe of peace. The origin of the word is doubtful. Heckewelder, in his Narrative of the Mission of the United Brethren among the Delaware and Mohegan Indians (Phil. 1820), gives several derivations. Mr. Duponceau thinks it may come from the French *chalumeau*, a reed. Upon all occasions, when Indian chiefs and warriors meet in peace, or at the close of a war with those of another nation, in their talks and treaties with the whites, or even when a single person of distinction comes among them, the calumet is handed round with ceremonies peculiar to each tribe, and each member of the company draws a few whiffs. To accept the calumet, is to agree to the terms proposed; to refuse it, is to reject them. Some symbols of amity are found among all nations: the white flag, or flag of truce, of the moderns, and the olive branch of the ancients, are similar in character to the Indian calumet. The calumet is still in use among the Indians, and was introduced at a late interview between president Adams and the chiefs of some Indian tribes. Tobacco is smoked in the calumet, and the leaves of various other kinds of plants. The bowl of this pipe is made of different kinds of marble, and the stem of a reed, or of some light kind of wood, which is easily perforated. This stem is adorned in various ways; sometimes it is marked with the figures of animals, and hieroglyphical delineations, and almost universally has beautiful feathers attached to it, disposed according to the taste of the individual, or of the tribe to which he belongs. The *calumet dance* is the least hideous of the Indian dances. It is of a peaceful character, and seems to be intended to represent, by a series of movements, the power and utility of the calumet. It is rude and simple, as are all the dances of the Indians.

Calvados; a dangerous ridge of rocks on the north coast of Normandy, extending (lat. 49° 22′ N.) to the west of Orne, for the space of 10 or 12 miles. It is so called from a Spanish vessel once wrecked on it, and gives its name to the department. (q. v.)

Calvados. (See *Departments.*)

Calvart, Dionysius, a painter, born at Antwerp, in 1555, went, very young, to Italy, as a landscape painter; where, in order to learn how to draw figures, he entered the school of Fontana and Sabbatini, in Bologna, with the latter of whom he visited Rome. After having passed some time in copying the paintings of Raphael, he opened a school at Bologna, from which proceeded 137 masters, and among these Albano, Guido and Domenichino. The people of Bologna regarded him as one of the restorers of their school, particularly in respect to coloring. C. understood perspective, anatomy and architecture; but the attitudes of his figures are sometimes mean and exaggerated. He died in 1619, at Bologna, where are his best paintings. Agostin Caracci and Sadeler have engraved some of his works.

Calvary (in Heb., Golgotha, *the skull*, Luke xxiii. 33., or *the place of the skull*, Matt. xxvii. 33.); a mountain situated without the walls of Jerusalem, on which Jesus Christ was crucified. Matthew relates, that, at the time when our Savior expired, the earth shook, and the rocks split; and some modern travellers assert that the fissures in this mountain do not follow the direction of the strata, but are evidently supernatural. Jewish traditions affirmed, that Adam was buried on mount Calvary (*credat Judæus*), and the early Christians believed that Jesus Christ was crucified here, that the blood shed for the redemption of the world might also purify the remains of the first sinner!—*Calvaries* are small chapels, raised on hills in the vicinity of cities, with a crucifix, in allusion to the place and manner of Christ's death. Thus the calvary of mount Valerian, near Paris, is composed of 7 chapels, in each of which some mystery of the passion is represented.

Calvert, George, the first baron of Baltimore, was descended of a Flemish family settled at Kipling, in Yorkshire, where he was born in 1582. He was educated at Oxford, and, after travelling abroad, entered into the service of Robert Cecil, afterwards earl of Salisbury. He was knighted by James I, and made clerk of the privy council, and, in 1619, was appointed one of the secretaries of state.

This post he resigned in 1624, in consequence of having become a Roman Catholic. Notwithstanding this, he retained the confidence of the king, who, in 1625, raised him to the Irish peerage of Baltimore. He had previously obtained a grant of land in the island of Newfoundland, where he was prevented from making a settlement by the invasions of the French. He therefore resigned his claim, receiving, instead of it, a territory on the American continent, now forming the state of Maryland. This country was colonized under the patronage of lord Baltimore, who displayed justice and good faith in his dealings with the Indians, and liberality to religious sects in his legislative arrangements, highly creditable to his principles and character. He died in London, in 1632. He wrote some political tracts, and his speeches in parliament and letters have also been published.

Calvin, John (so called from *Calvinus*, the Latinized form of his family name *Chauvin*), the second great reformer of the 16th century, was born at Noyon, in Picardy, July 10, 1509. His father, Gerard Chauvin, a cooper, dedicated him early to the church. C. says, in a letter to Claude d'Hangest, abbot of St. Eloi, at Noyon, that he was indebted to the family of this prelate for his first instruction and a liberal education. When hardly 12 years old, he received a benefice in the cathedral of his native city. Six years after, he was appointed to a cure, which he soon exchanged for another. Thus, by the means of his benefactors, he enjoyed, even before his 20th year, several benefices, and even the title and income of a cure, while he was yet pursuing his studies in Paris. Here he became acquainted with his townsman Peter Robert Olivetan, his senior by some years, from whom he received the first germ of the new doctrine, which was then beginning to spread in France. He was induced, by this, to renounce the study of theology, and to devote himself to law, at Orleans, and afterward at Bourges. He made rapid progress therein, and, at the same time, studied the Greek language, under Melchior Volmar, a German, who strengthened the inclination for innovations already awakened in him by Olivetan. In 1532, he returned to Paris, and resigned his benefices. In the same year, he published a Latin commentary upon the two books of Seneca, *De Clementia*, in which he called himself by his Latinized name, *Johannes Calvinus*, and was obliged, in 1533, to flee from Paris, because his friend Michael Cop, rector of the university, was persecuted on account of a discourse in favor of the new doctrine, in which he was suspected of having participated. C. took refuge in the house of Du Tillet, a canon at Angoulême, with whom he quietly pursued his studies, and began to collect the materials for his Christian Institution, which appeared two years afterwards. Thence he went to Nerac, to queen Margaret of Navarre, the sister of Francis I, who, not so much from a decided inclination for the new doctrine, as from love for science, afforded refuge to several learned men, who were obliged to leave France on account of their opinions. C. was very well received by her, and here became acquainted with several men, who, at a future time, were useful to his party; returned to Paris, but, in 1534, was again obliged to leave France. He retired to Bâle, where he published his Christian Institution, as the confession of faith of those who were persecuted in France, and condemned to the stake; in which it was his design to free them from the calumny, which had been circulated from political motives, that they were rebels and Anabaptists, and had nothing in common with the Lutheran doctrine. It would be difficult briefly to relate how he went farther than Luther in regard to the doctrine of free will, of imputative justice, and the merit of good works; but it is more easy to display the bold consequences which he drew from his doctrines. He attacked not only the supremacy of the pope, but even the authority of general councils; he does not recognise the character of a bishop or a priest any more than that of a visible head of the church; he permits no vows but those of baptism, and no sacraments but those of baptism and the Lord's supper; even these he does not regard as indispensable to salvation. The mass is to him a profanation, and the honors paid to the saints, idolatry. This work, *Institutio Christianæ Religionis*, appeared afterwards in French, and almost every year was published by him with emendations and additions. The most complete edition was published by Robert Stephens, in 1559. The prefixed *Præfatio ad Christianissimum regem, qua hic ei liber pro confessione fidei offertur*, could not, however, put an end to the religious persecutions in France; since Francis I, although far from being actuated by religious fanaticism, was influenced, by political views, to continue them. C. then

went to Italy, to preach his doctrine there, and met with a favorable reception from the duchess Renata of France, the daughter of Louis XII, and wife of Ercole d'Este, who subsequently professed her belief in his doctrines. But he was obliged to save himself by a hasty flight from Aosta, where he was discovered. He returned to Paris about the middle of the year 1536. Since, however, he could not live there in security, he resolved to go to Bâle, and took the road through Geneva, where, a year before, the new doctrine had been introduced by a formal decree of the government, and Farel was very active in effecting its establishment. With him C. united himself, and, soon after, undertook a course of theological instruction, to which he devoted himself exclusively, while he left the pulpit to Farel. They attempted to reform the manners of the inhabitants; but this enterprise, in which they had connected themselves with an equally zealous, but less able preacher, drew upon them a crowd of powerful enemies, by whom they were at last overthrown. The cause of this was the following: the Genevan church made use of leavened bread in the eucharist, and had removed the baptismal font from the church, and, moreover, abolished all holy-days, except the Sabbath. These innovations were not approved by the synod of Lausanne. The magistracy of Geneva required Farel and C. to comply with the decision of the synod, and commanded them, on their refusal, to leave the city in three days. This happened in April, 1538. They went to Berne; and, since the exertions of the magistracy of Berne and of the synod of Zûrich could not effect their recall, C. went to Strasburg, where Luther's doctrine had been introduced by Bucer 10 years before. Bucer received him very kindly, and caused him to be appointed professor of theology. At the same time, he obtained permission to erect a French church, which, on account of the great number of fugitives from France, was very important. Notwithstanding the great esteem in which he was held here, his views were still directed to Geneva; the inhabitants of which he exhorted, in two letters, to remain true to the new doctrine, when cardinal Sadolet invited them to return into the bosom of the church. Here, also, in 1540, C. published his work on the Lord's supper, in which he sought to refute both the opinion of Luther, who took this sacrament in the literal sense, and that of Zuinglius (q. v.), who understood it typically. In a conference held at Zûrich in 1549, he first declared himself, unconditionally, in favor of the opinion of the latter. At last, in 1541, his friends in Geneva succeeded in effecting his recall; a particular deputation besought the magistracy of Strasburg to restore him to his former flock. But, as C. was appointed a deputy to the diet at Frankfort, and was afterwards obliged to be present at the conference at Ratisbon, he was not able to return to Geneva till September of the same year. He now laid before the council the draft of his ordinances respecting church-discipline, which were immediately accepted, and published in November. In pursuance of the provisions of these, a consistory was formed, composed half of clergymen, half of laymen, in order to watch "over the support of the pure doctrine," and over morals. This tribunal called everybody, without exception, to account for their slightest words and actions, and referred cases, where ecclesiastical censure was not sufficient, to the council, with an opinion upon them. Thus C. made himself director of the conduct, as well as of the opinions, of the Genevans. His spirit governed exclusively in the council as in the consistory, and the judges never hesitated to punish every one who set himself in opposition to him. Thus a magistrate was deposed and condemned to two months' imprisonment, "because his life was irregular, and he was connected with the enemies of C." James Gruet was beheaded, "because he had written profane letters and obscene verses, and endeavored to overthrow the ordinances of the church." Opinions were judged with equal severity. It is well known, that Michael Servetus, on his passage through Geneva, in 1553, was arrested, and, on C.'s accusation, was burnt alive, because he had attacked the mystery of the Trinity in a book which was neither written nor printed at Geneva. Numerous other similar examples might be adduced, to prove the blind and fanatical zeal which he had infused into the magistracy of Geneva, for the support of good morals, and of what he esteemed sound doctrine; and, by this means, he succeeded in putting a check upon innovations, and upon the spirit of inquiry, and in introducing a character of austerity among his adherents. He also proposed alterations in the civil legislation of the Genevans, and in the form of their government, in which some French refugees were useful to him. For the advancement of useful studies

he erected the academy so happily conducted by his friend Theodore Beza.—When we consider all that C. did during his continuance in Geneva, we can hardly conceive how he could have accomplished so much. He preached almost daily, delivered theological lectures three times a week, attended all deliberations of the consistory, all sittings of the association of ministers, and was the soul of all the councils. He was consulted, too, upon points of law as well as of theology. Besides this, he found time to attend to political affairs in the name of the republic; to publish a multitude of writings in defence of his opinions, of which his commentaries on the Bible are the most important; and to maintain a correspondence through all Europe, but principally in France, where he labored incessantly to extend the new doctrine. Besides his printed sermons, the library of Geneva contains 2025 in manuscript, and, like that of Berne, several theological treatises not printed. Although C. differed from Luther in essential points, yet his adherents were not distinguished from the Lutherans in the edicts of Francis I and Henry II, nor even in the edict of Rouen in 1559. They themselves, indeed, regarded C. as their head, but without considering themselves as different, on this account, from the adherents of Luther. A formal separation first took place after the *colloquium* (conference) of Poissy, in 1561, where they expressly rejected the 10th article of the confession of Augsburg, besides some others, and took the name of *Calvinists*. C. died May 27, in the 55th year of his age. He was of a weak constitution, and suffered from frequent sickness. In Strasburg, he had married a widow, Idelette de Burie, in 1539: a son, the fruit of their union, died early. In 1549, he lost his wife, after which he never married again. He was temperate and austere, gloomy and inflexible. He knew nothing of friendship, and had no other passion than to establish the opinions which he believed to be correct. His disinterestedness was rare. He had a yearly stipend of 150 francs, 15 measures of corn, and 2 casks of wine: he never received a larger one. The value of the whole property which he left, in books, furniture, money, &c., did not exceed 125 crowns. His character was impetuous, and impatient of contradiction. "I have," he writes to Bucer, "no harder battles against my sins, which are great and numerous, than those in which I seek to conquer my impatience. I have not yet gained the mastery over this raging beast." The tone of his controversies is always harsh, bitter and contemptuous. He does not always succeed in concealing the feeling of his own superiority. As a theologian, C. was equal to any of his contemporaries in profound knowledge, acuteness of mind, and, as he himself boasts, in the art of making good a point in question. As an author, he merits great praise. His Latin works are written with much method, dignity and correctness. He was also a great jurist and an able politician. But all these qualities would not have been sufficient to make him the head of a distinct religious sect, had he not boldly rejected all religious ceremonies. By this means, he gained, on the one side, the highly cultivated, who were induced to look upon visible forms in religion as something derogatory, and also gave the uneducated an easy means of distinguishing themselves from the opposite party, without the necessity of examining the grounds of their faith, for which they were neither inclined nor qualified.—The chief doctrines of C.'s system are those which were discussed at the famous synod of Dort, under the following heads: *predestination, particular redemption, total depravity, irresistible grace*, and *the certain perseverance of the saints*. In succeeding controversies, these were denominated the *five points*. The doctrine of *original sin*, often set forth as peculiar to C.'s system, is common to those of many Protestant sects. The followers of C., in Germany, are called the *Reformed*, but the doctrine of predestination, it may be safely said, is every day losing ground in that country. In France, it is well known, most Protestants are Calvinists. Calvinism is the professed belief of the greatest part of the Presbyterians both of Europe and America; the Particular Baptists, in England and India, and the Associated Baptists in America; the Independents of every class in England and Scotland, and the Congregationalists of New England.

Calvinism. (See the conclusion of the preceding article; also *Protestants*.)

Calvisius, Seth; a musician and chronologer of the 16th century. He was the son of a Thuringian peasant, Jacob Kalwiz; was born in 1556, and, after a liberal musical and scientific education, became chanter at the Schulpforta and at the Thomas school at Leipsic. He died in 1617. His valuable works on the theory of music, written in good Latin, are mentioned in Gerber's Biographical

Lexicon of Musicians. He composed, also, many important chronological and other scientific works. Zach calls him an exact and zealous investigator of chronology, possessed of as much learning as penetration.

Calx; properly lime or chalk (hence *calcarious earth*); but the term is more generally applied to the *residuum* of a metal or mineral which has been subjected to violent heat, burning or calcination (q. v.), solution by acids, or detonation by nitre, and which is or may be reduced to a fine powder. Metallic calces are now called *oxydes*. (q. v.) They weigh more than the metal from which they are produced, on account of the oxygen which they have absorbed.

Calydon; an ancient city of Ætolia, celebrated in the stories of king Œneus, the Calydonian boar, and Dejanira and Hercules. Œneus, as the fable runs, had forgotten Diana in a solemn sacrifice offered to all the gods; that goddess, in revenge, sent a terrible boar, which laid waste the fields and gardens. In order to slay this monster, Meleager, the son of Œneus, solicited the aid of the boldest heroes of Greece—Theseus, Jason, Nestor, &c. Several of the assailants perished. Meleager finally pierced him in the back with his javelin, and the others speedily despatched him. (See *Meleager.*)

Calypso; a daughter of Atlas (some say of Nereus and Doris, or of Oceanus and Thetis). She inhabited the woody island Ogygia, situated deep in the ocean, and lived remote from all intercourse with gods and men. Ulysses having suffered shipwreck on her island, she received him kindly, and promised him immortality if he would consent to marry her. But his desire of beholding his country and his wife overcame the charms of the goddess. Seven years he had to remain with her. Mercury finally brought C. the command of Jupiter, that Ulysses should be permitted to return to his home. This command she dared not oppose. Ulysses departed, but C., who had borne him two children, Nausinŏus and Nausithŏus, died of grief. This subject has been wrought up in many different ways.

Camaieu, or Cameo. (See *Cameo.*) Camaieu is also used for a painting wherein there is only one color, and where the lights and shades are of gold, wrought on a golden or azure ground. When the ground is yellow, the French call it *cirage*, when gray, *grissaile*. This kind of work is chiefly used to represent *basso-relievos*. The Greeks call pieces of this sort μονοχρωματα.

Camaldolites, Camaldulians, or Camaldunians; hermits and monks of the order established, in 1012, by St. Romuald, a Benedictine of Ravenna, in the valley of Camaldoli, near Arezzo, in the Apennines, and confirmed afterwards by pope Alexander III. They were originally hermits, living in separate cells; but, as their wealth increased, the greater part of them associated in convents. They existed in Italy, France, Germany and Poland. In the 18th century, there were five independent fraternities of them:—1. at Camaldoli; 2. at Cronenberg, near Perugia; 3. at Turin; 4. at Grandbois, near Paris; 5. at Murano, in the Venetian territory; besides 12 monasteries of Camaldulian nuns. White garments and the austere rules of the Benedictines they all had in common. The hermits wore beards, and had still more severe rules in regard to fasting, silence and penances. Their life was devoted to contemplation rather than to usefulness. Joseph II and the French revolution put an end to the order.—There is, in the vicinity of Naples, a mountain which takes its name from a convent of the Camaldoli, situated on its top, from which the traveller enjoys a prospect of remarkable grandeur and beauty. It seemed to us the most charming of all the beautiful views around Naples; yet the spot is not much visited by travellers.

Camargue, or Camarque, la; a piece of land, insulated by the two principal mouths of the Rhone, sometimes called the *Delta* of France. It is a cluster of islands extending over nearly 200 square miles.

Cambacères, Jean Jacques Regis; exduke of Parma, prince and archchancellor of the French empire, member of the institute; born in 1753, at Montpellier, of an ancient *famille de robe* (family of lawyers). His zeal and talents soon obtained him distinction and the office of a counsellor at the *cour des comptes* at Montpellier. At the beginning of the revolution, he received several public offices, became, in September, 1792, a member of the convention, and labored in the committees, particularly in the committee of legislation. Dec. 12, 1792, he was commissioned to inquire of Louis XVI whom he desired for his counsel, and it was on his motion that the counsel was allowed to communicate freely with the king. In January, 1793, he declared Louis guilty, but disputed the right of the convention to judge him, and voted for his provisory

arrest, and, in case of a hostile invasion, death. The 24th of January, he was chosen secretary of the convention. As a member of the committee of public safety, he reported, in the session of March 26, the treason of Doumouriez. In August and October, 1793, he presented his first plan for a civil code, in which his democratical notions were displayed. In an intercepted letter of Antraigue, these words were found: "I do not wonder at all that C. is among those who wish for the return of royalty. I know him," &c. C. confuted the charge, and the convention ordered his speech to be printed; but his character as a republican had been shaken, and he was not received into the directory for which he was nominated. He entered into the council of the five hundred, where he presented a new plan for a *code civile*. This *Projet de Code civile*, 1796, became, subsequently, the foundation of the *Code Napoleon*. May 20, 1797, he left his seat in the council. A year afterwards, he appeared among the electors of Paris; and, after the revolution of the 30th Prairial, VII (19th of June, 1799), he was made minister of justice. On the 18th of Brumaire, he was chosen second consul, and entered on the office in December. He made the administration of justice the chief object of his attention. After Napoleon had ascended the throne, C. was appointed archchancellor of the empire, and afterward, grand officer of the legion of honor, obtained, successively, almost all the distinguished foreign orders, and, in 1808, was made duke of Parma. He always showed a remarkable attachment to Napoleon. The numerous edicts which appeared during his government were drawn up by C. During the campaign of Napoleon against the allied powers in 1813, C. was made president of the council of regency. At the approach of the allies in 1814, he followed the government to Blois, and, from that place, sent his consent to the abdication of the emperor. When Napoleon returned, in 1815, C. was again made archchancellor and minister of justice, and, subsequently, president of the chamber of peers. After the second fall of Napoleon, he was banished. He went to Brussels. In December, 1818, the king permitted him to return to Paris, where he lived afterwards as a private individual, and died March 8, 1824.

Cambodia, or Camboge, or Camboja, or Camboya; a country in Asia, between 10° and 15° N. lat., bounded N. by Laos, E. by Cochin-China and Chiampa, S. by the sea, and W. by Siam; about 400 miles in length and 150 in breadth. Population vaguely estimated at 1,000,000. The air is exceedingly hot, which compels the inhabitants to reside chiefly by the sides of rivers or lakes, where they are tormented by mosquitoes. The soil is very fertile. Gold of great purity, amethysts, hyacinths, rubies, topazes and other precious stones are found. Cattle are exceedingly numerous. Elephants, lions, tigers, and almost all the animals of the deserts of Africa, are found here. The capital is also called *Cambodia*, or *Leveck*. Lon. 104° 35′ E.; lat. 13° N.

Cambodia, or Donnai; a river in Asia, called, also, in different parts of its course, *Kiou-Long*, *May-Kanng*, *Mecon* or *Micon*, which rises in Thibet, passes through Yunnan, a province of China, the countries of Laos and Cambodia, and runs into the Chinese sea; lon. 104° 10′ E.; lat. 10° N. It is navigable for the largest vessels 40 leagues, and is generally two miles wide, and very deep. (See *Mecon*.)

Cambray, or Camerich, a large and strongly fortified city (having 3000 houses and 15,600 inhabitants), lies on the Scheldt, in the French Netherlands, department of the North, and contains a number of manufactories. From this place comes the linen cloth known by the name of *cambric*. C. has been the seat of an archbishop since the 16th century. In the cathedral church is Fenelon's monument. In 1508, the league (q.v.) against Venice was concluded at C.; in 1529, the peace with Charles V (see *Francis I*); and, in 1724, negotiations for peace were begun here by the emperor Charles VI and Philip V, which were terminated at Vienna, in 1725.

Cambridge; a post-town in Middlesex county, Massachusetts, on the north side of Charles river, three miles W. N. W. of Boston. Population, in 1820, 3295. C. consists of three principal parts or divisions, namely, Old Cambridge, which contains the university, a state arsenal, a Congregational meeting-house, an Episcopal church, &c.; Cambridge-Port, which is a considerable trading village, containing four houses of public worship, and is connected with Boston by West Boston bridge; East Cambridge, a flourishing manufacturing village, which is situated on Lechmere point, is connected with Boston by Craigie's or Canal bridge, and contains a court-house, a jail, a large glass manufactory, and three houses of public worship. The university in C., the oldest in the U. States, was incorporated in 1638, and named *Harvard college*, from its prin-

cipal founder. Its endowments have been since greatly increased by donations from the state, as well as by numerous acts of private bounty; and, with regard to funds, library, professorships, and literary advantages in general, it is the first institution of the kind in America. It comprises a department for under-graduates, and one for students preparing for each of the learned professions, theology, law and medicine. The principal college buildings are, University hall, an elegant edifice of granite, containing a chapel, lecture rooms, dining halls, &c.; Harvard hall, a brick edifice, containing the library, philosophical apparatus and mineralogical cabinet; four other brick edifices, called Massachusetts, Hollis, Stoughton and Holworthy halls, each four stories high, containing rooms for the accommodation of under-graduates; Divinity hall, a large brick edifice for the accommodation of the theological students; and Holden chapel, containing the anatomical museum, chemical laboratory and lecture rooms. The library is the largest in the union, and contains about 30,000 volumes. The philosophical apparatus is probably not surpassed by any in the country. The chemical laboratory, anatomical museum, and cabinet of minerals, are all valuable. The botanic garden comprises seven acres, laid out in an ornamental style, and is furnished with an interesting collection of trees, shrubs and plants, both native and foreign. The legislative government is intrusted to a corporation, consisting of the president of the university and six fellows, and to a board of overseers, composed of the president, the governor of the state, lieutenant-governor, members of the council and senate, and the speaker of the house of representatives, *ex officiis*, together with 30 others, 15 clergymen and 15 laymen, elected for the purpose. The officers of the university, to whom the business of instruction is confided, are a president, 21 professors, 2 tutors, and several *instructers*. The president, a part of the professors and the tutors constitute the immediate government of the institution. The course of education requisite to obtain the first degree in arts in this university, as in American colleges generally, is completed in four years. In the theological school, the course of education is completed in three years, and the students are divided into three classes, junior, middle and senior. Tuition is afforded free of expense to all pupils in this school, and further assistance is given to such as are indigent. Graduates of any college, of good moral character, may be admitted to share in all the benefits of this institution. The law school was established in 1817. Candidates for admission must be graduates of some college, or qualified, according to the rules of court, to become students at law. Students in this department, who are graduates of a college, complete their education in three years. Those who are not graduates complete it in five years. The lectures for the medical students are delivered in Boston, at the Massachusetts medical college, which is a spacious edifice of brick, and contains a medical library of about 4000 volumes. They commence annually on the third Wednesday in November, and continue three months. In order to obtain a degree of M. D., it is necessary for a student to attend two courses of lectures, and to pass three years, including the time occupied in attending the lectures, under the direction of some regular practitioner. In 1829, the number of under-graduates was 252, theological students 42, law students 24, medical students 83; total, 401. Commencement is on the last Wednesday in August. The academical year is divided into three terms and three vacations. The first vacation is of two weeks, from the Wednesday preceding the 25th day of December, the second of two weeks, from the first Wednesday in April, and the third, the six weeks next preceding commencement.

CAMBRIDGE; a town of England, situated on the river Cam, 51 miles north of London. It is an ancient place, and was a Roman station (Granta). It has a population of 14,142 inhabitants, and returns two members to parliament. This town is celebrated for its university, which, according to some writers, was founded as early as 630; but the earliest authentic document relative to it bears date 1229. The university consists of 17 colleges, 4 of which are called *halls*, the schools, the public library, and the senate-house. The following list contains the name of each of these institutions, and the time when it was founded.

1.	Peter house	1257
2.	Clare hall	1326
3.	Pembroke hall	1343
4.	Gonville and Caius college	1348
5.	Corpus Christi	1344
6.	Trinity hall	1350
7.	King's college	1441
8.	Queen's college	1448
9.	Catharine hall	1475
10.	Jesus college	1496
11.	Christ college	1505
12.	St. John's college	1511

13. Magdalen college	1519
14. Trinity college	1546
15. Emanuel college	1584
16. Sidney Sussex college	1593
17. Downing college	1800

(See *Colleges.*)—Previous to the erection of colleges, the students resided in hostels or inns, which were provided by the townsmen for their reception, of which there were 34. The charges of education and maintenance were paid by the students themselves. The university is composed of a chancellor, vice-chancellor, the masters or heads, fellows of colleges, and students, amounting in all (in 1823) to 4277 members, and is incorporated as a society for the study of all the liberal arts and sciences. Although each college or hall is a body of itself, and bound by its own statutes, it is controlled by the paramount law of the university (chiefly contained in the statutes given by Elizabeth), each furnishing members for the government of the whole. The government is administered by a chancellor, who is a nobleman, a high steward, chosen by the senate, a vice-chancellor, who is usually the head of some college or hall, two proctors, who attend to the discipline of the under-masters of arts, read the graces, &c.; taxors, moderators, scrutators, a commissary, a public orator; the *caput*, consisting of the vice-chancellor and several doctors, which determines what graces shall be brought before the university. There are also 23 professors in the various departments of literature and science. The senate is composed of all the doctors and masters, and is divided into two houses, the regent-house and the senate-house. The two members of parliament, returned by the university, are chosen by the whole body collectively. The election of officers, the admission to degrees, &c., take place in the senate-house. The fellows, scholars, and certain inferior officers, are maintained on the foundation. Besides which there are other orders of students: the greater pensioners are the young nobility and gentlemen of fortune, who dine with the fellows, and are therefore called *fellow-commoners*; the less pensioners dine with the scholars; the sizars are scholars who receive benefactions, called *exhibitions*. Three years' study at the university are necessary for taking the degree of bachelor of arts (q. v.), and four years more for that of master. In divinity, a student may commence bachelor seven years after receiving the degree of bachelor of arts; in law, six years after; and, in physic, five years after. The time for conferring these degrees is called the *commencement*. The nobility are entitled to degrees without waiting the statutable time. The whole number of students in 1823 was 1800. (See *Universities.*)—The public library occupies the four sides of a quadrangle over the schools, and contains 140,000 vols. (See *Libraries.*) The Fitzwilliam museum comprehends the collection of books, paintings, drawings, engravings, left by the viscount Fitzwilliam in 1815. The observatory is placed under the Plumian professor of astronomy and two assistant observers. (See Fuller's *History of Cambridge University*; Dyer's *History*, London, 1814, 2 vols., 8vo., and the *University Calendar.*)

Cambridge (Adolphus Frederic of England), duke of, earl of Tipperary baron of Culloden, governor-general of Hanover, chancellor of the university of St. Andrews, and field-marshal, was born Feb. 24, 1774. He entered the military service as an ensign when 16 years old, and soon afterwards went to the university of Göttingen. After he had passed one winter at the court of Frederic William II, he returned to London; was present, in 1793, in the campaign in the Netherlands, and was taken prisoner in the battle at Hondtschoote (8th of September, 1793), but immediately released. In 1794, having attained his majority, he was appointed colonel, and duke of C., and was called into the house of lords. Here he enlisted on the side of the opposition, under Fox, and adhered to this party until it was almost dissolved. He now joined the other party, opposed to Pitt—that of Grenville. In 1803, he was sent without an army to the defence of Hanover. But he soon transferred the chief command to Wallmoden, and returned to England. Being always violent against Napoleon, he fluctuated between the parties of lord Sidmouth, Grenville, and the opposition; and, after the re-acquisition of Hanover, was raised to the office of governor-general of this kingdom (Oct. 24, 1816). The city of Hanover was much benefited by his residence, and by the protection and patronage which he bestowed on many arts, particularly the dramatic. He was married, May 7, 1818, to Augusta, the daughter of the landgrave Frederic of Hesse-Cassel, who, in March, 1819, bore him a son, and, in 1822, a daughter.

Cambridge Manuscript, or Beza's Manuscript; a copy of the Gospels and Acts of the Apostles in Greek and Latin. Beza found it in the monastery of Irènæ-

us at Lyons, in 1562, and gave it to the university of Cambridge in 1582. It is a quarto, and written on vellum. 66 leaves of it are much torn and mutilated, and 10 of these are supplied by a later transcriber. The age of this MS. is differently estimated by different writers, but all agree that it is of great antiquity. The most competent judges consider it one of the most ancient. In the Greek, it is defective from the beginning to Matthew i. 20; in the Latin, to Matthew i. 12; besides which it has some other chasms. Wetstein, Griesbach, Michaelis, and several others, have written upon this MS.

Cambronne, Pierre Jacques Etienne, baron, general, commander of the legion of honor, and field-marshal, born Dec. 26, 1770, at St. Sebastien, near Nantes, was descended from an opulent family, and enjoyed a good education. Under the republic, and under Napoleon, he served in every campaign, and became so celebrated, on account of his personal bravery, that the soldiers wished to give him the title of *first grenadier of France*, after the death of Latour d'Auvergne. but he declined the honor. He was made commander of the chasseurs of the imperial guard, and was at Fontainebleau when Napoleon abdicated. He went with him to the island of Elba as chief of the division of the old guard, which accompanied him into his exile. C. commanded the little corps with which Napoleon landed, March 1, 1815, in the gulf of St. Juan, and signed the address to the French army, summoning them to return to Napoleon's standard. On the field of battle at Waterloo, he was taken prisoner by the British, among those who were severely wounded. His celebrated answer to the British proposal of capitulation is well known—"*La garde meurt, elle ne se rend pas.*" He was one of the 19 generals of Napoleon who, by the royal decree of July 24, 1815, were to be tried by a court-martial. He returned from his captivity as a prisoner of war, and appeared in person before this tribunal. As he had taken no oath of fidelity to the Bourbons, he was acquitted. The sentence was revised, and the acquittal confirmed.

Cambyses, 1. the son of Cyrus the Great and of Cassandana, became, after the death of his father, king of the Persians and Medes, A. C. 530. Soon after his accession to the throne, he made an attack upon Egypt, killed the king of this country, Psammenitus, plundered the chief city, Memphis, and conquered the whole kingdom within six months. He now wished to send a fleet against Carthage, to conquer Ethiopia, and to obtain possession of the temple of Jupiter Ammon. The first of these expeditions, however, did not take place, because the fleet, which was manned with Phœnicians, refused obedience to him. The army which was sent against the Ammonites perished in the desert; and the troops, at whose head he himself had set out against the Ethiopians, were compelled by hunger to retreat. From this time, he gave himself up to the greatest cruelties. On his entrance into Memphis, seeing the Egyptians engaged in the celebration of a feast in honor of their god Apis, whom they had found, he believed that they were rejoicing at his misfortunes. He caused the holy bull to be brought before him, slew him with his own sword, and caused the priest to be scourged with rods. To drown his vexation, he indulged himself in the most immoderate enjoyment of wine. No relation was held sacred by him when intoxicated. He caused his brother Smerdis, a dream concerning whom had disturbed him, to be murdered. His sister and wife Atossa, who lamented the death of Smerdis, he killed with a blow of his foot. These and other actions of the most insane rage had irritated his subjects. A Magian availed himself of this discontent, and obtained possession of the throne under the name of *Smerdis*, whose death had been concealed. C. had resolved to go to Susa, in order to punish him, when, as he was mounting his horse, he was wounded in the hip by his sword. He died of this wound soon after, in 522, at Ecbatana, in Assyria, without leaving any children.—2. A Persian of low descent, the grandfather of the former, to whom king Astyages gave his daughter Mandane in marriage, in order to prevent the fulfilment of a dream, according to which he was to lose his crown by means of his daughter's son, while he flattered himself with the hope, that his grandson would constantly hold in remembrance the benefit conferred on his father. He did not, however, escape his fate, for Cyrus, the son of Mandane, dethroned him.

Camden; a post-town, and capital of Kershaw district, South Carolina, on the E. side of the Wateree, 35 miles N. E. Columbia, 130 N. N. W. Charleston; lon. 80° 33′ W.; lat. 34° 17′ N.; population, about 1000. It is a pleasant town, regularly laid out, and contains a court-house, a jail, an academy, and four places of public worship. The surrounding country is

fertile and pleasant. The Wateree is navigable to this place for boats of 70 tons. Two battles were fought here during the revolutionary war; one, Aug. 16, 1780, between general Gates and lord Cornwallis, in which the Americans were defeated; the other, April 25, 1781, between general Greene and lord Rawdon. The Americans had 126 men killed, and 100 taken prisoners. The British had about 100 killed.

Camel (*camelus*, L.); a genus of mammiferous quadrupeds, of the ruminant order, characterized by their size; the possession of incisive, canine and molar teeth; the upper lip divided; the neck long and arched; by the absence of horns, and by having one or two humps or protuberances upon the back, and naked callosities at the joints of the leg, the inferior part of the breast, &c. The inferior extremities terminate in two toes, which are not wholly covered by hoof, as they have only a small one at the extremity, and a sort of very hard, callous sole, common to both. There are six incisive and two canine teeth in the lower jaw; and, in the upper, there are two incisors in the intermaxillary bone, with one or two canine teeth on each side, which increase to a considerable size with the increasing age of the animal. The camel is the only ruminant animal which has cutting teeth in the upper jaw.—The native country of this genus is said to extend from Mauritania to China, within a zone of 900 or 1000 miles in breadth. The common camel, having two humps, is only found in the northern part of this region, and exclusively from the ancient Bactria, now *Turkestan*, to China. The dromedary, or single-hump camel, is found throughout the entire length of this zone, on its southern side, as far as Africa and India. Notwithstanding this, the dromedary cannot sustain either the burning heat of the torrid, or the mild climate of the temperate zone, while the camel supports all the vicissitudes of climate with but little injury. It is highly probable that the camel has long ceased to exist in its wild or natural state, as it has been enslaved by man from the earliest times of which we have record. Among the stock composing the wealth of the patriarch Job, we find 600 camels enumerated. Unlike the elephant, and other animals which cease to breed in a state of captivity, the camel is as prolific as if at liberty; and vast numbers are raised and employed throughout the Oriental countries, especially in the commerce carried on between the people residing in the vicinity of the great deserts. To these people the camel serves in the place of ships, and other modes of conveyance, being especially adapted by nature for the service in which it is employed. In regions where water is exceedingly scarce, and wells or springs are several days' journey distant from each other, it would be impossible to traverse the country with the usual beasts of burthen. But the camel can abstain from drinking for seven or eight days together without injury—an important advantage, which is owing to the possession of a fifth pouch, or appendix to the stomach, destined to receive water, whenever it can be procured, and capable of retaining it unchanged for a long time. From this receptacle a portion of water can be thrown into the other stomachs or gullet when necessary, and thus avert the evils of thirst. Possessing strength and activity surpassing that of most beasts of burthen, docile, patient of hunger and thirst, and contented with small quantities of the coarsest provender, the camel is one of the most valuable gifts of Providence. There is nothing, however, in the external appearance of the animal to indicate the existence of any of its excellent qualities. In form and proportions, it is very opposite to our usual ideas of perfection and beauty. A stout body, having the back disfigured with one or two humps; limbs long, slender, and seemingly too weak to support the trunk; a long, slim, crooked neck, surmounted by a heavily-proportioned head, are all ill-suited to produce favorable impressions. Nevertheless, there is no creature more excellently adapted to its situation, nor is there one in which more of creative wisdom is displayed in the peculiarities of its organization. To the Arabs, and other wanderers of the desert, the camel is at once wealth, subsistence and protection. Their strength and fleetness render their masters the terror of enemies, and secure them from pursuit—a few hours being sufficient to place leagues of trackless desert between them and their foes. The milk of the females furnishes the Arab with a large part of his nutriment. The flesh of the young animal is one of his greatest luxuries: of the skins, he forms tents: the various sorts of hair, or wool, shed by the camel, are wrought into different fabrics; and its dried dung constitutes excellent fuel, the only kind, indeed, to be obtained throughout vast extents of country. In order to qualify camels for great exertions, and the endurance of fatigue, the Arabs begin to educate them

at an early age. They are first taught to bear burdens, by having their limbs secured under the belly, and then a weight proportioned to their strength is put on: this is not changed for a heavier load till the animal is thought to have gained sufficient power to sustain it. Food and drink are not allowed at will, but given in small quantity, at long intervals. They are then gradually accustomed to long journeys, and an accelerated pace, until their qualities of fleetness and strength are fully brought into action. They are taught to kneel, for the purpose of receiving or removing their load. When too heavily laden, they refuse to rise; and, by loud cries, complain of the injustice. Small camels carry from 600 to 800 lbs.; the largest and strongest bear 1000 or 1200 lbs., from 30 to 35 miles a day. Those which are used for speed alone are capable of travelling from 60 to 90 miles a day. Instead of employing blows or ill treatment to increase their speed, the camel-drivers sing cheerful songs, and thus urge the animals to their best efforts. When a caravan of camels arrives at a resting or baiting-place, they kneel, and, the cords sustaining the load being untied, the bales slip down on each side. They generally sleep on their bellies, crouching between the bales they have carried: the load is, therefore, replaced with great facility. In an abundant pasture, they generally browse as much in an hour as serves them for ruminating all night, and for their support during the next day. But it is uncommon to find such pasturage, and they are contented with the coarsest fare: nettles, thistles, wormwood, and various harsh vegetables are eaten by them with avidity, and are even preferred to more delicate plants.—Camels, designed exclusively for labor, are usually gelded, and females are also treated in a similar manner. They are, it is true, not so strong, nor so spirited, as unmutilated animals, but are much more manageable. During their sexual season, the males become furious and ungovernable: they refuse food, are spiteful, biting and kicking even their keepers, to whom they are, at other times, very obedient. At this time, also, a fœtid secretion is effused from a glandular apparatus on the neck; the animal foams at the mouth, and a red, membranous vesicle, similar to a bladder, is extended on each side of the mouth. One male is reserved perfect for every eight females. The female receives the male in the same crouching attitude, in which she places herself to receive a load, or for the purpose of sleeping. She goes with young 12 months, and brings forth one at a birth. Her milk is very thick, abundant and rich, but of rather a strong taste. Mingled with water, it forms a very nutritive article of diet. Breeding and milk-giving camels are exempted from service, and fed as well as possible, the value of their milk being greater than that of their labor. The young camel usually sucks for 12 months; but such as are intended for speed are allowed to suck, and exempted from restraint, for two or three years. The camel attains the full exercise of its functions within 4 or 5, and the duration of its life is from 40 to 50 years.—The humps or bunches on the back of the camel are mere accumulations of cellular substance and fat, covered by skin, and a longer hair than that of the general surface. During long journeys, in which the animals suffer severely from want of food, and become greatly emaciated, these protuberances are gradually absorbed, and no trace of them left, except that the skin is loose and flabby where they were situated. In preparing for a journey, it is necessary to guard the humps from pressure or friction by appropriate saddles, as the slightest ulceration of these parts is followed by the worst consequences: insects deposit their larves in the sores, and sometimes extensive and destructive mortification ensues.—The Bactrian or common camel is larger than the dromedary; the limbs are not so long in proportion to the body; the muzzle is larger and more tumid; the hair of a darker brown, and the usual gait slower. A still more striking distinction is afforded by the two humps—the dromedary having but one. This single hump of the latter occupies the middle of the back, rising gradually on all sides towards its apex, and never inclining to one side. Both species are occasionally found in collections of animals. The dromedary is more frequently seen than the camel.—During that season of the year when these gentle creatures become violent, the Turks take advantage of this change in their disposition to set on foot camel-fights—disgraceful exhibitions, indicative of the same spirit as the lion-fights of Rome, the bull-fights of Spain, the bull and badger-baitings and cock-fights of England. These fights are common at Smyrna and Aleppo. The camels of Smyrna are led out to a large plain, filled with eager crowds. The animals are muzzled, to prevent their doing each other serious injury, for their bite is tremendous, always bringing the piece

out. A couple, being let loose, run at each other with extreme fury. Their mode of combat is curious: they knock their heads together laterally, twist their long necks, wrestle with their fore-legs, almost like bipeds, and seem to be principally bent on throwing down their adversary.

Camel, in mechanics; a machine used in Holland and St. Petersburg for lifting ships over shallow bars. De Witt invented these machines, and Peter the Great introduced them into Russia. A camel is composed of two separate parts, the insides of which are shaped so as to embrace the hull of a ship on both sides. Each part has a cabin, with many pumps and plugs. They are fastened to the vessel underneath, and entirely enclose its sides and bottom. They are then towed to the bar, and are sunk with the vessel, by taking out the plugs. The water being now pumped out, the camel lifts the vessel, and the whole is towed over the bar.

Cameleon. (See *Chameleon.*)

Camelopard; also called *giraffe* (*camelopardalis giraffa*, L.); a very remarkable genus of mammiferous quadrupeds, belonging to the order of ruminants; characterized by having 8 incisive teeth in the lower jaw; a bony prominence on the frontal bone; horns somewhat inclined, covered by the skin of the head, and having a bristly fringe round their tips; callosities upon the sternum and knee joints; a tuft at the end of the tail; a reddish mane, extending from the occiput along the whole of the neck and shoulders, as far as the root of the tail. The body of the giraffe having considerable resemblance to that of the camel, and the color of its skin being an impure or yellowish white, spotted with rhomboidal patches of fawn color, something like that of the leopard, led to its bearing the names of these animals conjoined. In its manner of kneeling for the purpose of sleeping, in the length of its neck, and the presence of callosities on the lower part of the breast and over the joints, it has a further similarity to the camel. Its horns, which, in the male, are about a foot long, permanent, and covered by the skin of the head to their very tips, give the giraffe some analogy to the genus *cervus* or deer, under which it was classed by Linnæus. Its most striking peculiarity is the great apparent height of its foreparts, which rise very suddenly from the fore-shoulders. Measured from the ground to the top of the head, the animal is from 15 to 17 feet high. The posterior extremities are not higher than 9 feet; but the difference in length between the anterior and posterior extremities is by no means as great as would be inferred from the appearance of the animal. The great difference is owing to the length of the neck, which tapers upwards, and at its base is rendered exceedingly thick, by the long dorsal and cervical spinous processes, that give attachment to its powerful muscles and ligaments. The trunk of the body is short in proportion to the neck, and the fore limbs are more robust than the posterior. The hoofs are rounded and cleft, like those of the ox. The tail is slender, cylindrical, and terminated by a tuft 3 or 4 inches long. The head of the giraffe is not unlike that of the horse; the eyes are large, fine and brilliant; the ears, both in length and figure, more resemble those of the ox. It is a mild, timid and harmless animal, choosing dense forests for its residence, and feeding on the leaves and shoots of trees. When it browses the herbage on the ground, it is not, as has been supposed, under the necessity of kneeling, though its natural mode of feeding, for which it seems to be especially constructed, is by browsing upon trees or shrubs of considerable elevation.—The giraffe is a native of the country lying between Egypt and Ethiopia. It is rare in Abyssinia, and still more so in Southern Africa. It is hunted and killed by the natives for the sake of its large and beautiful skin, as well as for the marrow of its bones, considered by them to be an exquisite dainty. The flesh of the young camelopard is said, by travellers, to be an acceptable article of diet. Little is known of the gestation of this animal, though it is said, like that of the camel, to endure for 12 months.—The giraffe has long been known to naturalists, though opportunities of examining living specimens have always been rare. They were brought living to Rome, to adorn the public games and festivals, as Pliny states, during the dictatorship of Cæsar. Figures of the animal are still preserved in the Prænestine pavement, wrought under the orders of Sylla. The figure of the giraffe also occurs among the hieroglyphic monumental drawings of the Egyptians. The giraffe moves with great celerity, and it requires a swift horse to equal its speed, when only in a trot. It has not been tamed, or applied to any useful purpose, as far as we know, though a few specimens have, at different times, been sent to Europe, as presents to sovereigns, or for exhibition. The pacha of Egypt, not

long since, sent one to the king of France, which is still living in the menagerie of Paris.

Camenz; a village in the Prussian government of Reichenbach, circle of Frankenstein, on the Neiss; remarkable for the rich Cistercian abbey of the same name, now abolished, which was built in 1094, and numbered, from 1249 to 1810, 53 abbots. The most celebrated abbot was Tobias Stusche, who acquired the favor of Frederic the Great in a way till lately inexplicable. According to a manuscript history in the Latin language, left by a friar of C., during the war of 1741, the abbot suddenly summoned the monks, one evening, to the chapel, at an unusual hour, by the sound of the bell. With him came a stranger in a clerical dress. Scarcely had the monks begun to pray, when a great tumult was heard. Austrian troops had arrived from Wartha, and were seen in the monastery, and even in the church. They searched the building for king Frederic, but found and seized his aids only. The address of the abbot saved the king of Prussia and the monarchy. Frederic refers to this adventure in the *Histoire de mon Temps*, i. chap. 3. The monastery was dissolved by the edict of Oct. 30, 1811. The beautiful castle was burnt in 1817.

Cameo, or Camaieu; in the proper sense, a gem engraved in *relievo*. The ancients generally used the onyx for this purpose. At first, such onyxes, and, afterward, all gems carved in relief, were called *cameos*. They were carved according to the layers of the stone, so that the ground should be of a different color from the figure in relief. One of the most famous cameos is the onyx at present in Paris, called the *Apotheosis of Augustus*, 1 foot high and 10 inches wide: its history is also singular. (See *Gem Sculpture*.)

Camera Æolia; a contrivance for blowing the fire, for the fusion of ores, by means of water falling through a funnel into a vessel, which emits a quantity of air or vapor continually, sufficient to keep up a strong fire.

Camera Clara (*light chamber*); an optical instrument invented by Reinthaler, which supplies the deficiencies of the *camera obscura*, and has this advantage over that instrument, that the object to be represented need not be illuminated by the sun. All objects appear in it with great distinctness. It can be used equally well in bright and dark weather, in the light of the sun or that of the moon.—*Camera lucida* is the somewhat awkward name of an instrument invented in England, which only so far resembles the *camera obscura*, that it presents a complete image of objects on a very diminished scale. The chief part is a prism. If this is placed in a proper position, and the spectator approaches his eye to it, he perceives the image of the object before it represented with the greatest clearness, and perfect precision of outline, on a sheet of paper fixed underneath, and can easily trace it, whilst the persons around him see only the drawing made on the paper. —*Camera obscura* (dark chamber) is either a closed room, in which the light can fall only through a small aperture, or an optical box, in which exterior objects are represented on a smaller scale. It is used for amusement or for drawing landscapes and scenery, though what is gained in rapidity and ease of execution is lost in the dimness of the coloring. (For the theory of this instrument, see treatises on natural philosophy and optics.)

Camera lucida. (See *Camera clara*.)

Camera obscura. (See *Camera clara*.)

Camerarius (Joachim I); born in 1500, at Bamberg; one of the most distinguished scholars of Germany, who contributed to the progress of knowledge, in the 16th century, by his own works as well as by editions of Greek and Latin authors with commentaries, and by a better organization of the universities at Leipsic and Tübingen, and of the gymnasium at Nuremberg. He also took an important part in the political and religious affairs of his time. He was a friend of Melancthon, and was held in great esteem by the emperors Charles V, Ferdinand I, and Maximilian II. In 1555, he was deputy of the university of Leipsic to the diet of Augsburg, and died in 1574. He was naturally grave and serious, and had such a detestation of falsehood, that he could never endure it, even in jest. His works are estimated at 150, mostly translations from Greek and Latin writers, besides many poems, and a great number of familiar letters.

Camerarius (Joachim II); son of the preceding; born in 1534, at Nuremberg; one of the most learned physicians and greatest botanists of his time. After having studied in the German and Italian universities, he practised with great success in Nuremberg, where he instituted a medical academy, laid out a botanical garden, and published many botanical works. He died in 1598. Several of his

sons and grandsons have distinguished themselves in medicine and botany.

Camerlingo (*Italian*) denotes the highest officer in the Ecclesiastical States. The *cardinale camerlingo* stands, in fact, at the head of affairs in this government. He has the control of the treasury, administers justice, and exercises almost sovereign power when the papal chair is vacant.

Cameronians; a sect in Scotland, who separated from the Presbyterians in 1666, and continued long to hold their religious assemblies in the fields. Their name is derived from Richard Cameron, a preacher, the founder of the sect. They rebelled against the government, and were never entirely reduced till the revolution. They adhered rigidly to the form of government established in 1648.—*Cargillites* was another name for the same sect, derived from another preacher among them. It is said, that not above 14 or 15 congregations of them exist.

Cames are slender rods of cast lead, of which glaziers make their turned or milled lead, for joining the panes or quarrels of glass.

Camillus, Marcus Furius. This Roman hero was chosen tribune of the people in the year B. C. 401, and took part in the siege of Veii. Three years after, he was invested with the same dignity, and went against the Falisci. After he had become censor, he proposed a law to oblige unmarried men to marry the widows of those slain in battle. After the defeat of the military tribunes L. Atilius and Cn. Genucius, before Veii, by the Tuscans, C. was made dictator. He defeated the Falisci, Capenates and Tuscans, advanced to Veii, into which he penetrated by a subterraneous passage, and, B. C. 396, obtained possession of a place, which, for 10 years, had defied the Roman power. The people murmured when they saw him make a triumphal entry in a splendid chariot drawn by four white horses, and with his face painted; for both of these distinctions were appropriated to the gods. But the discontent of the citizens rose to the highest pitch when the dictator demanded of them the tenth part of the plunder, to perform a vow which he had made to Apollo in case of success. After a long contention, they agreed to consecrate to the god a golden cup, for which the Roman ladies were obliged to give all their jewels into the public treasury. Not long after, C. was appointed military tribune. He besieged Falerii, the inhabitants of which defended themselves to the last extremity. A schoolmaster delivered into the power of C. the children of the most distinguished Falisci, but he sent back the traitor, with his hands bound, while the boys beat him with rods, as they returned to their parents. This generosity induced the besieged to surrender; and the senate allowed C. to determine their fate. He contented himself with obliging them to pay the arrears due to his soldiers; but this increased the number of his enemies. Some time before, C. had opposed the proposal of colonizing Veii with one half of the citizens of Rome: he did the same now, when that proposal was renewed. For some time, he was invested with the dignity of an *interrex*, and had to contend with all the consequences of hatred. The tribune of the people, Apuleius, accused him of having embezzled a part of the plunder of Veii. C., who foresaw his condemnation, went into voluntary exile, although his friends offered to pay the sum demanded of him. Less magnanimous than Aristides, in a similar situation, C. is said to have prayed the gods to compel his ungrateful country to a speedy repentance. This wish was granted. Brennus (q. v.) had obtained possession of Rome, with the exception of the capitol. C., who was residing in Ardea, aroused the inhabitants of that city to resistance, and defeated the Gauls, who were carelessly encamped before it. The Romans, who had fled to Veii, besought him to place himself at their head; but he declared that he was ready to do this only in case the Roman people, now in the capitol, would commit to him the chief command. Pontius Cominius, a young plebeian, had the courage and the good fortune to carry the message from the city. C. was unanimously appointed dictator, and soon saw himself at the head of an army of 40,000 men, with which he hastened to the relief of the capitol, where he found the besieged just on the point of purchasing peace, and exclaimed, "With iron, not with gold, Rome buys her freedom." The Gauls were defeated, and left their camp by night. C. overtook them on the next day, and obtained a complete victory. He now made a triumphal entry into Rome, amidst the acclamations of the people and the army, who greeted him with the name of *Romulus, father of his country*, and *second founder of the city*. But the city was a heap of ruins, and the tribunes renewed the proposal of removing to Veii, while, at the same time, they sought to excite in the people apprehen-

sions of the power of C. The senate, however, frustrated their designs, and C. retained the dictatorship. Rome was rebuilt. The Æqui, Volsci, the Etruscans, and even the Latins, united against Rome. C., for the third time dictator, armed the whole people, came to the assistance of the military tribunes, who were surrounded, fired the enemy's camp, and gave the plunder to his soldiers. He then took Bolæ, the chief city of the Æqui, defeated the Volsci, and compelled the Etruscans to retreat. He now triumphed for the third time, restored, from the booty, to the Roman ladies, what they had formerly contributed to the accomplishment of his vow, and retired into a private station. Soon after, when the inhabitants of Antium attacked Rome, he was appointed military tribune, obtained from his colleagues the chief command, and took severe vengeance on the enemy. His glory excited the jealousy of Manlius. The senate, alarmed, once more raised C. to the military tribuneship. Manlius was overcome; but the people, who had at first rejoiced at his condemnation, soon felt repentance. It was resolved to attack the Prænestines, allies of the Volsci. C. was obliged, notwithstanding his age, to take the chief command. It appeared to him hazardous to venture a battle; but Lucius Furius, his colleague, pressed him to attack the enemy. C. allowed him to direct the engagement, and confined himself to the command of the reserve. The troops under the command of Furius being thrown into disorder, C. came up, and prevented a total defeat. On the day following, he obtained a complete victory, being nobly supported by his colleague. The inhabitants of Tusculum, against whom he then advanced, surrendered without resistance, and obtained the friendship of Rome, which they had lost by their own fault. C. was appointed dictator, for the fourth time, on account of the disturbances excited by Licinius and Sextus, the tribunes of the people; but he soon resigned the power which he was obliged to employ against Romans, and not against enemies. He was already 80 years old, when the appearance of a new army of Gauls terrified Rome. He once more resumed the dictatorship, attacked the Gauls, dispersed them entirely, and obtained again the honor of a triumph. As new disturbances had broken out, C. did not lay down his office till the ferment was quelled. After this, he caused a temple to Concord to be built near the capitol, retired from public life, and died soon after, B. C. 365, of the plague, greatly lamented by the Romans.

Camisards; Calvinists in France (in the Cevennes), who, in the beginning of the 18th century, opposed the oppressive proceedings of the royal deputies. The collectors of taxes were attacked by night by the malcontents (who, to disguise themselves, appeared only in their shirts—whence their name), dragged out of bed, and hung, with the tax-rolls about their necks. The government sent troops to punish the authors of these acts. A certain John Cavalier, a peasant, whom a fortune-teller had pointed out as the deliverer of Israel, placed himself at the head of the Camisards. His unlimited authority with his adherents, and his talents and courage, enabled him to oppose the measures of experienced generals with so much success, that negotiation was substituted for force. The marshal Villars made a treaty with Cavalier, which conceded to the party all their demands, and by virtue of which Cavalier himself was received into the royal service as a colonel. Sickness subsequently induced him to leave France, and he went to England, where queen Anne gave him a favorable reception. Voltaire, who became acquainted with him in London, speaks of him in high terms. At the time of his death, Cavalier was general and governor of Jersey.

Camlet, or Camblet (in French, *camelot*; Italian, *camellato*); a fine stuff, composed of a warp and woof, and manufactured on a loom with two treddles, so called because originally made of camels' hair only. Camlets are of different kinds, as goats'-hair, wool, silk camlets.

Camma; a river, and a kingdom, in Africa: the former divides Benin from Loango, and runs into the Atlantic; lat. 1° 40′ S.: the latter is near the river.

Camœnæ, a name often given to the Muses. Properly, *Camœna* was synonymous with *Carmenta*, a prophetess, whom the oldest colony that settled in Latium, under Evander, brought with them out of Arcadia; therefore tradition calls her his mother. Others mention two *Carmentæ* as looking into the past and future—goddesses of fate, who afterwards became goddesses of birth. Numa consecrated to the Camœnæ a fountain and grove, and, from that circumstance, they became confounded with the Muses.

Camoens, Louis de; the most celebrated poet of the Portuguese; one of the great men whose merit was first apparent to after time, while their own age suffered them to starve. He was born at Lisbon,

probably in 1524; for it appears, from a catalogue of persons embarking for the East Indies in 1550, that C., whose age is there given at 25 years, offered himself as a volunteer for the campaign. His father, Simon Vaz de C., was a ship-captain, and perished, by shipwreck, on the coast of Goa, in 1556. C. studied at Coimbra. At that time, writers were esteemed in proportion as they imitated the ancients. C. was inspired by the history of his country, and by the manners of his age. His lyric poems, like the works of Dante, Petrarch, Ariosto and Tasso, belong to the literature formed under the influence of Christianity. After the completion of his studies, he returned to Lisbon, where he fell deeply in love with a lady of the palace, Catharine d'Attayde. Violent passions are often joined with great talents: C. had both. He was exiled to Santarem, on account of disputes in which his love for Catharine involved him. From despair, he became a soldier, and served in the fleet which the Portuguese sent against Morocco. He composed poetry in the midst of battles; and, as danger kindled his genius, so genius animated his courage. An arrow deprived him of his right eye before Ceuta. He hoped that his wounds would receive a recompense, though his talents were not appreciated; but envy opposed his claims. Full of indignation at seeing himself neglected, he embarked, in 1553, for India. He landed at Goa. His powerful imagination was excited by the heroic deeds of his countrymen in this quarter; and, although he had much reason to complain of them, he could not resist the desire of celebrating their glory in an epic. But this vivacity of mind, essential to the poet, is not easily united with the moderation which a dependent condition demands. C. was displeased with the abuses of the government in India, and wrote a satire, which caused his banishment to Macao. Here he lived several years in no other society than that of nature, which showered round him in abundance all the charms of the East. Here, too, he composed his Lusiad. Vasco da Gama's expedition to India is the subject of the poem. The parts of it which are best known are the episode of Ines de Castro, and the appearance of Adamastor, who, by means of his power over the storms, aims to stop Gama's voyage, when he is about to double the Cape. In conformity to the taste of the time, C. united, in this poem, a narrative of the Portuguese history with the splendor of poetic description, and Christianity with mythological fables. He pleased himself with tracing the descent of the Portuguese from the Romans, of whom Mars and Venus are considered the progenitors and protectors. Since fable ascribes to Bacchus the first conquest of India, it was natural to represent him as jealous of the undertaking of the Portuguese. If the imitation of the works of classical antiquity has been of any disadvantage to the Lusiad, the injury consists, perhaps, in a diminution of the originality which one expects in a work in which India and Africa are described by an eye-witness. The versification of the Lusiad has something so charming and splendid, that not only cultivated minds, but even the common people, are enraptured by its magic, and learn by heart and sing its beautiful stanzas. The general interest of the poem consists principally in the patriotic feeling which pervades it. The national glory of the Portuguese appears here in every form which invention can lend to it; and therefore the countrymen of C. must naturally admire this poem more than foreigners. Some critics pronounce the Lusiad a more powerful and pure historical painting than Tasso's Jerusalem Delivered. C. was at last recalled from his banishment. At the mouth of the river Mecon, in Cochin-China, he was shipwrecked, and saved himself by swimming; holding in one hand, above the water, the manuscript of his poem, the only treasure which he rescued from the waves, and which was dearer to him than life. In Goa, he encountered new persecutions; he was confined in prison for debt, and was not allowed, until his friends became responsible for him, to embark and return to Lisbon in 1569. King Sebastian, yet hardly past the age of childhood, took an interest in C. He accepted the dedication of his epic (which appeared in 1572), and, being on the point of embarking on his expedition against the Moors in Africa, he felt, more sensibly than others, the genius of the poet, who, like him, loved dangers if they led to glory. But Sebastian was killed in a battle before Alcaçar, in 1578. With him the royal family became extinct, and Portugal lost her independence. Every source of assistance, as well as every hope of C., was destroyed by this event. So great was his poverty, that, at night, a slave, whom he had brought with him from India, begged in the streets, in order to support the life of his master. In this misery, he

yet wrote lyric poems, some of which contain the most moving complaints. This hero of Portuguese literature, the ornament of his country and of Europe, died, at last, in 1579, in the hospital at Lisbon, in the 62d year of his age. 15 years afterwards, a splendid monument was erected to his memory.—The best edition of the Lusiad (*Os Lusiadas*, etc.) was published by Jose Maria de Souza-Botelho (Paris, 1807, by Didot, small folio). The best French translation, with notes, is *Les Lusiades, ou les Portugais*, etc., by J. B. F. Millié (Paris, 1825, 2 vols.) The works of C., besides the Lusiad, consist of sonnets, songs, odes, elegies, eclogues, *redondillas*, epigrams, satires, letters, and two comedies (Amphitryon, after Plautus, and the Love of Philodemus).—(See the article *Portuguese Language and Literature.*) John Adamson's Memoirs of the Life and Writings of L. de Camoens (London, 1820, 2 vols.), of which the 2d volume contains a criticism on his works, are valuable. See, also, madame de Staël's article respecting him in the *Biographie Universelle* (6th vol.).

Camomile (*anthemis nobilis*) is a well-known plant, the dried, daisy-like flowers of which are frequently used in medicine. The principal use, for which camomile flowers are applied, is to excite vomiting, and promote the operation of emetics. They have likewise been substituted for Peruvian bark, in the case of intermittent fevers or agues, particularly on the continent of Europe, but not with much success. Both the leaves and flowers are employed in fomentations and poultices. They each, but particularly the flowers, have a powerful, though not unpleasant smell, and a bitter taste. They are administered in substance, as a powder or electuary; in infusion, as tea; in decoction or extract, or in the form of an essential oil, obtained by distillation. So fragrant is the camomile plant, that the places where it grows wild, on open, gravelly commons, may easily be discovered by the somewhat strawberry-like perfume which is emitted by treading on them. This quality has sometimes induced the cultivation of camomile for a green walk in gardens.

Camp means, generally, the place and order of tents or huts for soldiers in the field. In modern times, a difference is made between *camp* and *bivouac*, the former signifying the residence of an army resting in tents; the latter, the situation of one which dispenses with them, and remains either entirely in the open air, or, where time allows it, in huts built of branches, &c. (See *Bivouac.*) On the continent of Europe, tents are abolished, and the name of *camp*, therefore, is seldom used there at present.—Camps, of course, are of very ancient origin, since almost all nations, in their infancy, lived as nomades, dwelling in tents; as is the case with many tribes in Asia and Africa at the present day, e. g., the Arabs. The Romans, probably, first carried the art of encampment to a high degree of perfection, on account of their many wars in distant and thinly settled regions, where their large armies found no cities to quarter in. Cæsar and several other Roman authors give us much information on their way of constructing a camp, which they improved in strength and convenience, according to the time that they were stationed in it, and which, at the same time, the want of fortresses obliged them to make, in some cases, the points of their military operations. From such camps, it is well known, many cities originated, as Cologne on the Rhine, Treves, Cambridge, Bristol, and many others. It is a fact of much interest, that the military art, after so many changes in tactics, and in the principles of strategy, again resorts to something similar to these fortified camps of the ancients, as, in very recent times, it has been thought advisable, besides providing fortresses, properly so called, to strengthen certain large cities on the chief roads, partly in order to defend them against the first attack of the enemy, and to prevent his possessing himself easily of the important resources which they afford, but chiefly to give to retreating armies rallying points, able to furnish support to numerous soldiers. They are also points of assembly for the militia. Thus the Prussians fortified the large city of Cologne. Of all the European armies, the English are the only ones, we believe, who make use of tents, and therefore have camps, in the narrower sense of the word. It is to be observed, that camps have become slighter and simpler with the progress of the military art. The camps of the Turks, or other Asiatic nations, are extremely cumbersome, in comparison with the light bivouac of the Europeans, from which, at any moment, the whole army can rise in arms, prepared for battle.

Campagna di Roma; a territory in Italy, which comprehends the greater part of old Latium, about 70 miles wide and 230 long. We usually understand by it the desert plain which commences

near Ronciglione or Viterbo, and, including the Pontine marshes (q. v.), extends to Terracina. In the middle of this region lies, half deserted, the ancient capital of the world. The lakes of the C. are evidently craters of extinct volcanoes. Thus the lake Regillus, above Frascati, lies at the bottom of an inverted cone of hard, black lava, rising in wild and naked masses from 40 to 60 feet high. The craters containing the lakes of Albano and Nemi, which lie from 400 to 500 feet higher than the lake Regillus, have a very regular conical form. The lake of Albano is also remarkable for its aqueduct, or *emissarium*, one of the most ancient and excellent works of the Romans, which discharges the waters of the lake through the mountains. It was cut through the lava, in a year, by the command of an oracle, during the siege of Veii, when the lake threatened to inundate even Rome. (See *Albano.*) It answers its original purpose even at the present day. There are, also, many sulphur springs here, particularly between Rome and Tivoli, where the water issues almost boiling from the earth, and forms the lake of Solfatara, which contains floating islands, consisting of a calcarious deposit, which collects round substances thrown into the water. The water of the river, which issues from this lake, has the same qualities, and was considered, by the ancients, as particularly salutary. Near the lake were the baths of M. Agrippa. The soil of the C. is, in general, dry, but very fertile in the lower parts, though its cultivation is much neglected. From Monterosi to the hills of Albano, a tree is seldom to be seen. All the efforts of the French to diminish the malignity of the *mal' aria* in these regions, by planting trees, have been unsuccessful. There are no villages and towns in the C. Here and there you find single huts leaning against the ruins of old towers or temples, and patched up from their fragments. In the middle of the summer, when malignant fevers render a residence in the C. very dangerous, the unhappy inhabitants are obliged to take refuge in the neighboring towns, or in Rome, where they seek shelter under the porticoes of the churches and palaces. The great number of sick persons who fill the Roman hospitals during the months of July, August and September, are chiefly inhabitants of the country. Besides their huts, innumerable ruins of temples, circuses and monuments are scattered about C., particularly near the Via Appia; and long rows of aqueducts, some in ruins, some in a state of preservation, are overgrown with ivy and other plants. In the winter, flocks of sheep pasture in these solitudes; during the summer, they are driven up the Apennines. Herds of half-wild cattle remain during the whole year in the C. Their keepers, however, soon become a prey to the pestilence, or fall into a gradual decline. They are mostly natives of the mountains, and serve the proprietors of the herds for trifling wages. Bonstetten saw at Torre Paterno, very near Rome, a herd of several hundred cows, the proprietors of which did not consider it worth while to milk them, though milk is as dear in Rome as in other large cities. The herdsmen are mounted, and armed with long lances, with which they manage the cattle very skilfully. Scarcely a ninth part of the C. is cultivated; the rest is used for pasturage. In the times of the ancient Romans, this dreary solitude exhibited a smiling picture of abundance and fertility. Cornfields, groves, villas, monuments, alternated with each other, and, according to the accounts of Strabo, Varro and Pliny, the air was remarkably healthy, with the exception of a few marshy tracts along the coasts. The corruption of the climate originated as early as the 6th century, according to tradition, after some great inundations of the Tiber; which, however, still take place, without increasing the evil. The unhealthy air, the famous *aria cattiva*, is most injurious in the dry and hot seasons. The most probable supposition is, that it originated after the devastations of the barbarians, when the waters became stagnant from the want of human industry. The greatest obstacle to the removal of the evil is in the prejudices and indolence of the people. Thus the corruption is continually spreading, and has even attacked some quarters of Rome.

Campaign generally denotes the season during which armies keep the field. It also means an extensive level country. Formerly, when war was not carried on with so much impetuosity as at present, campaigns lasted only during the warmer months; and, towards winter, the troops went into winter-quarters, when the officers of the opposing armies often met very amicably at balls and other entertainments; but, of late, armies have kept the field through the winter, till a decisive victory has been gained. Thus the allies, in the winter of 1813—14, followed the French over the Rhine; some battles

were fought in January and February, and the armies remained, for several months, without roof or tent, in the open air of a cold winter.

Campan, Jeanne Louise Henriette (originally *Genet*), born at Paris, Oct. 6, 1752, became reader to the daughters of Louis XV; gained the favor of the wife of the dauphin, afterwards the queen Marie Antoinette, who gave her in marriage to the son of her private secretary, M. Campan, and appointed her the first lady of the bed-chamber. Madame C. gave her patroness many proofs of fidelity and attachment, and wished to follow her into the Temple after the 10th of Aug., 1792, which, however, Pethion did not allow. After the fall of Robespierre, madame C. established a boarding-school for the education of young ladies at St. Germain, which soon acquired a wide reputation. On this account, Napoleon appointed her the principal of an institution founded by him for the daughters of the officers of the legion of honor, at Ecouen, which she organized and superintended for seven years. After the restoration, Louis XVIII abolished this institution, and madame C. lost her situation. Her only son died in 1821, in consequence of ill treatment suffered because he was a relation of marshal Ney. Madame C. died at Paris, March 10, 1822. Of her Memoirs respecting the Private Life of the Queen Marie Antoinette, with Recollections of the Times of Louis XIV, XV, and XVI, in 4 vols. (translated into English, 1823), the fifth edition appeared at Paris, 1823. They contain interesting contributions to the history of the French revolution. Her *Journal Anecdotique*, also (Paris, 1824), is rich in piquant anecdotes of Napoleon, Alexander I, and others.

Campanella, Thomas; a native of Calabria, in Italy, famous for his talents and misfortunes. He displayed great quickness of parts when quite young, and, at the age of 15, entered into the order of the Dominicans. He studied theology and other branches of knowledge with assiduity, but was principally attracted by philosophy. The opinions of Aristotle, then generally taught in the schools, appeared to him unsatisfactory; and, in 1591, he published, at Naples, a work, entitled *Philosophia Sensibus demonstrata*, intended to show the futility of the prevailing doctrines. This book procured him some admirers, and more enemies. He then went to Rome, and afterwards to Florence, where he was well received by the grand-duke Ferdinand; but, not obtaining some preferment which he expected, he proceeded to Bologna, and then to Padua, where he gave lectures on philosophy. In 1598, he returned to Naples, and revisited, shortly after, Calabria, where, in the following year, he was arrested on a charge of conspiracy against the Spanish government, to which Naples was then subject. A scheme was imputed to him of having engaged the Turks to assist him in making himself master of Calabria. On this improbable and apparently unfounded accusation, he was imprisoned, and, after being repeatedly tortured, condemned to perpetual confinement. In this situation, he wrote many learned works, afterwards published. At length, in 1626, pope Urban VIII procured his removal to Rome, and, in 1629, gave him his liberty, and bestowed on him a pension. Dreading some further persecution from the Spaniards, he withdrew, in 1634, to France, where he was honorably received, and much esteemed by the learned men of that country. He died at Paris in 1639.—C. was a man of more imagination than judgment, displaying his talents rather by undermining the systems of others than by establishing his own. He was a believer in astrology, one of the follies of the age; and some of his opinions were very eccentric. His works are extremely numerous.

Campania; the ancient name of a province of Italy, in the present kingdom of Naples, which, partly on account of its natural curiosities, including Vesuvius, the Phlegræan fields, the lake of Avernus, and partly for its remarkable fertility, was a favorite resort of the distinguished Romans, who built there magnificent country-houses. Cuma, Puteoli, Naples, Herculaneum, Pompeii, Capreæ, Salernum and Capua, the principal cities of C., are names rich in classical associations. The Appian and Latin ways led into the interior of this charming province. Even now, C., or Terra di Lavoro, is the most beautiful and fruitful part of Italy; and no traveller can wish for a more delightful country than the fields of C., filled, in the month of April, with barley four feet high, and adorned with lofty poplars, which are connected by luxuriant vines, forming a canopy over the fields. "There," says Göthe, "it is worth while to till the ground."

Campanile; a detached tower, in some parts of Italy, erected for the purpose of containing bells. Several of them have deviated considerably from the perpen-

dicular, in consequence of their great height and narrowness of base. The campanile of Pisa, called *Torre Pendente*, or Hanging Tower, is the most remarkable of these. Its height is 150 feet, and it inclines nearly 13 feet from the perpendicular. The tower consists of eight stories, each of which is surrounded by columns. (See *Bologna*.)

Campbell, George, a distinguished Scotch divine, was born at Aberdeen, in 1709. He was educated at Mareschal college, and afterwards articled to a writer of the signet at Edinburgh. In 1741, he relinquished the law, and studied divinity. In 1759, he was appointed principal of Mareschal college. In 1763, he published his celebrated Dissertation on Miracles, in answer to the Essay on Miracles of Mr. Hume. This Dissertation was translated into the French and Dutch languages. In 1771, C. was chosen professor of divinity, and, in 1776, gave to the world his Philosophy of Rhetoric, which established his reputation as an accurate grammarian, a sound critic and a tasteful scholar. He also published occasional sermons. The last work which he lived to publish, was his Translation of the Gospels, with Preliminary Dissertations and Notes (2 vols. 4to.) He died in 1796. Besides the works already mentioned, his Lectures on Systematic Theology and the Pastoral Character (folio) have been printed since his death; as also his Lectures on the Ecclesiastical Character (2 vols. 8vo.), with his life prefixed.

Campbell, John, a native of Edinburgh, was, when very young, brought to England. His earliest productions are not certainly known; but, in 1736, he published the Military History of Prince Eugene and the Duke of Marlborough (2 vols. folio), which gained him so much reputation, that he was engaged, soon after, to assist in writing the ancient part of the Universal History, in 60 vols. 8vo. In 1742, he published the first two volumes of the Lives of the Admirals and other British Seamen, the two last volumes of which appeared in 1744. In 1745 commenced the publication of the *Biographia Britannica*, one of the most important undertakings in which C. was engaged. The articles written by him, extending through four volumes of the work, are, both in point of style and matter, much superior to those of his coadjutors. They are liable, however, to one general censure, arising from the almost unvarying strain of panegyric, in which the writer indulges, and which has repeatedly subjected him to critical animadversion. In 1750, he published the Present State of Europe, containing much historical and political information. He was then employed on the modern part of the Universal History. His last and favorite work was a Political Survey of Great Britain (1774, 2 vols. 4to.) C. died Dec. 28, 1775.

Campbell, Thomas, was born at Glasgow, Scotland, Sept. 7, 1777, and early displayed a remarkable vivacity of imagination and vigor of mind. He entered the university of Glasgow at the early age of 12, and immediately distinguished himself by carrying off the academical prizes, particularly for translations from the Greek poets. Moral philosophy was one of his favorite pursuits; but he never applied himself to any professional studies. After passing 7 years at the university, he went to Edinburgh, and produced, at the age of 20, his principal poem, the Pleasures of Hope, which established his reputation in England. Harmony of versification, a polished and graceful diction, and an accurate finish, are united with an ardent poetical sensibility, in this youthful production. The passage concerning the partition and subjugation of Poland is full of the lyric fire, which afterwards burst forth so brilliantly in the Mariners of England, the Battle of the Baltic, and Hohenlinden. In 1800, he visited the continent, and passed a year in Germany, where he became acquainted with the principal poets and literati. Here he witnessed the bloody fight of Hohenlinden, which inspired one of his finest lyric effusions. On leaving the continent, he visited London for the first time, and resided there till his marriage, in 1803, when he removed to Sydenham, where he resided about 20 years, receiving a pension of £200 from the crown. He has lately lived in London. In 1808 appeared his Annals of Great Britain, from the Accession of George III to the Peace of Amiens (3 vols., 8vo.) In 1809, he published a volume of poems containing Gertrude of Wyoming, a Pennsylvanian tale. It is full of pathos and beautiful simplicity. In O'Connor's Child he has touched a wilder string of passion and despair. His Theodric (1824) disappointed every body; and C. has, of late, done nothing worthy of his earlier productions. He is remarkable for his severe criticism of his own works, and this may account for his having written so little for the last 25 years. His poems have all been republished in America, where they

are very popular. His Specimens of British Poets, with biographical and critical Notices, and an Essay on English Poetry (1819, 7 vols., 8vo.), contain short extracts from the poets, from the time of Chaucer to that of Anstey. His Lectures on Poetry were written, originally, for the London Institution, and afterwards delivered in different cities of the kingdom, to his own profit and honor. They were printed, or at least a part of them, in the New Monthly Magazine. This magazine was originally projected by C. It appeared in 1821, and was edited by C. about four years, with much reputation. He was one of the early promoters of the London university, and, by his letter to Mr. Brougham, which first appeared in the Times, Feb. 9, 1825, and by his Suggestions, which appeared in the New Monthly soon afterwards, materially furthered that great project. In 1827, he was elected rector of the university of Glasgow—an office without labor or emolument. His rival was sir Walter Scott, and the election was made entirely on political grounds, C. representing the whig interest, to which he has always been attached.—C. is a very amiable and interesting person in private life, of lively manners, and devoted entirely to literary pursuits. Besides his pension and the profits of his literary labors, he has a small inheritance, received from an uncle.

Campe, Joachim Heinrich, born in 1746, at Deensen, in the territory of Brunswick, studied theology at Helmstadt, in Halle. In 1773, he was a chaplain in the Prussian service. He founded a private institution for education near Hamburg, but left it, on account of his health, in 1783, to professor Trapp. He died, Oct. 22, 1818, at the age of 72 years. His philosophical treatises, as well as the works which he composed for the instruction of youth, display a noble and philanthropic spirit. The services which he has rendered to the cause of education have been universally acknowledged. His style is pure and flowing, artless and animated. He possessed a rare faculty of accommodating himself to the youthful capacity. His endeavors to purify and enrich the German language were carried to excess. His writings for the instruction of childhood and youth were published together, at Brunswick, 1806—9, in 30 vols. 12mo., with copperplates. His Robinson the Younger has been translated into almost all the European languages, even into modern Greek. His *Theophron* has also had a wide circulation. His *Wörterbuch der Deutschen Sprache* (Brunswick, 1807—11, 5 vols. 4to.) is a production of much merit. His letters written (1789) from Paris, containing warm eulogiums on the French revolution, are bold and eloquent, but marked with the enthusiastic exaggeration of the time, and drew upon him many serious and satirical attacks.

Campeachy, or Campeche; a seaport town of Mexico, in Yucatan, in a bay to which it gives name, on the west coast of the peninsula of Yucatan; 90 miles W. S. W. Merida; lon. 90° 31′ W.; lat. 19° 51′ N.; population, 6000. It is defended by a castle furnished with cannon, and has several times been taken from the Spaniards, and plundered. Its port is large, but shallow. The houses are well built of stone. The exportation of the wax of Yucatan constitutes one of the most lucrative branches of its trade. It has a manufacture of cotton cloth. It was, for a long time, the chief mart for logwood, of which great quantities grew in the neighborhood, before the English landed here, and cut it at the isthmus. At the time when it was taken by the Spaniards, it was said to have contained 3000 houses, and considerable monuments of Indian art.—The *bay of Campeachy* lies on the south-west of the peninsula of Yucatan, and on the north of the province of Tabasco.

Camper, Peter, born at Leyden, 1722, died at the Hague, April 7, 1789, was one of the most learned and acute physicians and anatomists of the 18th century. He distinguished himself in anatomy, surgery, obstetrics and medical jurisprudence, and also as a writer on the beautiful. He drew with great skill with the pen, painted in oil, modelled in wax, and knew how to handle the chisel of the sculptor. C. was the first who proved that the ape, of which the ancients have left anatomical descriptions, was a species of orang outang. His essays on lithotomy, &c., have spread light on these subjects. He was much devoted to comparative osteology, and believed, what the discoveries of Cuvier have confirmed, that there have really existed animals of which the species are at present extinct. His Dissertation on the natural Varieties, &c., is the first work which has thrown much light on the varieties of the human species, which the author distinguishes by the shape of the skull. His Treatise on the natural Difference of Features in Persons of various Countries and Ages, and on Beauty as exhibited in ancient Paintings and Engravings, followed by a

method of delineating various sorts of heads with accuracy, is intended to prove that the rules laid down by the most celebrated limners and painters are very defective. His general doctrine is, that the difference in form and cast of countenance proceeds from the facial angle. (q. v.) In his essay on the organs of speech in apes, he proves that nature has rendered the pronunciation of articulate sounds impossible, even to those which approach nearest to man, by lateral pouches connected with the windpipe. C. wrote in four languages, and received ten prizes from different academies. He received his education at Leyden, and travelled, and obtained the acquaintance of many of the most distinguished men of Europe, after which he was made professor of philosophy, medicine and surgery in Franeker. He taught the same sciences, afterwards, in Amsterdam and Gröningen.

Campetti; an Italian, born at Gargnano, on lake Garda, who has attracted much attention, in our time, by pretending to be capable of ascertaining, by his feelings, the places where metals and water exist under the ground. Many experiments seemed to confirm his statements. The king of Bavaria sent for him in 1806, and he came to Münich, where the experiments were renewed. These experiments were chiefly made with pendulums of sulphurous pyrites, which are said to vibrate if brought near to metals. Information on this subject is contained in Aretin's *Neuer Literarischer Anzeiger* (1807), beginning with No. 22. Gilbert also published, in 1808, interesting elucidations of these experiments. (See *Rhabdomancy.*)

Camphor is a white, resinous production, of peculiar and powerful smell, not unlike that of rosemary, and is extracted from two or three kinds of trees of the bay tribe, that grow in the islands of the East Indies and China. Of these, the principal is the *laurus camphora* of Linnæus. It is of considerable height, much branched, and has spear-shaped leaves, with nerves, of a pale-yellowish-green color on the upper side, and bluish-green beneath. The flowers are small, white, and stand on stalks which issue from the junction of the leaves and branches. Camphor is found in every part of the trees; in the interstices of the perpendicular fibres, and in the veins of the wood, in the crevices and knots, in the pith, and in the roots, which afford by far the greatest abundance. The method of extracting it consists in distilling with water in large iron pots, which serve as the body of the still, with earthen heads fitted to them, stuffed with straw, and provided with receivers. Most of the camphor becomes condensed in the solid form among the straw, and part comes over with the water. Its sublimation is performed in low, flat-bottomed glass vessels, placed in sand, and the camphor becomes concrete, in a pure state, against the upper part, whence it is afterwards separated with a knife, after breaking the glass.—Numerous other vegetables are found to yield camphor by distillation. Among them are thyme, rosemary, sage, elecampane, anemone and pusatilla. A smell of camphor is disengaged when the volatile oil of fennel is treated with acids; and a small quantity of camphor may be obtained from oil of turpentine by simple distillation, at a very gentle heat.—Camphor has a bitterish, aromatic taste, is unctuous to the touch, and possesses a degree of toughness which prevents it from being pulverized with facility, unless a few drops of alcohol be added, when it is easily reduced to a powder. It floats on water, and is exceedingly volatile, being gradually dissipated in vapor if kept in open vessels. At 288° Fahr. it enters into fusion, and boils at 400° Fahr. It is insoluble in water, but is dissolved freely by alcohol, from which it is immediately precipitated, in milky clouds, on the addition of water. It is likewise soluble in the fixed and volatile oils, and in strong acetic acid. Sulphuric acid decomposes camphor, converting it into a substance like artificial tannin. With nitric acid, it yields a peculiar acid, called *camphoric acid.* This acid combines with alkalies, and forms peculiar salts, called *camphorates.* They have not hitherto been applied to any useful purpose.—As an internal medicine, camphor has been frequently employed, in doses of from 5 to 20 grains, with much advantage, to procure sleep in mania, and to counteract gangrene. In large doses, it acts as a poison. Dissolved in acetic acid, with some essential oils, it forms the aromatic vinegar. It promotes the solution of copal; and, from the circumstance that its effluvia are very noxious to insects, it is much used to defend subjects of natural history from their ravages.—In a crude state, camphor is formed into irregular lumps, of a yellowish-gray color, somewhat resembling nitre or bay-salt. It is imported into Europe in canisters, and the refining of it was long kept a secret by the Venetians. The Dutch have since

performed this work; and large quantities of camphor are now refined by some of the English and American chemists.—For carpenters' work the wood of the camphor-tree is much used. It is light and durable, and, in consequence of long retaining its aromatic smell, is not liable to be injured by insects.—Plants of the camphor and cinnamon trees were captured by admiral Rodney, in 1782, and afterwards carried to Jamaica, and propagated there. The camphor-tree which grows very abundantly in the western parts of Japan, is a different species from that found in the islands of Sumatra and Borneo, with which we are principally acquainted.—Camphor was formerly in great repute as a medicine, but at present its virtues are less highly rated. It is a cordial and stimulant of a decidedly heating character, and is, therefore, improper in all fevers, unless the system is very low and weak. In such cases, if combined with nitre and other cooling articles, it is sometimes an excellent diaphoretic. But, in fevers in general, it is an article rather to be avoided. It was once, however, and is now, in some parts of Europe, thought to be one of the best medicines in fever of almost all sorts; but it is an article that could well be dispensed with in common practice. As a domestic cordial and medicine, it is, perhaps, more used than any other, being still, in families, a panacea for all ailments of the smaller sort.

Campistron, Jean Galbert de; a dramatic poet, contemporary with Racine; born 1656, at Toulouse, died 1723, at the same place. His tragedies, at the time of their appearance, met with extraordinary applause. At present, however, they are much less esteemed; so that only two of his pieces—*Andronicus*, a tragedy which represents, under fictitious names, the history of don Carlos, and the comedy *Le Jaloux Désabusé*—are admitted into the selection of the *Théâtre Français des Auteurs du Second Ordre*. Laharpe says of C., "His plots have been commended as probable: they are so, but they are feeble in conception and execution."

Campo Chiaro, duke of; a Neapolitan diplomatist. In 1805, he served, in the royal guard, as captain of the Lipariots—a kind of mounted chasseurs. He remained in Naples when the king, on the approach of the French, fled, with his family, to Sicily. His liberal sentiments placed him, the next year, in Joseph's council of state, and he was soon after appointed minister of the royal house. Murat, also, when Joseph was appointed king of Spain, placed great confidence in him, and intrusted to him the direction of the police. He was afterwards employed on the most important diplomatic missions, among which was that to the congress of Vienna. The imprudence of the king himself, however, frustrated all the negotiations of the duke, which were conducted with great ability. After the revolution of Naples, in 1820, he was appointed minister of foreign affairs. His exertions in this difficult post were not crowned with success; and, after the departure of the king for the congress of Laybach, he was summoned before the parliament, on account of the circular of count Zurlo, which he had countersigned. He was, however, acquitted. He now lives in retirement.

Campo-Formio; a castle near (or rather a suburb of) Udine, in Friuli, a province of the Austrian government of Venice, celebrated for the peace, concluded here October 17, 1797, between Austria and France, and signed, on the part of Austria, by the ambassadors Cobentzl, Meerveldt, Degelmann, and the marquis of Gallo, and, on the part of France, by general Bonaparte. The negotiations were begun at Udine May 19, and were carried on alternately there and in the castle of Passeriano, where Bonaparte resided. Austria consented to cede Mantua, when Bonaparte threatened to renew the war. The treaty of peace was signed at both places, but it was dated at Campo-Formio, because this place lay between Udine and Passeriano, although the ambassadors had never been there. Austria gave up the Netherlands, Milan and Mantua. The Cisalpine republic was formed from Milan, Mantua, Modena, Bologna, Ferrara, Romagna, and the Venetian Terra Firma, on the right bank of the Adige. The republic of Venice was divided. Austria obtained Venice, Istria, Dalmatia, and the mouths of the Cattaro, and the Terra Firma, on the left bank of the Adige; France, the Venetian Ionian islands, and the Venetian possessions in Albania. To effect a peace with the German empire, a congress was to be held at Rastadt. By secret articles of agreement, the emperor consented to the partial or total surrender of the left bank of the Rhine to France, for which Austria was to receive Salzburg, and a part of Bavaria on the Inn. To the duke of Modena, and other princes who had lost a portion of their territory, indemnifications in Germany were secured. Bonaparte had, of his own authority, concluded this peace. The reader will

find his explanation of this subject in his *Memoires* (4th vol.) *dicté au Compte de Montholon* (London, 1824, p. 242). The directory was discontented with the treaty. Later occurrences gave occasion to a second coalition against France, in 1798; upon which France declared war against the king of Hungary and Bohemia, and the grand-duke of Tuscany, March 12, 1799. (See the articles *Rastadt*, *Luneville*, *peace at*; also, Schöll's *Traités de Paix*, vol. 5th.)

Campomanes (don Pedro Rodriguez) count of, a celebrated Spanish minister, whose learning, and profound and elevated views in political economy, place him among the first writers of his country, was born early in the 18th century. He was director of the academy of history, and his own works were a model of taste and industry. As a statesman and a publicist, he enlightened his countrymen by his writings on agriculture, manufactures, and the true principles of commerce. He was chosen a member of the academy of belles-lettres at Paris, and, on the proposal of Franklin, of the philosophical society of Philadelphia. C. raised himself solely by his own merits. His reputation as the most learned lawyer in Spain obtained him, in 1765, the appointment of fiscal to the royal council of Castile, by whose order he published, 1768, an Answer to the Letters of the Bishop of Cuença, in which that prelate asserted that the immunities and revenues of the Spanish church were attacked. He had already published a Treatise on Ecclesiastical Mortmain (1765), which was translated into Italian, by order of the senate of Venice. He assisted Aranda in the expulsion of the Jesuits from Spain, and labored to introduce a more equal distribution of the taxes, to diminish the number of mendicants, &c. In 1788, on the accession of Charles IV, C. was appointed president of the council of Castile and minister of state. With the rise of the count Florida Blanca, the favor of C. began to decline. He was removed from the council, and retired in disgrace. His death took place early in the 19th century. Among his numerous works are, Dissertation on the Templars (1747); Commercial Antiquity of Carthage (1756), in which he controverts the opinions of Dodwell, on the Periplus of Hanno; *Discurso Sobre el Fomento de la Industria popular* (8vo., 1774); and *Discurso Sobre la Educacion popular de los Artisanos* (1775); and a Sequel to the latter work (4 vols., 8vo., 1775—77), which treats of the causes of the decline of the arts in Spain.

Campus Martius (called also, by way of eminence, *Campus*, merely) was a large place in the suburbs of ancient Rome, between the *mons Capitolinus* and *Picius*, surrounded, in a great measure, by the Tiber. Its name was derived from a temple of Mars, situated in it. The first meetings of the people (*comitia centuriata*) were held here, and the first *lustrum* was celebrated in this place. (*Liv.* i., 24.) Tarquin the Proud sowed it with grain, but Brutus and Collatinus restored it to the people, who destroyed the grain, appropriated it anew to its former destination, and made it, at the same time, a place of exercise and gymnastic sports for the Roman youth. The bodies of the most distinguished men were burned there. Situated so near the city, it soon became covered with splendid buildings, of which the finest was the *circus Flaminius*. It is now filled with memorable ruins, and is one of the most interesting parts of Rome.

Camuccini, Vicenzo, is considered the best among the living historical painters of Italy. He was born at Rome, and is a follower of the French school, from the hardness and exaggeration of which the feeling of the beautiful, natural to an Italian, has secured him. A. W. Schlegel says of him, "He is correct, in the better sense of the word, to a very high degree. His drawing is accurate, his coloring vigorous and bright without harshness, his draperies well studied, the arrangement of his groups happy, as is his composition in general; yet he seems wanting in invention." He is a member of the academy of San Luca, and painted for St. Peter's his *Christ with the unbelieving Thomas*. He possesses a large collection of pictures and casts, and is celebrated for his success in restoring old pictures.

Canaan. (See *Palestine*.)

Canada; a country in North America, belonging to Great Britain; divided, in 1791, into the provinces of Upper and Lower Canada.

Lower Canada is bounded N. by New Britain, E. by New Britain and the gulf of St. Lawrence, S. E. and S. by New Brunswick, and the states of Maine, New Hampshire, Vermont and New York, and S. W. and W. by Upper Canada. The Ottawa river forms a great part of the boundary between Upper and Lower Canada. Above its source, the line runs due north to Hudson's bay, about lon. 81° W. Lon. 62°—81° W.; lat. 45°—52° N. The inhabitants, in 1763, were 70,000; in 1814, 335,000, of whom 275,000 were native or

French Canadians, the remainder being a mixture of English, Scotch, Irish, and emigrants from the U. States. In 1823, the population was 427,465.—It is divided into 5 districts, viz., Montreal, Three Rivers, Quebec, Gaspé and St. Francis, which were subdivided, in 1792, into 21 counties. The minor divisions are, 1. seigniories, or the original grants of the French government under the feudal system; 2. townships, or grants of land made by the English since 1796, in free and common soccage. The principal towns are Quebec, the capital, Montreal, Three Rivers, New Carlisle, William Henry, St. John's, Chambly and La Chine. The government is modelled on the principles of the British constitution. The executive power is vested in a governor, with a council of 10 members, all appointed by the king of Great Britain. The legislature, or provincial parliament, is composed of a council of 28 members, appointed by the king, and a house of assembly of 50 members, elected by the people. About nine tenths of the inhabitants are Catholics; the majority of the remainder are Episcopalians. There are two bishops residing at Quebec, one Catholic, the other of the church of England. The number of Catholic clergymen, in 1811, was 140; of Episcopal clergymen, in 1829, 25, and of Presbyterian, 4. There are respectable seminaries at Quebec and Montreal, but education is generally neglected by the French Canadians, the most of whom are unable to read and write. The descendants of the ancient Canadian colonists retain the politeness, sprightliness, and easy manners of the old French, from whom they sprung. Their houses are built of stone and plastered, seldom, except in the towns, of more than one story, and made extremely warm by means of stoves. Their furniture is generally of their own workmanship, and very simple. Their principal article of food is peas soup, with a small quantity of pork boiled in it, and a dish of thick, sour milk. The women and children seldom make use of any other drink than milk and water, but the men are passionately fond of rum. During the six months of winter, a great portion of the time is devoted to amusement, of which the most prevalent is dancing. The climate is healthy, but the extremes of heat and cold are very great; the thermometer sometimes rising, in summer, to 100° Fahr., and sinking, in winter, to 40° below 0.—The great river St. Lawrence forms a striking feature of Canada. The other principal rivers are the Ottawa or Uttawas, Richelieu or Sorel, St. Francis, Chaudiere, Saguenay, St. Maurice, Black, Bustard, Betsiamites, Harricanaw and Rupert. The principal lakes are St. John's, St. Peter's, Abbitibbe, Mistassin and Manicouagan. Lower Canada is intersected by ridges of mountains, which generally extend from the coast into the interior, with intervening valleys of a fertile and pleasant appearance. The valley through which the St. Lawrence flows is enclosed on each side by mountains. It is mostly level, of a very rich soil, and is thickly settled. The country lying upwards of 50 miles north of the St. Lawrence has been but little explored, and is only known to be covered with immense forests. The productions are grass, wheat, peas, rye, Indian corn, barley, and culinary vegetables. The commerce has been progressively increasing, since the country came into the possession of Great Britain. The exports, in 1769, amounted to only £163,000; in 1808, to £1,156,000. These consist chiefly of lumber, furs, grain, and pot and pearl ashes; the imports, of wines, rum, sugar, molasses, coffee, tobacco, salt, coals, and British manufactures, amounting, in 1808, to £610,000.

Upper Canada is bounded E. and S. E. by Lower Canada, S. by the U. States, from which it is separated by the St. Lawrence and the chain of the great lakes. New Britain lies on the north and west, but the limits are not well defined, the regions on these borders being unsettled. Lon. 74° to about 98° W.; lat. 42° to about 50° N. The population, in 1783, was estimated at only 10,000; in 1814, at 95,000; and, in 1826, at 231,778. The country has been settled chiefly by emigrants from Great Britain and Ireland, and the U. States. It is divided into 11 districts, viz., Eastern, Johnstown, Midland, Newcastle, Home, Niagara, London, Western, Gore, Bathurst and Ottawa. These are subdivided into counties and townships. The townships contain, on an average, about 61,600 acres each; total, 9,694,400 acres. Of these, about 3,000,000 acres are granted in free and common soccage, 2,769,828 reserved for the crown and clergy, and 3,924,572 still remain to be granted. The country which, in 1818, had been laid out and surveyed, extends about 570 miles along the north shore of the river St. Lawrence, lakes Ontario and Erie, up to lake St. Clair, varying from 40 to 50 miles in breadth. The soil consists, generally, of a fine dark loam, mixed with a rich vegetable mould. The whole

country presents a great degree of sameness, an almost uniform level, rising only a few feet above the banks of the St. Lawrence, and finely intersected, in every direction, by numerous streams, some of which are navigable. The productions are grass, wheat, Indian corn, flax, hops, &c. The climate is healthy, and considerably milder than in Lower Canada. Farther north, the country is covered with immense forests, but is little known, except to the Indians. The principal rivers are the St. Lawrence, Ottawa, Niagara, Trent, Ouse, Redstone and Thames. One half of the lakes Ontario, Erie, St. Clair, Huron, Superior, and lake of the Woods, is included in Upper Canada. There are, besides, lakes Nipissing, Simcoe, St. Joseph's, &c. The principal towns are York, the capital, Kingston, Niagara, Brockville, Queenstown and Chippeway. The Methodists are the most numerous religious denomination. There are also Episcopalians, Presbyterians, Baptists, Quakers and Mennonists. The executive power is vested in a lieutenant-governor and a council of 7 members, all appointed by the king. The legislative power is vested in a council, the members of which are appointed by the king, and a house of assembly, or provincial parliament, consisting of upwards of 40 members, returned from the counties.

The French appear to have availed themselves of the information derived from Cabot's voyage to North America, before any other nation. We hear of their fishing for cod on the banks of Newfoundland very early in the 16th century. About 1506, one Denys, a Frenchman, is said to have drawn a map of the gulf of St. Lawrence, and, two years afterwards, Aubert, a master of a vessel belonging to Dieppe, carried over to France some of the natives of C. Several years, however, passed away before public attention was again turned to it. In 1524, Francis I sent four ships, under Verazani, a Florentine, to prosecute discoveries in this country. The particulars of his first expedition are not known. He returned to France, and, the next year, undertook a second, which appears to have produced no beneficial result. On a third voyage, he and all his company perished. In April, 1534, James Cartier, of St. Maloes, sailed, by commission from the king, with two small ships and 122 men, and, May 10, came in sight of Newfoundland; but the earth was covered with snow, and great quantities of ice were about the shore. Having sailed to the 51st degree of latitude, in the vain hope of passing to China, he returned to France without making a settlement. In the following year, he sailed a second time from France, with three ships, proceeded up the St. Lawrence 300 leagues, to a great and swift fall; built a fort, and wintered in the country. The French were well received by the natives, but were soon infected with the scurvy, of which disease 25 of their number died. The next spring, Cartier returned, with the remains of his crew, to France. Between 1540 and 1549, a nobleman of Picardy, de la Roque, lord of Roberval, made an attempt to found a colony in C., but perished, on his second voyage, with a great number of adventurers. At last, Henry IV appointed the marquis de la Roche lieutenant-general of C. and the neighboring countries. In 1598, he landed on the isle of Sable, which he absurdly imagined to be a suitable place for the establishment of a colony, though it was without any port, and produced no other crop than briers. Here he left about 40 malefactors, the gleanings of the French jails. After cruising, for some time, on the coast of Nova Scotia, without being able to relieve these unfortunate settlers, he returned to France. His colony must have perished, had not a French ship been wrecked on the island, from which a few sheep were driven ashore. With the boards of the ship they erected huts, and, while the sheep lasted, they lived upon them, feeding afterwards upon fish. Their clothes wearing out, they made garments of seal-skins, and, in this miserable condition, spent seven years, when Henry IV ordered them to be brought home to France, and, on seeing their miserable appearance, was so much moved, that he forgave them their offences, and presented each with 50 crowns to begin the world anew. In 1600, one Chauvin, a commander in the French navy, made a voyage to C., from which he returned with a profitable cargo of furs. The public now began to turn more attention to this country. An armament was equipped, and the command given to Pontgran. He sailed in 1603. In 1608, the city of Quebec was founded, and from this period the establishment of a permanent French colony commenced. The settlement was, for many years, in a feeble condition, and was often in danger of being totally exterminated by the Indians. The French, however, concluded a treaty of peace with them, and, finally, by their address, obtained entire control over them, to the great inconven-

ience of the neighboring English settlements. In 1628, a company of French merchants obtained a patent for the exclusive trade with Canada. The next year, an English expedition, under sir David Keith, took possession of Quebec; but it was surrendered again to the French, by the treaty of St. Germain's. In 1663, the charter of the company of merchants was taken away, and new privileges were granted, for 40 years, to the West India company. From this period, C. appears to have remained in a state of tranquillity until 1690, when a bold attempt was made by the people of New England to reduce it to subjection to the crown of England. An armament was equipped for this service, and the command given to sir William Phipps. The effective men, to the number of between 12 and 1300, landed a little below the town of Quebec, and were fired on from the woods by the French and Indians. Having found the place too strong for them, they reembarked with precipitation, and returned to Boston. The attempt was renewed, in 1711, by a powerful force of British veteran troops, assisted by about 4000 provincials and Indians. Such were the difficulties and losses, however, experienced in passing up the river, that the design was abandoned by the British officers, to the great mortification of the provincial troops. C. continued in the occupation of the French, without any further molestation, until the breaking out of the war between France and England, in 1756. Great preparations were then made, on both sides, for attack and defence. In 1759, the British government formed the project of attempting the conquest of C. by three different but simultaneous attacks. One division of the army was to ascend the St. Lawrence, and lay siege to Quebec. The central and main body was to be conducted against Ticonderoga and Crown Point. The third was to proceed against Niagara, and, after the reduction of that place, to descend the St. Lawrence to Montreal. The division which ascended the St. Lawrence was commanded by general Wolfe, and was defeated in its first operations by the French. The English, however, finally obtained possession of Quebec, after a gallant resistance on the part of the French, whose brave commander, Montcalm, had been killed in the action. The English general Wolfe was also killed. Soon afterwards, the whole province of C. was subdued by the English forces, and was confirmed to Great Britain by the treaty of 1763. In 1775, C. was invaded by a body of provincial troops, under general Montgomery. Montreal was taken, and a gallant but unsuccessful attempt was made on Quebec, in which the brave Montgomery was killed. No other attempt was made on this province during the revolutionary war. We have few records of Canadian history from this period until the late war between the U. States and England. Upper C. then became the theatre of a sanguinary contest. The American troops were unable, however, to make any permanent conquests, and the province has since remained subject to Great Britain. In 1825, the restrictions upon its commerce, under which it had labored, with the other colonies of Great Britain, were principally removed, and its trade has since greatly increased.

Canaille; a French word, signifying the lowest class of people. In the time, however, which immediately preceded the revolution, when the arrogance of the nobility was outrageous, *canaille* signified, with them, all who were not noblemen. The people adopted the word, during the revolution, in contempt of the nobility. In this sense, Napoleon said, at St. Helena, that he sprung from the *canaille*; i. e., he did not belong to the feudal aristocracy.

Canal. A canal, in navigation, is an artificial channel for transportation by water. The first inquiry in the project of such a work, accordingly, relates to the amount of transportation that will be accommodated by the route proposed, at some given rate of tolls (for the quantity will be in some degree influenced by that rate). If the project be a mere speculation, or investment of capital by individuals for the sake of income, its expediency will be determined by the net amount of annual tolls it will probably yield; which ought, in this view of the matter, to be equal to the ordinary rate of interest. But the general utility or public expediency of a project of this sort is not determined wholly by this mode of calculation; for, in this view, we must look at the indirect advantages, such as the increased value of lands on the borders of the canal, the increased profits of other works connected with or affected by the one proposed; as in the case of the smaller branches of internal navigation in England, many of which, as will be seen by referring to the subjoined list, are not very productive investments, but doubtless contribute to the large income of the great lines of transportation between the principal towns, as London and Liverpool, by in-

creasing the amount of goods that pass along those lines. To determine the general public utility of one of these smaller branches, therefore, we must estimate not only the increased value which it gives to coal mines, stone quarries, forests, &c. on its borders, but also its effects in enhancing the value of other canals. But a work of this sort may be, on the whole, of public utility, although an absolute income, in consequence of the investment, can nowhere be traced, but only a reduction of the cost of some article of general use, by means of a diminution of the labor, the number of days' or hours' work, necessary to furnish the article, at any place. Thus the proprietors of the duke of Bridgewater's canal are under obligation to supply the inhabitants of Manchester with coals at the rate of 4*d.* for 140 pounds, which is a great benefit to the inhabitants of that town. This is one of the advantages of this work, which should be taken into the account in estimating its public utility. Another beneficial consequence of any great improvement of this description, as well as those of other kinds, often is to promote some species of arts: for instance, a canal may promote agriculture, horticulture, &c. by irrigation or opening a market. In determining on any canal project, then, as well as in estimating its utility, these various circumstances are to be taken into consideration. The motives, whether of public utility or private emolument, or a union of them both, being sufficient to induce to the undertaking, the next things to be considered are, the obtaining of an adequate supply of water, the particular route to be taken, and the mode of construction. On these subjects, the reader is referred to the treatises more particularly relating to them. The remainder of the present article will be devoted to a general account of some of the most considerable works of this sort. Minuteness of detail and technical accuracy, in regard to the dimensions, &c., cannot be expected in a book of this kind. The length of the canals is probably given with sufficient correctness. The breadth is, in many instances, stated, in the works to which a resort was necessarily had, without distinguishing whether it was that of the bottom or water line, and, in these instances, it has been given as it was found, the reader being left to refer it to one or the other of these dimensions, according to the breadth of the locks, and other facts stated respecting such canals.

Canals of Egypt. Egypt has been celebrated for its canals from the earliest periods of history. The principal are, the *canal of Alexandria*, between that city and Rosetta and the Nile; that of *Jessuf*, on the western bank of the Nile, and parallel to it; and that of the *Red sea and Nile*, across the isthmus of Suez. The existence of this last, though a subject heretofore of some discussion, is now established beyond doubt. It was begun by Necho, son of Psammeticus, about 616 B. C., and the work was continued by Darius Hystaspes, but was afterwards abandoned, from fear of inundating a great part of Egypt, which is supposed to be lower than the surface of the Red sea. The work was, however, resumed, and completed near a century afterwards, about 521 years before the Christian era, by Ptolemy II; but a current from the Red sea upon Egypt was prevented, it seems, by a barrier or bank across the canal; or a part of the route may have been left not excavated. This dam, if narrow, might have been passed by boats on inclined planes, after the Chinese method, or otherwise; but it seems to be more probable, that boats did not pass between the canal and the Red sea, but that the cargoes were carried by land across the intervening barrier, or portion of ground not excavated, and reshipped. Herodotus says this canal was of 4 days' navigation, and wide enough to admit of 4 vessels to pass abreast. Strabo says it was 100 cubits wide, and of sufficient depth for large vessels. The breadth would probably vary very much, as does that of the canal of Alexandria; for if it was made, for any considerable part of the distance, by embanking, instead of excavating, additional breadth might be given without increasing the expense of construction; and, if navigated by sailing-vessels, like the canal of Alexandria, the additional breadth would be convenient, though not maintained through the whole route.—The *canal of Jessuf* leaves the Rosetta outlet of the Nile, near Rhameneh, passes a little south of Demanhour (the ancient *Hermopolis parva*), and thence by the north-east shore of the lake Mareotis, to Alexandria. Two branches pass off in a north-west direction, and one in a southwardly, which communicates with the lake Mareotis. This canal is navigated by sailing-vessels, being, in most parts, of a convenient breadth for this purpose, though, at its entrance from the Nile by its new channel, it is only 19½ feet wide. The old entrance, a little north of the new, is not used, on account of the height of the banks, which intercept the

wind. Afterwards, at the village of Lemedis, it spreads to the breadth of about 55 yards, and keeps this breadth for 2½ leagues, where the banks are 13 feet above the bottom of the canal, and 10 above the surface of the ground. Passing over 2 leagues more, towards Alexandria to Gabel, the breadth is contracted to 22½ yards. It continues of about this breadth for 4 leagues, and is very regular. Beyond Leloha, it widens, varying in the first half league from 109 to 273 yards in breadth. Near Beda, it is 55 yards wide, and the banks 23 feet high. Passing on towards Alexandria, the country sinks by degrees, until the bottom of the canal is on a level with the adjacent territory, and then rises above it, the canal being here formed by embankments; but, for a league before arriving at Alexandria, the ground rises again, so that the canal is here formed by an excavation in the ground. It passes very near the lake Aboukir, on the left, in the course we have been following, and is separated from it, near the western extremity of the lake, only by a wall about 20 feet in thickness.—The water must rise 13 feet above the lowest state of the Nile to enter the *Alexandria canal*; and, at high water in the Nile, the water in the canal is about 2 feet deep on an average. The distance, in a straight line, from Rhameneh to Alexandria, is about 15 leagues, but by the course of the canal, 20. The navigation of this canal continues only about 20 or 25 days in the year, during the highest water of the Nile. The French, when in Egypt, were enabled to navigate this canal for six weeks by clearing away about 18 inches of mud near Rhameneh, at the eastern extremity. This canal, which now passes through ruins and deserts, and is navigable for only a few days of the year, was, as late as the 14th century, bordered by a wealthy and populous territory, and, in the time of the Roman and Greek empires, was the channel of an extensive transportation.

Canals of China. The Chinese seem to have a more extensive inland canal navigation than any other nation, if not greater than that of all other nations. The general course of the rivers is from west to east, the principal of which are the Yang-tse, or Kiang-keo, to the south, the course of which is said to be 2000 miles, and its breadth 2½ miles at a distance of 100 miles from its mouth; and the Yellow river, to the northward, which is represented to be still longer. These two rivers empty into the sea, within 100 miles of each other, though they are more than 1000 miles apart in the interior of the country. The artificial channels of navigation pass in a northerly and southerly direction across the territory lying between the natural streams, thus making lines of communication between these principal rivers and their various branches, which form the natural channels of transportation in the easterly and westerly direction. As these canals pass over the summits of the intermediate territories between the great streams, the different parts of the canals must be upon different levels, and there must, accordingly, be some means for boats to pass from one level to another, which they do mostly by means of inclined planes and rollers, over which they are drawn by men. The ascent and descent, at some of these planes, is 15 feet. The banks of the canals are, in many instances, lined with freestone, and contain sluices to let the water off for irrigating the country and supplying the towns; and in many parts, also, they are beautifully ornamented with trees. The barque in which Le Compte passed from Nimpo on a canal, was 70 feet long and 16 feet broad. The management, repairs and extension of the canals is a very important branch of the internal economy of the empire, and the description and history of these works is said to occupy 40 volumes; which does not, however, give us a very definite idea of the extent of these records, as we are not told the size of these volumes. Some of the most extensive of these works have been in operation about 2000 years, having been completed 80 years before the Christian era; and, about A. D. 605, it is said there were completed in the empire 1600 leagues of canal.—The *Imperial canal*, and the continuation of the line of transportation between Pekin and Canton, of which that forms a part, is most frequently spoken of, though the distance of the whole route is variously stated. Malte-Brun, in his Geography, states it at 1660 miles, but it is stated by others at 920. The navigation over this route occupies about 3 months. The part of this line called the *Imperial canal* is said to be about 500 miles in length from the vicinity of Pekin to the Yellow river, which it meets about 25 leagues from the sea, where the river is about a mile wide and 9 or 10 feet deep. This canal is called the *Imperial*, from its being navigated only by the emperor's boats, which Le Compte estimates at 1000, of 100 tons burthen each. Between the Yellow river and Canton, the navigation is interrupted, for about 30

miles, by a mountainous district, causing a portage of that distance.

Canals of Italy. In ancient Italy, besides the *canal of the Pontine marshes*, intended as a drain, and used also for navigation, the region about the mouths of the Po was intersected by the *fossa Augusti*, *fossa Philistina*, and numerous other canals. It was in Italy that the great improvement, in modern canals, over the ancient and those of China, was first introduced, in 1481, by the construction of locks and sluices to pass boats from one level to another. It was the invention of two engineers of Viterbo, brothers, whose names have not been handed down. This improvement was soon after adopted in the Milanese territory, under the direction of Leonardo da Vinci, the famous painter, who was also celebrated as an engineer. Inland navigation became so important, that the Italian governments paid great attention to it, and enacted many regulations on the subject, and numerous treatises were published on the construction of locks and the art of making and managing canals. The following are some of the principal canals of modern Italy. The *Naviglio Grande*, between Milan and the river Tesino, 15 miles in length, 130 French feet broad at the surface, and 46 at the bottom. It was extended to Milan in 1257, and enlarged, in 1269, with a branch of about 11 miles in length, from Abiato southward. The *Martesena canal* branches off from the right bank of the Adda, near Concessa (ancient *Trizzo*); is 24 miles in length and 33 feet in breadth, and is raised, in some places, by walls and embankments, 110 feet above the level of the river. In 1497, 5 locks were introduced into this canal. The *great canal of Tesino* terminates at Milan. The *Muzza canal* is drawn also from the river Adda, near Cassano, and re-enters the river at Castiglione, 40 miles distant.—In *Piedmont* are the *Naviglio d'Inéa*, 38 miles in length, uniting the Dora Baltea and the Sessia, with a branch of 13 miles, to the Gardena river; and a canal of 27 miles from Dora Baltea, a little above the falls of the Po, which, passing Trino, unites with the Po 4 miles below Casal. These 2 canals are parallel to the Po, and substitutes for it. There are 3 other short canals in this territory.—In the *duchy of Mantua* is the *fossa Puzzola*, 15 miles in length, from the Mincio to the Tartaro, and the *canal of St. George*, 7 miles long, branching to the lake of Mantua; also the *Montanaro*, 8 miles from the same lake to the Po, at Borgo Fute; the *fossa Maestra*, 5 miles from Ozoma to the *canal Montanaro*; and the *Fossero*, from the Mincio, 7 miles.—In the *duchy of Modena* is a canal 16 miles in length, from Secchia by Modena to Panaro, which has several branches, one 5 miles long.—In the *papal territory* is the *fossa Rangone*, parallel to the Panaro, from which a branch passes off by Conte to Po Mort or Po di Jerana, and the *canal Di Giovanni Niginales*, 22 miles long. From Bologna to Ferrara is the *canal Di Naviglio*, 24 miles long, and terminating in the great marshes.—There are, besides, many short branches of the canals, already mentioned, as well as locks and channels for passing rapids in the navigable rivers.

Canals of Russia. The canals of Russia began with Peter the Great, who had observed their useful effects in Holland. He commenced three. The *canal of Ladoga*, begun by him A. D. 1718, and finished by the empress Anne, is 67½ miles long, from the Volk to the Neva, 70 feet broad, and the water 7 feet deep in summer, and 10 in winter.—The *canal of Vishnei-Volosholk*, completed under Peter the Great, but much improved, afterwards, by Catharine, forms a communication, by water, between Astracan and Petersburg, or between the Caspian and the Baltic, which is effected, as will be seen by referring to the map, by passing from the Caspian up the Wolga, then turning into the river Ivertza; leaving which, the canal passes over to the river Schlina, which flows towards the Baltic into the lake Martina, from which flows the river Mista, which, after a course of 234 miles, discharges itself into lake Ilmen, from which issues the Volk, that runs 130 miles, and empties into the lake Ladoga, which again gives rise to the Neva, that discharges itself into the Baltic at Petersburg; so that these three rivers are, in fact, the same stream, passing through three lakes in its course. It is said that 3485 barques have passed through this canal in one year.—There are many other canals in Russia, which we have not space to describe. The canals and rivers supply the channels of a very extensive inland navigation in Russia; so that goods may be transported, by rivers and canals, from the frontiers of China to Petersburg, a distance of 4472 miles; and the line of navigation from Astracan to that capital is 1434 miles.

Canals of Sweden. Canals were early opened in Sweden, and the improvement of the inland navigation has always been a subject of great interest to the government. Among the modern canals of this country is that of *Stromsholm*, 60 miles

long, the descent 336 feet, the number of locks 25, breadth 18 feet, and depth 4 feet 4 inches.—The *Kindac canal* and the *Gotha canal*, intended to open a communication between the lake Wenner and the Baltic, have been commenced under the superintendence of the English engineer Mr. Telford.—The *canal of Trolhatta* makes a navigable channel round the rapids of Trolhatta, in the river Gotha, consisting of successive cascades, one of 60 feet in height, and, in all, 114 feet, and situated N. E. of Gothenburg, about 45 miles. The project of constructing works, by which to pass these rapids, was long contemplated, and finally accomplished in 1800. These rapids interrupted the navigation of the Gotha for about two miles; and the difficulty of making a canal past them was owing to the banks being bold and rocky, as is usual at falls of such extent. They are now passed by nine locks, mostly excavated out of solid rock. This is considered a gigantic work, and was executed by a private company, to their own emolument, as well as the public benefit.

Canals of Denmark. The principal canal in this country is that of *Keil*, which commences about 3 miles north of Keil, and passes 20½ miles across the duchy of Holstein to the river Eydar, which, running by Rendsburg, falls into the German ocean at Jonningen. The Keil canal thus opens a communication between the two seas. It was begun in 1777, and completed in 1785; is 100 feet broad at the top, 57 at the bottom, and the least depth of water is 10 feet. The descent from the summit towards the Baltic is 25½ feet, and towards the German ocean 23 feet. It has 6 locks.

Canals of Holland. This country, it is well known, is intersected, in all directions, by canals, which serve for navigation in summer, and roads of ice in winter. The surface of the water, in many of these canals, is above that of the surrounding country; the lands of which are drained by pumping the water up into the canals; for which purpose numerous windmills are scattered about the country, and kept in operation. (For the great ship canal from Amsterdam to Niewe Diep, see *Amsterdam*.)

Canals of Germany. The improvement of inland navigation in Germany has been obstructed by the division of the territory into numerous small jurisdictions, which are, in many respects, independent of each other.—The canal between *Vienna* and *Neustadt* is 40 miles in length; and that of *Francis*, completed in 1802, between the Danube and Jeysse, is of the same length, and has 3 locks.—In Prussia are the *canals of Stecknitz*, *Planer*, *Potsdam*, *Finow*, *Muhlrose*, *Frederic William*, and the *Bromberg*. This last was constructed under Frederic the Great, by the engineer Breekenhaaff. It is 16 miles in length, has a descent of 67 feet, and 9 locks. (See *Fossa Carolina*.)

Canals of Spain. Spain has done almost nothing towards improving its internal navigation. Some canals have been projected, but only a part of the *Arragon canal* has been completed, consisting of two pieces of canal, both commencing at Navarre. Though this partial execution of the projected navigation has had a sensible effect in promoting the populousness, fertility and wealth of the neighboring territory, the work stands still; and there seems to be little prospect of the completion of the project.

Canals of France. The canals of France, next to those of Great Britain, are the most important in Europe, in respect to their extent and the difficulties overcome in their construction. The whole length of canal navigation in France is about 900 miles, or about one third part of that of Great Britain.—*Canal of Briare*. The first important work of this kind, constructed in France, was the canal of Briare, called, also, that of the *Loire and Seine*, because its object was to connect those two rivers. It was 37 years in execution, being begun in 1605, during the reign of Henry IV, and completed in 1642. It is 34½ miles in length. From the Loire, about a mile from Briare, it ascends along the river Frezee, by Ouzonne and Rogny, where are 7 locks; then by Chatillon and Montargis, and, near Cepay, meets the river Loing, which falls into the Seine. The locks of this canal, 40 or 42 in number, were the first executed in France. They vary from 124 to 164½ feet in length, and from 5 feet 4 inches to more than 13 feet in lift, and are, according to some authorities, 14 feet 5 inches, or, according to others, $15\frac{16}{100}$ feet, in breadth. The bottom of the canal is $25\frac{56}{100}$ wide. It is supplied with water principally by lakes; one of the feeders, that of Privé, is 12 miles in length. The cost of this canal is estimated at 20,000,000 francs, or about $3,700,000, which, considering the difference in the value of money, is nearly equal to that of the Erie canal of New York. It is important for the supply of provisions to Paris.—The *canal du Midi*, or *Languedoc canal*, makes

a communication between the Mediterranean at the city of Cette, and the Atlantic ocean at the mouth of the Garonne, passing through the province of Languedoc, and is supplied by the rivers Garonne and Gironde, and their tributaries. It was undertaken in 1664, 22 years after that of Briare was completed, and finished in 1680; being 148 English miles in length, from the coast of the Mediterranean to Toulouse, where it meets the Garonne; 64 feet wide at the surface of the water, and 34 or 35 feet at the bottom; rising, at the summit, 200 metres, or about 640 feet, above tide-water, and having 114 locks, varying in lift from 4 to 12 feet, and navigated by boats 85 feet long, and from 17 to 19 broad, drawing 5 feet 4 inches of water, and of 100 tons burthen. The reservoir of St. Ferrol is situated at the summit-level, where a body of water more than five French leagues in length is accumulated, for the supply of the canal, from the streams falling from the neighboring mountains. This reservoir and the basins at Castelnaudary cover 595 acres. The canal passes under a mountain at Beziers, by a tunnel of 720 feet in length, lined throughout with freestone—a kind of construction novel at the time when the canal was made, though now common. The canal is crossed by 92 road-bridges, and has 55 aqueduct bridges. It was completed under Louis XIV, under the direction of François Andreossi, as engineer. It is estimated to have cost 33,000,000 francs, or about $6,160,000; in comparing which with the cost of similar works in Great Britain and the U. States, allowance must, as above suggested, be made for the difference in the value of money, the same nominal cost, in France, being a much greater actual cost, in this comparison.—The *canal of Orleans* was the next in order of time, having been begun in 1675, and completed in 1692, 12 years after that of Languedoc. It branches from the Loire, near to Orleans, 36 miles below the place where the canal of Briare meets that river, and joins the canal of Briare at Montargis, being 45 miles long. One object of its construction was to save the difficult navigation on the Loire, between Orleans and the junction of the canal of Briare with that river, and to open a shorter route of communication between the Lower Loire and Paris. It has 28 locks, varying from 136½ to 177½ feet in length, and of lifts from 5 feet 4 inches to 12 feet 7 inches. From the Loire to the summit, the ascent is 98 feet 2 inches. The breadth is from 25 feet 7 inches to 32 feet, at the surface of the water, and the depth from 4½ feet, when full, to 2 feet, when lowest. The boats are from 96 to 102 feet long, and 13 feet 10 inches broad. The expense of its construction is stated at 8,000,000 francs, or about $1,500,000.—The *canal of Loing* is a continuation of the navigation of that of Orleans, and the northern part of that of Briare, commencing from the northern extremity of that of Briare, and extending to the river Seine, terminating in the neighborhood of Fontainebleau. It was completed in 1723, is 33 miles long, 44 feet broad at the surface, 34 at the bottom, and from 4 to 5 feet deep. The towing path, on each side, is 6 feet 5 inches broad, outside of which, on each side, is an embankment, like the *levées* on the Mississippi, or the dykes of Holland, 3 feet high, 19 feet broad at the base, and 12 feet 9 inches at the top, to prevent the waters from overflowing during floods. The whole descent is 136 feet 8 inches, divided among 21 locks, which vary in lift from 4 to 7 feet, and in breadth from 15½ to 16. The cost is stated at 2,500,000 francs, or about $466,000. It was constructed about the same time with the canal of Orleans.—The *canal of the centre*, called, also, that of *Charolois*, and likewise a branch of the "Grand Navigation," completed in 1791, leaves the Loire at Dijon, follows the banks of the Arran, then the left bank of the Bourbonne, and passes by Parce, Genelard, Aire and Blauzey, to the lakes of Monschamin and Long-pendu, which form the summit-level, the rise being 240 feet, by 30 locks, in 6300 metres. The summit-level is a distance of 3940 metres, whence the canal descends, by the river Dheune, to St. Julian, where it crosses that river, and passes along the right bank by St. Benain, St. Leger and St. Gilles, to Chagny, leaves the valley of the Dheune, and crosses towards the river Halia, which it follows to its junction with the Soane at Chalons, the descent from the summit being 400 feet by 50 locks, in a distance of 47,000 metres; the whole length of the canal being about 71 miles, the breadth, at the surface of the water, 48 feet, at the bottom 30 feet, the depth of the water 5¾ feet, the length of each lock 100 feet, and its breadth 16. The cost of this canal is stated at 11,000,000 francs, or about $2,060,000.—The *canal of St. Quintin* unites the Scheldt with the canal of Flanders. It was projected, in 1727, by the military engineer Devieq, but not

constructed until 1810. The original plan, which has been very nearly followed, was to proceed from Maquincourt, near the Scheldt, to mount St. Martin, there pass through a tunnel 3440 toises, or a little more than 3¾ miles, long; then follow the valley of Bellinglise and Haut Court to the heights of Tronquoy; there pass through a tunnel 700 toises, a little more than ½ of a mile, in length, coming out at Ledin; making the distance of the summit-level 7090 toises, or a little over 8 miles, of which 2950 are open, and 4140, or more than 4½ miles, subterraneous. The length of this canal is 28 miles; in the rise from St. Quintin to the summit-level, there are 5 locks, and in the descent to Cambray, 17. The cost is stated at 12,000,000 francs, or about $2,250,000.—Besides the above canals, 42 others are enumerated in the *Encyclopédie Moderne*, as completed, or in the course of construction, in France, in 1825.

Canals of Great Britain. The English were a century after the French in commencing the construction of canals upon a large scale. The first considerable work of this description was the *Sankey canal*, for which an act of parliament was passed in 1755; the object of the act being the improvement of the navigation of Sankey brook; which plan was afterwards changed to that of a separate canal of 12 miles in length. While the work on this canal was in progress, in 1758, the duke of Bridgewater obtained an act of parliament for making Worsley brook navigable from Worsley mill to the river Irwell, for the purpose of facilitating the transportation of coals from his estate to Manchester; but, seeing the advantages of still-water navigation over that of a river, he conceived the project of a canal over dry land, passing the river Irwell by an aqueduct, and thus making a communication between his coal-mines and the town of Manchester on one level. The plan was subsequently extended, and the duke, who lived 14 years after the commencement of the execution of his project (he died in 1772, at the age of 56), devoted his time and his fortune to the execution of his great work, with the assistance of an engineer distinguished for his genius. He diverted all his resources into this channel, and, to enlarge his means for the undertaking, he limited his personal expenses to £400 a year, and is even supposed to have shortened his life in consequence of the toils and anxiety attendant upon so arduous an enterprise. It was a grand project, worthy of the sacrifices he made to it. And it is a stupendous monument, whereby his memory is associated with the wealth and prosperity of England. The works were projected by the celebrated engineer John Brindley, and executed under his direction, and constitute a lasting memorial of his genius and skill.

The following are the principal canals in Great Britain. (*Originally* denotes the first assumed cost per share, where the actual cost is not ascertained.)

Name.	*When made.*	*Length in miles.*	*Ascent & Descent, in feet and decimal parts.* Total.	Pr.mile.	*Breadth.*	*Depth.*	
Aberdare, . . .	1793	7¼	40	5.5			From Glamorganshire to Abernant. Length of the boats, 12 feet; breadth, 5. Number of shares, 221; originally, £100; value in 1824, £25.
Aberdeenshire,	1805	19	170	8.8	20	3½	From Aberdeen harbor to Don river, at Inverary bridge; 17 locks.
Andover, . . .	1790	22½	177	7.8			From Southampton water to Andover; has been partially abandoned. Number of shares, 350; originally, £100; value in 1824, £5.
Ashby-de-la-Zouch,	1805	40¼	224	5.6			From the Coventry canal, at Marston bridge, to an iron railway, 3½ miles long, at Ticknall. The first 30 miles are level, forming, with the Coventry and Oxford canal, a level of 73 miles, without including the branches. It has tunnels at Ashby-de-la-Zouch and Snareton (the length of the two is 700 yards), and an iron railway, 6 miles in length, to the Cloudshill mines. It has 2 aqueduct bridges. At Boothorpe, a steam-engine is erected, to convey the water to a feeder for the summit-level. Number of shares, 1482; cost, £113; price in 1824, £20.

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Ashton-under-line, or Manchester and Oldham, and branches,	1797	18	152	8.4	33—15	5	From Rochdale canal, at Manchester, to Huddersfield, at Duckenfield; has 3 aqueduct bridges; boats of 25 tons burthen. Number of shares, 1760; average cost, £97 18*s.*; price in 1824, £150.
Barnesley and branches,	1799	18	120	6.7			From river Calder, below Wakefield, to Barnby bridge; has 1 aqueduct bridge and 20 locks. Number of shares, 720; cost, £160; price in 1824, £215.
Basingstoke, .	1790	37	195	5.3			From Wye to Basingstoke; has 72 bridges and 29 locks. Number of shares, 1650; cost, £100; price in 1824, £6. The Tingis branch is 5½ miles in length. The boats are of 45 tons burthen. It has a tunnel of ¾ mile.
Birmingham, .	1772	22½	204	9.07	40	4½	Commences in the Birmingham and Staffordshire canal, and terminates in the Birmingham and Fazeley canal. The boats are 70 feet long and 7 wide, and of 22 tons burthen. Number of shares, 4000; originally £140; price in 1824, £315. The tonnage is not to exceed 1½*d.* per mile.
Birmingham and Fazeley,	1790	16½	248	15	30	4½	From the Coventry canal, at Whittington brook, to Birmingham canal, at Farmer's bridge; has 44 locks; boats 22 tons burthen.
Brecknock and Abergavenny,	1776	33	68	2			From the Monmouthshire canal to Brecon. There is, at Abergavenny, an iron railway a mile in length; at Wain Dew another 4¾ miles, and at Llangroiney another 1¼ mile. It has a tunnel of 220 yards, and 3 aqueduct bridges. Number of shares, 958; originally, £150; price in 1824, £100.
Bridgewater, . .	1758	40	83	2	52	5	From the tide-way of the Mersey, at Runcorn Gap; and at Longford bridge divides into 2 branches, one terminating at Manchester, the other at Pennington, near the town of Leigh. The whole lockage is the 83 feet at the Mersey, in rising from tide-water, by 10 locks. This canal, with a part of the Trent and Mersey canal connected with it, makes a level of 70 miles, 30 of which are on this canal. Mr. Cary states that there are about 16 miles of canal under ground within the mountains at Worsley. It has 3 principal aqueduct bridges, and several smaller ones. Arched branches pass off from it at considerable distances, under the town of Manchester, from one of which coals are hoisted up to supply the inhabitants, which the proprietors, successors to the duke of Bridgewater, are bound to furnish them at 4*d.* for 140 lbs.—an advantage to which much of the prosperity of that town has been attributed. The embankment over Stratford meadows is 900 yards long, 17 feet high, and 112 feet wide at the base; that at Barton bridge is 200 yards long and 40 feet high. The tonnage is 2*s.* 6*d.*

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Bristol and Taunton,		41					From Taunton bridge to the mouth of the Avon, below Bristol. The operations on this canal were at a stand in 1824.
Burrowstonness,	1790	7					
Caistor, ...	1793	9					From Ancholme to Caistor.
Caldon and Uttoxeter,		28	136	4.8			A branch of the Grand Trunk canal, terminating at Uttoxeter.
Caledonian, . .	1822	21⅞	190.5	8.6	40 bot.	20	This stupendous canal passes through a chain of lakes, or *lochs*, and narrow arms of the sea; and, by making 21⅞ miles of canal, and deepening the beds of the rivers Lochy and Oich, and dredging to deepen a part of Loch Ness (in the whole a distance of 4⅛ miles, making the total length of excavation 25 miles, with a lockage, up and down, of 190 feet), an interior navigation of 250 miles is opened across the central part of Scotland, from the Murray Firth, on the eastern coast, to Cantyre, on the western, and about opposite to the northern coast of Ireland; being one half of the distance of the navigation between the same extreme points, round the northern coast by the Orkneys. It has 27 locks, including the tide-locks, one of them 170, but most, if not all, the others 180 feet long, and all 40 feet wide; thus opening a ship-navigation through the midst of the country, rising, at the summit-level, 94 feet above the tide-water of the eastern coast, and 96½ feet above that of the western, showing the ocean to be 2½ feet higher on the eastern. At fort Augustus, where it leaves Loch Ness in a north-westerly direction, this canal is cut through the glacis of the fortification, thus adding to the military defences as well as to the appearance of the fort, which, with the five locks of masonry rising behind, presents a grand combination of civil and military engineering amid romantic mountain scenery. From Loch Ness, passing in the westwardly direction of the canal to Loch Oich, 1¾ mile, the land is 20 feet above the water line, which, with the depth of water in the canal, makes an excavation, in this distance, of 40 feet in depth, with a bottom of 40 feet in breadth. To save rock-cutting, in descending, in the westwardly direction, as before, from Loch Oich to Loch Lochy, the natural difference of the surfaces of the two lakes being 22 feet, the whole area of Loch Lochy, which is 10 miles in length and 1 in breadth, is raised 12 feet. In the last 2 miles, before the canal, in its westerly direction, enters Loch Eil, there is a descent of 64 feet, which is passed by 8 connected locks, each 180 feet long by 40 in breadth. These locks are founded on inverted arches, exhibiting a solid and continuous mass of masonry 500 yards in length and 20 yards wide, in which, as late as 1824, and 5 years after its construction, no flaw had been discovered. The gates are of cast-iron. This system of locks has received the fanciful appellation of *Neptune's Staircase;* and the appearance of large vessels, with their masts and rigging, descending these stupendous locks, from the hill towards Loch Eil, is most majestic and imposing, exhibiting a striking instance of the triumph of art. In the distance of 8 miles, from Loch Lochy to tide-water in Loch Eil, the canal, in passing along the north-westerly bank of the river Lochy, crosses, by aqueduct bridges, 3 large streams and 23 smaller ones. Since the construction of this canal, upwards of a million of forest-trees have been planted along its borders. The cost of this great national work was, for

Management and travelling expenses, ...	£29,000	Purchase and damage of land, . .	47,900
Timber, ...	68,600	Horse labor, ...	3,000
Machinery, cast-iron work, &c.,	121,400	Road-making, ...	4,000
Quarries and masonry, ...	195,800	Incidental expenses, ...	2,000
Shipping, ...	11,000		£905,300
Labor and workmanship, . . .	418,000	Add, to complete the dredging, . . .	7,200
Houses and buildings, ...	4,600		£912,500

Assuming the number of miles operated upon to be 25, the canal cost £36,500 per mile. It was constructed under the direction of Thomas Telford, Esq.

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Cardiff, or Glamorganshire,	1775	25	600	24			From a sea-basin on the Severn, near Cardiff, to Merthyr; is connected with various railways, one of which is 26¾ miles long. Number of shares, 600; cost, £172 13*s.* 4*d.*; price in 1824, £265.
Chester, ...	1775	17½	170	9.7			From the Dee, at Chester, to Nantwich, where it communicates with the Whitchurch branch of the Ellesmere canal.
Chesterfield, . .	1776	46	380	8.2			From the Trent, at Stockwith, to Chesterfield; has 65 locks and 2 tunnels, together 2850 yards long, and 9½ feet wide. The lower part of the canal is navigable for boats of from 50 to 60 tons burthen, and the higher, being but 26 or 28 feet broad, is navigable for boats of only 20 or 22 tons burthen. These boats are 70 feet long and 7 feet broad. Number of shares, 1500; cost, £100; price in 1824, £120.
Coventry, . . .	1790	27	96	3.6			A part of the line of canal between London and Liverpool.
Crinan, ...	1805	9	117	13			From lake Gilp to lake Crinan. Number of shares, 1851; cost, £50; price in 1824, £2 10*s.*
Cromford, . . .	1794	18	80	4.4	26		From the Erewash canal, at Langley, to Cromford. It has several tunnels, and passes the river Derwent by an aqueduct 200 yards long and 30 feet high. The arch over the channel of the river is 80 feet broad. Another aqueduct over a branch of the Derwent is 200 yards long and 50 feet high. Each aqueduct cost about £3000. Number of shares, 460; cost, £31 2*s.* 10*d.*; price in 1824, £270.
Croydon, ...	1801	9½	150	15.8			From Grand Surry canal to Croydon. It has 23 locks. Number of shares, 4546; originally, £100; price in 1824, £4 10*s.*
Dearne and Dove,	1804	9½	125	6.6			From the river Dove, between Swinton and Mexburgh to Barnesley canal. The boats are from 50 to 60 tons burthen. It has two branches, of 3¼ and 1¾ miles in length.
Derby, ...	1794	9	78	8.6	44—24	4	From the river Trent to Derby. Number of shares, 600; cost, £110; price in 1824, £140. It has a branch, the Erewash, 8½ miles in length.
Dorset and Somerset,	1803	42					From the Kennet and Avon canal to the river Stour; but not completed in 1824; has a branch 9 miles long.

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Dublin and Shannon,	1776	65½					From Dublin, at the mouth of the Liffey, to the river Shannon, near the town of Moy. It passes 24 miles across a marsh, in which the absorbing nature of the soil rendered the work enormously expensive.
Lawton branch,		21					
Miltoun branch,		7					
Bog of Allen br.,		3					
Edenderry br.,		1					
Kildare br., . . .		6					
Dudley, ...	1776	10½	35	3.3		5	From the Worcester and Birmingham canal. It has 61 locks; 3 tunnels, one 3776 yards in length, another 623 yards, and the other 2926 yards, all 13½ feet wide; and near one of them, the Laplat tunnel, it passes 9 locks, nearly contiguous. Number of shares, 2060; originally, £100; price in 1824, £63.
Stourbridge br.,		2					
Dudley br., . . .		1¼					
Edinburgh & Glasgow,		50					This canal is proposed to commence at Leith, in the Forth, and terminate in the Clyde, at Glasgow. The enterprise was suspended on account of a supposed insufficiency of water, and is not known (1829) to have been resumed.
Ellesmere and Chester, and branches,	1804	109	755	6.9			This canal is said to be the first constructed in England for agricultural purposes, as well as trade. It has 1262 yards of tunnelling. Number of shares, 3575; cost, £133; price in 1824, £68.
Erewash, . . .	1777	11¾	181	15.4			From the Trent to Cromford canal.
Fazeley, ...	1790	11					Is a part of the Liverpool line, joining the Grand Trunk with the Coventry canal. It is entirely level. The Fazeley and Birmingham, and the Birmingham, are continuations of this.
Forth and Clyde,	1790	35					From the tide-water, at the junction of the river Carron with the Forth, to Glasgow. It was the first considerable work of the kind undertaken in Scotland, having been commenced in 1777 and completed in 1790. It ascends, from the Forth to the summit, by 20 locks, 156 feet, in 10½ miles, and keeps this level 18 miles, to Glasgow, and, one mile beyond that city, terminates in the Monkland canal basin. About 2¾ miles north of the port of Dundas, near Glasgow, a branch of the canal passes off 8¾ miles, crossing the Kelven by a magnificent stone aqueduct, to the tide-water at Bowling bay, to which it descends by 19 locks, 74 feet in length and 20 in breadth. When full, it has 8 feet of water.
Glasgow branch,		2¼					

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Foss Dyke, . .		11	0	0			From the Trent, at Torksey, to the Witham. It is a level.
Glasgow and Saltcoats,	1812	33¼	168	5			
Glenkenns, . .	1802	27					From the Dee, at Kirkcudbright, to Dalry.
Gloucester, . .	1793	18½				15	A channel for ship navigation,
Hockcrib branch,		2			70	to 18	to avoid the windings of the Severn from Berkley Pill, where it leaves that river, to Gloucester, where it joins the river again. Number of shares, 1960; price in 1824, £100, and a loan of £60 per share, making the investment £160 per share.
Grand Junction,	1805	93¼	587	6.3	36—24	4½	A part of the line between London and Liverpool, from Brentford to the Oxford canal at Braunston. It has 101 locks; passes the river Ouse and its valley by an embankment about half a mile in length and 30 feet high. It has a tunnel at Blisworth, 3080 yards in length, 18 feet high, and 16½ wide; and another at Braunston, 2045 yards long, the other dimensions being the same as those of the Blisworth tunnel. Number of shares, 11,657½; originally, £100; price in 1824, £270.
Paddington br.,		13¾					
6 other branches,		40					
Grand Surrey,	1801	12					From the Thames, at Rotherhithe, to Mitcham. It is of large dimensions, being navigable by the Thames boats. The company pays to London, annually, £60, for the junction of the canal with the Thames.
Grand Western,	1796	35					From the mouth of the Ex, at Topsham, to Taunton bridge; in 1824, was but partially finished. Number of shares, 3096; cost, £79; price in 1824, £6.
Tiverton br., . .		7					
Grand Trunk,	1777	93	642	6.9			A part of the line between London and Liverpool. It has 4 tunnels, in length 3940 yards, and 9 feet wide. Number of shares, 1300½; price in 1824, £2150. The tonnage is from 3*d.* to 4½*d.* per mile.
Its branch, . . .		37					
Grand Union, .		23¼	130	5.5			From the Leicester and Northampton Union canal, near Foxton, to the Grand Junction, east of Braunston tunnel. Number of shares, 1521; cost, £100; price in 1824, £50. The canal has, besides, a loan, at 5 per cent. interest, of £19,327.

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Grantham, . . .	1799	33¾	148	4.4			From the Trent, near Holme Pierpoint, to Grantham. It has divided 8 per cent., and left a clear surplus of £3000 to meet unforeseen accidents. Number of shares, 749; cost, £150; price in 1824, £160. It is supplied with water wholly from reservoirs.
Haslingden, . .	1793	13					From the Manchester, Bolton and Bury canal, at Bury, to the Leeds and Liverpool, at Church.
Hereford and Gloucester,	1790	36½	225	6.1			From the Severn, at Gloucester, to the Wye, at Hereford. It has 3 tunnels, of 2192, 1320 and 440, making, in all, 3952 yards. In consequence of the opening of this canal, the price of coals at Ledbury was reduced from 24*s.* to 6*s.* per ton. Shares, originally, £100; price in 1824, £60.
Huddersfield, .	1798	19½	770	39.5			From Ramsden's canal, at Huddersfield, to the Manchester, Ashton and Oldham canal, at Duckenfield bridge, near Marsden. It has a tunnel of 5280 yards in length. Number of shares, 6312; cost, £57 14*s.*; price in 1824, £26.
Kennet and Avon,	1801	57	263	4.6			From the Avon, at Dole-mead, near Bath, to the Kennet and Newbury. It has an aqueduct bridge over the Avon. The boats are of 25 or 26 tons burthen. Number of shares, 25,328; cost, £35 5*s.*; price in 1824, £24.
Kingston and Leominster,	1797	45¾	544	11.8			From the Severn, at Areley, to Kingston. It has two tunnels of 3850 and 1250, making 5100 yards.
Lancaster, . . .	1799	76	287	3.8		7	From Kirby Kendall to Houghton. It has tunnels at Hincaster and Chorley, 800 yards long in the whole. It passes the Loyne by a stone aqueduct, 50 feet high, on 5 arches, each of 70 feet span. It has also a road aqueduct, near Blackmill, 60 feet high. The boats are 56 feet long and 14 broad. Number of shares, 11,699½; cost, £47 6*s.* 8*d.*; price in 1824, £29.
Leeds and Liverpool,	1771	130	841	6.4	42	4½	From Liverpool to Leeds. The boats navigating between Leeds and Wigan are of 42 tons burthen; those below Wigan, and on this side Leeds, of 30 tons. The tunnels at Foulbridge and Finnloy are, in the whole, 1609 yards long. It has a beautiful aqueduct bridge over the Ayre. The locks are 70 feet long and 15½ wide. The number of shares is 2897¾; originally, £100 each; price in 1824, £380. Tonnage on merchandise, 1½*d.* per mile; on coals and lime, 1*d.*; on stone, ½*d.*

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Leicester, . . .		21½	230	10.7			From the Loughborough basin to the Soar, which has been rendered navigable as far as Leicester. Number of shares, 545; cost, £140; price in 1824, £330.
Leicestershire and Northamptonshire Union,	1805	43¾	407	9.3			From Leicester to Market Harborough. It has 4 tunnels, 1056, 990, 880 and 286, in the whole 3212, yards in length. Number of shares, 1895; cost, £83 10*s.*; price in 1824, £82.
Loughborough,	1776	9½	41	4.3			From the Trent, near Sawley, to Loughborough. No. shares, 70; cost, £142 17*s.* 8*d.*; price in 1824, £4000.
Manchester, Bolton and Bury,	1797	15	187	12.4			From the Mersey and Irwell navigation to Bolton. The locks have been reconstructed and enlarged. Number of shares, 477; originally, £250; price in 1824, £112.
Haslingden br.,		4					
Market Weighton,	1770	11	35	3.2			
Monkland, . . .		12	96	8			A continuation of the Forth and Clyde canal.
Monmouthshire,	1796	17¾	1057	53.5			This canal is remarkable for the extent of its railways and inclined planes. Number of shares, 2409; cost, £100; price in 1824, £198. It has, besides, a loan of £43,526, at an interest of 5 per cent.
Montgomeryshire,	1797	27	225	8.3			From a branch of the Ellesmere canal to Newtown. Number of shares, 700; originally, £100; price in 1824, £71.
Welshpool br., .		3¼					
Neath, ...	1798	14					From the river Neath, at the Giant's Grave, to the Aberdare canal, at Abernant. It serves for the transportation of copper and lead ore from Cornwall to Glamorganshire. Number of shares, 247; cost, £107 10*s.*; price in 1824, £333.
North Wilts, . .	1798	8½					From the Thames and Severn canal to the Wilts and Berks.
Nottingham, . .	1802	15					From the Trent, at Nottingham, to the Cromford canal, near Langley bridge.
Oakham, ...	1803	15	126	8.4			From Melton Mowbray to Oakham. Number of shares, 522; cost, £130; price in 1824, £50.
Oxford, ...	1790	91½	269	2.9	30—16	5	From the Coventry canal to the river Isis at Oxford, and a part of the grand line between Liverpool and London. It has 3 aqueducts of very considerable magnitude, a tunnel at Newbold 125 yards long and 12½ feet wide, and one at Fenny Compton 1188 yards long and 9½ feet wide. It rises, from the level of the Coventry canal, in 45½ miles, to the summit at Marston Tolls, 74 feet 1 inch, by 12 locks; and descends, from the summit at Claydon, in 35 miles, to the Isis, 195¼ feet, by 30 locks. It has 188 stone and brick bridges. It cost £178,648 stock, besides £130,000 loan, above half of which has been paid off. Number of shares, 1786; originally £100; price in 1824, £780.

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Peak Forest, . .	1800	21					From the Manchester, Ashton and Oldham canal, at Duckenfield, to the Chapel Milton basin. It has a railway 6 miles long. It passes the Mersey, by a bridge 100 feet high, of 3 arches, each of 60 feet span. Number of shares, 2400; cost, £77; price in 1824, £94.
Portsmouth & Arundel,	1815	14½					From the river Arun, near Little Hampton, to the bay connected with Portsmouth harbor. Number of shares, 2520; cost, £50; price in 1824, £25.
Ramsden's, . .	1774	8	56	7			From the Calder and Hebble navigation to the Huddersfield canal.
Regent, ...	1820	9	86	9.5			The last link, near London, of the chain connecting that city and Liverpool. It commences at Paddington, from the Grand Junction canal, and meets the Thames at Limehouse, descending, by 12 locks, to a basin communicating with a ship lock. The locks have double chambers, which are estimated to make a saving of one third of the usual quantity of water. It has 2 tunnels, one at Maida Hill, 370 yards long, the other under Islington, 900 yards. Number of shares, 12,294; cost, £40 10*s.*; price in 1824, £49 10*s.*
Ripon, ...	1767	7					From the river Ure, at Milby, to Ripon.
Rochdale, . . .	1804	31	613	19.7			From the Bridgewater canal, in the town of Manchester, to the Calder and Hebble navigation, at Sowerby bridge. It has 49 locks, 8 aqueducts, a tunnel of 70 yards in length, and several reservoirs. Number of shares, 5631; cost, £85; price in 1824, £94.
Royal Irish, . .		68	614	9			From Dublin, in a westward direction, to the Shannon, at Tasmonbarry, nearly parallel to the Dublin canal, and about 10 miles distant from it. Its greatest elevation above the sea is 307 feet, to which it ascends from Dublin by 26 locks, and descends to the Shannon by 15 locks.
Sankey, ...	1760	12½	78	6.2	48	5	From the Mersey and Irwell navigation, at Fiddler's Ferry, to Sutton Heath mines. It has 10 locks, and also a tunnel, near St. Helen's. It was the first canal constructed in England.

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Shorncliff and Rye, or Royal Military,	1809	18					From the sea, at Hythe, to the mouth of the river Rother. It is a level, having locks to keep in the water at low tide. It is large enough to receive vessels of 200 tons burthen. Each of its extremities is defended by strong batteries. It was constructed on account of Bonaparte's projected descent on England, and hence its name of Royal *Military* canal.
Shrewsbury, .	1797	17½	155	9			From Shrewsbury to the Shropshire canal. One half of the ascent is effected by locks, the other half by inclined planes. It has one tunnel. Number of shares, 500; originally, £125; price in 1824, £180.
Shropshire. . .	1792	7½	453	60.4			From the Severn, at Coalport, to the Shrewsbury canal, at Downington wood. It has several inclined planes and railways, but no locks.
Somerset Coal,	1802	8½	138	16.2			From the Kennet and Avon canal, at Monkton Coombe, to Paulton. The boats are 72 feet long and 7 broad. It has 22 locks. Number of shares, 800; original cost, £50; price in 1824, £135.
Radstock br., . .		7½	138	18.4			
Southampton & Salisbury,	1804	17½					From the Itchin, at Northam, to the Avon, at Salisbury.
Stafford and Worcester,	1772	46½	394	8.4	30	5	From the river Severn, at Stourport, to the Grand Trunk canal. It has 44 locks. Its boats are of 20 tons burthen. It has 3 tunnels. Number of shares, 700; cost, £140; price in 1824, £800. The tonnage is not to exceed 1½*d.* per mile.
Stainforth and Keadby,	1798	15					From the river Trent, at Keadby, to the Don, at Fishlake.
Stourbridge, . .	1776	5	191	38.2	28	5	From the Stafford and Worcester canal, at Stourton, to the Dudley canal. It has 20 locks. Number of shares, 300; originally, £245; price in 1824, £212.
Stover, ...	1792	6½	50	8			From the river Teign, at Newtown, to Bovey Tracey.
Chudleigh br., .		5½					
Stroudwater, .	1796	8	108	13.5			From the river Severn, at Framiload, to the Thames and Severn canal, at Wallbridge.
Swansea, . . .	1798	17½	366	20.9			From Swansea harbor to Hen Noyadd. Like the Neath canal, it serves to transport copper ore from Cornwall to Glamorganshire founderies. Number of shares, 533; originally, £100; price in 1824, £195.
Llansamlet br.,		3					

Name.	When made.	Length in miles.	Ascent & Descent, in feet and decimal parts. Total.	Pr. mile.	Breadth.	Depth.	
Tavistock, . . .	1810	4½	237	52.7			From the river Tamar, at Calstock, to Tavistock. It has a tunnel at Morwellham, 460 feet below the surface. This tunnel led to the discovery of a copper-mine. Its boats are 15½ feet in length and 5 in breadth. Number of shares, 350; originally, £100; price in 1824, £150.
Mill Hill branch,		2					
Thames and Medway,	1800	8½					From the Thames, at Gravesend, to the river Medway. Number of shares, 2670; cost, £42 9*s.* 5*d.*; price in 1824, £26. This canal has loans to a large amount.
Thames and Severn,	1789	30½	377	12.3	40—30	5	From the Stroudwater canal to the Thames and Isis navigation. The boats are of 70 tons burthen, being 80 feet long and 5 broad. It has a tunnel at Sapperton, 250 feet below the top of the hill of rock under which it passes. The bottom of this tunnel is an inverted arch.
Warwick and Birmingham,	1799	25					From the Warwick and Napton canal, near Warwick, to the Digbeth branch of the old Birmingham canal. It has a tunnel at Fazeley 300 yards in length. It has 32 locks.
Warwick and Napton,	1799	15					From the Warwick and Birmingham to the Oxford canal. Number of shares, 980; originally, £100; in 1824, £215.
Wey & Arun Junction,		16					From the river Wey, near Godalming, to the north branch of the Arun river navigation. Number of shares, 905; cost, £110; price in 1824, £25.
Wilts and Berks,	1801	52	376	7.2			From the Kennet and Avon canal, at Semington, to the Thames and Isis navigation.
Calne branch, .		3					
Worcester and Birmingham,	1797	29	128	4.3	42	6	From the Severn, at Diglis, below Worcester, to the Birmingham and Fazeley canal, at Farmer's bridge.
Wyrley and Essington,	1796	23	270	11.6	28	4½	From a detached part of the Fazeley canal, at Huddlesford, to the Birmingham canal, at Wolverhampton. The boats are of 18 tons burthen. It has 28 locks.
Hayhead br., . .		5½					
Lordshery br., .		2¼					
Wyrley Bank br.,		4					
Essington br., .		1					
Norwich and Lowestoff Navigation,	1829	50			50		The works near Yarmouth open an inland navigation in two directions; one 30 miles, by the Yare, the other 20 miles, by the Waveney, without a lock. The river Yare discharges at Yarmouth, about 30 miles below Norwich, but the navigation is obstructed by shoals and shifting sands at its

mouth. To avoid these obstructions, the river is to be made navigable for sea-borne vessels from Norwich to a place 20 miles lower down the river, called *Reedham Ferry*, where a new cut of 2½ miles is to be made across the marshes, to join the river Waveney at St. Olave's bridge, whence the water communication proceeds by a small stream (Oulton Dyke) and two lakes (Oulton Broad and Lothing), from the latter connected with the sea by a channel 700 yards long and 40 feet wide, with a sea-lock 50 feet wide in the clear and 24 feet deep, for the purpose of admitting sea-borne vessels. Oulton Dyke and Oulton Broad are to be deepened. The lock constructed at the outlet of lake Lothing makes an artificial harbor, the first that has been formed in England. This lock has folding gates pointing both landward and seaward, so as to admit of vessels passing in or out at any time of tide, and whether the water be higher on the outside or inside. The harbor covers about 200 acres, the whole contents of which it is proposed, occasionally, to let off at low water, to keep open the channel from the sea.

American Canals. It is proposed to give a more particular description of the American canals under the article *Inland Navigation*. In the mean time, a very general enumeration will be here made of the principal works of this kind already completed or in progress, which will show the astonishing extent to which canal navigation has been opened in the U. States, during the short period, now (1829) only 13 or 14 years, since these works began to be undertaken upon a large scale. It will appear, from the following outline, that not less than 2500 miles of canal are constructed, or in the progress of execution in the U. States, and will probably soon be completed, making a liberal allowance for a suspension of some of the works projected and commenced. The extent of canal in the U. States will soon equal that in Great Britain. The canals constructed and now in progress in the state of Pennsylvania have been estimated at a length of 900 miles; very nearly equal to that of the canals of France, but doubtless inferior in the style and durability of execution.—The *Welland canal*, in Canada, is intended for opening a sloop navigation between lakes Erie and Ontario. It is not completed.—The *Middlesex canal* opens a boat navigation between Boston and the Merrimack river, and runs 28 or 29 miles, in a northwesterly direction, from its outlet into the harbor of Boston, in the town of Charlestown.—The *Blackstone canal* is constructed along Blackstone river from Providence, in Rhode Island, north-westerly 45 miles, to Worcester, in Massachusetts.—The *Farmington canal* leaves the coast of Long Island sound at New Haven, in Connecticut, and takes a north-easterly course, towards Northampton in Massachusetts, 65 miles distant, where it is to communicate with Connecticut river. A great part of it is finished and in operation, but a portion, towards the north-eastern termination, remains to be constructed.—The *Hudson and Erie canal* passes from Albany, in the state of New York, along the western bank of Hudson river, until it meets the Mohawk; then runs, in a north-westerly direction, up the south-western bank of that river, to the town of Rome, where it turns more westerly, on a summit level of about 60 miles, without a lock, and, passing in a line corresponding, in some measure, to the direction of the southern shore of lake Ontario, and crossing the Seneca and Genesee rivers in its course, communicates with lake Erie at Buffalo, 363 miles from Albany. This canal is connected with lake Champlain by the *Champlain canal*, 63 miles in length; with lake Ontario by the *Oswego canal*, about 38 miles long; and with Seneca lake by the *Seneca canal*, about 20 miles long.—The *Hudson and Delaware canal* begins at the west bank of Hudson river, near Kingston, in New York, about 85 or 90 miles north of the city of New York, and runs in a south-westerly direction 65 miles, to the Delaware river, near to the north-east corner of Pennsylvania, and the north-west of New Jersey. It then takes a general direction a little to the north-west, and keeps the northern bank of the Delaware river for 25 or 30 miles, to the entrance of Lackawaxen creek, from the opposite side; crosses the Delaware at a point about 110 miles north of Philadelphia, and, leaving that river, keeps the northern bank of Lackawaxen creek; then crosses it, in a westerly direction, to Riscis Gap, a distance, added to the former, of between 40 and 50 miles, as nearly as can be estimated from Mr. Tanner's map of Pennsylvania, of 1829. This canal opens the Lackawaxen coal district to Hudson river.—The *Morris canal*, now in progress, commences, at its western extremity, at the river Delaware, near Easton, and passes across the state of New Jersey in a north-easterly, then in an easterly, then in a southerly direction, 86

miles, to Newark, in that state. Its western extremity is at the eastern termination of the Lehigh navigation in Pennsylvania, and it is intended for the transportation of Lehigh coal to New York.—The *Ohio state canal* commences at the mouth of Sciota river, where it discharges into the river Ohio, and takes a northerly course, for about 306 miles, to lake Erie, at the mouth of the Cuyahoga river, in the town of Cleveland. This work is in rapid progress.—The *Miami canal* is also a line of communication between the river Ohio, which it leaves at Cincinnati, and lake Erie. Its northerly termination is in the Maumee, which discharges into the westerly part of lake Erie. The proposed length of this canal is 265 miles. It is now in progress.—*Illinois and Michigan canal.* An act was passed in the legislature of Illinois, Jan. 22, 1829, authorizing commissioners, "as soon thereafter as they could command funds, and might deem it expedient to commence the work, to effect a navigable communication between lake Michigan and the Illinois river." This is the fourth projected work for making a communication between the great northern and western waters; one of the others being projected by Pennsylvania, from Pittsburg to Erie, of which a very small part is executed; the other two are undertaken by Ohio, and both in progress.—The *Lehigh canal* commences at the Maunch Chunk coal-mine, on the river Lehigh, and runs to Easton, on the Delaware; the whole distance of this navigation being 46¾ miles; but a part of it is river navigation, the length of the canal being 37 miles. Its eastern termination at Easton meets the western termination of the Morris canal in New Jersey.—The *Delaware canal* commences, at its northern extremity, at Easton, about 55 miles in a right line nearly north from Philadelphia, on the north-western bank of Delaware river, the general course of which, for about 50 miles from this place, is south-easterly, when it turns, in nearly a south-westerly direction, about 30 miles, to Philadelphia. This canal, which is now (1829) in progress, is to follow the general course of the Delaware, keeping its westerly bank to Morrisville, where it bears off from the river, to avoid a bend, and proceeds, in a pretty direct course, a little to the west of south, to Bristol, on the westerly bank of the Delaware, 19½ miles N. E. from Philadelphia.—The *Schuylkill canal* is constructed on the banks of Schuylkill river, from Philadelphia, about 110 miles, to mount Carbon, the region of the Anthracite, in Schuylkill county. the general direction being nearly northwest.—The *Union canal.* A little to the westward of the town of Reading, in Berks county, Pennsylvania, about 60 miles from Philadelphia, the Union canal branches off from the Schuylkill canal in a general south-westerly direction, first passing up a branch of the Schuylkill, and then down the valley of the Swatara, somewhat circuitously, about 80 miles, to Middletown, a little above the junction of the Swatara with the Susquehanna.—*Pennsylvania canal* commences at Middletown, at the termination of the Union canal, whence it is proposed to proceed up along the Susquehanna, in a westerly direction, to the Alleghanies, which are to be passed by a rail-road, now in progress, about 50 miles in length, into the valley of the Ohio, where the canal again commences, and is continued to Pittsburg, a distance, in the whole, of 320 miles of canal and rail-road; the part of the canal beyond the Alleghanies being already completed, and the part on the eastern side being in progress.—The *Little Schuylkill canal* is 27 miles in length, from the mouth of the Little Schuylkill river to the coal-mines.—*Conestoga canal* passes from Lancaster, in Pennsylvania, about 62 miles directly west from Philadelphia, down the Conestoga creek, 18 miles, in nearly a south-west direction, to Susquehanna river.—The *Chesapeake and Delaware canal*, 18 miles in length, from the Delaware river to Elk river, which discharges into Chesapeake bay, is of sufficient dimensions for the passage of coasting vessels, in the route between Philadelphia and Baltimore.—*Dismal Swamp canal* is a channel of sloop navigation, being 6 feet deep and 70 wide, along the low land between Chesapeake bay and Albemarle sound, and thence to Pamlico sound. Several branches have been constructed, and the whole is in operation, being a very important work, as will be apparent by an inspection of the map, and somewhat similar to that of the Chesapeake and Delaware canal.—The *Chesapeake and Ohio canal* is a gigantic enterprise, in progress, for opening a navigation of 360 miles, from Wahsington, along the Potomac and its branches, across the Alleghany mountains, and thence down the valley of the Youghiogeny and Monongahela rivers, to Pittsburg, on the Ohio. The execution of this work was commenced in 1828, at the eastern extremity.—The *Louisville canal*, though only 3 or 4 miles in length, is a work of great importance,

as well as great expense. It is now in progress, and is intended to form a passage along the side of the rapids of the Ohio, near to Louisville, in Kentucky. The canal is constructing of sufficiently large dimensions to admit of the passage of steamboats; and the difficulty and expense, as in the case of the canal at Trolhatta falls, in Sweden, is occasioned by the necessity of excavating rock.—The *James and Kanhawa canal* is a name given to works intended to form a line of transportation, partly by water and partly by land, from the Atlantic coast to the Ohio; being a navigation along James river to the Blue Ridge, partly by an artificial channel, but mostly by the river, and, across the Ridge, by a well-constructed road, graduated to an inclination not exceeding 3 degrees, which has been completed, and descending, by river or canal navigation, along the Kanhawa river, to the Ohio. A canal was commenced, along the bank of James river, to pass the falls at Richmond, before the revolution. The work was resumed, and completed, after the establishment of the present government, by a private company; but the state has since assumed these works, and greatly enlarged them, upon an improved construction, in the execution of the plan of the extended line of transportation above described. In Mr. Boye's map of Virginia, the canal is laid down along the north-western bank of the James river, from Richmond to Venture falls; a distance of about 20 miles, and, by the course of the canal, probably as much as 24 or 25.—The *Appomattox canal* is about 5 miles of canal, in detached portions, being a part of a system of improvement of the Appomattox navigation in Virginia.—The *Roanoke canal* is a similar work on Roanoke river.—The *Santee canal* is a proposed and partly executed line of navigation from Charleston to Columbia, and thence to Cambridge, in South Carolina. The whole distance is 160 miles. A canal has been cut, and for many years in operation, 22 miles in length, across from Cooper's river, which discharges into the ocean at Charleston, to Santee river. Thence the route of this navigation is proposed to pass along Santee, Broad and Saluda rivers; the project being an improvement of the river navigation, by removing obstructions, deepening the water in shallow places, and locking round falls. The work has not, hitherto, been prosecuted with great success.—The *canal Carondolet* is a short, artificial channel, connecting the Mississippi with lake Pontchartrain, near New Orleans. It has no locks.—Such is a general geographical outline of the most important artificial channels of inland navigation, completed or commenced in the U. States, down to 1829. The table of dimensions, and the most striking features of construction, of these works, is deferred to the article on inland navigation, where a more satisfactory description, in these respects, may be given, when the results or prospects of some of the great enterprises in progress, at the time of writing this article, shall be more fully ascertained.

Canaletto; 1. a Venetian painter, born in 1687, whose true name was *Antonio Canale*. He is celebrated for his landscapes, which are true to nature, and his architectural paintings. He died at London, in 1768. There is a bird's-eye view of Venice painted by him. He is also said to have first used the *camera obscura* for perspective.—2. Bernardo Bellotti, who was likewise a good artist, and painted at Dresden many Italian landscapes, also goes by this name. He lived in Dresden, where he was a member of the academy of painters, and died in 1770.

Canaries; a cluster of islands in the Atlantic, considered as belonging to Africa, the most easterly being about 150 miles from cape Non. They are 13 in number, 7 of which are considerable, viz., Palma, Ferro, Gomera, Teneriffe, Grand Canary, Fuerteventura and Lancerota. the other 6 are very small; Graciosa, Roca or Rocca, Allegranza, Sta. Clara, Inferno and Lobos. Lon. 13° 20′—18° 10′ W.; lat. 27° 30′—29° 30′ N. The extent and population of the seven largest, according to Ledru, are given in the following table:—

	Sq. leagues.	*Pop.*	*Pop. to sq. l.*
Teneriffe,	73	70,000	958
Fuerteventura,	63	9,000	142
Grand Canary,	60	50,000	833
Palma,	27	22,600	837
Lancerota,	26	10,000	384
Gomera,	14	7,400	528
Ferro,	7	5,000	714
	270	174,000	644

Hassel states the population of the whole at 181,000, and the square miles at 3213. The soil of these islands is very fertile, and produces all kinds of grain, fruits and pulse in great abundance; so that the name of *Fortunate Islands*, which the ancients gave them, was well deserved; but the method of cultivation practised by the natives tends very little to its improvement.

All the islands furnish good wine; but the preference is given to the wines of Palma and Teneriffe. The situation of the C., the salubrity of their climate, the fertility of their soil, and the quality of their productions, all conspire to render them the most valuable of the Spanish colonies. The exports amount to 242,000 dollars annually, and consist of wine, raw silk, soda and fruits. One of the most recent works on these islands, and probably the most valuable one, is Leopold von Buch's *Physikalische Beschreibung der Canarischen Inseln* (Physical Description of the Canary Islands, by Leop. von Buch; Berlin, 1825, 4to. They are of volcanic origin, and were, as has been stated, known to the ancients. Juba II, king of Mauritania, described them first with some degree of accuracy. He graced a triumphal entry of Cæsar into Rome, was instructed in all branches of liberal knowledge, and became a highly accomplished prince. Pliny followed his description of the islands. Juba called the C. Proper *Fortunatæ*, but Madeira and Porto Santo, *Purpureæ*. Of the island of Ferro, which he calls *Ombrios*, and of the others, he gives an interesting account. The loss of this work is the more to be regretted, as we might reasonably hope to find in it some information respecting that mysterious tribe who originally inhabited these islands. This people understood how to embalm their dead, who were sewed in goat-skins, put into coffins of one piece of wood, and placed in grottoes. These mummies smell agreeably, but fall to dust if they are taken out of their goat-skin coverings. The Spaniards relate strange things of the civilization of these tribes, called *Guanches*, of their respect for women, of their chastity, and aristocratic constitution. Their language resembled that spoken on the neighboring continent; but we know too little of it to be able to give any opinion respecting it. Between 1316 and 1334, the Spaniards, pressed by the Moors, discovered and conquered these islands; and they are laid down with accuracy in the old map which Andreas Bianco published in Venice, 1436. The Spaniards seem, however, not to have esteemed these islands much; for the infante of Portugal, Henry the Navigator (q. v.), ordered them to be taken possession of, and prosecuted his discoveries from them to the coast of Guinea. In 1478, the Spaniards undertook again the conquest of the C. At the end of the 15th century, they had subdued the original inhabitants entirely; and they extirpated them at a later period. At present, the islands are inhabited almost entirely by Spaniards: only a few Portuguese reside there. Teneriffe (q. v.) is an island of basaltic formation, thrown up by internal convulsions. The fortified capital is the seat of the governor, has 8400 inhabitants, and an excellent harbor on the eastern side of the island. Another city, Laguna (8800 inhabitants), is the seat of the bishop (who has an income of about £6000 sterling), and of the tribunals. The island Lancerota, or Lancelotta, contains three volcanoes, and, in 1823, experienced violent eruptions. Five islands of this cluster are uninhabited. The people of the C. are rigid Catholics.

Canary-Bird, or Canary Finch. (See *Finch.*)

Canary, Grand, or Canaria; an island in the Atlantic ocean, about 180 miles from the coast of Africa. It is the most fertile and important of the Canary islands, to which it gives name. Canary, or Cividad de Palmas, is the capital of the island. (See *Canaries.*)

Cancer, in astronomy; the fourth sign in the zodiac (q. v.), marked thus ♋, which the sun enters on the 21st day of June, thence called the *summer solstice*. It consists, according to Kepler, of 17, according to Bayer, of 35 stars, 2 of which are of the third magnitude. Flamstead made a catalogue of 83 stars, the comparative brightness of several of which will be found estimated by doctor Herschel (*Phil. Tran.* lxxxvii., 311). The *tropic of cancer* is a small circle of the sphere, parallel to the equator, from which it is 23½° distant, and marks the sun's greatest northern declination. It is so called because it passes through the beginning of the sign Cancer.

Cancer. In medicine, this name is given to a roundish, unequal, hard and livid tumor, generally seated in the glandular texture. Though this is the texture in which it is believed always to originate, it may extend to others. This is doubted by some; and the disease which is often met with in the immediate neighborhood of advanced cancer, and in different textures, is, by them, ascribed to mechanical pressure of the cancerous tumors, aided by the acrid discharges which accompany its ulceration. The name was derived from a supposed resemblance of the tumor to a crab, and furnishes a good example of the nomenclature from resemblance, which was very much in use in the early periods of the sciences. Two forms of cancer are recognised by

physicians. They may rather be called two states or stages of the same disease. One of these, and the first, is carcinoma, scirrhus, or concealed cancer, of some writers. The second is the open, or ulcerated cancer—ulcerated carcinoma, as it is designated by writers. Under proper internal treatment, the second stage may be kept off for some time; and, in favorable cases, the extirpation of the tumor by the knife may effect a cure. The disease is kept in check, in the first case, but is not removed, and is very prone to pass into the ulcerative stage. The fact that this can be deferred, by proper treatment, is an important one. The sufferings of the patient are thus made less, especially during the first stage; and, even in the last, their severity is much mitigated. One very early symptom of carcinoma is pain. This pain differs from that which ordinarily accompanies local diseases of a different kind. It is described as *lancinating*, occurring somewhat in paroxysms, and resembling the suffering which the sudden passage of a sharp and pointed instrument would produce in the part. Besides this, there is always more or less dull pain present. The progress of the disease, and the occurrence of the second stage, are marked by increased pain of both kinds; by increase in the size of the tumor, augmented heat, greater inequality in the surface, a darker color, and increased tenderness on pressure. When ulceration is just established, and even a little before, the patient complains of general irritation of the skin; the stomach is disturbed; and symptoms of constitutional irritation, more strongly marked, make their appearance. Ulceration begins on the *surface* of the tumor, and parts are destroyed, in succession, from without, until the whole texture presents a mass of disease. Instead of this destructive ulceration, we have, in many cases, fungous masses projecting from the diseased surface; and these, at times, attain considerable size. But it is not a character of carcinoma to grow, and become as large as other diseases of some of the organs in which it appears. This is especially true of it when seated in the womb. An offensive, sanious discharge proceeds from the ulcer. Bleeding often takes place from it, especially when fungous, either from mechanical irritation, though slight, or from accidental excitement of the arterial system only.—Carcinoma is a malignant disease. Its tendency is to death. The constitution has not power to overcome it; and hence, when left to itself, it is certainly mortal. Internal remedies do little more than palliate symptoms, or prevent the rapid progress to ulceration, which belongs to the disease. The only remedy is the knife; and, in cases in which the constitution and neighboring parts are not contaminated, extirpation by the knife has removed the disease entirely. There are parts of the body which are liable to carcinoma, in which extirpation cannot be practised, and some in which, though an operation has been performed, death has, nevertheless, followed. In cases of this sort, especially those of the first class, palliatives only can be resorted to; such remedies, namely, as mitigate suffering, and retard the progress of the disease.

Cancer-Root, or Beech-Drop (*orobanche virginiana*, L.); a parasitic plant, indigenous in America, growing almost exclusively on the exposed root of the beech tree. The whole plant is powerfully astringent, and the root of a brownish color, spongy, and of a very nauseous, bitter taste. It has been applied more externally than internally to the cure of cancer. The *one-flowered cancer-root* (*orobanche uniflora*) is used in the same manner. All parts of the plants are used in medicine.

Candelabra. Torches and lamps were the means used by the ancients for obtaining artificial light. The latter were either suspended from the ceilings of their rooms, with chains, or placed upon small, movable tables (*lampadaria*, *candelabra*, and *candelabri*). The candelabra were originally made of cane, with one plate fixed above and another underneath, or with feet, for supporters. The Greeks called these λυχνουχοι. The Grecian artists produced, in ornamenting these lamp-stands, the richest forms, which always however, had reference to the original cane, and were encircled with an infinite variety of beautiful ornaments. Sometimes they were shafts in the shapes of columns, which could be shortened or drawn out; sometimes the luxuriant acanthus, with its leaves turned over; sometimes they represented trunks of trees entwined with ivy and flowers, and terminated by vases or bell-flowers at the top, for the reception of the lamps. Examples of these forms may be found in the British museum and the Louvre, but particularly at the Vatican, where a gallery is filled with marble candelabra. Candelabra of yet more delicate forms, of bronze, inlaid with silver and other met-

als, have been found in Herculaneum. In ancient times, Tarentum and Ægina were famous for their elegant candelabra. The graceful and expressive form of this utensil was made use of for colossal works of art, particularly on account of its resemblance to the holy torches employed in the worship of Æsculapius. The largest and grandest of those monuments was the Pharos, at the harbor of Alexandria. In modern times, this ancient form has been used for an ingenious Christian monument. At the place where (721) the first church in Thuringia was founded by Boniface, the apostle of the Germans, only a few relics remaining of the building, which had served for more than 10 centuries as a Christian temple, a candelabrum, 30 feet high, formed of sand-stone, was erected (Sept. 1, 1811), as a symbol of the light which spread from this spot.

Candi, or Candy (anciently *Maagrammum*); a city of Ceylon, and capital of a country to which it gives name; 80 miles from Columbo; lon. 80° 44′ E.; lat. 7° 36′ N. The town is a poor, miserable place, surrounded by a mud wall. The kingdom is fertile, intersected with rivers, and well furnished with woods. It was annexed to the British dominions in 1816. (See bishop Heber's *Narrative of a Journey through the Upper Provinces of India, &c., with Notes upon Ceylon*, vol. ii, p. 188 et seq.)

Candia (in the Turkish language, *Kirid*, called, in the most ancient times, *Idæa*, from mount Ida, afterwards *Crete*), one of the most important islands of the Turkish empire, situated in the Mediterranean (lon. 23° 40′—26° 40′ E., and lat. 34° 50′—35° 55′ N., 81 miles from the southern extremity of the Morea, 92 from Rhodes, and 230 from the African coast), is 160 miles long, 14—50 broad, and contains 4026 square miles. A high chain of mountains, covered with forests, runs through the whole length of the island, in two ranges, the western part of which is called by the Venetians *Monte di Sphachia* (formerly *Leuce*); the eastern part, *Lasthi* or *Sethia* (formerly *Dicte*). On the north side, it declines moderately to a fertile coast, provided with good harbors; on the south side, steeply to a rocky shore, with few roadsteads; and reaches its greatest height in the lofty Psiloriti (the ancient *Ida*), 7670 feet high, and always covered with snow. Mountain torrents, which are swollen in the winter and spring, but almost dry in summer, conduct the waters to the sea. Numerous springs give fertility to most of the valleys, in which, and on the declivities of the mountains, is seen a luxuriant vegetation. The air is mild; the summer is cooled by the north winds; the winter is distinguished only by showers of rain. The island would, therefore, be a most delightful residence, and supply its inhabitants, as formerly, with grain, wine and oil, wool, flax, silk and cotton, fish, honey, game, cattle, the noblest fruits of the south, and even with metals, in abundance, did not the oppressions and cruelties of the Turks prevent all cultivation, and render it impossible for the discouraged inhabitants (who, instead of being 1,200,000, as in the time of the Greeks, or 900,000, as in the time of the Venetians, amount only to 300,000, half Greeks, half Turks) to attain more than the most indispensable necessaries of life. Manufactures, trade, navigation, the arts and sciences, are not to be thought of. All the harbors, with the exception of that of Canea, are filled with sand, and the cities are mere aggregations of rubbish. The capital, Candia, the seat of the pacha, has 15,000 inhabitants; Retimo, 6000; Canea (the ancient *Cydonia*), the most important place of trade on the island, 12,000. According to Homer, king Idomeneus sailed from this island to Ilium, with 80 vessels. The Greek mythology made Crete the scene of many of the adventures of the gods and heroes. Here Saturn reigned, and afterwards Minos, 1300 years before Christ. After the banishment of the kings, Crete became a republic, and then a seat of the Cilician pirates, till it was conquered by the Romans. In the year 823, it passed from the hands of the Roman emperors in the East into those of the Saracens, who built the capital, Candia, on the ruins of Heraclea, but were expelled again, in 962, by the Greeks. Against the will of the inhabitants, the Byzantine sovereign sold the island to the Venetians in 1204, who, aware of its importance, fortified most of the cities, won the good will of their new subjects by a mild government, and repelled all the assaults of the Genoese and Turks, till the middle of the 17th century. About this time, the attacks of the Turks became more violent, on account of a prize taken by the Maltese, on board of which was the aga of the eunuchs, and, according to a report then very generally spread throughout Europe, the favorite wife and son of the sultan Ibrahim, but probably only a slave of the aga, who had been employed in the seraglio as a nurse, with her son, to whom, however, the sultan was much at-

tached. This vessel was carried, for a short time, into Calismene, a harbor of Candia, without, however, the consent of the Venetians, who had no garrison there. The sultan was highly incensed, ascribed all the fault to the Venetians, and landed a large force in Candia, in June 1645, which soon took Canea and Retimo, and besieged the capital with vigor. The attack was bravely repelled, but repeated in 1649; and was this time also unsuccessful. In 1656, the Turks made a third effort, but afterwards changed the siege into a blockade, which they continued for 10 years without success, since the Venetians, being masters of the sea, supplied the fortress, without difficulty, with provisions, men and ammunition. In 1667, after the peace of Vasvar, the grand vizier, Kiopurli, in order to restore his reputation, which had been tarnished by the loss of the battle of St. Gothard, and to regain the favor of Mohammed IV by an important conquest, took vigorous measures for the entire reduction of Candia, investing the capital, May 14th, with 80,000 men. A wall with 7 bastions surrounded the fortress; the same number of ravelins were situated in front of the wall, and several detached works still farther in advance: a numerous fleet held the Turks in check by sea, and the garrison, commanded by the chevalier de Ville and Morosini, was ready to be buried under the ruins of the fortress. The attack of the Turks was directed against the bastion called *Panigra*. The Christians contested every step of their advance; but the Turks were soon at the foot of a breach, which was, however, so well defended by mines, sallies, and intrenchments, that the most furious assaults, directed by Kiopurli in person, who feared the displeasure of his master, were without success. The winter found the Turks still before the breach, and compelled them to withdraw to their intrenchments. The natives of the East, unaccustomed to a winter campaign, were carried off by sickness; and new masses of troops, with all the materials for a siege, supplied the loss. Changes occurred also in the fortress. In the spring of 1668, the brave chevalier de Ville was recalled, on account of the jealousy of his superiors, and a quarrel with Morosini. His place, however, was well supplied by the chevalier St. André Montbrun. Volunteers, likewise, poured in from all the countries of Europe, to display their courage on so bloody a field, and to learn the art of war. Numerous engineers made the place their school, and Werthmüller, Rimpler and Vauban were together here. The pope sent troops and money; the Maltese, knights and soldiers. The duke de la Feuillade led hither 600 Frenchmen, some of them of the noblest families, who, with French thoughtlessness, rushed into needless danger, and were, for the most part, destroyed. The count of Waldeck subsequently came with 3 regiments of Lüneberg troops, so that the garrison was always kept from 8000 to 10,000 strong. Treachery had given the Turks information that the bastions of St. André and Sabionetta were the weakest points of the fortress: they therefore altered their plan, and attacked the last-mentioned works. Departing from the line of operations which they had hitherto followed, they approached the fortress by employing a great number of men in digging a deep ditch, throwing up the earth towards the place, and continuing to move it forward with shovels, till they reached and filled the trench. Daring sallies and well-applied mines, however, kept the Turks in check for a long time, and often destroyed their works; but, having finally succeeded in establishing themselves on the bastion of St. André, they found beyond it strong intrenchments, which withstood the most violent assaults; and the approach of winter found the besiegers no farther advanced. In the spring of 1669, the Turks pursued their labors slowly, but surely and successfully. In a short time, nothing but a heap of earth and stones remained to the Venetians of the bastion of St. André, and their last defence was a wall, thrown up during the winter, as a general intrenchment. In this extremity, the dukes of Beaufort and Navailles appeared with a French fleet and 7000 troops. A desperate sally was undertaken with this new reinforcement. A mine, which was to serve as a signal, and throw the Turks into confusion, did not explode: on the contrary, a Turkish powder-magazine blew up when the French had already got possession of the trenches, and repelled an attempt of the Turks to recover them. This explosion filled the French with such a fear of concealed mines, that they fled in disorder to the fortress, and left 200 men dead on the field, among whom were many brave officers, and the duke of Beaufort. At the same time, the Christian fleet, consisting of 80 ships and 50 galleys, which were to attack the Turkish camp in the flank, was thrown into disorder by the batteries on the coast, and the blowing up of a ship of 70 guns, and the sally was entirely un-

successful. This misfortune increased the discord which already existed to such a degree, that the duke of Navailles, convinced that the preservation of the fortress was impossible, re-embarked his corps, and returned to France. Individuals belonging to the other troops joined the French; the Maltese, and almost all the volunteers, also, departed shortly after; a new assault of the Turks was more successful than the previous ones, and brought them to the palisades of the last intrenchment; the garrison, amounting to scarcely 3000 men, was desponding and disobedient; quarrels distracted the commanders, and every thing announced that the place must fall at the next assault. It was resolved, therefore, in a council of war, to surrender. The terms of capitulation gave the garrison and inhabitants liberty to depart within 12 days, and to take with them all their property, even the artillery which had been introduced into the city during the siege, and left the Venetians in possession of Suda, Garabusa and Spinalonga. Sept. 27, 1669, the city was surrendered, after a war of 25 years, a blockade of 13 years, and a siege, in which the trenches had been open 2 years 3 months and 27 days. Its defence must serve as a model to the latest ages, as one of the bravest recorded in history, and proves what Christian courage could effect against Turkish fury and superiority of numbers, even at a time when the European art of war was imperfect, and the Turkish empire was at the zenith of its prosperity. At the time of the capitulation, the garrison consisted of only 2500 soldiers. 30,985 Christians and 118,754 Turks were killed or wounded during the siege; 56 assaults were made by the Turks; 96 sallies by the Christians; 472 mines were sprung by the former, 1173 by the latter; 509,692 cannon shot were fired by the fortress, and 180,000 cwt. of lead used for musket balls by the Christians. The Turks found the city in a ruinous state; every thing of any value was taken away; only 33 men, for the most part far advanced in years, remained behind, and 350 miserable cannon stood on the walls. The Turks immediately repaired all the works. Having obtained possession of the capital, they now endeavored to expel the Venetians from the strong holds which remained to them on the island; and, before the expiration of the 17th century, Garabusa fell into their power by treachery, and Suda and Spinalonga by surrender. They managed Candia in the usual manner. Three pachas, at Candia, Canea and Retimo, governed the island. On account of the feuds of these pachas, the inhabitants of the western mountains succeeded in forming a government of their own, under Turkish protection, in the agalic of Sphachia. As the compacts made with them were not always observed, they were wont, in such cases, to take up arms, were often defeated, but never entirely subdued. The pachas having demanded hostages of them in 1821, they joined the Greek insurgents. Even under the Venetian government, the Candiotes had the reputation of suffering no infringement of their privileges, and would not permit the Venetians to establish, as in the other districts of Greece, a nobility, *degli possidenti*, by whose means they might hold the other inhabitants under the yoke of the *podestas*. Had the mountaineers been armed, when the Turks made their first descent on the island, it would probably have been impossible for the invaders to have maintained themselves in Candia. The Sphachiotes have played the same part in Candia as the Mainotes in the Morea, excepting that they have not escaped the tribute of the poll-tax. The energy of the inhabitants seems to be now relaxed. (See *Greek Insurrection*.) The historical importance of ancient Crete, in a mythological point of view, and as a seat of ancient civilization, is shown by Höck's *Kreta* (Gött., 1823). In 1817, F. W. Sieber, a German physician, penetrated far into Crete, and made many observations on it, which had principally in view the improvement of natural history and medical science. See his *Reise nach der Insel Kreta*—Voyage to the Island of Crete (Leips. 1823), 2 vols. with plates and a map.

Candidate (from the Latin *candidatus*, *white-robed*, because, among the Romans, a man who solicited an office appeared in a shining white garment—*toga candida*). The *candidati* of the Romans wore no tunic; either as a sign of humility, or in order to show the wounds received on their breasts. The time of their canvassing was two years, during which they wore the *toga candida*. In the first year, they delivered speeches to the people, or had them delivered by others, with the consent of the magistrates. This was called *profiteri nomen suum*, and the year, *annus professionis*. After this year, they requested the magistrate to enter their names on the list of candidates for the office sought for. An aspirant was seldom refused permission to deliver his speeches; but he was not yet necessarily treated as a candidate by the magistrates,

or proposed by them to the people on the day of election. Before that was done, his life was subjected to a scrutiny in the senate, after the pretor or consul had received his name. If the senate accepted him, he was permitted to offer himself, on the day of election, as a candidate. The formula, by which permission was granted, was, *rationem habebo, renuntiabo;* if he was not accepted, he received the answer *rationem non habebo; non renuntiabo.* The tribunes often opposed a candidate who had been accepted by the senate. The morals of the aspirants, in the purer ages of the republic, were always severely examined. In the later period of the republic, nobody could obtain an office if he was not present, and if he had not offered himself on three market-days. (Sall. Cat. 18., Cic. Fam. xvi. 12.) On these days, the candidates tried to insinuate themselves into the favor of the people. They went from house to house (*ambiendo*), shook hands with every body whom they met (*prensando*), addressed each one by his name, for which purpose they generally had a *nomenclator* with them, who whispered the names of those whom they met into their ear. Cicero, therefore, calls the candidates *natio officiosissima.* They placed themselves, on market-days, in elevated places, in order to be seen. On the day of election, they did the same. Favorites of the people accompanied them (*deductores*); some of their suite (*divisores*) distributed money among the people, which, though prohibited, was done publicly. *Interpretes* were employed to bargain with the people, and the money was deposited in the hands of *sequestres.* Sometimes a number of candidates united into parties (*coitiones*), in order to defeat the endeavors of the others. At last, the grounds on which each candidate rested his claims to the office were read, and the *tribes* delivered their votes. The successful candidate then sacrificed to the gods in the capitol. To oppose a candidate was called *ei refragari;* to support him, *suffragari*, or *suffragatores esse.*—We have dwelt so long on this subject, on account of the similarity between the ancient and the modern modes of seeking office.—The word *candidate* is also used, by Protestants, to designate a theologian, who, having finished his studies at a university, is waiting for an appointment in the church.

Candide; the name of a famous tale of Voltaire's, forming an epoch in French literature, in which he ridicules the system of optimism with his usual spirit, and attacks revelation with plausible but superficial arguments. Voltaire is unsurpassed in the art of treating the most serious subjects with light raillery, while he seduces the reader by the charms of his style. Some descriptions in this tale, for instance, that of the carnival at Venice, are excellent.

Candlemas; a Catholic feast, instituted by pope Gelasius I, in 492, in commemoration of the presentation of Christ in the temple, and of the purification of Mary; perhaps intended to take the place of the rude heathen feast called the *Lupercalia*, which was abolished by him. It is celebrated on February 2, and has its name from the consecrated torches which are carried about in procession, in allusion to the words of Simeon, "a light to enlighten the Gentiles."

Cane. (See *Bamboo* and *Ratan.*)

Canea; the principal port of Candia; lat. 35° 28′ 45″ N.; lon. 24° 12′ 45″ E.; supposed to be on the site of the ancient Cydonia. Population, 7150. The city has been fortified from the time of the Venetian government.

Canga-Arguelles, don José, Spanish minister of finance from 1820 to March, 1821, distinguished himself in the cortes of 1812, no less by his talents than by his zeal for the establishment of a constitution. When he was minister, he laid before the cortes a statement of all the possessions of the crown and of the church in Spain, from which it appeared that the latter surpassed the former by a third part. When king Ferdinand, in 1814, resumed the government, C. was confined in Penniscola, but, in 1816, was restored to liberty, and employed in Valencia. In his *Memoria Sobre el Credito Publico*, he represented the condition of the treasury, at the time when the king swore to observe the constitution, and set forth the measures of the ministry for improving the condition of the finances. According to this report, the annual deficit of 340,050,231 reals was more than the whole revenue. Among other means of remedying the evil, the minister proposed to raise 140,000,000 reals by direct taxes; to sell a 7th part of the property of the church and monasteries; also the small possessions of the crown in North Africa, and to make proposals for a loan of 200,000,000 reals. He presented a plan, likewise, for diminishing the great number of officers, and reducing the amount of exclusive privileges. His projects were executed only in part. In 1821, he resigned his office, together with

the other ministers, and was chosen, in 1822, a member of the cortes. In this body, he joined the party of the moderate liberals. After the fall of the constitution in Cadiz, he fled to England.

Cange, Du. (See *Du Fresne.*)

Canisius, Petrus, born in 1524, at Nimeguen, was the first man in Germany who entered the order of the Jesuits, of which he became a very active member. In 1549, he was made professor of theology, rector and vice-chancellor of the university at Ingolstadt. He afterwards reformed the university of Vienna, according to the views of the order. His catechism is yet in use. He persuaded Ferdinand I to adopt violent measures against the Protestants, and founded the colleges at Prague, Augsburg, Dillingen, and Friburg, in Switzerland, in the latter of which he died, in 1597.

Cannæ; a city in the Neapolitan province Puglia, at the mouth of the Aufidus, on the Adriatic, famous for the great battle in which the Romans were here defeated by Hannibal (216 B. C.). The consuls Æmilius Paulus and Terentius Varro contented themselves with acting on the defensive against the Carthaginian general, who endeavored to decide the fate of Rome by one blow; but the senate, considering that the Roman army consisted of 87,000 men, while that of the enemy amounted only to 50,000, among whom were 10,000 horse, and would have no point of support when beaten, commanded the consuls to give battle. Hannibal, seeing that their plan was changed, allowed Varro to gain a slight advantage in a skirmish of cavalry. The Romans left their strong position at Canusium, on the banks of the Aufidus, and the whole army crossed the river. The consul Varro drew up his troops on the plain, with his right wing protected by the river. At the same time, Hannibal forded the Aufidus, and led his small army to the attack. The Romans had their own cavalry on the right wing, that of their allies on the left, and the infantry, as usual, in the centre. Hannibal opposed the Numidian cavalry to that of the Roman allies, and that of the Spaniards and Gauls to the Roman. His infantry from Africa he divided into two bodies, each of them near the cavalry. At some distance from both wings, the Spaniards and Gauls, on foot, arranged in an obtuse angle, occupied the centre. Behind them was a strong reserve. Hannibal himself commanded the centre. He had calculated that the wind called *Volturnus*, which blew regularly at certain hours in that country, would, at the time of attack, throw dust and sand in the eyes of the Romans, and hide his own evolutions. The consul Æmilius Paulus was wounded by a Balearian slinger, soon after the light troops had begun the engagement. The first shock of the Roman cavalry upon the Spaniards and Gauls was violent. After the fight had lasted for a long time, they alighted, and fought on foot. The Gauls and Spaniards then broke through the dismounted Romans, and cut them down. The Roman infantry, to assist their horse, moved in a curved line towards the wing, under very disadvantageous circumstances, and attacked the Spanish and Gallic infantry, which retired in good order into the intervals, as Hannibal had commanded. By this means, Hannibal was enabled to attack the Romans in flank, as they advanced incautiously, with the African infantry, which he had kept back for this purpose. Thus surrounded, and contracted into a small compass, the Romans fell in great numbers, among them the consul Æmilius Paulus, and both the proconsuls Servilius and Atilius. The Numidian horse destroyed those who fled from the field of battle. The victor made 13,000 prisoners. The Romans lost, according to their own lowest statements, 45,000 men; according to the highest, 70,000. Hannibal collected the gold rings of the knights who had fallen, and sent some bushels thereof to Carthage. But the victory had also weakened his own army. He was in want of money to recruit his troops. This want, rather than the short period of luxurious living in winter-quarters at Capua, obliged him, at length, to give up the hope of conquering Italy, after a war of 17 campaigns. (See *Hannibal.*)

Cannes, or Canes; a small seaport of France, on the shore of the Mediterranean, in the department of the Var; population, about 2800. C. is famous as the place where the memorable march of Napoleon through France began, when he returned from Elba. He landed here March 1, 1815.

Cannibals. (See *Anthropophagi* and *Caribs.*)

Canning, George, was born in London, April 11, 1770. His father, a man of considerable abilities and literary cultivation, had offended his family by marrying a lady of beauty and accomplishments, but without fortune, and died in 1771, leaving his widow destitute. She had recourse to the stage for support, but was

not very successful, and was afterwards twice married. Her second husband was an actor; her third, Mr. Hunn, a linen-draper of Exeter. She lived to see the success of her son, from whom she ever received the tenderest marks of filial love. C., who had inherited a small estate in Ireland, was educated at Eton, where he was distinguished for industry, vigor of mind, and elegance of taste, and, at the age of 15, formed the plan of a periodical paper, called the *Microcosm*, of which he was the principal editor. In 1787, he was entered at Oxford. His vacations were passed with Sheridan, by whom he was introduced to Burke, Fox, and other distinguished whigs. But, although Sheridan had already announced him, in parliament, as the future ornament of his party, C. entered into terms with Pitt, by whom he was brought into parliament in 1793. During the first session, he remained silent. His maiden effort was made in 1794, on the Sardinian treaty, and rather disappointed expectation. In 1794, he took the degree of M. A., and, from that time, resided constantly in London. In 1796, he was under-secretary of state. In 1797, he projected, with some of his friends, the Anti-Jacobin, or Weekly Examiner, of which Gifford was appointed editor. C. contributed many poetical and other articles to this periodical. In 1798, he supported Wilberforce's motion for the abolition of the slave-trade, and continued always an advocate for the amelioration of the condition of the blacks. In July, 1800, C. increased his fortune and influence by a marriage with Joanna, daughter of general Scott, a lady with a fortune of £100,000. The administration being dissolved in 1801, C. became a member of the opposition, until the restoration of Pitt in 1804. In 1807, he was appointed secretary of state for foreign affairs in the Portland administration. A political misunderstanding with lord Castlereagh led to a duel between that minister and C., in which the latter was slightly wounded. This dispute occasioned the dissolution of the ministry. In 1810, he opposed the reference of the Catholic claims to the committee of the whole house, on the ground that no security or engagement had been offered by the Catholics. Some of his most brilliant speeches were on this subject. He invariably supported the admission of the Catholics to power, not as an abstract question of right, but as a matter of expediency—of hourly increasing expediency. The adoption of the measure being then a matter of policy, the state of opinion, the condition of affairs, and the securities with which it should be accompanied, were, with him, elements of the question. He proposed securities, in 1813, which, with the bill, were rejected. He supported, in 1812 and 1813, the same motion which he had opposed in 1810; and, in 1821, two bills in favor of the Catholics having been introduced into the house of commons, he observed, "that the moment was peculiarly favorable for discussion; that they were in possession of a peace achieved by Catholic arms, and cemented by Catholic blood." To C. was principally owing the first blow which shook the throne of Napoleon; the British policy in Spain was directed and animated by him. "If there was any part of his political life," he declared, on one occasion, "in which he gloried, it was that, in the face of every difficulty, discouragement, and prophecy of failure, his had been the hand which had committed England to an alliance with Spain." "Never," said he, on another occasion, "ought we to relinquish our hold of the Peninsula. The ruler of France has one grand object, to which he stands pledged —the establishment of his dominion in the Peninsula. If he fail in this, his defeat must be most signal." In 1812, he was elected member of parliament for Liverpool; from which he was also returned in 1814, 1818, 1820. In 1814, he was appointed minister to Portugal, and remained absent about two years. In 1819, he declared his decided hostility to parliamentary reform, in whatever shape; and his speech on lord John Russell's motion for reform, in 1822, is among the most finished specimens of his eloquence. On the occasion of the proceedings relative to the queen, he declared, that "toward the object of that investigation, he felt an unaltered regard and affection;" and soon after resigned the presidency of the board of control, and went abroad. Having been nominated governor-general of India, he was on the point of embarking, when the death of the marquis of Londonderry called him to the cabinet as secretary for foreign affairs (Sept. 16, 1822). One of his earliest acts, in this situation, was to check the French influence in Spain; and, in a debate on this subject (April 28, 1823), he observed, "It is true that there is a contest going on in the world between the spirit of unlimited monarchy and the spirit of unlimited democracy. Between these two spirits there is a strife openly in

action, or covertly at work, throughout the greater portion of Europe." It was in this session that Brougham accused him of "the most monstrous truckling which the whole history of political tergiversation could furnish." C. rose immediately, and exclaimed, "That is false." The affair was settled, after some explanations on the part of Mr. Brougham. He continued to support the propositions in favor of the Catholics, and, in 1825, communicated to foreign ministers the determination of his majesty to appoint *chargés d'affaires* to Colombia, Mexico and Buenos Ayres. In consequence of the attempts made by Spain to assist the malcontents of Portugal, it was immediately determined, by the ministry, to support the regency of that country. On this occasion, C. concluded his speech with these remarks: "Some years ago, I said that I feared that the next war, which should be kindled in Europe, would be a war of *opinions*. It is the contemplation of this *new power*, in any future war, which excites my most anxious apprehensions." And, in answer to the argument that the ministers had encouraged the attack upon Portugal, by having permitted the occupation of Spain by France, he uttered the memorable words: "Was it necessary that we should blockade Cadiz? No. I looked another way; I resolved that if France had Spain, it should not be Spain with the Indies. I called the new world into existence, to redress the balance of the old." April 12, 1827, his appointment to be prime minister was announced. His administration was terminated by his death, the 8th of August following; but not until it had been crowned by the treaty of London (July 6), for the settlement of the affairs of Greece.—As a statesman, he was liberal, profound, consistent and independent. His foreign policy was marked by the three great measures of the recognition of the South American states, the maintenance of the independence of Portugal, and the treaty in behalf of Greece. His uniform support of the Catholic claims, and his constant and ardent exertions in favor of the slave population of the colonies, are not less honorable to his humanity than to his policy. His eloquence was persuasive and impassioned; his reasoning clear and logical; his manner graceful; his expression winning, and his whole appearance prepossessing. His wit was brilliant, and his satire was extremely caustic. He died poor. His body is deposited in Westminster abbey. (See *Speeches of the Right Hon. G. Canning, with a Memoir, by R. Therry*, London, 1828.)—The cousin of G. Canning, the honorable Stratford Canning, is well known by the conspicuous part which he has played during the late difficulties between the Porte and the other European powers.

Cannon; a heavy metallic gun, which is moved by the strength of men and horses. It is mounted on a carriage, and iron (formerly stone or leaden) balls are projected to a distance from it by the force of gunpowder. The interior of the cannon is called the *bore*. The solid piece of metal behind is named the *breech*, and terminates in the *button*. The *dolphins* (so called because they used to be made in the form of this animal) are the handles by which the piece is mounted or dismounted. The aperture through which the fire is introduced into the bore, to ignite the charge, is called the *vent* or *touch-hole*, in which a small tube, used to contain the priming, is placed previous to firing. The supports, which are denominated *carriages*, are mounted on trucks, as in the case of ship-guns or garrison-guns, or on two wheels, as in the case of field-pieces. When a field-piece is to be moved, a two-wheeled frame is fixed to the carriage, which is called a *limber*, and this process is called to *limber up*. The charge, or cartridge, is a bag filled with powder, carried near the cannon. The cannon is fired by means of the *match*, which is a lighted bunch of tow, wound round a small stick; or by a tube, filled with the priming-powder, from which a piece is broken off every time, and forced into a stick, to light the charge. On board most of the English ships there are cannon fired by means of locks. To perform the labor required in managing cannon is called to *serve the guns*. Cannon were formerly dignified with great names. 12, cast by Louis XII, were called after the 12 peers of France. Charles V had 12, which he called the *Twelve apostles*. One at Bois le Duc is called the *Devil;* a 60 pounder, at Dover castle, is named *Queen Elizabeth's pocket-pistol;* an 80 pounder, at Berlin, is called the *Thunderer;* another at Malaga, the *Terrible;* two 60 pounders at Bremen, the *Messengers of bad news*. In the beginning of the 15th century, names of this sort were abolished, and the following came into general use:—cannon royal, or carthoun, carrying 48 pounds; bastard cannon, or ¾ carthoun, 36; ½ carthoun, 24; whole culverins, 18; demi-culverins, 9; falcon, 6; saker, lowest sort, 5; ordi-

nary, 6; largest sort, 8; basilisk, 48; serpentine, 4; aspick, 2; dragon, 6; siren, 60; falconet, 3, 2 and 1; moyens, which carried a ball of 10 or 12 ounces: rabinets carried one of 16 ounces. Cannons are, at present, named, from the weight of the balls which they carry, 6 *pounders*, 12 *pounders*, &c. The length of the cannon is in proportion to the *caliber*. Cannon took their name from the French word *canne* (a reed). Before their invention, machines were used for projecting missiles by mechanical force. These were imitated from the Arabs, and called *ingenia*; whence *engineer*. The first cannon were made of wood, wrapt in numerous folds of linen, and well secured by iron hoops. They were of a conical form, widest at the muzzle. Afterwards, they received a cylindrical shape. At length they were made of iron bars, firmly bound together, like casks, by iron hoops. In the second half of the 14th century, they were formed of an alloy of copper and tin, and, in process of time, other metals were added. Some attribute the invention of cannon to the Chinese, and say that there are now cannon in China, which were made in the 80th year of the Christian era. From the Chinese the Saracens probably learned to manufacture them, and Callinicus, a deserter from Heliopolis, in Phœnicia, made them known, in 670 (676), to the Greek emperor Constantinus Pogonatus. Bombards were brought into use in France in 1338, and, according to another and more doubtful authority, Solomon, king of Hungary, used them, in 1073, at the siege of Belgrade. From all these accounts, it appears that the true epoch of the invention of cannon cannot be exactly determined: it is certain, however, that they were actually in use about the middle of the 14th century. In 1370, the people of Augsburg used cast cannon. In the beginning of the 15th century, nearly all the countries of Europe, except Russia, where cannon were first cast in 1475, were provided with them. The lead cannon, which were invented and employed by the Swedes, between 1620 and 1632, in the 30 years' war, were lined with tubes of wood or copper, and secured on the outside with iron rings. The art of firing red-hot balls from cannon was invented by major-general Weiler, of the electorate of Brandenburg. In the commencement of the 16th century, Maurice of Switzerland discovered a method of casting cannon whole, and boring them, so as to draw out the interior in a single piece. Arms for expeditious firing, loaded from behind, and having the charge closed in with a wedge, were introduced by Daniel Spekle (who died 1589) and Uffanus. Charles Millon invented a kind of air cannon, 2 feet long, 3 inches diameter in the thickest part, 12 lines caliber, charged with inflammable air, and fired with a Leyden jar, or a piece of cat-skin, by which 12 discharges can be made in a minute. It stands on a frame of glass, and may be directed to any point. In 1740, cannons were made of ice at St. Petersburg, and balls of many pounds weight were projected without injuring the pieces. (See *Steam-Gun*, *Gun-Boat*.) *Cannon-clock* is a contrivance invented by one Rousseau, and placed in the garden of the *palais royal*, and in the Luxembourg at Paris. A burning-glass is fixed over the vent of a cannon, so that the sun's rays, at the moment of its passing the meridian, are concentrated, by the glass, on the priming, and the piece is fired. The burning-glass is regulated, for this purpose, every month. (For the use of cannon in naval warfare, see *Ship*.)

Cano, Alonzo or Alexis; a painter, sculptor and architect. The variety and extent of his talents made him the Michael Angelo of Spain, whom he also resembled in his private character. He was born in 1608, at Grenada, studied in Seville, with Pacheco, and first made himself known by the statues which he executed for the great church of Lebrija. In his 24th year, he had acquired the fame of a great artist, and was (1638) appointed painter to the king. In this capacity, he executed several celebrated pictures, and was at the summit of his prosperity, when a dreadful event destroyed his happiness. His wife was one day found murdered, and his house plundered. Instead of a suspected Italian servant, who had fled, C. himself, convicted of a connexion with another woman, was condemned by the judges as guilty of the murder. He was put to the torture; but his right arm was spared, from respect for his talents. He bore the torture with silent fortitude. The king pardoned him. He became a priest, and was made a *racionero* (resident) of Grenada, where he passed the remainder of his life in a pious and exemplary manner, and died in 1676.

Canobus. (See *Canopus*.)

Canoe, also Canoa; the term generally used to designate the small vessels which uncivilized people, living near the water, use. In the East Indies, there is a kind of boat which goes by this name, sometimes from 40 to 50 feet long, and 5 or 6

broad. The North American Indians generally impel their canoes with paddles, which have a very large blade, and are managed perpendicularly. The canoes of Canada are of the most fragile texture, and of so little weight, that, in passing from one river to another, the boat-men carry them on their heads across their portages. They are mostly covered with bark, the pieces of which are sewed together with a kind of grass. This bark is generally not more than a quarter of an inch in thickness; yet, in these frail vessels, the Indians and Canadians do not hesitate to descend very dangerous rapids. The Esquimaux are exceedingly dexterous in the management of their canoes. These consist of a light, wooden frame, covered with seal-skins, sewed together with sinews. The skins are not only extended round the bottom and sides, but likewise over the top, forming a complete deck, and having only one opening to admit the Indian to his seat. To this hole a flat hoop, rising about four inches, is fitted, to which is fastened the surrounding skin. The paddle is about 10 feet long, light, and flat at each end. In the Esquimaux language, the canoe is called a *kaiak*, or *man's boat*, to distinguish it from *umiak*, the *woman's boat*, which latter is a large boat for transporting the women, with their families and possessions. The Greenlanders and Esquimaux use the same kind of canoes, and it is astonishing, when we consider their insignificant construction, at what a distance from the regions they commonly inhabit, these people, especially the former, are found in them. In the islands of the South sea, the natives have a double canoe, united by a strong platform, serving, in this way, as one vessel. Such a canoe is capable of carrying a number of persons, and a considerable lading. Captain Cook gives us a long account of the different kinds of canoes used in Otaheite.

Canon; a person who possesses a prebend, or revenue allotted for the performance of divine service in a cathedral or collegiate church.

Canon, in the arts. When art has succeeded in producing beautiful forms, the question arises, with what proportions beauty of form is united. Artists of genius first started this question, and imitators, inferior to them in talents, scrupulously followed their results, and naturally exalted some existing work into a model for every performance. Among the Greeks, the celebrated statuary Polycletus (q. v.) first instituted such inquiries; and, as he generally represented youthful, pleasing figures, it is probable that he fixed the standard of beauty in the youthful form. The canon (the model statue) of Polycletus was accordingly a statue, which was made principally for the purpose of showing the beautiful proportions of the human form in a youth just ripening into manhood. No copy of it is known to exist; the artist probably gave his model of proportion a quiet, simple attitude, without any strong, distinguishing marks. His successors imitated it without deviation. Polycletus was not the only Greek artist who pursued such investigations respecting the proportions of form. Euphranor, for instance (in the 10th Olympiad), is celebrated in the same way. Among the moderns, Dürer and Leonardo da Vinci have devoted themselves to similar inquiries. See A. Hirt's *Abhandlung über den Canon in der bildenden Kunst* in the *Abhandl. der Histor-philolog. Classe der königl. Akad. der Wiss. in Berlin* (1814 and 1815), a table annexed to which gives the average proportions (ascertained by careful measurements) of the best ancient statues.

Canon, in music, signified, with the ancient Greeks, what now is called *monochord*. At present, it signifies a composition in which the several voices begin at fixed intervals, one after the other, and in which each successive voice sings the verse or the strain of the preceding one. In Italian, therefore, it is called *fuga di conseguenza;* in Latin, *canon perpetuus*, or continuous fugue; in German, *Kreisfuge* (circulating fugue). Sometimes each voice begins with the same, sometimes with different notes. Canons may be finite or infinite. The former end, like any other compositions, with a cadence, while the infinite canon is so contrived, that the theme is begun again before the parts which follow are concluded. By this means, the performance might be continued to an indefinite length. A canon may consist of two, three, four or more voices. Generally only one voice of a canon is written, and a sign shows the place where the other voices are to begin. Formerly, at the beginning of canons, it was the custom to place the directions by which they were to be deciphered and sung. These directions were called the *rule* or *canon*, and thence arises the title which such compositions have since retained. Canons differ from ordinary fugues; for, in the latter, it is sufficient that the subject be occasionally repeated and imitated according to the laws of counterpoint; but,

in the former, it is essential that the subject be strictly repeated by all the succeeding parts; which repetition may be made in the unison or octave, the fourth, or the fifth, or any other interval of the scale. There are several other canons, as *canon polymorphus*, *canon pertonos*, *canon per diminutionem*, and *canon per augmentationem*, which to explain, would exceed our limits. Sometimes, also, a musical passage of a composition, in which one voice repeats, for a short time, another, is called, improperly, a *canon*.

Canon (*Greek*); properly a measure, a rule, a standard; thence *canon* is used to denote the rule or standard of primitive Christianity. The same term is employed to designate the collection of books containing this rule; that is, the canonical books of the Holy Scriptures, whose divine origin the church acknowledges. The canon of the books of the Old Testament, as drawn up by the Jews in the 4th century before Christ (see *Hebrew Language and Literature*), receives in this form equal respect among all Christians, because Christ and the apostles have expressly appealed to them, and pronounced them writings inspired by God. The apocryphal books of the Old Testament, whose canonical character the Jews did not acknowledge, the Eastern church has never received; but the Western church declared them canonical, in the African council, about the end of the 4th century. Nevertheless, the opinions of the clergy respecting the canonical authority of the apocryphal books of the Old Testament remained for a long time divided. Jerome, one of the fathers of the church, denied it, and many theologians coincided with him. (*See the following article.*) The Protestant churches reject the Apocrypha as books not belonging to the rule of faith. Respecting the value and the number of the books belonging to the canon of the New Testament, the opinions of Christians were much divided till the 6th century. As early as the 2d century, the separation was made into the Evangelicon (the four evangelists) and the Apostolicon (the Acts and Epistles of the Apostles). The five historical books, the Epistles of Paul, the First Epistle of Peter, and the First Epistle of John, were universally acknowledged to be genuine in the 3d century; hence they are called, by Eusebius, in his Ecclesiastical History, written about A. D. 325, *Homologomena* (universally received). The other five Catholic Epistles (Second of Peter, Second and Third of John, Jude and James) he calls *Antilegomena* (doubtful, not universally received). At that time, the Epistle to the Hebrews was considered genuine by most persons, and the Apocalypse by many. These books were received, in the second half of the 4th century, in the Egyptian church (where Athanasius first used the term *canonical*), and in the Western church. In the Eastern church, properly so called (the dioceses of the patriarchs of Constantinople, Antioch and Jerusalem), only the Catholic Epistles were of canonical authority at that time; the Apocalypse not till the 6th century. The canon of the New Testament has since remained unaltered, and the Protestant churches hold it in common with the Greek and Catholic churches. The results of critical examinations of the genuineness and canonical character of the single books of the Bible, even when they were unfavorable to the books, have produced no alteration in the established canon. The reasons of the ancient fathers of the church for or against the canonical character of the Biblical books were merely historical and traditional, and built on philological criticism; they are still the most tenable and rational: the philosophical grounds are more subject to be affected by extraneous influences. Modern criticism has attacked, with success, the genuineness of single passages; but it has failed in its attempt to destroy the canonical authority of whole books. With respect to the Apocalypse, or Revelation of John, however, a large number of the Protestant commentators incline to the side of the assailants.—*Canon* is also the name of the prayers which the Catholic priests repeat before, at and after the consecration of the host.—In arithmetic, algebra, &c., *canon* denotes a formula obtained by the solution of a problem, and containing the rule by which all examples, comprehended under the general problem, may be solved.

Canon of the Holy Scriptures [written by a Catholic]. The distinguishing characteristic of the Catholic religion, as is fully explained in the article *Catholicism*, is, the authority which it attributes to tradition, by which revelation continues in life and power. The Holy Scriptures are esteemed sacred by the Catholics, because the church has transmitted them from age to age as sacred, and illustrative of revelation, as far as any writings can be. The church has only declared what writings have been handed down as of divine origin. The catalogue of these Holy Scriptures is the canon; the writ-

ings themselves are called *Canonical Books*. In this sense, the Protestant church has no canon; it rejects the authority of all the traditions of the church. Hence, in order to be consistent, it must leave every Protestant, on free investigation, to decide what books he will regard as canonical. But the Bible, the pillar of the Protestant faith, is made up of separate canonical books; and, by pursuing such a course, the basis of the Protestant faith might be undermined. It has been agreed, therefore, however inconsistently, to adopt the New Testament canon of the Catholic church. But, in fixing the canon of the Old Testament, the decisions of the Catholic church have been rejected; and, contrary to the African councils and the usage of the Roman church, established by the council of Trent, part of Esther, also Baruch, Tobit, Judith, Wisdom, Ecclesiasticus or Jesus the Son of Sirach, the two books of Maccabees, the Song of the Three Youths in the Fiery Furnace, described in Daniel, together with the two last chapters of this prophet, are thrown out as uncanonical and apocryphal. It is worthy of mention, that a controversy on this subject broke off the negotiations for a union of the Catholic and Protestant churches, which commenced in the beginning of the 18th century, between Leibnitz, Molanus and Bossuet.

Canon and Caput in Councils. A council is not only the church universal assembled, which declares the faith of the members, and fixes the doctrines to be defended, but it also possesses the supreme power in the administration of all ecclesiastical affairs, which have not immediate reference to doctrines (as liturgies and rules of discipline). In the language of the church, a distinction is made between these two kinds of ordinances. Such as respect doctrine are called *canons*; and every other precept or regulation, *caput* or *decretum*. The latter are subject to be changed as the spirit of the age requires, and hence lay no claim to infallibility: the former are the unalterable truths and doctrines of the infallible church of the Lord. The council of Trent makes a distinction between the two, and the *capita* on church discipline are superscribed *De Reformatione*. It would be a great mistake to view these *capita* as doctrinal truths, and then to reproach the church with establishing erroneous dogmas as truths essential to salvation.

Canon Law [written by a Catholic]. The famous Gravina begins his Institutes of the canon law thus:—Since the word *law* is imperative, and includes the idea of physical enforcement, the ancient church preferred to apply to its precepts the milder term of *rule* or *canon* (from the Greek κάνων, rule), which agrees with the language of the council of Trent, and the most able canonists, as Van Espen, &c. Canons, therefore, are the laws which the church has promulgated; and by *canon law*, in English, is understood the whole body of ecclesiastical laws, ordinances and regulations. The church has been, from the time of its establishment, a free society, possessing and exercising the right of forming laws for itself, either by positive enactment, or by the gradual growth of custom. The regulations of the apostles, the decrees of the general and particular councils, and of the bishops, constitute these laws. Even when, after the downfall of paganism, the Christian church became connected with the state, it retained this legislative power. If the Theodosian code acquired authority, it was only in consequence of *reception*. The more the organization of the church became settled, the more frequent became the regulations and orders of the supreme bishop (the *decretals*). There is no question about the authority which was allowed to these decretals, and it is useless to inquire here whether this authority originated from positive enactment or from customary observance. The ecclesiastical as well as the political law is to be traced, in part, to each of these sources. In the course of time, collections were made of these canons, arranged in chronological order (*Collectio Canonum*). These collections came into use in the fifth and sixth centuries. The chief basis of them was a translation of the decrees of the four first general councils, to which other decrees of particular synods and decretals of the popes were added. In the time of Charlemagne, the collection of Dionysius the Little acquired almost the authority of laws. Equal authority, also, was allowed to the collection of canons ascribed to Isidore, bishop of Seville, which appeared in the ninth century. This famous collection is falsely attributed to Isidore, and abounds in spurious interpolations. It was entitled the *Isidorian Code*, and is said to have been brought from Spain. The object of the interpolations of the *Pseudo-Isidore* was probably to give a historical basis to a system grown up out of observance, which transferred many of the former rights of the metropolitans to the pope. After the 10th century, the custom which had before

prevailed, of collecting chronologically the ordinances of the church, and studying them from the sources, was given up, and systematical compendiums of ecclesiastical law began to be drawn from these canons. In these compendiums, it is true, literal extracts of the canons were retained, but often mutilated, and separated from their proper connexion. The most important of these compendiums is that of the Benedictine Gratian (of Chiusi), which he finished in 1151, in the convent of St. Felix, at Bologna. Gratian treated the subjects of the canon law according to a system which he had formed himself, and under each division laid down principles, which he established by quotations from the original decrees. By means of these authorities, with additions of his own, he extended his principles further, and endeavored to reconcile apparent contradictions in the law, or, where they could not be reconciled, to determine which part was binding. Hence the title of his work —*Concordantia Discordantium Canonum.* He divides the whole subject into three parts: in the first, he begins with a general essay on law, particularly ecclesiastical law, and treats of the officers of the church, their character, rights, duties, consecration, and share in the government of the church: the second part contains the system of the powers of the church, particularly of its jurisdiction and judicial processes: the third part embraces the rules respecting religious rites, the liturgy, the sacraments, &c. This new collection met with great success. Within 10 years after its appearance, the universities of Bologna and Paris had their professors of canon law, who taught from Gratian's work; and, within a short time, it superseded all former chronological collections. As the civil law acquired authority in so many countries from the circumstance that it was taught in the universities, so the *Decretum Gratiani*, in the same way, became a code, and with more reason, since it expounded a law really existing; and what Gratian had added was, to a certain degree, considered as commentary. Any direct coöperation of the popes in elevating the *Decretum Gratiani* to the authority of a code has never been proved. This *Decretum*, however, is only the first part of the present *Corpus Juris Canonici.* After the appearance of the *Decretum*, new decrees of councils and new decretals were promulgated, which several authors collected into appendices. All these new collections pope Gregory IX ordered to be put in order, which was done by the Dominican Raymond, of Pennaforte. The work was divided into five books. This authentic collection was finished in 1234, and sent to the universities of Bologna and Paris. It bears the name of *Decretales Gregorii Noni*, and has the authority of law. The later decretals and decrees of councils were collected by Boniface VIII, and published as the sixth book (*Liber Sextus*) of the Gregorian Decretals, in 1298. They have also the authority of laws. Pope Clement V published, in 1313, a collection of his decrees, mostly issued at the council held at Vienne, in France: they are also a part of the *Corpus Juris Canonici.* About the year 1340, the decretals of John XXII were published; they are called *Extravagantes Johannis XXII;* and, at a later period, the subsequent decretals, to the time of Sixtus IV, who died in 1484, called *Extravagantes Communes*, appeared. These *Extravagantes* have not altogether the authority of law. Under pope Pius IV, a commission of 35 persons (the *correctores Romani*) was appointed to revise the *Decretum Gratiani.* The labor was continued under Pius V, and completed under Gregory XIII, and sanctioned by a bull of July 1, 1580. The later bulls have the force of law, if they concern a subject on which the pope has an unquestionable right to legislate, or as far as the secular governments accept them. The canon law, excepting some of its regulations, is in force in Germany, even in civil cases. Luther, it is well known, burned a copy of the canon law at Wittemberg, but the Protestant courts have continued to apply it, except where it disagrees with Protestant principles. The canons, even those of the general councils, which respect the discipline of the church, have no authority in the Gallican church, unless it is proved that they have been admitted as laws of the kingdom. The celebrated declaration of the clergy of France, of 1682, is a series of very important canons. They are to be considered as *rules of the Gallican church and laws of the kingdom.* Many Catholics are willing to admit that there exist arbitrary canons in the ecclesiastical codes, as much as unconstitutional laws in civil governments. In England, when the Catholic faith prevailed in that country, there existed, besides the general canon law, the legatine and provincial constitutions; the former being laws enacted in national synods, held under the cardinals Otho and Othobon, legates from pope Gregory IX and Clement IV, about the years 1220 and 1268; the

latter being decrees of various provincial synods, under several archbishops of Canterbury. The authority of the canon law in England, since the reformation, depends upon the statute 25th Henry VIII, according to which the ecclesiastical laws were to be revised by the king and a commission of nobles and clergymen, and such as were not repugnant to the laws of the realm and the king's prerogative were to remain in force till so revised. This revision was never made. There are four species of courts in England, in which the canon law, as well as the civil, is, under different restrictions, permitted to be used: 1. the courts of the archbishops and bishops, and their derivative officers, usually called, in the English law, *courts Christian* (*curiæ Christianitatis*), or *ecclesiastical courts*; 2. the military courts; 3. the courts of admiralty; 4. the courts of the two universities. The reception of these laws in general, and the different degrees of their reception in these courts, are grounded entirely upon custom, corroborated, in the case of the universities, by acts of parliament. The courts of common law have a superintendence over these courts. An appeal lies from all of them to the king.

Canonical Books. (See *Canon*, and *Apocryphal*.)

Canonical Hours are certain stated times of the day, devoted, more especially by the Roman church, to the offices of prayer and devotion, as matins, lauds, sixth, ninth, vespers. In England, the canonical hours are from 8 to 12 in the forenoon, before or after which marriage cannot be legally performed in any parish church.

Canonization; a ceremony in the Roman church, by which deceased persons are declared saints. Alexander III, in 1170, pronounced it an exclusive privilege of the papal chair. This ceremony is one of the most solemn in the Roman church. The pope institutes a formal investigation of the qualifications of the deceased person recommended for canonization, in which his manner of life and the genuineness of the miracles ascribed to him are strictly examined; and an *advocate of the devil*, as he is called, is appointed, to assail the memory of the candidate, but, of course, always loses his cause. If the examination is satisfactory, the pope pronounces the beatification (q. v.) of the candidate; but, in order to collect new proofs of his merits (e. g., of miracles performed by his relics), the actual canonization generally takes place many years afterwards; and then a day, usually the anniversary of the death of the new saint, is dedicated to his honor, his name is inserted in the *Canon* or the Litany of the Saints in the Mass (thence *canonization*), churches and altars are consecrated to him, and his remains are preserved as holy relics. The last instance of canonization occurred in 1803. (See *Saints*.)

Canopus, or Canobus, in Egyptian antiquities, is the name given to large-bellied vessels, used formerly for preserving the water of the Nile fresh and fit for drinking. They were frequently made of basalt (as the fine canopus of green basalt in the villa Albani), and decorated with figures in relievo or paintings; or of costly white alabaster, like that in the Mus. Pio. Clementinum, with spiral flutings; or they were formed from black, burned clay Under the shape of such a vessel, surmounted by a human head, connected also sometimes with serpents, and similar attributes, the Egyptians worshipped one of their beneficent deities. The city Canobus or Canopus, between Alexandria and the western mouth of the Nile, is said to have derived its name from this deity. The worship of Serapis was introduced, in the room of that of this rude idol, under the first Ptolemy. (See Part 1st of Creuzer's *Symbolik*, where representations of this idol are given. For information respecting the worship of the same, see Creuzer's *Dionysos*.) According to Eusebius, the spherical shape of the vessel was to express the universal nature, or the world. The human head upon it signified the all-enlivening spirit (νους), which was denoted also, in former times, by the figures of a ball and a serpent. According to Zoega (*Numi Ægyptii Imperatorii*, page 34), Canopus was the same as Knuph, which seems to come from the same root, and denotes the kind, protecting god. There are traces, in Italy, of the worship of this deity, in that country, in the time of Adrian.

Canosa; a city in Lower Italy (*Terra di Bari*), famous for the tombs in its vicinity, near the field where Hannibal defeated the Romans. They are cut in rocks, on a hill. Vases of coarse, whitish clay have been found in them. In 1813, a beautiful burial-chamber was opened. It had a small ante-chamber, supported by pillars, and contained the corpse of a warrior in armor, with a helmet on his head, but one leg bare. The body crumbled to dust as soon as it was exposed to the exterior air. The wall of the apartment contained a fine *basso-relievo*. A copper lamp and a number of beautiful vases

were also found here. (See Millin's *Description des Tombeaux de Canosa ainsi que des Bas-reliefs, des Armures, et des Vases peints qui y ont été découverts en* 1813 (Paris, 1813, folio), with correct representations). The paintings upon the vases are the most important part of this discovery. They refer to the Greek-Italian mysteries of the eldest inhabitants.

Canosa (near Reggio, in the duchy of Modena); a mountain castle, now in ruins. Adelheid, widow of king Lotharius, was besieged here, in 951, by Berenger II., when she offered her hand and the crown of Italy to Otho the Great, emperor of Germany. In the 11th century, Canosa belonged to Matilda, duchess of Tuscany, with whom Gregory VII resided, in 1077, when he imposed a severe penance upon the excommunicated emperor Henry IV.

Canova, Antonio; the third sculptor of modern times, who has formed an epoch in Italian statuary. Michael Angelo Buonarotti was the first, Bernini the second. C. may be considered as the restorer of the graceful and lovely style, and the founder of a new school, as far as it respects softness and delicacy of execution, and excellent handling of the marble. He was born, Nov. 1, 1757, at Possagno, in the Venetian territory. While a boy of 12 years old, he displayed his talents by modelling the figure of a lion in butter, which was placed on the table of Falieri, the *seigneur* of the place. The Falieri, father and son, sent him, therefore, as an apprentice, to a statuary in Bassano, where he acquired skill in the mechanical part of the art. His first work, executed in his 17th year, was an Eurydice, in soft marble, of half the natural size. He was now sent to the academy of Venice, where his proper study of the art commenced. He gained several prizes, and excited expectations which he more than equalled in the sequel. The first work, which he was commissioned to execute, was the statue of the marchese Poleni, of the natural size, for the city of Padua. In his 25th year, he finished the group of Dædalus and Icarus, of the natural size, in Carrara marble. It is remarkable as a juvenile work, but is only a faithful imitation of common nature. The senate of Venice sent him, in 1779, to Rome, with a salary of 300 ducats. Here the first fruit of his study was an Apollo crowning himself with laurel, three palms high, in marble. It is weak, and without character. Yet the artist, in this production, has advanced beyond the mere imitation of nature; and this statue is to be considered as his transition to the ideal. A group as large as life—Theseus sitting upon the slain Minotaur—was the first large work by which C. made himself known in Rome (1783). It is one of his best works. Theseus has the character of a hero; and the forms show the study and style of the antiques. It was received with universal applause, and count Fries, in Vienna, purchased it. In 1783, C. undertook the execution of the tomb of pope Clement XIV, in the church Degli Apostoli. He retained the usual style of composition, and only improved on the depraved taste of the school of Bernini. He next made the group of Cupid and Psyche, where he first displayed his own peculiar style, of which loveliness is a striking characteristic. The figures are exceedingly delicate and graceful; yet there is no point of view from which the countenances of both can be seen at the same time; besides, the wings of Cupid project disagreeably from the group, which presents too many interstices. About the same time, he executed the likeness of the young prince Czartoriski, in the character of Cupid. He was employed on a second public monument, the tomb of pope Clement XIII, in St. Peter's. It was finished in 1792, and is distinguished by its colossal size and simple style. (See the engraving of Raphael Morghen.) The figure of Religion is objected to as stiff; the long rays, the huge cross, and the petty folds of the lower dress, give her a tasteless air. The Genius has more beauty of appearance than depth of expression. Meanwhile, the fame of the artist continually increased. He established, in the palace of the Venetian ambassador, a school for the benefit of young Venetians. His next works were a winged Cupid, standing; another group of Cupid and Psyche; a group of Venus and Adonis (in which the figure of the latter is particularly beautiful), for the marchese Verio, in Naples; the tomb of the Venetian admiral Emo, for the republic of Venice. This is a combination of *basso-relievos*, with figures in full relief. C. also made a very lovely Psyche, standing, half-dressed, with a butterfly in her left hand, which she holds by the wings with her right, and contemplates with a calm, smiling mien. He also modelled, at this time, many *basso-relievos*, mostly scenes from the life of Socrates, taken from ancient fable and history, which cannot all be called successful. Only one of these models, which represents the city of Padua as a sitting

female figure, he executed in marble. A repentant Magdalen, of the natural size, belongs to the works in marble, in which he has carried the expression of the melting and the soft to the highest degree. The relaxing effect of repentance is expressed with great truth. His Hebe is a delightful figure. In an easy and animated attitude, the smiling goddess of youth hovers upon a cloud, pouring nectar, with her right hand, into a bowl, which she holds in her left. Both vessels, as well as the coronet of Hebe, and the edges of her garment, are gilt. C. is fond of a variety of material, and often endeavors to give to his statues the effect of pictures. He repeated this and the preceding statue. He next displayed his talent for the tragical, in the raging Hercules hurling Lichas into the sea, The group is colossal, and Hercules somewhat larger than the Farnesian; but it makes a disagreeable impression, which proves that the genius of C. was not adapted to such subjects. His representation of the two pugilists, Kreugas and Demoxenos, is much more successful. A standing group of Cupid and Psyche, which has been often repeated, was the triumph of his art. Psyche here appears again holding the butterfly. A Palamedes, subsequently executed by C. in marble, was overthrown, in the winter of 1805, by an inundation, and broken in pieces. In 1796 and 1797, C. finished the model of the celebrated tomb of the late archduchess Christina of Austria, wife of duke Albert of Saxe-Teschen, which, in 1805, was placed in the church of the Augustines, at Vienna. The design of it is original; for the first time, the great artist ventured to leave the common track. In 1797, he made the colossal model of a statue of the king of Naples, one of his finest works. In the beginning of the revolution, the *studio* of C. was in great danger from the Jacobins; but the lovely Psyches, Hebes and Cupids softened the rage of the mob, and saved the work-shop of the artist, in the back part of which the royal colossus was concealed. This statue, 15 palms high, was executed in marble, in 1803. During the revolution of 1798 and 1799, C. accompanied the senator prince Rezzonico on a journey through Germany. After his return, he remained for some time in the Venetian territory, and painted, for the church of his native village, Possagno, an altar-piece, in which are represented the dead Christ, the Maries, Nicodemus and Joseph, and, on high, God the Father. He afterwards executed, in Rome, his Perseus with the head of Medusa, which, when the Apollo of Belvedere was carried to France, occupied its place and pedestal. This statue increased the fame of C. more than any of the preceding works. But Perseus has no decided character. It is only an imitation of the Apollo. The separate parts are of exquisite beauty in form, as well as in masterly, delicate finishing. The magical charm of the finish dazzles the eye, and makes us often forget the more severe forms of art. Far less successful is the *Mars pacifer*, of equal size. In 1802, C. was made, by Pius VII, superintendent of the Roman works of art, and knight of the Golden Spur. In the same year, he was invited by Bonaparte to Paris, to make the model of his colossal statue. In the beginning of 1803, the model of the emperor's bust, and afterwards that of his colossal statue, was to be seen in the workshop of the artist. It is impossible to conceive a more characteristic likeness, exhibiting, at the same time, the ideal character of the ancient heroic style. We have not a more successful work of the kind than this bust: the figure of the statue is not so good. George IV has since presented the latter to the duke of Wellington. The statue of madame Lætitia Bonaparte was purchased, in 1819, in Paris, by the duke of Devonshire, for 36,000 francs. Among the later works of the artist are a Washington, of colossal size, in a sitting attitude, now in the state-house at Raleigh, the seat of government of North Carolina; the tombs of the cardinal of York and of Pius VII; the busts of Pius VII and of Francis II; an imitation of the Medicean Venus; a Venus rising from the bath; a portrait statue, lying, half-dressed, upon a couch; the tomb of the late engraver Volpato; the colossal group of Theseus killing the Minotaur, far surpassing his earlier works in the heroic style; the tomb of Alfieri, for the countess of Stolberg, in Florence, and erected in that place (the weeping Italia, a colossal statue in marble, is particularly admired); the Graces rising from the bath; the monument of the marchioness of S. Croce; a colossal *basso-relievo*, in marble; a Venus; a dancing girl, with almost transparent garments; the portrait statue of the wife of Lucien Bonaparte, with the lyre in her arms, a large marble statue, with beautiful drapery; a colossal Hector; a Paris; a Muse, larger than the natural size; a model of a colossal Ajax; and the model of a sitting statue, in rich robes, of

the archduchess Maria Louisa of Austria. After the second fall of Napoleon, in 1815, C. was commissioned, by the pope, to demand the restoration of the works of art carried from Rome; went from Paris to London, and returned to Rome in 1816, where Pius VII inscribed his name in the golden book of the capitol, declared him "to have deserved well of the city of Rome," and made him marquis of Ischia, with a pension of 3000 scudi. C. died at Venice, Oct. 13, 1822.—In his manner of treating the marble, a particular endeavor to produce the appearance of the greatest softness is visible. Not satisfied with giving to the surface of the marble the most delicate finish, by means of the rasp and the pumice-stone, he has invented a corrosive color, of a yellowish hue, and prepared with soot, which he applies, after the last polish, in order to break the dazzling white of the marble, and to give it the soft, mellow appearance of ivory or wax. This excessive refinement in finishing is more attractive to amateurs than to true connoisseurs. C. used to make his models first of a small size, in wax, then in clay, of the same size as the work was to be. From this last a cast was taken in gypsum. The first shaping of the marble from the cast he left to skilful workmen.—As a man, C. was respectable and amiable. He was active, open, mild, obliging and kind towards every body. He had neither the pride nor the envy of an artist. His opinion of himself was very modest, notwithstanding his fame was spread through all Europe. He was not only disinterested, but animated by the noblest benevolence. He assisted promising young artists, and established prizes for the encouragement of the arts. In short, his moral character was so excellent, that, even among his many rivals, there is but one voice respecting his worth as a man. His last work was a large group, the principal figure of which represents Religion victorious. It was intended to be placed in Rome, as a monument commemorative of late events, the expense to be defrayed by a subscription in England. C. was also an agreeable painter, but, strangely enough, more of a colorist than a correct designer. (See the *Life of Canova*, by Missinini; 4 vols., Prato, 1824: also, the *Biografia*, by the count Cicognara; Venice, 1823). Engraved representations of all his works have appeared in Italy and at Paris.

Canstein (Charles Hildebrand, von), founder of a famous establishment for printing Bibles, which goes under his name, was born, in 1667, at Lindenberg, in Germany, studied at Frankfort on the Oder, travelled much in Europe, went, in 1688, to Berlin, where he was appointed page of the elector of Brandenberg, and served as a volunteer in the Netherlands. A dangerous sickness obliged him to leave the military service. He went to Halle, where he became familiarly acquainted with Spener. His wish to spread the Bible among the poor led him to form the idea of printing it with stereotype plates. Thus originated the famous institution, called, in German, *Die Cansteinsche Bibelanstalt*, of which we shall speak more in the article *Franke*. Canstein published some works, wrote the life of Spener, and died, in 1719, in Halle, leaving to the great orphan asylum his library, and a part of his fortune.

Cant Timbers, in ship-building; those timbers which are situated at the two ends of a ship. They derive their name from being *canted*, or raised obliquely from the keel, in contradistinction from those the planes of which are perpendicular to it.

Cantabile; a term applied to movements intended to be performed in a graceful, elegant and melodious style.

Cantabri; the rudest and most valiant of all the Iberian tribes, who dwelt in the ancient *Hispania Tarraconensis*, and inhabited the greater part of what is now La Montana, and the north-west part of the present province Burgos. In ancient history, *Cantabri* is generally used to denote all the inhabitants of the northern mountains of Spain. *Cantabria* is the name which was given to the country they inhabited.—*Oceanus Cantabricus* is the ancient name of the bay of Biscay.

Cantacuzeno, George and Alexander. These Greek princes are descendants of the ancient Byzantine family of the same name, of which the emperor John Cantacuzenus was a member. (*See the next article.*) Under the dominion of the Turks, the Cantacuzenes belonged to the first families of the Fanar, in Constantinople, called the *Fanariotes*. Many years ago, they settled in Russia, where the brothers George and Alexander were employed in the Russian service. As members of the Hetæria (q. v.), they followed prince Alex. Ypsilanti, in 1821, to Moldavia. George accompanied Alex. Ypsilanti to Jassy, Feb. 22, and Alexander repaired to Kischenaw, Feb. 28, O. S. (March 12, N. S.), where the Hetærists, who wished to fight in the cause of Gre-

cian freedom, were assembled. He received, at this place, from Alex. Ypsilanti, orders to repair to the Morea. April 16, O. S., he proceeded to Trieste, by way of Vienna and Laybach. At Laybach, he had two interviews with count Nesselrode, the Russian minister, who said, among other things, "It is the will of his majesty, that you do not go to Greece; but you may continue your travels." This made Alex. Cantacuzeno irresolute what to do; but, being informed, during his residence of four weeks in Venice, of the murder of the patriarch, and the breaking out of the Greek insurrection in the Morea, the idea that his absence might corroborate the suspicion that the revolution met with the disapprobation of Russia, induced him to sacrifice every thing to the cause of his country. He obtained from the Russian consul a passport to return to Odessa by water, and went to Greece without interruption. For this step, he was subsequently forbidden to return to Russia. 60 young Greeks, from the various universities, the French captain Balestras, and Demetrius Ypsilanti, who had been intrusted, by his brother Alexander, with the management of the insurrection in the Morea, embarked with him. June 19, they reached Hydra, where they were received with the greatest rejoicings. Alex. Cantacuzeno immediately undertook the charge of the department of war, organized a general administration of the islands, and formed a band of volunteers, whom Balestras commanded. But they were soon in want of arms and powder. June 20, Cantacuzeno and Demetrius Ypsilanti proceeded to the Peloponnesus, to Gerusia, in Vervena, a village near Tripolizza. Cantacuzeno immediately invested the fortress of Malvasia (Epidaurus), and reduced it by famine, July 21, 1821. He next deliberated with the Hydriots and Spezziots respecting the formation of a national senate, and was, in other respects, active in establishing order. He then proceeded to Tripolizza, and, at the head of the Albanian soldiers, took part in the siege of the place; refused, in the meanwhile, an offer of the Cretans, who wished to confer on him the command of their island; travelled through the provinces of Hellas, in order to establish elective assemblies, and undertook the charge of fortifying Missolonghi, though he had to contend with great obstacles, confusion and discord prevailing everywhere. The management of Greek affairs having passed into other hands, he received, from the Greek senate, the commission to convey to Petersburg the solicitations of the Greeks for succor from the Russian government; but, being unable to obtain a passport for this purpose, he remained in Dresden. His brother George, under the command of Ypsilanti, was engaged in the unsuccessful struggle in Moldavia and Walachia, and published a memorial on the subject at Kischenaw, Oct. 28, containing, likewise, a vindication of his conduct. Both of the brothers have been erroneously estimated by many. Even Pouqueville, in his *Hist. de la Régénération de la Grèce* (Paris, 1824, 4 vols.), has represented the two Cantacuzenos as one person, and given an incorrect view of their character. (See *Ypsilanti.*)

Cantacuzenus, John, a Byzantine emperor and historian, was born in 1295. While minister of Andronicus III, he negotiated a favorable peace with the Genoese in 1336, and repelled the encroachments of the Turks in 1337. On the death of Andronicus in 1341, C. became regent during the minority of the young emperor, John Palæologus. He defeated the Bulgarians and Turks, assumed the diadem, and entered Constantinople, victorious over his rivals, in 1346. He used his power with moderation, and endeavored to heal the wounds which five years of civil war had inflicted on the state; but religious disputes, civil dissensions and foreign enemies soon disturbed his government; and the jealousy of Palæologus, the rebellion of his own son, war, plague, the frightful disorders which prevailed in the empire, and his own loss of popular favor, induced him to renounce the crown. He retired to a monastery (1355), where he employed himself in literary labors. He is considered one of the greatest among the successors of Constantine. His Four Books of Byzantine History were printed in 1645 (Paris, 3 vols., folio), and belong to the collection of the Byzantine historians. His other works, principally theological, are partly printed, and partly in manuscript.

Cantal; a chain of mountains in Upper Auvergne, France, the highest peak of which, called *le plomb de Cantal*, is said to be nearly 6000 feet above the level of the sea. They give name to a department. (See *Department.*)

Cantata; an elegant and passionate species of vocal composition, consisting of an intermixture of air and recitative. It was invented by Barbara Strozzi, a Venetian lady, who flourished about the middle of the 17th century, and was at one time extended to such length as to

form a little opera, but has since been cultivated in Italy, Germany and England only as chamber music.

Canteen (from the French *cantine*, Spanish *cantina*) signifies both a bottle-case and a tavern for soldiers.—In military language, it denotes a little coffer divided into minute partitions for holding an officer's eating utensils; likewise, a semi-cylindric tin case, carried over a soldier's knapsack, to hold his cooked victuals in; also a vessel to hold the ration of spirits or wine served out to the English troops when employed abroad. —*Canteen*, moreover, signifies a public house, licensed in English barracks or forts, to sell liquors and tobacco to the soldiers.

Cantemir, Demetrius, was born in Moldavia, in 1673. At the age of 15, he was sent as a hostage to Constantinople, where he remained 4 years. He served his first campaign in 1692, under his father, upon whose death, in the succeeding year, he was chosen prince of Moldavia, at the age of 20. This choice was not confirmed by the Porte, and he was ordered to reside at Constantinople, where his abilities soon gained him the favor of the government; and he was twice nominated hospodar of Moldavia. He successfully used his influence to transfer that dignity to his brother. He was appointed the third time, in 1710, with the promise of the annexation of Walachia, and exemption from tribute. Notwithstanding this promise, as soon as he was invested with his office, he was called upon for the amount usually paid on such occasions. He entered, therefore, into a treaty with the czar Peter, by the terms of which the principality was to be hereditary in the family of C., under the protection of the czar, whom Cantemir was to assist in his war with Turkey. The czar, however, being abandoned by the Poles and betrayed by the Moldavians, was obliged to retire, and C. took refuge in his dominions, with the rank of prince of the Russian empire. He died at Astracan, in 1723. C. spoke 8 languages, and understood the ancient Greek, French and Sclavonian. He was a member of the academy of Berlin. His principal work is called History of the Growth and Decay of the Ottoman Empire (in Latin). It has been translated into English (London, 1734, 2 vols., folio), French and German. He is the author, likewise, of the Present State of Moldavia (in Latin), and the System of the Mohammedan Religion, which have both been published. His other works are in MS.

Canterbury (ancient *Darvenum*, *Durovernum*, *Dorobernia*, and *Cantwara-byrg*), city, Eng., capital of Kent; 56 E. London; lon. 0° 55′ E.; lat. 51° 17′ N.; pop. 10,498; houses, 2,093. It is the see of an archbishop, primate of all England, situated in a valley, between gently-rising hills, on the river Stour; founded before the Christian era. It is a county of itself, and the magistrates have authority to determine all law-suits between the citizens, and to try for capital crimes committed within the city. There are two markets weekly, on Wednesday and Saturday. It contains a cathedral, and 12 parish churches within the walls, and 3 in the suburbs. The cathedral is spacious and magnificent, built in the form of a double cross, 514 feet long; the height of the great tower is 235 feet. The Jews have a synagogue here; Methodists, Baptists, Presbyterians and Quakers have each a place of public worship. It sends 2 members to parliament. The principal manufactures are cotton and silk. It is famous for its brawn. The country round it produces a great quantity of hops. In former times, this place was distinguished for the festivals celebrated here in memory of St. Thomas à Becket, who was murdered here. (See *Becket*.)

Cantharides, or Spanish fly (in medicine); the name of a kind of fly, the *cantharis vesicatoria*, Geoffray; *meloë vesicatoria*, Lin.; *lytta vesicatoria*, Fab.; belonging to the family of the *trachelides*. They are very common in Spain, Italy and France, where they are found in large families on the ash, lilac, viburnum, &c. Their body is from 6 to 10 lines long; the feelers are black, setaceous, composed of 12 articulations; the elytra long, flexible, of a shining, golden green, and the tarses of a deep brown. Their odor is strong, penetrating, peculiar and unpleasant; their taste extremely acrid; their powder is of a brownish gray, intermixed with shining particles of a metallic green color. According to Robiquet, they contain, with several other ingredients, a peculiar substance, called *cantharidin*. (q. v.) These insects are, of all the vesicating substances, those which are most commonly used. Their action is principally confined to the skin; however, their active principles may be absorbed, and cause serious accidents. The application of a blister is often followed by strangury, hæmaturia, priapism, &c. Taken internally, they act as the most energetic acrid poison; they produce irritation on the intestines, and especially affect

the genito-urinary organs, which they stimulate violently. In certain disorders, they are administered in small doses, as powerful stimulants. The medicine is of a very dangerous character, and its use requires the greatest caution on the part of the physician. Several species of blistering fly are found in the U. States, some of which are more powerful than the Spanish fly.

Cantharidin, the vesicating principle of the *cantharides*, or Spanish fly, is white, in small, crystalline scales, insoluble in water and cold alcohol, soluble in ether, boiling oils and alcohol, from which it precipitates by cooling. The vesicating properties could be extracted from cantharides by oil of turpentine, and probably a satisfactory ointment be prepared by merely evaporating the oil of turpentine at a moderate temperature. (See *Cantharides.*)

Canticles. (See *Solomon, Song of.*)

Cantium; an ancient territory in South Britain, whence the English word *Kent* is derived, supposed to have been the first district which received a colony from the continent. The situation of Cantium occasioned its being much frequented by the Romans, who generally took their way through it in their marches to and from the continent. Few places in Britain are more frequently mentioned by the Roman writers than Portus Rutupensis. Portus Dubris (now *Dover*), Durobrivæ and Durovernum (now *Rochester* and *Canterbury*) were also Roman towns and stations. Cantium, in the most perfect state of the Roman government, made a part of the province called *Flavia Cæsariensis.* (See *Kent.*)

Canto fermo; the name given to the ancient chants of the Roman Catholic church, which were adopted as standing melodies. These chants, until counterpoint was discovered, were unaccompanied, or only harmonized with octaves.

Canto figurato. This term was applied, by the old Christian ecclesiastics, to the *canto fermo* in its more cultivated state, when harmony began to assume modulation.

Canton, principal city of the Chinese province of the same name, otherwise called *Quang-tong*, or *Koanton*, is situated in 23° 30′ N. lat., and 113° 2′ 45″ E. lon., on the banks of the river Taho, which is here very wide. This city, distinguished for size, wealth, and a numerous population, is the only seaport in China open to the ships of Europe and America. The estimate of missionaries, that it contains 1,000,000 of inhabitants, is exaggerated. The number is probably nearer 750,000. The circuit of the walls, which are of a moderate height, is over 9 miles. Only about a third part, however, of the space enclosed is covered with buildings; the rest is occupied with pleasure-gardens and fish-ponds. The neighboring country is very charming, hilly towards the east, and presenting, in that quarter, a beautiful prospect. The houses are mostly of one story; but those of the mandarins and principal merchants are high and well built. In every quarter of the town and the suburbs are seen temples and pagodas, containing the images of Chinese gods. The populous streets are long and narrow, paved with flat stones, and adorned at intervals with triumphal arches. Shops line the sides, and an unbroken range of piazza protects the occupants of the houses, as well as foot-passengers, from the rays of the sun. At night, the gates are closed, and bars are thrown across the entrances of the streets. The traders express themselves with sufficient fluency in the languages of their European and American customers, with whom they deal almost exclusively, selling them porcelain, lackered wares, &c. The Americans trade here to a greater extent than any other nation: next to them come the English. The greatest part of the silver, which is carried from America to Europe, eventually circulates through China, by means of the ports of Canton and Batavia, to which large supplies of the productions of the empire are transmitted. The principal articles of export are tea, India ink, varnish, porcelain, rhubarb, silk and nankeen. A company, consisting of 12 or 13 merchants, called the *Cohong*, is established here, by order of the government, for the purpose of purchasing the cargoes of foreign ships, and supplying them with return cargoes of tea, raw silk, &c. This society interferes, undoubtedly, with private trade, but adds greatly to the security of the foreign dealer, as each member is answerable for all the rest. Carriages are not used here, but all burdens are transported on bamboo poles laid across the shoulders of men. All the inhabitants of distinction make use of litters. Chinese women are never seen in the streets, and Tartar women but seldom. The European factories, to wit, the Dutch, French, Swedish, Danish and English, are situated on a very commodious quay, on the bank of the river. Nearly a league from Canton is the *Boat-town*, which consists of about

40,000 barks, of various kinds, arranged close to each other in regular rows, with passages between them, to allow other vessels to pass. In this manner they form a kind of floating city, the inhabitants of which have no other dwellings, and are prohibited by law from settling on shore. As this is the only emporium in the empire for foreign commerce, which is carried on not only by Europeans and Americans, but also to a great extent by the Chinese themselves, with almost all the ports of India and the eastern Archipelago, the number of vessels frequently seen in the river, at once, is said to exceed 5000. An American paper, issued twice a month, called the *Canton Register*, has lately been established at Canton. The following table gives the amount of imports from Canton into the ports of the U. States, also the exports of domestic and foreign goods from the U. States to Canton, from 1821 to 1827.

Year.	*Imports.*	*Dom. Exp.*	*For. Exp.*
1821	$3,111,951	$388,535	$3,902,025
1822	5,242,536	429,230	5,506,138
1823	6,511,425	288,375	4,347,686
1824	5,618,502	330,466	4,970,705
1825	7,573,115	160,059	5,410,456
1826	7,422,186	242,451	2,324,193
1827	3,617,183	290,862	3,573,543

The climate of Canton is healthy, warm in summer, but pretty cold in winter. Provisions, including various luxuries, are abundant.

Canute I, king of England and Denmark, ascended the throne of both kingdoms A. D. 1015. He was called the *Great*, on account of his power, as Alfred had been for his virtue. The barbarities committed by the Danes in England excited Ethelred II, the 12th king of Saxon descent, to a bloody vengeance. In 1002, he caused all the Danes, women and children, to be massacred on the same day. The sister of Sweyn, then king of Denmark, he caused to be beheaded in his presence. Sweyn landed in England, and laid waste the country with fire and sword. Ethelred had escaped to Normandy. Sweyn died 1014, before he had time to confirm the Danish power in the island. This was accomplished, however, by his son and successor, Canute. He began his reign by devastating all the eastern coast of his new kingdom, and causing the English, who were given to his father as hostages, after he had cut off their noses and hands, to be drowned at Sandwich. He then received reinforcements from Denmark, and extended his ravages in the south of England. The valiant Edmund marched against him with an army, and, although he was several times overcome, through the treachery of Edric, his brother-in-law, he still maintained himself against Canute, so that the English and Danish nobles, weary of the long-continued contest, sought to bring about a division of England between the two princes. A solemn treaty secured to Canute the north of England, and to Edmund the south. But only a month after this contract, Edmund was assassinated by two chamberlains, hired by Edric; and Canute became master of all England. At a general assembly of the states, he induced false witnesses to affirm that Edmund had appointed him heir to his crown, to the prejudice of his two minor children. After the assembly had confirmed this settlement, Canute sent the two young princes to the king of Sweden, with the request that he would put them to death. The latter, however, sent them to Hungary, where they met with the kindest reception. Canute, who had begun his reign with barbarity and crime, afterwards became humane, and finally pious, and even superstitious. He commenced a more equitable administration, by punishing the English natives, who had betrayed their king, and by causing Edric to be hanged, and thrown into the Thames. He restored the Saxon customs at a general assembly, and ensured to the Danes and Englishmen equal rights and equal protection of person and property, so that the horror which had been excited by his tyranny was changed into respect and gratitude. His power was confirmed by his marriage with Emma, Ethelred's widow. He now made two expeditions to the continent, one to conquer Sweden, and the other to reduce Norway. But the most powerful prince of his age was at length brought to feel the vanity of earthly greatness. He erected churches and monasteries, and even performed a pilgrimage to Rome, where he obtained important privileges for the schools of England. It was this spirit of piety that animated him, when, to confound his flatterers, he seated himself upon the strand, and commanded the waves to retire. As they advanced, and bathed his feet, Canute arose, and said, that He only was almighty, whom the ocean obeyed when he proclaimed, "Thus far shalt thou go, and no farther." His last expedition was against Malcolm, king of Scotland. He died four years after, A. D. 1036, at Shaftsbury. By his will, he left Norway

to his eldest son, Sweyn; to the second, Harold, England; to the third, Hardicanute, Denmark.

Canzona; a kind of lyric poem, of Provençal origin. It is found in the Italian poetry of the 13th century. At first, it was quite irregular, but was confined by Petrarch to more fixed and regular forms. Hence it is called *canzone Petrarchesca:* it is also called *canzone Toscana*, because it originated in Tuscany. It is divided into several stanzas, in which the nature and disposition of the verses, which are of 11 and 7 syllables, and the place of the rhymes, are uniform. The canzona usually concludes with a stanza which is shorter than the others, and is called *ripresa*, *congedo*, *comiato* (signifying dismission or taking leave). With Petrarch, this is rarely wanting; in the elder poets, it is often omitted. It generally contains the poet's apostrophe to his song, bidding it farewell, &c. There are different kinds of canzonas, and different names are given to the different parts. The *canzona Anacreontica* is divided into small stanzas, consisting of short verses, with a regular disposition of the rhymes through all the stanzas. In the selection of his verse, however, and of the disposition of the rhymes which he will observe in the poem, the poet may follow his pleasure. Not only light, pleasing songs of love, gayety and mirth, but poems on solemn and lofty subjects, and of an elevated dithyrambic strain, are included under this name. The latter subjects, however, are better adapted to the *canzona Pindarica*, which was first introduced into Italian poetry, in the 16th century, by Luigi Alamanni, and owes its perfection chiefly to Chiabrera. It is distinguished from that of Petrarch by a bolder flight, loftier ideas, greater freedom in the choice and disposition of the verses, and by the form of the stanzas, which is borrowed from the Greek chorus. The Pindaric canzonas are divided into *strophe*, *antistrophe* and *epode*, and are also called *canzoni alla Greca*. Those divisions are sometimes called *ballata*, *contraballata* and *stanza;* or *volta*, *rivolta* and *stanza;* almost all of which signify the same as the Greek divisions: the Greek names are the most common. There is also the *canzona a ballo*, an old Italian poem, originally intended to be sung at a dance (*ballo*). It is called, also, *ballata*. It is not employed by the Italian poets later than the 16th century.

Canzonet, Canzonetta (*poetry* and *music*); in Italian poetry, a canzona (q. v.), consisting of short verses, much in use with the poets of the 15th century. Rinuccini, and, after him, Chiabrera, have used it in modern times, and given it more grace. Canzonets are generally expressive of tender feelings.—In music, *canzonet* signifies a short song, in one two or three parts; but, in England, it is more generally applied to the two latter.

Caoutchouc. This substance, improperly termed *elastic gum*, and more commonly, from its application to remove pencil-marks from paper, *India rubber*, is obtained from the milky juice of several plants, which are natives of the torrid zone. The chief of these are the *hævea Guianensis*, the *jatropha elastica*, and *urceola elastica*. Caoutchouc is brought principally from South America. This juice, obtained from incisions, is applied, in successive layers, over a mould of clay, and dried by exposure to the sun, and to the smoke from burning fuel. When perfectly dry, the mould is broken, leaving the caoutchouc in the form of a hollow ball. In its solid state, caoutchouc is of a close texture, distinctly fibrous, of a light-brown color, or sometimes nearly white. Its elasticity is such that it can be stretched to a great extent; and, on removing the stretching force, it recovers its original dimensions. Its softness and pliancy are increased by heat. Boiling water renders it so soft, that two slips, newly cut and pressed closely together, may be firmly united. By a greater heat, it is fused, and may, in that state, be applied, as proposed by Mr. Aitkin, to the surface of steel instruments, which it will cover with a transparent film, that effectually preserves them from rust. It is insoluble in alcohol and in water. Sulphuric ether, when purified by washing in water, dissolves it; and, by evaporation, the caoutchouc may be recovered unchanged. Oil of turpentine softens it, and forms with it a sort of paste, that may be spread as a varnish, but is very long in drying. The fluid now commonly used to dissolve it is the purified naphtha from coal tar, which is, at the same time, a cheap and effectual solvent, and which does not change its properties. This solution is employed to give a thin covering of caoutchouc to cloth, which is thus rendered impervious to moisture. Caoutchouc is also readily soluble in cajeput oil.—Caoutchouc, from its softness, elasticity, and impermeability to water, is applied to the formation of catheters, bougies, and tubes for conveying gases. These are formed by twisting a slip of it round a rod, and causing the edges to adhere by pressure, when softened by maceration in

warm water. It is also used for overshoes; and its solution in oils forms a flexible varnish.—It was not until about the year 1736 that this very extraordinary natural production was made known in Europe. It is obtained by making incisions through the bark of the tree, chiefly in wet weather. From the wounds thus formed the juice flows abundantly. It is of a milky-white color, and is conducted by a tube or leaf, supported by clay, into a vessel placed to receive it. Some writers assert that, on mere exposure to the air, it gradually hardens, and others, that it goes through a certain process for this purpose, which the Indians of South America keep a profound secret. It is usually brought to Europe in the form of pear-shaped bottles, which are formed by spreading the juice over a mould of clay, exposing it to a dense smoke, or to a fire, till it becomes so dry as not to stick to the fingers, when, by certain instruments of iron or wood, it is ornamented on the outside with various figures. This done, the clay in the inside is moistened with water, and picked out. India rubber is remarkable for the flexibility and elasticity which it acquires on attaining a solid state, and also for the numerous useful purposes to which it is capable of being applied. By the Indians, it is sometimes formed into boots, which are impenetrable by water, and which, when smoked, have the appearance of leather. Bottles are made of it, to the necks of which are fastened hollow reeds, through which the liquor contained in them can be squirted at pleasure. One of these, filled with water, is always presented to each of the guests at their entertainments. Flambeaux are likewise formed of this substance, which give a very brilliant light; and it is said that a torch of it, an inch and a half in diameter, and two feet long, will burn 12 hours. The inhabitants of Quito also prepare a species of cloth with the hardened juice of this tree.

Cap; the cover of the end or head of any thing. The word is very often used in the mechanical arts.—In ship-building, *cap* is a square piece of timber placed over the head or upper end of a mast, in which is a round hole to receive the top or top-gallant-masts, which are thus kept steady and firm.—*Cap of a block;* a semicircular projection from the sides and round the end of a block above the pins.—*Cap-merchant;* the purser of a ship.—*To cap verses* is an exercise of the memory among school-boys; the one repeating a verse, and the second proceeding where he left off, and so on with the rest.—Caps were not worn by the Romans for many ages. When either the rain or sun was troublesome, the lappet of the gown was thrown over the head; and hence all the ancient statues appear bareheaded, excepting, sometimes, a wreath or the like. The same usage prevailed among the Greeks, to whom, at least during the heroic age, caps were unknown. The sort of caps or covers of the head in use among the Romans, on divers occasions, were the *pitra*, *pileus*, *cucullus*, *galerus* and *palliolum*, which are often confounded by ancient as well as modern writers. The general use of caps and hats is referred to the year 1449. The first seen in Europe were used at the entry of Charles VII into Rouen. From that time, they began to take the place of *chaperons*, or hoods. When the cap was of velvet, they called it *mortier;* when of wool, simply *bonnet*. None but kings, princes and knights were allowed to use the *mortier*. The cap was the head-dress of the clergy and graduates. Pasquin says that it was anciently a part of the hood worn by the people of the robe; the skirts whereof, being cut off, as an incumbrance, left the round cap an easy, commodious cover for the head; which cap, being afterwards assumed by the people, those of the gown changed it for a square one, first invented by a Frenchman, called Patrouillet. He adds, that the giving of the cap to the students in the university was to denote that they had acquired full liberty, and were no longer subject to the rod of their superiors, in imitation of the ancient Romans, who gave a *pileus*, or cap, to their slaves, in the ceremony of making them free: whence the proverb *vocare servos ad pileum:* hence, also, on medals, the cap is the symbol of Liberty, who is represented holding a cap in the right hand, by the point.—Of the derivation of this word, and its use in almost all European languages, Adelung gives an interesting account in his German dictionary.

Cape. Of the immense number of capes, which have received names from navigators, the limits of the present work will permit us to enumerate only a few.

Cape Ann; a cape on the coast of Massachusetts, in the township of Gloucester, forming the northern limit of Massachusetts bay; lat. 42° 35′ N.; lon. 70° 37′ W.

Cape Breton; an island of North America, belonging to Great Britain; situated in the gulf of St. Lawrence; separated from Nova Scotia by the strait of Fronsac, about 3 miles wide. This island is about 110

miles in length, and from 20 to 84 in breadth, full of mountains and lakes, and intersected by a great number of creeks and bays. The soil is fertile, and abounds in timber. In the mountains are coal-mines; in the valleys, excellent pasture; and the coast abounds in fish. The chief towns are Louisburg, Sydney and Arichat. Population, 3000. Lat. 45° 34′ to 47° 5′ N.; lon. 59° to 61° 20′ W.

Cape Cod; a noted cape and peninsula on the coast of Massachusetts, on the south side of Massachusetts bay; lat. of the cape, 42° 5′ N.; lon. 70° 14′ W. The peninsula is 65 miles in length, and from 1 to 20 in breadth, and is in the form of a man's arm, bent inward both at the elbow and the wrist. Though mostly sandy and barren, it is nevertheless populous; and the inhabitants derive their subsistence chiefly from the sea. The cape was discovered in 1602, by Bartholomew Gosnold, who gave it its name from having taken a great quantity of cod-fish near it.

Cape Fear; a dangerous cape on the coast of North Carolina, being the southern extremity of Smith's island, at the mouth of Cape Fear river; lat. 33° 32′ N.; lon. 78° 25′ W.

Cape Fear; a river of North Carolina, the largest and most important that flows wholly within that state. The north-west, or principal branch, rises in the northern part of the state, flows southerly, passing by Fayetteville, and above Wilmington. 35 miles from its entrance into the ocean, it is joined by the north-eastern branch. The Cape Fear is navigable for vessels of 300 tons to Wilmington, and for steam-boats to Fayetteville.

Cape François. (See *Cape Haytien.*)

Cape of Good Hope; in the southern part of Africa; lon. 18° 24′ E.; lat. 33° 55′ S. Bartholomew Diaz discovered it in 1493. The tempestuous sea which beat against it prevented him from landing; he therefore called it *Cabo dos Tormentos* (see *Camoens*); but John II changed it to *Cabo da Bona Esperanza.* It was first doubled by Vasco de Gama. The Portuguese never formed any permanent settlement here. (See next article.)

Cape of Good Hope; a British colony, near the southern extremity of Africa. The Dutch, who had early fixed upon this point as a watering-place for their ships, first colonized it in the middle of the 17th century. Reducing the Hottentots (q. v.) to slavery, or driving them beyond the mountains, they extended the Cape settlement to nearly its present limits. It was captured by the English in 1795, restored at the peace of Amiens, 1802, and again taken in 1806; since which time it has remained in their possession. The colony extends about 230 miles from north to south, and 550 from east to west; from 30° to 34° 30′ S. lat., and from 18° to 28° E. lon. The space included within these limits is about 120,000 square miles, with a population of about one to a square mile. On the west and south, it is washed by the ocean, and, on the north, it is bounded by a range of lofty mountains. The principal bays on the coast are Saldanha, Table, Plattenburg, Algoa bays. Cape Aguillas is the most southern point of the old world. In the interior, almost every variety of soil and surface is found. Several ranges of mountains, running nearly parallel to the southern coast, divide the country into successive terraces, between which lie belts of fertile land, or vast barren plains. One of these, called the *Great Karroo,* is 300 miles long and 100 broad, presenting a scene of complete desolation. In fact, according to Barrow, nearly seven tenths of the colony are destitute of vegetation during a great part of the year. The summits of the Nieuweldt Gebirgte, the highest chain of southern Africa, are covered with perpetual snow. The Table mountain is a stupendous mass of naked rock, rising, almost perpendicularly, about 3585 feet in height. The colony is deficient in navigable rivers for vessels of any considerable burthen. The principal streams are the Doorn and the Berg, flowing into the Atlantic; the Breede, Groot, and Great Fish, emptying themselves into the Indian ocean. The last, in part of its course, separates the Cape colony from Caffraria. The spring and autumn are temperate, and the most agreeable part of the year. The heat is excessive in summer, and, on account of the elevation of the surface, many parts experience the extreme of cold in winter. The soil is, of course, various, but its general character is not that of fertility. The cultivation is very imperfect, the inhabitants depending principally on pasturage. Wheat and maize thrive well; the vine flourishes luxuriantly; oranges, lemons and figs are good, but all kinds of nuts have failed. The aloe and myrtle grow to a great size. Timber is scarce: the chestnut, wild almond and plum are indigenous. The domestic animals of civilized man have all been introduced. The sheep are of the broad-tailed kind. Lions, tigers, wolves, hyænas, buffaloes and jackals are numerous in the vicinity of the settle-

ments. In the more remote parts are the elephant, the rhinoceros, the quagga, the giraffe, &c. The spring-bock is seen in herds of 10,000. Monkeys, armadillos, and other small animals, are numerous. The ostrich is common. Vultures, eagles, kites, and the gigantic condor inhabit the mountains. There are also pelicans, flamingoes, parrots, and many kinds of aquatic birds. Noxious reptiles are not numerous. Fish are plentiful on the coasts. The capital is Cape Town. (q. v.) Scarcely any manufactures have been introduced into the colony, and its commerce is very limited. Some British merchants have settled at Cape Town, and the trade appears to be increasing. The principal export is Cape wine. The imports are in small quantities, and consist of cloths, hardware, furniture, hats, &c. The average amount is about a million of dollars. The value of the colony to Great Britain must not, however, be estimated by its revenue. It is important, principally, as being the connecting link between that kingdom and her possessions in the East. The Dutch settlers, who live in the interior, are called *boors*, and are in a very degraded condition. Indolent and stupid, every thing about them exhibits the utmost wretchedness in the midst of plenty. (See Barrow's *Travels in Southern Africa;* Vaillant, Lichtenstein and Campbell's *Travels*, and the reverend Mr. Latrobe's *Visit to South Africa, in* 1815 *and* 1816. Beauvois, the French traveller, has also lately given interesting information on the south of Africa.)

Cape Hatteras; a noted and dangerous cape on the coast of North Carolina; being the projecting point of a long reef of sand, extending from Ocracoke inlet to New inlet; lat. 35° 14′ N.; lon. 75° 30′ W.

Cape Haytien (formerly called *Cape François*, or *Le Cap*, and, during the reign of Christophe, *Cape Henry*); a town of Hayti, and the capital of the island and republic; lon. 72° 16′ W.; lat. 19° 46′ N. It is situated on the north coast; was founded in 1670; burnt in 1792, by the blacks; was the last town retained by the French in the island, but was surrendered by them to the blacks in 1803; it then became the capital of the black emperor, Henry Christophe. Before it suffered so severely by intestine convulsions, it contained a number of elegant buildings, about 900 houses of stone and brick, and a population of from 8 to 12,000; some say 20,000, 12,000 being slaves. It is situated in a very fertile tract, and has one of the most secure and convenient harbors in the island. It is built on a cape, at the edge of a large plain, 60 miles long and 12 broad, between the sea and the mountains. Its situation is not fortunate, as it is screened from the land wind by the mountains, and thus left exposed to the unmitigated fervor of the sun's rays. The plain is well watered and highly cultivated. It is cut through by straight roads, 40 feet broad, lined with hedges of lime and lemon trees, leading to plantations which produce as great a quantity of sugar as any spot of the same size in the world.

Cape Horn; a cape on the south coast of Terra del Fuego. It is the southern extremity of South America; lat. 55° 58′ S.; lon. 67° 21′ W. The navigation round cape Horn is very dangerous, on account of frequent tempests; yet, of late, it has been the common course of vessels, being found much preferable to the tedious passage through the straits of Magellan. The shore is inhabited by Indians, of whom little is known. The cape was discovered by Jacob le Maire, a Dutchman, in 1616. It is cold, lofty, and covered with wood.

Cape Lookout; a dangerous cape on the coast of North Carolina; lat. 34° 22′ N.; lon. 76° 37′ W.

Cape Town; capital of the cape of Good Hope; lat. 33° 6′ S. lon. 18° 23′ E.: population in 1818, 18,173; of whom 7460 were whites, 1905 free blacks, 810 apprentices, 536 Hottentots, 7462 slaves. It is agreeably situated, rather more than 30 miles from the cape of Good Hope, properly so called, at the head of Table bay, in a valley between the Table and Lion mountains. It is defended by a castle of considerable strength, and contains a court-house, a guard-house, a Calvinistic church, a Lutheran church, a theatre, and 1145 houses, many of which are fine. The tone of society is wholly commercial, the minds of all classes being bent on trade. There was not, in 1818, a public school nor a bookseller's shop in the town. The streets are broad, but ill-paved. The price of provisions is very reasonable. The town is well supplied with springs of excellent water, sufficient also for the ships which stop at the port. The harbor is tolerably secure from September to May, while the S. E. winds prevail. During the rest of the year, when the wind blows generally from the N. and N. W., ships are obliged to resort to False bay, on the opposite side of the peninsula.—A missionary is supported

here by the London missionary society.

Cape Verde (anciently, *Arsenarium*); on the west coast of Africa; lat. 14° 44′ N.; lon. 17° 31′ W.

Cape Verde Islands; islands of Africa, in the Atlantic; so called from cape Verde, opposite to which they are situated; 390 miles W. cape Verde, and between 15° and 18° N. lat. They belong to Portugal. As to their number, some reckon 10, others 14 or more, by giving the name of islands to those which are only rocks. They are, in general, mountainous; the lower hills are covered with a beautiful verdure, as well as the extensive valleys between; but with little water, except what is found in ponds and wells. They are said to have been, and probably were, known to the ancients, under the name of *Gorgades*. The air is extremely hot and unwholesome. It rarely rains; and the ground is so hot that one can hardly stand in places exposed to the sun. It is dangerous to pass the night in the open air, for the great heat is often succeeded by a sudden cold, which proves mortal to such as are exposed to it. The soil is, for the most part, stony and barren; nevertheless, some parts produce rice, maize, bananas, lemons, oranges, citrons, pomegranates, figs and melons. Grapes are gathered twice a year. The manufacture of leather and salt forms the principal riches. Two of the islands, St. Yago and St. Philip, depend immediately on the king, and are the only ones fortified. The number of inhabitants is calculated at 100,000. Few whites are now seen. The governor and priests are often Negroes. The chief town is Porto Praya. In the small island of Mayo, much salt is made. Numerous vessels, principally American, visit this place for the sake of obtaining it, and bring flour to give in exchange. In 1827, the imports into the U. States from these islands amounted to $77,425; the exports to them from the U. States, to $104,165. The island of Fuego, one of the group, consists of one single mountain, formerly a volcano, according to lieutenant Mudge, 9790 feet above the level of the sea.

Capellen, G. A. J., baron de; governor-general of all the Dutch settlements in Asia; one of the few politicians of our time, who, in good and bad fortune, have preserved integrity of principle. His father is known by his defence of the fortress of Gorkum against the Prussians. The son, after an excellent education, was made, in 1808, by Louis king of Holland, prefect of East Friesland, where he was much beloved. Louis afterwards made him minister of the interior and counsellor of state, and it was very probably he who advised the king to resign his throne. Under Napoleon, he accepted no office. King William made him minister of the colonies. When the congress of Vienna united Belgium with Holland, he was commissioned to prepare the Belgians for the new government. Since 1815, Capellen, in his high post in Batavia, has increased the productiveness of the Dutch possessions in Asia, particularly of Java, by his excellent institutions. Batavia has been made a free port, at which the ships of the U. States of America, in particular, procure great quantities of coffee, sugar, rice, rum and spices, for ready money. The commerce of Banda and Amboyna, as well as that of Borneo, has also been increased.

Capello, Bianca; a noble Venetian lady, whose singular adventures and final elevation have rendered her exceedingly remarkable. She was born about 1542, being the daughter of Bartolomeo Capello, a patrician of Venice. She early fell in love with a young and handsome clerk in the banking-house of Salviati, named Buonaventuri. The consequence of the intrigue was the pregnancy of the lady, and the flight of the lovers to Florence, where they married, and Bianca lay in of a daughter. Here they lived some time in great apprehension and obscurity, until some accident or contrivance introduced Bianca to the notice of Francis, son of Cosmo, grand-duke of Tuscany. Her uncommon beauty and engaging manners made an immediate impression on a prince notorious for his attachment to the sex; and the consequence was, that she and her husband were quickly settled in a splendid palace, and the latter made chamberlain to the duke, and, to the great disgust of the Florentines, intrusted with a large share of public business. Bianca was, in the mean time, introduced at court, and became the object of great admiration; and it is asserted, that, even at that time, Francis promised to marry her, should they become released from the marriage ties by which they were each of them bound. This took place in a very few years on her part. Buonaventuri, having engaged in an intrigue with a woman of rank, was assassinated by her family; and Francis now avowedly proclaimed Bianca his mistress. As Francis, who had no issue, passionately desired even a natural child, Bianca, whose in-

temperate mode of living was not favorable to his wishes, carried on all the forms of pregnancy, and presented to her deluded lover a new-born male child, of poor parents, whom he joyfully received as his own, and christened Antonio. A legitimate son, produced to him soon after by his duchess, induced him to be less open in his attentions to Bianca; but the death of his wife, very soon after, opened to the latter a road to her final elevation, and she was quickly united to Francis by a private marriage. Her ambition, however, was not to be gratified without publicity; and she induced the grand-duke to send a solemn embassy to Venice, to inform the senate of his marriage, and to request them to confer on Bianca the title of *daughter of the republic*, which honor was supposed to entitle those on whom it was bestowed to a royal alliance. That government assented, and Bianca, being crowned daughter of the state, was solemnly installed grand-duchess of Tuscany in 1579. In 1582, the legitimate son of Francis expired; and, soon after, he declared Antonio his lawful son, although, it is said, Bianca had acknowledged her imposition. Ferdinand, the brother of Francis, and his lawful heir, was not blind to these proceedings, and paid the greatest attention to the subsequent reported pregnancies of the duchess, until, the state of her health setting all idea of further progeny aside, she essayed to effect a reconciliation between the brothers, and Ferdinand paid a visit to Florence. He had been there but a short time, when Francis fell ill, at his hunting village of Poggio, where his brother was a guest; and, two days after, the duchess being seized with the same symptoms, they both died, after about a week's illness, in October, 1587, Bianca being then in her 45th year. The known character of the Medici family caused this catastrophe to be attributed to poison; and a story is current, that Bianca, intending to poison Ferdinand with a prepared viand, he had the address to make the duke and duchess eat of it themselves. As there was no direct motive for the attempt at the period, and it rests only on the character of the parties, it is more reasonable to suppose that a malignant fever, at an unhealthy season, was the real cause of the sudden termination of so extraordinary a career. The hatred of the Florentines has made Bianca a monster of vice and cruelty; a thousand absurd stories were propagated of her propensity to magic, and other crimes; and, perceiving the impossibility of gaining their affections, she employed trains of spies and informers, which added still more to their animosity. The truth seems to be, that she was a woman of consummate beauty and address, with little or no principle; and such was the character of the Italian courts, at the period in which she flourished, that she had only to act in the spirit of the times, to become very nearly as vicious as the Florentines described her.

Caper. Capers are the unopened flower-buds of a low shrub (*capparis spinosa*), which grows from the crevices of rocks and walls, and among rubbish, in the southern parts of France, in Italy and the Levant. The stems of the caper-bush are trailing, and two or three feet long. The leaves are alternate, of somewhat oval shape, veined, and of a bright-green color; and the flowers are large and beautiful, with four petals, and white, with a tinge of red.—In the south of France, the caper-bush is very common. It grows wild upon the walls of Rome, Sienna and Florence, and, when trained against a wall, flourishes even in the neighborhood of Paris; notwithstanding which, it is almost unknown in English gardens, where it cannot be made to flower without the aid of artificial heat. It is cultivated, on a large scale, between Marseilles and Toulon, and in many parts of Italy. In the early part of the summer, it begins to flower, and the flowers continue successively to appear, until the commencement of winter. The buds are picked every morning, before the petals are expanded; and, as they are gathered, they are put into vinegar and salt. When a sufficient quantity is collected, they are distributed, according to their size, into different vessels, again put into vinegar, and then packed up for sale and exportation. This pickle is much used in sauce for boiled mutton. To persons unaccustomed to it, the taste of capers is unpleasant; but, after a little while, the palate becomes perfectly reconciled to it. The flower-buds of the marsh-marigold (*caltha palustris*) and nasturtiums are frequently pickled, and eaten as a substitute for capers. The bark of the root, cut into slices, and dried in small rolls or quills, like cinnamon, is sometimes used in medicine, in cases of obstruction of the liver.

Caper, in shipping, is the Dutch and German name for *privateer*.

Capernaum; a town in ancient Palestine, on the west side of the sea of Tiberias; lon. 35° 44′ E.; lat. 32° 45′ N. Near

it were a mountain and rivulet of the same name. This place is famous, in Christian history, because Jesus used to reside here during the time of his ministry; and in its vicinity he delivered the sermon on the mount. Nothing of it now remains. As Capernaum is not mentioned in the Old Testament, it may have been built after the return from the Babylonish captivity. It stood on the coast of Galilee, on the borders of Zabulon and Nephthalim.

Capet; the name of the French race of kings, which has given 118 sovereigns to Europe, viz. 36 kings of France, 22 kings of Portugal, 11 of Naples and Sicily, 5 of Spain, 3 of Hungary, 3 emperors of Constantinople, 3 kings of Navarre, 17 dukes of Burgundy, 12 dukes of Brittany, 2 dukes of Lorraine, and 4 dukes of Parma. The history of this royal race is, at the same time, the history of the rise and progress of the French monarchy. (See *France.*) The fate of one of the most interesting countries and nations in Europe is connected with the name of Capet. After having been deprived of four thrones, and again restored to them, this family stands forth as the first and most ancient support of the European principle of political legitimacy, that divine right, which, in this house, commenced with treason. Its origin is remarkable. Pepin the Short, the father of Charlemagne, and mayor of the palace under the Merovingian dynasty, had displaced that royal house, and usurped the throne of the ancient kings of the Franks. After a space of 235 years, his own descendants, the Carlovingian monarchs, experienced a similar fate. Under the last Carlovingians, destitute alike of energy and wisdom, Hugh the Great, duke of France (by which was then understood the Isle of France), Orleans and Burgundy, exercised a power as unlimited as that of the mayor of the palace under the Merovingians. On the death of Louis V, without children, in 987, his uncle Charles, duke of Lower Lorraine, laid claim to the throne, which the Franks had sworn to preserve to the family of Charlemagne. The French nobility, supported by pope John XV, proclaimed Hugh, son of Hugh the Great, duke of France and count of Paris, king, with the surname of *Capet* (*capetus*, *capito*, broad-head; or, more probably, from a sort of hat, *capatus*). The valiant Charles of Lorraine was surprised in Laon, by the treachery of a bishop, and made prisoner. He died, soon afterwards, in prison, and his son Otho, duke of Lower Lorraine, died in 1006. Both his younger brothers died childless in Germany. Thus the race of Capet was left in possession of the throne of France. According to some historians, Hugh Capet was descended from a German family. He was married to a German princess, Adelaide, daughter of king Henry I of Germany (duke of Saxony). Hugh was crowned at Rheims, and swore to preserve to the nation, and particularly to the powerful feudal nobility and clergy, all their existing privileges. By his wise measures, he gave permanence to his dynasty, which, next to the family of Guelph, is the eldest sovereign house at present existing. (See *Bourbon.*) Hugh, and the succeeding monarchs, till Louis VII, took the precaution to have their successors invested with the royal title during their own life-time. Thus Hugh had his son Robert crowned and anointed, as his colleague, as early as Jan. 1, 988. He abolished, by law, the partition of the hereditary estates among the sons of the kings, and forbade the alienation of the family domains. The daughters of the kings were endowed, from that time, with money, and the appanage which was given to the princes of the blood returned to the crown in default of male heirs. Both these principles were more fully confirmed by later laws. Thus Hugh Capet, by uniting his hereditary duchy, consisting of Paris, Isle de France and Burgundy, unalienably with the crown, may be regarded as the founder of the French monarchy. What he had begun was completed by his successors, particularly in the times of the crusades, and by the establishment of standing armies. All the political statements illustrative of this subject are collected by the marquis de Pastoret, peer of France, in his continuation of the *Ordonnances des Rois de France de la troisième Race*, vols. xv. xvi. xvii. (Paris, 1811, 1814, 1820, fol.), with which may be compared the essay of the advocate Beugnot, which obtained the prize of the academy of inscriptions, *Essai sur les Institutions de St. Louis* (Paris, 1821).

Capi Aga; in the Turkish court, the superintendent of the eunuchs. He also announces all who desire to speak to the grand vizier, and introduces foreign ambassadors to an audience.—*Capigi* (*capidschi*) is a name applied to the guards or door-keepers of the seraglio, in number about 400. Their superintendent is called *Capigi Baschi.* They likewise convey the sultan's orders. Among their duties

is that of carrying the cord to those who are to be strangled.

Capias. A writ or process of capias is one whereby the sheriff is ordered to arrest the body of the defendant, either before judgment, to compel him to answer to a suit; and this is called a *capias ad respondendum;* or, after the judgment, to compel him to satisfy the judgment; and this is called a *capias ad satisfaciendum*, commonly abbreviated *ca. sa.* In case of injuries without force, the civil law, and, originally, the common law, did not authorize the arrest of the defendant before judgment, that is, the arrest *to answer;* and upon feudal principles, says sir William Blackstone, 3 Com. 281, "the person of a feudatory was not liable to be attached for injuries merely civil, lest, thereby, the lord should be deprived of his services." The first writ of *capias ad respondendum* was given by act of parliament in 1267, 52 Henry III, c. 23, § 1, which provided, that, "if bailiffs, which ought to make account to their lords, do withdraw themselves, and have no lands nor tenements whereby they may be distrained, they shall be attached by their bodies, so that the sheriff shall cause them to come to make their account." This act applied to a particular description of receivers, and supposes them not only to be debtors, but also to have in their own hands the evidence of the amount of the debt, the production of which was one object of the process. The statute of 13 Edward I, c. 11, passed in 1285, 18 years after the former, extends this process to "all manner of receivers bound to yield account," and provides "if they be found in arrearages upon this account, their bodies shall be arrested, and, by the testimony of the auditors, shall be sent into the next gaol, and be imprisoned in irons under safe custody, and remain in prison at their own cost, until they have satisfied their master [the creditor] fully of their arrearages." This statute seems to suppose the proof and establishment of the debt before the arrest, and, so far, seems to have the character of a *ca. sa.;* but it is considered a *capias ad respondendum* by sir William Blackstone; so in Jacobs's Law Dictionary, and, indeed, generally. And it appears that the practice of arresting on mesne process, that is, before judgment, *to answer*, in civil suits, grew out of these statutes; for the subsequent statutes of 25 Edward III, c. 17 (A. D. 1350), providing that "such process shall be made in writ of debt, detinue of chattels, and taking of beasts, by writ of capias, as is used in writ of account;" and of 21 Henry VII, c. 9 (A. D. 1503), providing that "like process shall be hereafter, in actions upon the case, as in action of trespass or debt;" evidently have reference to an arrest *to answer*. A writ upon which a suit is commenced is either a capias, distress or summons; either the person of the defendant is seized, and (unless he is bailed) imprisoned until the trial, or his goods or lands are seized as a guarantee of his appearance to answer; and more often, in modern times, to obtain a lien to secure satisfaction of the judgment; or he is only summoned, that is, merely has notice, that a suit has been commenced before such a court, by such a plaintiff, and is to be heard at such a time. This last is uniformly the process adopted in claims of land. But by the statute of 5 Geo. II, c. 27, since made perpetual by another statute, it is provided, that, "in all cases where the cause of action shall not amount to ten pounds, the plaintiff shall not arrest the body of the defendant;" and "in all cases where the cause of action shall amount to ten pounds, an affidavit shall be made and filed of such cause of action, and the sum specified in such affidavit shall be endorsed on the writ, for which sum the sheriff shall take bail, and no more." "It is curious to remark," says Mr. Tidd, "the changes which the law of arrest has undergone at different periods. Anciently, an arrest was not allowed, except in action of trespass *vi et armis;* afterwards, an arrest was introduced with a capias in other actions; now, by the operation of the before-mentioned statutes, an arrest cannot be made in the only action wherein it was formerly allowed." But, as has been justly remarked in a Pennsylvania case (6 Binn, 302), the reason for not requiring bail in trespass is, the difficulty of fixing the amounts for which it ought to be required. In the U. States, except Louisiana, the form of process is usually adopted from the English law, but with so great modifications on this particular subject, that it is not easy to lay down any general rule; and to state the particular cases in which an arrest of the person on mesne process is allowed in each of the states, would far exceed the limits prescribed by the plan of this work. The general principle was laid down, in the trial of judge Chase on articles of impeachment, in 1804, that, in criminal proceedings, wherever the offence charged subjects the party to the punishment of imprisonment, the process

may be commenced by an arrest of the person, that the party charged may be held in custody, to receive punishment in case of his being found guilty. In civil suits, the *capias ad respondendum* was anciently adopted very extensively, if not universally, under the colonial governments, in actions of account, assumpsit, covenant, debt and case. The capias was adopted early and implicitly, in many of the states, as a part of the common law; and a large part of the legislation on the subject, subsequent to the adoption of the constitutions of the states, is a modification of a practice already existing. And the very laws authorizing the arrest are not to be found, except by implication from those modifying and regulating the practice. In many of the states, however, arrest on mesne process for debt is abolished, except in cases where it is apprehended the debtor intends to escape. In other states, the debtor is arrested on the *capias ad respondendum*, but set at large immediately on surrendering his property, on oath, for the benefit of his creditors. It seems, indeed, to be putting a slight value upon personal liberty to permit arrest, in any case, without the intervention of a magistrate; and, in case of debt or contract, there does not appear to be any good reason for arresting the person on mesne process, unless it be made to appear satisfactorily to a magistrate, that there is reason to apprehend the defendant will depart beyond the jurisdiction of the court. The *capias ad satisfaciendum*, or arrest on execution, issues, in England, in those cases where the *capias ad respondendum* lies, and so was the original common or statute law, generally, in the U. States; but the bankrupt and insolvent laws of England, and the insolvent laws of several of the U. States, enable the defendant, by surrendering his property for the benefit of his creditors, to defeat the *capias ad satisfaciendum*.

Capigi. (See *Capi Aga*.)

Capillary Tubes, in physics; little pipes, the canals of which are extremely narrow, their diameter being only a half, third or fourth, &c. of a line. If one end of a tube of this sort, open at both ends, be immersed in a fluid which adheres to glass, as water, the liquor within the tube will rise to a sensible height above the surface of that without, and the height to which it will rise is inversely as the diameter of the tube, at least unless the tubes are excessively fine. This phenomenon is explained by the attraction which exists between the glass and the fluid. Such liquids as do not adhere to glass (e. g., quicksilver) do not rise in the tube: on the contrary, they stand lower within than without it. The phenomenon of the rise of liquids in such tubes is exhibited in numberless instances in nature, as in the rising of the sap in plants. (See the article *Adhesion*; also, Laplace's *Theorie de l'Action Capillaire*, Paris, 1806, 4to., and the *Supplement* to the same, Paris, 1807, 4to., also annexed to the third volume of his *Mecanique Celeste*.)

Capillary Vessels; the minute vessels in which the arteries terminate, and from which, in a way not well understood, the veins commence. The distinction between the arteries and veins is, therefore, lost in these vessels. The support of the solid, and the formation of the fluid, parts of the system take place especially in these vessels.

Capital, in political economy, is the stock of valuable exchangeable commodities possessed by individuals or a community. This is the usual and more limited meaning of the term; for, in comparing the capital of one individual with that of another, we have in mind the amount of money for which the stock of each can be exchanged. The market value is in view. In estimating the capital of any individual, we necessarily take into consideration the debts due to and from him; and many men of large capital are only possessed of claims upon others; their whole stock is in the hands of others at interest; and they have only promises for a certain amount of money, and actually possess neither lands nor goods to any considerable value; while others possess large quantities of both, and yet have little or no capital, since they owe, in money, the value of the greater part or the whole of their possessions. Now it is plain that no individual can undertake production, to any large extent, without an extensive stock. He must have land to cultivate, or materials to work up, and implements to work with. Even a savage must have a capital, such as his hut, clothes, cooking utensils, food enough to support him until he can obtain a new supply, and implements, such as a hatchet, gun, canoe, fishing gear, with which to procure this supply. The first effort of industry is to supply the implements, apparatus and machinery for his own employment; and as society and the arts advance, and the operations of industry are extended, the implements, apparatus, machinery and materials, requisite in conducting the processes of production, must

be proportionally accumulated; and these will constitute a part of the capital of a community, and also of an individual, which is essential to success in productive processes. And these can be commanded by any one in proportion to the extent of his individual capital; or, if he have credit, then his resources for production will depend upon the capital of others—in other words, that of the community to which he belongs.—In considering the aggregate capital of a community, we may put out of the question all the debts due from any of the members to others; for, whether these be great or small,—and they will vary according as the practice of giving credit is more or less in use,—still the capital of the community will consist in its lands, buildings, ships, machinery, materials on hand, implements; in short, in all those things which bear a value in the market. Provided the community owes no debts abroad, these will constitute its aggregate capital; and, if its members are indebted abroad, we find its actual net capital, as in the case of an individual, by deducting the amount of its debts from the value of its possessions, without regarding the debts due from some of its members to others.—In comparing the capital or wealth of two communities, we may be led into an error by comparing the value of their possessions in gold and silver, since the value of these metals is well known to differ in different countries, by whatever standard the comparison be made. If, for instance, we compare the value of the metals in reference to the wages of a common day laborer, we find he has 2 or 3 pence a day in Egypt, and from 50 to 72 pence in the U. States. We shall find the same diversity in other things. If we take a horse, of the same beauty and serviceable qualities, for an example, we shall find his price, in money, to be twice as great in one place as in another. In order, therefore, to make such a comparison through the medium of the metals, or by adopting them as a common measure, we should, in the first place, correct the measure itself, and ascertain whether an ounce of gold, in one of the places between which the comparison is to be made, is worth a half of an ounce or an ounce and a half in the other; and the way of correcting the standard would be, to take equal quantities of a great number of articles of the same quality, in the two places, or equivalent quantities of equivalent articles, as nearly as their equivalence can be ascertained, and compare their money prices in the two places. But this correction of the common measure is not very easily made. The means of comparing the value of money at successive periods, in the same community, are very defective; and the only attempt at any scale of value, of this description, known to the writer of this article, is that of Mr. Evelyn, published in the Transactions of the royal society of London for 1798, and corrected, since, by Mr. Colquhoun. But suppose the comparative value of money, in two states or kingdoms, to be ascertained, and then a valuation of all the property in each, of every description, to be made, the capital of each and the comparative capital of the two are thus ascertained. But this comparison would not show the comparative resources of the two, either for war or for production. This will appear from the obvious fact, that a river like the Hudson is a greater facility to transportation than the Languedoc canal; yet, in making a return of the property, or the estimation of the capital of France, the Languedoc canal would be a great item, whereas the Hudson river, though of equal or greater utility, would not appear as constituting a part of the capital of New York. The inhabitants are the great agents of production in every country; and, though their productive efficiency will be influenced, very essentially, by the amount of capital, fertility of the soil, quality of its products, facilities of transportation, and arrangements of industry, still the character, habits and skill of the agents themselves are the most important circumstances in estimating the productive resources of a community. Industry and skill will rapidly create capital. Mr. Phillips, in his Manual of Political Economy, estimates that the whole value of the capital of a country is consumed and reproduced every three or four years. But the training of a population, and forming its character and habits, is a work of many years. The most important ingredient in the national resources is, therefore, not only no part of its capital, but is a thing of very slow growth, and results from the combined and long-continued influence of a thousand causes, moral, physical and political, too complicated to be disentangled, and so blended that the action of each cannot be distinctly traced. Economists have confined their views of production too much to considerations of capital, and neglected, or, at least, not given sufficient weight to, the other economical capacities and resources.—Capital is distinguished

into *floating*, or *movable*, and *fixed*; the former consisting of things that may be moved, and are susceptible of manual delivery; the latter, of those confined to one place, as a house or piece of land. We use the terms in a different sense when applied to any particular establishment, by the floating capital of which is meant that which remains after payment is made for all their apparatus and the implements of their business, and which is usually invested in the materials to be manufactured or transported, or to pass through the process, whatever it is, which constitutes the business conducted. Thus one carrying on a flouring-mill wants a floating or disposable capital, over and above the cost of his works, to be invested in wheat to be floured, and flour not yet disposed of. This instance illustrates what is meant by the floating or disposable capital of a whole community being that movable, exchangeable stock of things on hand, over and above the fixtures and apparatus of production, including lands, buildings, ships, working animals, all the implements of the arts, with necessary food, clothing, and a stock of seed sufficient for the time requisite for reproduction. What remains over these is the disposable capital, and, in a flourishing community, the disposable floating capital is constantly invested in new fixed capital, implements and apparatus of production. A declining community, on the contrary, consumes a part of its implements and apparatus of industry, or, what is, in effect, the same thing, it does not repair and replace the damage of use and decay. The idea is held out in many economical treatises, that a community cannot have a surplus capital; that is, it cannot have more capital than it can make use of in its consumption and reproduction. As no grounds whatever are given for this doctrine, it seems to be hardly entitled to a consideration; for the position is certainly, at the first view, very improbable, since we know very well that men may accumulate; and why they may not, in any possible case, accumulate a surplus, does not appear by any plausible reason; and whether such surplus accumulation may be useful or not, will depend entirely upon the kind of articles of which such accumulation consists. If it consist in articles the value of which depends on the prices in foreign markets, the excess may be of no value at all; for it may so depress the foreign prices as to countervail all the indirect advantage arising from the cheaper supply, for a time, of the domestic demand. —*Fictitious capital* generally means nothing more nor less than excessive credits, which throw the management and disposition of a great deal of property into the hands of persons who are not able to answer for the risks of loss from its bad management, or other causes. A whole community, in the aggregate, can have fictitious capital only in case of its members having an excessive credit in a foreign country. But the members may, among themselves, have a fictitious capital, by too great facility of credits in their dealings with each other, and the fiction, in this case, is in their false promises of payment.

Capital, in geography; a city in which reside the highest authorities of a district, province, country, &c. Capitals, in the modern meaning of the word, can hardly be said to have existed in ancient times; at least, they were then only the seat of the sovereign, but not the centre of all the national activity, Rome only, perhaps, excepted; but this city was, for a very long time, the state itself, and, at a later period, the tyrant of the whole empire, rather than the head of a well-organized body. In Asia, there existed, indeed, in ancient times, capitals of very large empires; but they are not to be compared to the capitals of large modern empires, since the channels of communication and intercourse had not then reached that degree of perfection which enables them, in our days, to bring into close connexion all parts of a country. Each province was, therefore, left much more to itself. It would be difficult to determine whether the good or evil consequences of large capitals, in modern times, are greater, and such an examination would far exceed our limits; otherwise, it would be very easy to point out, in every department of civilization, in science, social intercourse, politics, arts, &c., both salutary and pernicious effects, resulting from the influence of capitals. It seems to us a matter of little doubt, that it must be regarded as disadvantageous to any country, if the capital ceases to be the concentration of the skill, genius and strength of a nation, for the benefit of the whole, and by a disproportionate superiority destroys the importance of the rest of the country, as we find to be the case with Paris, which, as has been often observed, contains France. In Germany, the state of things is quite the reverse. There is no city which may boast of being the point of national concentration. The consequences

have been very advantageous to science, and somewhat disadvantageous to literature. In politics, this want of a central point has had melancholy consequences for Germany. London never exercised that degree of influence over England which Paris has over France; one reason of which may be, that the two most extensive institutions for the diffusion of knowledge are not seated in the metropolis. The system of concentration has, there is little doubt, been carried to an extreme in Europe; the best of every thing having been collected in the capitals, and the provinces having been almost stripped of pictures, libraries, &c. In many countries, this fault is acknowledged, and a return to a more equitable system is perceptible. The great increase of wealth and consequence, which the capitals of large empires in Europe have acquired, in modern times, by the introduction of the bureau system (q. v.), which has brought together, in one place, the different departments of administration, has had much influence on military operations, having made the capture of the capital now far more important than formerly. —In the U. States, the word *capital* is not used officially, but, instead of it, the phrase *seat of government*, which is, in most cases, not the largest place of the state. It is not here the place to discuss, whether it would be more beneficial to the whole country if the seat of the general government were in one of the largest cities of the U. States. As it is now, to use the words of a traveller, "Washington must by no means be considered as the capital of the nation, but only as the capital of governmental business. It is a camp of business."

Capital, in architecture. (See *Architecture.*)

Capital Offence. (See *Crime.*)

Capital Punishment. (See *Death, punishment of.*)

Capitanata; a province of Naples, bounded N. and E. by the Adriatic, S. by the country of Bari and Basilicata, and W. by the Molise. This was the ancient *Apulia Daunica.* The whole country is a vast plain, and the soil generally sandy, with few trees, and scarcely any springs or rivers of fresh water; yet the land produces a great deal of corn, and feeds a great number of cattle. Salt is made along the coast. The Gargano is the only mountain: on the sides are plantations of oranges. The coasts are defended by 22 towers. The principal towns are Lucera, Foggia, St. Severo and Volturara. Population, 254,809. Square miles, 3289. Manfredonia is the principal seaport. Capitanata forms what is generally called the *spur of Italy.*

Capitani, or Capatans; the hereditary chieftains who have taken possession of the district of Maina, the mountainous country of the ancient Messenia. They exercised, under the Turkish government, an arbitrary jurisdiction, without any kind of responsibility. With the bey, whom they chose from among themselves, they formed a kind of great council. The bey took care that the *haratsch*, or poll-tax, was paid to the Turks, and was the agent in all dealings with the pacha. Generally, the *capitani* were robber chieftains, who lived retired in rocky fastnesses, and defied the Turks and their neighbors. They united only if resistance against the Turks became necessary. At other times, they lived at war amongst themselves. From this wild oligarchy most of the generals of the modern Greeks have sprung up; their Colocotroni, Odysseus, Niketas (called *Turkophagus*) and others. The *palikaris*, or the Greek warriors, also called *klephtes* (i. e., robbers), followed the orders of the *capitani* as long as they had confidence in them, and met with good success. The French colonel Voutier has given us interesting information concerning them.

Capite censi were the Roman citizens, of the lowest class, who possessed no property. They had this name because they were counted by their heads, not by their property, in the divisions of the centuries.

Capitol, now *Campidoglio;* the citadel of ancient Rome, standing on the Capitoline hill, the smallest of the seven hills of Rome, anciently called the *Saturnine* and the *Tarpeian rock.* It was begun A. C. 614, by Tarquinius Priscus, but not completed till after the expulsion of the kings. At the time of the civil commotions under Sylla, it was burnt down, and rebuilt by the senate. It again suffered the same fate twice, and was restored by Vespasian and Domitian. The latter caused it to be built with great splendor, and instituted there the Capitoline games. Dionysius says the temple, with the exterior pillars, was 200 feet long and 185 broad. The whole building consisted of three temples, which were dedicated to Jupiter, Juno and Miverva, and separated from one another by walls. In the wide portico, triumphal banquets were given to the people. The statue of Jupiter, in the capitol, represented him sitting

on a throne of ivory and gold, and consisted, in the earliest times, of clay, painted red. Under Trajan, it was formed of gold. The roof of the temple was made of bronze: it was gilded by Q. Catulus. The doors were of the same metal. Splendor and expense were lavished upon the whole edifice. The gilding alone cost 12,000 talents (about 9,000,000 dollars), for which reason the Romans called it the *golden capitol*. On the pediment stood a chariot, drawn by four horses, at first of clay, and afterwards of gilded brass. The temple itself contained an immense quantity of the most magnificent presents. The most important state papers, and particularly the Sibylline books, were preserved in it. The present capitol (Campidoglio), standing near, and partly on, the site of the old one, is a modern edifice, after the design of Michael Angelo. The principal entrance to it commands a most splendid prospect, but the buildings, as connoisseurs tell us, are among Michael Angelo's inferior works. The modern capitol consists of three buildings (in the principal one resides the senator of Rome), which do not, however, cover the whole Capitoline mount. On the ruins of the former temple of Jupiter Capitolinus, of which some pillars are still to be found, a Franciscan church is now erected. The present capitol is one of the most interesting spots in Rome. From the summit of the middle building, the spectator has a splendid view of one of the most remarkable regions in the world—the Campagna up to the mountains. The museums contain some of the finest collections of statues and paintings. The stairs leading up to the equestrian statue of Marcus Aurelius are beautiful. Every thing contributes to render the capitol venerable and interesting.—The name of *capitol* is also given to the edifice in Washington, where congress assembles. Some of the states of North America also call their state-houses *capitols*.

Capitulary. The word *capitulary* is generic, and denotes every kind of literary composition divided into chapters. Laws of this description were promulgated by Childebert, Clothaire, Carloman and Pepin, kings of France; but no sovereign seems to have put forth so many of them as the emperor Charlemagne, who appears to have wished to effect, in a certain degree, a uniformity of law throughout his extensive dominions. With this view, it is supposed, he added to the existing codes of feudal laws many other laws, divided into capitularies, or small chapters or heads, sometimes to explain, sometimes to amend, and sometimes to reconcile or remove the difference between them. They were generally promulgated in public assemblies, composed of the sovereign and the chief men of the nation, both ecclesiastical and secular. They regulated equally the spiritual and temporal administration of the kingdom; and the execution of them was intrusted to the bishops, the courts and the *missi regii*, officers so called because they were sent, by the French kings of the first and second race, to dispense law and justice in the provinces. Many copies of these capitularies were made, one of which was generally preserved in the royal archives. The authority of the capitularies was very extensive. It prevailed in every kingdom under the dominion of the Franks, and was submitted to in many parts of Italy and Germany. The earliest collection of the capitularies is that of Angesise, abbot of Fontenelles. It was adopted by Louis the Debonnaire and Charles the Bald, and was publicly approved of in many councils of France and Germany. But, as Angesise had omitted many capitularies in his collection, Benedict, the Levite or deacon of the church of Mentz, added three books to them. Each of the collections was considered to be authentic, and of course was appealed to as law. Subsequent additions have been made to them. The best edition of them is that of Baluze, in 1697. The capitularies remained in force in Italy longer than in Germany, and in France longer than in Italy. The incursions of the Normans, the intestine confusion and weakness of the government under the successors of Charlemagne, and, above all, the publication of the epitome of canon law, termed the *Decretum of Gratian*, in the year 1150, which totally superseded them in all religious concerns, put an end to their authority in France. (Butler's *Horæ Juridicæ Subsecivæ*, p. 128—131.)

Capitulation formerly signified a writing drawn up in heads; now commonly used, in military language, to signify the act of surrendering to an enemy upon stipulated terms, in opposition to *surrender at discretion*. In the 15th century, *capitulations*, as they were called, were presented by the ecclesiastical establishments in Germany to their newly chosen abbots and bishops, who were obliged to swear to observe them as laws and conditions for their future rule. The ecclesiastical electors obtained, after the

fall of the Hohenstaufen family, certain advantageous promises from the new emperors, which were called *capitulations*. When Charles V was proposed as emperor, and it was apprehended, on account of his foreign education, that he would disregard the German constitution, he was obliged to make oath, that he would not reside without the German empire, nor appoint foreigners to office in the empire, &c. This was called his *election capitulation*. Such a *Wahlcapitulation* was afterwards presented to every new emperor, as a fundamental law of the empire, and shook the constitution of the German government to its very foundations, since the electors, at the choice of every new emperor, made some new infringement on the imperial privileges. The *Wahlcapitulationen* were acknowledged bargains, certainly unique in history.

Capnist, or Kapnist, Wassil Wassiljewitsch, Russian counsellor of state, member of the academy of St. Petersburg and other learned societies, one of the first lyric poets of Russia, born in 1756, was the rival of his friend and relation, the celebrated poet Derschavin. (q. v.) He translated Horace with applause. The collection of his works appeared at Petersburg, in 1806 (Lyric Poems, by Wassil Capnist). He wrote a comedy, called *Jabeda*, in 1799, and a tragedy, called *Antigone*, in 1815. His critique on Homer's Odyssey, published in Russian and French, is more acute than profound. His odes have not the easy and bold character by which those of Derschavin are distinguished, but they have a charm of another kind. Purity of style, richness of thought, and a sound philosophy, connected with deep and genuine feeling, are Capnist's characteristic traits. Some years ago, he retired to Obuchowka, his country-seat, in Little Russia, where he lived devoted to the muses till his death, which took place Oct. 28, 1823, in his 67th year.

Capo d'Istria, John, count of, formerly Russian secretary of state, now president of Greece, was born at Corfu, 1780, where his father was a physician, and studied medicine at Venice. When the Russian troops occupied the Ionian islands, in 1799, Anthony Maria de Capo d'Istria, his father, was at the head of the government. But, after the islands were again made dependent on France, in 1807, in consequence of the peace of Tilsit, he entered into the Russian service. He afterwards returned to Corfu, became a senator there, and died, April 17, 1821, aged 80 years. The son still continued in Russia, where he was first employed in the office of count Rumanzoff, and afterwards went as Russian ambassador to Vienna. In 1812, he conducted the diplomatic business of the army of the Danube, of which admiral Tschitschagoff was commander-in-chief. When this army was united with the great Russian army, after the retreat of the French, Capo d'Istria managed the diplomatic correspondence at head-quarters, under the emperor's direction, and soon gained the confidence of his monarch to such a degree, that he was afterwards engaged in the most important public business, and appointed secretary of state for the department of foreign affairs. He was made grand-cross of the Wladimir order, knight of St. Ann, grand-cross of the royal Austrian Leopold order, and of the Prussian order of the red eagle. In 1813, he was Russian ambassador to Switzerland, negotiated with the Austrian ambassadors the new relations of this republic, and, in Sept., 1814, was present at the congress of Vienna as Russian plenipotentiary, from which the downfall of Napoleon, in 1815, recalled him to the head-quarters of the allies at Paris. As imperial Russian plenipotentiary, he subscribed the treaty of Paris, Nov. 20, 1815, and returned with his monarch to Petersburg, where he took a very active part in the business of the council of state. His endeavors for the restoration of the republic of the Ionian islands, for the support of the established religion in Russia against the intrigues of the Jesuits, and for the deliverance of the Greeks from the Turkish yoke, are well known. But, as Russia disapproved of the attempts of the Greeks, and Stroganoff (q. v.) returned from his mission to Constantinople, in 1822 count Capo d'Istria left the public service, and retired, as a private man, to Germany and Switzerland, living chiefly at Geneva, till the year 1827, when he was elected president of the Greek republic. He stands now at the head of this government; but his means have been as yet so feeble, and the whole state of Greece such, that we are not able to judge of his talents for administration. So much, however, is certain, that he immediately brought Greece into closer connexion with the other governments of Europe, and has thus exerted a salutary influence.

Capo d'Istria (the ancient *Ægida*); a seaport of Austria, on the gulf of Trieste, 8 miles south of Trieste; lon. 13° 43′ E.; lat. 45° 31′ N.; population 5,119;

is a bishop's see, and the capital of a district, containing 65,150 inhabitants. The town is two miles in circumference, has, besides the cathedral, 30 other churches, six convents, hospitals, &c.

Capoc; a sort of cotton, so short and fine, that it cannot be spun. It is used, in the East Indies, to line palanquins, to make beds, mattresses, &c.

Caponier, or Caponniere, in fortresses; a place which is covered against the fire of the enemy, on the sides, sometimes also above, and serves for the connexion of two works, or for maintaining an important point. In particular—1. a passage secured by two parapets, in the form of *glacis*, which leads through the dry ditch, from one work to another; for instance, from the chief wall to the ravelin. If danger is to be apprehended only from one side, and consequently only one parapet is made, it is called a *demi-caponniere:* if it is covered above with hurdles or with wood, it is called a *coffer:* but this word is often used indifferently for *caponniere.*—2. Small blockhouses in the covered way, for its defence. Coehorn laid out similar, but less useful works below the glacis, and Scharnhorst proposes them, under the name of *field-caponnieres*, for the saliant angles of field-fortifications.

Cappadocia, in antiquity; one of the most important provinces of Asia, once a famous kingdom; bounded W. by Lycaonia, S. by Cilicia and Syria, E. by Armenia, and N. by the Pontus Euxinus. In the period of the Persian government, Cappadocia comprehended all the country between the Halys and Euphrates. By the former river, it was separated from Phrygia and Paphlagonia; by the latter, from Armenia: therefore the region afterwards called *Pontus* was comprehended in this territory. The Persians divided it, according to Strabo, into two satrapies, which bore the name of *Cappadocia Magna* (afterwards *Cappadocia Proper*) and *Cappadocia Minor* (afterwards *Pontus*). This division, however, was not always strictly observed. The Persian satraps governed, at a later time, under the title of *kings*, and sometimes made themselves independent. At the time of the famous retreat of the 10,000 Greeks, both the Cappadocias seem to have been under the rule of Mithridates, who had participated in the conspiracy of Cyrus the Younger, but retained his government, and became, after the defeat of Cyrus, again dependent upon the kings of Persia. Cappadocia Magna was a poorly-cultivated country, little favored by nature, the plains of which were only fit for breeding sheep. The climate was rough, and, wood being scarce, the habitations of the people were low and mean. Even the capital, Mazaca, was more like a camp than a city. The Cappadocians, also called *Leukosyri* (the White Syrians), because they had a language resembling the Syrian, were considered stupid and ill-tempered.

Caprea, or Capreæ. (See *Capri.*)

Capri; an island in the beautiful gulf of Naples, which contributes not a little to the charms of this favorite scene of nature. Capri, five miles long and two broad, lies at the entrance of the gulf, and consists of two mountains of limestone, remarkable for their picturesque shape, and a well-cultivated valley. The inhabitants, amounting to 3000, are occupied in the production of oil and wine, in fishing and in catching quails, which come in immense numbers from Africa to the shores of Italy. Every spot on the island, which can be made productive, is cultivated. In fact, agriculture all around Naples is in the highest state of perfection. The town of Capri (lon. 14° 8′ E.; lat. 40° 11′ N.) is the seat of a bishop, to whom all the quails belong. A high rock separates Capri from Anacapri, 1600 feet high, with 3500 inhabitants, to which a stairway in the rock, of 522 steps, leads from the lower part of the island. With the Romans, Capri was called *Capreæ*. Augustus obtained it by exchange from the Neapolitans, and made it a place of agreeable retreat, but never made use of it. Tiberius spent here the last seven years of his life in degrading voluptuousness and infamous cruelty. The ruins of his palace are still extant, and other ruins are scattered over the island.

Capriccio. *Caprice* is the name applied to a sort of musical composition, in which the composer follows the bent of his humor. The *capriccio* may be used with propriety in pieces for exercise, in which the strangest and most difficult figures may be introduced, if they are not at variance with the nature of the instrument or of the voice.

Caprification. (See *Figs.*)

Capsicin. Cayenne pepper contains a peculiar substance, discovered by Forchhammer, and called *capsicin* by doctor C. Conwell, which, according to the latter, when perfectly pure, is tasteless, inodorous, and crystallizes in acicular fragments. It is neither acid nor alkaline.

Capstan, in shipping (in French, *cabestan;* Dutch, *kapstani*); a strong, massy

column of timber, in the form of a truncated cone, and having its upper extremity divided into several squares, with holes in them, to receive bars or levers. It is let down perpendicularly through the deck of a ship, and is fixed in such a manner, that the men, by turning it horizontally with their bars, are able to weigh the anchors, and to perform other work requiring great exertion.

Captain. This is one of those many words derived from the Latin of the middle ages, and now to be found in all the different idioms of Europe. *Captain* comes from the Latin *capitaneus*, from *caput*, head, and signified, first, a governor of a province, who, in the first half of the middle ages, was generally a military man. Thus the word *captain* soon came to be used chiefly to denote a high, or rather the highest, military officer. Opitz, an early German poet, calls God, *Lord, Master, Captain;* and, in English, Christ is called the *Captain of our salvation.* Like many other words, however, this has, in the course of time, lost much of its dignity, and, in military technology, now signifies the commander of a small body—a company—and, in maritime language, the master of a vessel. In the United States of America, the master of the smallest craft, and even the chief man on a raft, is styled *captain.* In the latter part of the middle ages, when armies were not yet so regularly divided and subdivided as at the present time, captains were the commanders of those small bodies of which the armies consisted. These were generally collected by their commander, who entered, with his company, into the service where most pay or most booty could be obtained. The practice of carrying on wars, by troops collected in this manner, prevailed to the greatest extent in Italy, where the continual quarrels of the numerous small states afforded ample employment to the unsettled and the dissolute. These companies play an important part in the history of the middle ages, particularly that of the two centuries preceding the reformation, and had a very important influence on the manners and morals of the south of Europe. They are further interesting to the student of history, because they are so unlike any thing at present existing. We refer the reader, for some further remarks on this subject, to an able article on Macchiavelli, in the Edinburgh Review, March, 1827.—*Captain*, in modern armies, is the commander of a company of foot, or a troop of horse. In the English army, he appoints the serjeants, corporals and lance-corporals of his company—a right which belongs, in other armies, to the commander of the regiment. In the horse and foot-guards, the captains have the rank of lieutenant-colonels in the army. In the French army, besides the commanders of the companies of the line, commanders of certain detached bodies of guards, &c., are called *captain*, and have, sometimes, a very high rank in the army.—*Captain-lieutenant* is, in the English army, a lieutenant, who, with the rank of captain, commands a troop or company in the name of some other person. Thus, the colonel being usually captain of the first company of his regiment, that company is commanded by his deputy as captain-lieutenant.—*Captain of a merchant ship;* he who has the direction of the ship, her crew, lading, &c. In small vessels, he is more ordinarily called *master.* In the Mediterranean, he is called *patroon.*—*Post-captain;* an English officer commanding any man-of-war, from a ship of the line down to a ship-rigged sloop. Formerly, a twenty-gun ship was the smallest that gave post-rank; but, by a late regulation, the largest class of ship-sloops has been added to the list of post-ships; and post-captains, under three years' standing, are now appointed to them, unless they happen to be selected as flag-captains to admirals' ships. After being three years posted, they are appointed to frigates, which they may continue to command till they are of 10 years' standing, when they are generally removed to 50 or 64 gun-ships, preparatory to their taking the command of ships of the line.—*Captain-general* signifies, in England, the first military rank, power and authority in the realm; therefore the king is, by the constitution, captain-general, or generalissimo, of all the forces in the United Kingdoms. In 1799, the king delegated this rank, with the powers annexed to it, to the duke of York. In France, it is an ancient title, which conferred an almost unlimited power on the person who possessed it, in the district where he commanded. But it never corresponded to that of *generalissimo*, except in the case of the duke of Savoy, in 1635, in the time of Louis XIII. The count de Tessé was French captain-general in Italy in 1702. The title is not in use at present, nor would it agree with the existing organization of the administration. In Spain, the rank of a captain-general corresponds with that of a marshal of France, who has the command of an army. This title was also given to the

head of a province, in the Spanish colonies in South America, which was divided into viceroyalties and captain-generalships (*capitanias-generales*); thus Chili was a captain-generalship. The captain-generals were not placed under the viceroys, but accountable only to the king, through the council of the Indies. The captain-general of Venezuela, for instance, had no connexion with the viceroy of New Grenada. They decided, in the last instance, on all legislative, judicial and military affairs, and presided in the *real audiencia*. The time during which these governors remained in power was limited to a few years, probably in order to prevent them from becoming too powerful. The consequence was, that the colonies were oppressed the more to enrich the governors, for rich every one was when he left his office.

Capture. (See *Prize*.)

Capua; a fortified place in the Terra di Lavoro, in the kingdom of Naples, on the Volturno; the see of an archbishop; contains a military school, and 7300 inhabitants; one league distant from the ancient Capua, out of the ruins of which it was partly built, in the 9th century; lon. 14° 8′ E.; lat. 41° 5′ N.; 15 miles north of Naples. There are 12 convents in this city. Jan 11, 1797, it was taken by the French, and, in 1820, it did not resist the Austrians. The ancient Capua, one of the finest and most agreeable cities of Italy, was so important, that it was compared to Rome and Carthage. Hannibal went into quarters here, after the battle of Cannæ, and promised to make the city the capital of Italy. Capua therefore formed an alliance with him, but was reconquered after five years. The Vandals laid it waste. Narses restored it, but the Lombards devastated it again. There are still many ruins here. Around Capua lie the fertile Campanian fields, which produced three crops a year. Living was cheap here, and the climate healthy, so that it was a favorite place of resort of the Romans.

Capuchins. (See *Franciscans*.)

Caput-mortuum (*dead head*); a technical expression, in chemistry, for the deposit in the retort, arising from dry distillation; because, if the operation is continued, volatile substances cease to be given off.

Caqueta; a large river in South America, which rises about 60 miles south of Popayan. Being enlarged by the addition of several streams, it takes a course due east about 300 miles, when it divides into three branches, one of which falls into the Içá; another takes the name of Yupura, and the third forms the principal stream of the Negro.

Carabine; formerly, a kind of guns, which are now out of use. At present, short guns, used by the cavalry, have this name. Tacticians entertain very different opinions respecting this kind of arms. Some think that they are of no use whatever, as the aim from on horseback is extremely uncertain. In some armies, every third man of certain regiments of cavalry is armed with a carabine. The word *carabine* is found in all European languages, with different endings only. Many derive the word from *Calabria*, which, for a long time, was famous for a certain light cavalry. The transformation of the *l* into *r* would not be extraordinary. Du Fresne derives the word from a kind of arms called *chavarina*, of which mention is made in the 14th century.

Carabobo; a province of Colombia, forming, according to the law of June 23, 1824, with the province Caracas, the department of Venezuela. The residence of the governor of Carabobo is Valencia. This name has been rendered famous by the battle of Carabobo, which was decisive of the independence of Colombia. It was fought June 24, 1821, soon after the armistice concluded between Bolivar and Morillo had expired. Bolivar, having formed a junction with Paez in Varinas, advanced to attack the Spanish general La Torre, who had taken a strong position upon the heights commanding the only pass by which his army could be approached. The battle was commenced by Paez, who led on his division in person, and, by the valor and impetuosity of himself and his followers, drove the Spaniards from their intrenchments, and thus gained a complete victory, before the second division, under general Cedeño, came up. Of all the troops, the English, in the service of the republic, distinguished themselves most: they chiefly decided the day, and suffered most severely. The battalion in which most of the English and Irish served received the name of *battalion of Carabobo*. Caracas, La Guayra, Carthagena and Cumaná, and all that portion of Venezuela which is dependent upon them, were permanently secured to the patriots by this victory. (See *Columbia* ii., 495, 724.)

Caracalla, Antoninus Bassianus, eldest son of the emperor Severus, was born at Lyons, A. D. 188, and appointed by his father his colleague in the government, at the age of 13 years. Nevertheless, he attempted his life. Severus died A. D. 211

He was succeeded by Caracalla and Geta. The two brothers, from their earliest years, hated one another inveterately. After a campaign against the Caledonians, they concluded a disgraceful peace. They then wished to divide the empire between them; but their design was opposed by their mother, Julia, and by the principal men of the state. Caracalla now resolved to get rid of his brother, by causing him to be assassinated. After many unsuccessful attempts, he pretended to desire a reconciliation, and requested his mother to procure him an interview with his brother in private in her chamber. Geta appeared, and was stabbed in his mother's arms, A. D. 212, by several centurions, who had received orders to this effect. The prætorian guards were prevailed upon, by rich donations, to proclaim Caracalla sole emperor, and to declare Geta an enemy to the state. The tyrant caused Geta's children and friends to be put to death. (See *Papinian.*) Dion estimates the number of victims at 20,000. He afterwards executed many of the murderers of his brother, and caused him to be placed among the gods. His pattern was Sylla, whose tomb he restored and adorned. Like this dictator, he enriched his soldiers with the most extravagant largesses, which extortion enabled him to furnish. Cruel as Caligula and Nero, but weaker than either, he regarded the senate and the people with equal contempt and hatred. From motives of avarice, he gave all the free men of the empire the right of citizenship, and was the first who received Egyptians into the senate. Alexander, whose habits he imitated, and Achilles, were the objects of his deepest veneration. He went to Ilium to visit the grave of Homer's hero, and poisoned his favorite freedman, named *Festus*, to imitate Achilles, in his grief for Patroclus. His conduct in his campaigns in Gaul, where he committed all sorts of cruelties, was still more degrading. He marched over the Rhine to the countries of the Catti and Alemanni. The Catti defeated him, and permitted him to repass the river only on condition of paying them a large sum of money. He marched through the land of the Alemanni as an ally, and built several fortifications. He then called together the young men of the tribe, as if he intended to take them into his service, and caused his own troops to surround them, and cut them in pieces. For this barbarous exploit, he assumed the name *Alemannicus*. In Dacia he gained some advantages over the Goths. He signed a treaty of peace at Antioch with Artabanus, the Parthian king, who submitted to all his demands. He invited to Antioch Abgares, the king of Edessa, an ally of the Romans, loaded him with chains, and took possession of his states. He exercised the same treachery towards Vologeses, king of Armenia; but the Armenians flew to arms, and repulsed the Romans. After this, Caracalla went to Alexandria, to punish the people of the city for ridiculing him. While preparations were making for a great massacre, he offered hecatombs to Serapis, and visited the tomb of Alexander, on which he left his imperial ornaments, by way of offering. He afterwards devoted the inhabitants, for several days and nights, to plunder and butchery, and seated himself, in order to have a view of the bloody spectacle, on the top of the temple of Serapis, where he consecrated the dagger which he had drawn, some years before, against his brother. His desire to triumph over the Parthians induced him to violate the peace, under the pretence that Artabanus had refused him his daughter in marriage. He found the country undefended, ravaged it, marched through Media, and approached the capital. The Parthians, who had retired beyond the Tigris to the mountains, were preparing to attack the Romans, the following year, with all their forces. Caracalla returned without delay to Mesopotamia, without having even seen the Parthians. When the senate received from him information of the submission of the East, they decreed him a triumph, and the surname *Parthicus*. Being informed of the warlike preparations of the Parthians, he prepared to renew the contest; but Macrinus, the pretorian prefect, whom he had offended, assassinated him at Edessa, A. D. 217, on his way to the temple of Lunus. Caracalla erected at Rome some splendid monuments, magnificent baths, which bear his name, and a triumphal arch, in commemoration of the achievements of Severus.

Caracas; a province, which, with the province of Carabobo, constitutes, according to the law of June 23, 1824, the department of Venezuela, one of the 12 departments of Colombia. (See *Venezuela.*) The city of Caracas, or Leon de Caracas, is the capital of the department of Venezuela, formerly a captain-generalship; lon. 67° 5′ W.; lat. 10° 31′ N. In 1812, the population was estimated at 50,000. March 26 of that year, the city was partly destroyed by an earthquake, and nearly 12,000 persons were buried in the ruins.

By the political events which followed this catastrophe, the population of this ill-fated city was reduced, in four or five years, to less than 25,000. The city is situated five leagues from the sea, from which it is separated by a chain of mountains, at an elevation of 3000 feet above the ocean. A good road traverses the mountains to the port La Guayra. Caracas carries on a considerable trade. The greatest part of the productions of the whole province, consisting principally of cocoa, coffee, indigo, cotton, sarsaparilla, and the Varinas tobacco, is brought here for sale, or to be exchanged for European manufactures and productions. The temperature is generally between 77° and 90° Fahr. in the day, and between 68° and 72° at night; but this general mildness is connected with great fluctuations in the weather. Humboldt, among the vapors of November and December, could sometimes hardly fancy himself in one of the temperate valleys of the torrid zone, the weather rather resembling that of the north of Germany. Caracas is the seat of the intendant of Venezuela, and has a college, a court of justice, nine churches, and five convents. The streets are straight and well built, intersecting each other at right-angles, at a distance of about 300 feet. The inhabitants consist of whites, descendants of Spaniards, free colored people, a few slaves, and Indians. The first are either merchants, planters, professional or military men, very proud, and disdaining all kinds of labor. The women are considered very handsome, having large black eyes, full of expression, jet-black hair, and fine complexions; but they are careless of their figures. They seldom leave their houses except to go to mass, when they wear the long veils called *mantillas*, covering nearly the whole body. They possess considerable natural talent and vivacity, but little or no accomplishments.—Caracas, as is well known, has been conspicuous throughout the revolution of Venezuela and New Grenada against Spain.

Caracci. (See *Carracci.*)

Caraccioli, Louis Antoine de; born in 1721, at Paris, of an ancient and distinguished Neapolitan family. His talents for conversation procured him a distinguished reception, in Rome, from Benedict XIV and Clement XIII. He afterwards went to Germany and Poland. After having educated the children of prince Rzewuski, in the latter country, he returned to Paris, and wrote his *Lettres du Pape Clément XIV* (Ganganelli), which display a kind spirit, a benevolent philosophy, and fine taste. They also contain intelligent observations on many situations of life. For a long time, they were thought to be the genuine productions of the pope, and excited the greatest interest in France, and throughout Europe. He died in 1803.

Caraccioli, marquis de, the friend of Marmontel and D'Alembert, born in 1711, was, about the middle of the 18th century, Neapolitan ambassador in London and Paris. He was esteemed one of the first ornaments of the accomplished society of the capital of France. He died in 1789, in the office of viceroy of Sicily.

Caraccioli, Francisco, brother of the duke of Roccaromana, was distinguished as Neapolitan admiral, in 1793, at Toulon; but, being treated by his court with contempt, he entered the service of the Parthenopean republic, and repelled, with a few vessels, an attempt of the Sicilian-English fleet to effect a landing. When Ruffo took Naples, in 1799, Caraccioli was arrested, contrary to the terms of the capitulation, was condemned to death by the junta (see *Speziale*), was hung at the mast of his frigate, and thrown into the sea. His death is a blot on the fame of Nelson.

Caractacus; a king of the ancient British people called *Silures*, inhabiting South Wales. He defended his country seven years against the Romans, but was, at last, defeated, and led in triumph to the emperor Claudius, then at York, where his noble behavior and pathetic speech obtained him liberty, A. D. 52. Buchanan, Monipenny, and the other ancient Scottish historians, make this heroic prince one of the Scotch monarchs.

Carafa, or Caraffa, Michael; one of the most popular Italian composers now living. He was born at Naples, 1787, studied under Fenaroli, at the *conservatoire* of Naples, and enjoyed the advantages of an acquaintance with Cherubini during his residence at Paris. He has composed some agreeable and characteristic melodies, and is an imitator of Rossini. Among his operas, the *opera seria* "*Gabriele de Vergy*" has gained the most applause. Carafa is also an excellent composer of music for songs.

Caraites, or Caræans, among the Jews; those who reject the tradition of the Talmud, and hold merely to the letter of Scripture, in opposition to the Rabbinists. (See *Rabbi.*)

Caramania; an interior province of Asiatic Turkey, east of Natolia, comprising about 35,000 square miles. It is intersected by the Kisil Jermak, which, af-

ter a course of about 350 miles, flows north into the Black sea. Caramania comprehends the ancient Pamphylia, and a great part of Cilicia, Pisidia and Cappadocia Minor. Bajazet united it to the Ottoman empire in 1488. The inhabitants carry on some trade with camels' hair, goats' wool and opium. The population probably does not exceed from 150 to 200,000. Cogni, or Konich (lat. 38° 10′ N., lon. 32° 25′ E., 308 miles east of Smyrna, and 150 north of the shore of the Mediterranean) is the capital. There is also a town of this province called *Caramania*.

Carascosa, Michele, baron. This general, distinguished in the latest history of Naples, rose to eminence during the period of the Parthenopean republic, and, after 1806, under Joseph Bonaparte, in Spain. After his return, Joachim (Murat) raised him successively through various degrees of military command. In 1814, he commanded a body of troops which assisted the Austrians against the French, and, in 1815, a division of Neapolitan troops against the Austrians, and signed, with the other Neapolitan generals, the capitulation of Casalanza. In 1820, when minister of war, he endeavored, unsuccessfully, to suppress the insurrection which broke out in the army. In later times, he took part in the revolution, after the king had shown himself apparently favorable to constitutional principles. At the time of the invasion of the Austrians, he received an important command, and was appointed to guard the road from Terracina to Naples. (See *Abruzzo*, *Neapolitan Revolution*, and *Pepe*.) At Sulmona, his army was surrounded, and dispersed. He fled to Barcelona, and lives, at present, in England, where he has written his *Mémoirs hist., polit. et milit., sur la Révolut. du Roy. de Naples en* 1820 (London, 1823), which are valuable in a historical and military respect.

Caravaggio, Michael Angelo Amerighi, or Morigi, called *Michael Angelo da Caravaggio*, a celebrated painter, born at Caravaggio, in the Milanese, in 1569, was, at first, a journeyman mason, but soon applied himself to the study of painting, studied in Milan and Venice, and afterwards went to Rome, where he distinguished himself. He may be considered as the inventor of a manner which has had a crowd of imitators. His characteristic traits are vigor and truth of *chiaro-oscuro* combined with excellent coloring. He was fond of introducing broad and deep masses of shade, whereby a great effect is given to the light. To aid him in producing this effect, the room in which he worked was illuminated by a skylight, and the walls were painted black. He excelled in the painting of naked figures. His faults are obvious. Narrow and servile imitation of nature was his highest aim. Annibal Caracci and Domenichino were, perhaps, less distinguished than Caravaggio during their lives, but, after their death, were ranked higher, because, without neglecting coloring and the study of nature, they aimed at correctness of design and dignity of conception. His violent character involved him in many difficulties. He died as early as 1609. The painters who have imitated him most are Manfredi, Valentin, and Ribeira, called *Espagnolet*.

Caravaggio. (See *Caldara*.)

Caravan, or Karavan; a Persian word, used to denote large companies which travel together in the Levant and in Africa, for the sake of security from robbers, having in view, principally, trade or pilgrimages. Such a company often has more than 1000 camels to carry their baggage and their goods. These walk in single file, so that the line is often a mile long. On account of the excessive heat, they travel, mostly, early in the morning. As every Mohammedan is obliged to visit the tomb of Mohammed once, at least, during his life, caravans of pilgrims go to Mecca, every year, from various places of meeting. The leader of such a caravan to Mecca, who carries with him some cannon for protection, is called *Emir Adge*. Trading caravans choose one of their own number for a leader, whom they call *Caravan-Baschi*. Much information on the subject of caravans is to be found in the travels of Niebuhr, who made many journeys with them, and describes them, as it is well known, minutely and faithfully. (For an account of some of the most important routes pursued by the caravans in Africa, see the article *Africa*, p. 90, vol. i.)

Caravan Tea. (See *Tea*.)

Caravansaries, in the East; a sort of inn, situated in countries where there are no cities or villages for a considerable extent, to furnish travellers with a shelter. Some of them are built with much splendor, though they are generally unfurnished, and the traveller is obliged to bring with him his bed and carpet. In many, the hospitality is gratuitous. It is common for a pious Mohammedan to establish, during his life, or by will, one or several of such caravansaries. This kind of benevolence is considered peculiarly

agreeable to the Deity, and promotive of the eternal happiness of the founder. Sometimes persons are kept in these establishments to show the way to the caravans for some distance. (See *Khan.*)

Caraway Seeds (*fructus carvi*) are a stimulant and excitant, the fruit of a biennial plant (*carum carvi*, Linnæus), a native of Europe, growing particularly in the south of France.

Carbon. Charcoal, as we are familiar with it in common life, contains hydrogen and saline and metallic substances. Accordingly, it became necessary to introduce a peculiar term for its pure base, and the one adopted by chemists was *carbon.* This element, besides forming the inflammable matter of charcoal, exists largely in animal substances, and is extensively distributed in the mineral kingdom.—The only body in which carbon has been found to exist in a state of absolute purity, is the diamond. This precious stone has always been esteemed as the most valuable of the gems—a superiority which it owes to its hardness, lustre and high refractive power. Diamonds are brought from India and from Brazil. Those of India, which have been the longest known, are principally found in the kingdoms of Golconda and of Visiapour. Those of Brazil, discovered at the commencement of the 17th century, belong to the district of Serro-do-Frio. The situations in which they occur are such as to favor the idea of their recent formation; since they exist disseminated through a loose, ferruginous sandstone, or quite detached in a sandy soil; and, in both cases, are situated at no great depth below the surface. In Brazil, the conglomerate in which they exist is called *cascalho;* from which they are extracted by washing, in the same manner as gold. The diamond uniformly occurs crystallized, and presents a great variety of forms; all of which yield readily to mechanical division parallel to all the planes of the regular octohedron, which, therefore, is the form of the primary crystal, and under which figure it is sometimes found in nature. The faces of its crystals are very frequently curved, so as to communicate to them a rounded appearance. They are commonly limpid; and are either colorless, or of a yellowish, bluish, yellowish-brown, black-brown, Prussian blue or rose-red color. Specific gravity, 3.5. Its hardness is extreme; so that it can be worn down only by rubbing one diamond against another, and is polished only by the finer diamond powder.

—The weight, and, consequently, the value of diamonds, are estimated in carats, one of which is equal to four grains; and the price of one diamond, compared with that of another of equal color, transparency and purity, is as the squares of the respective weights. The average price of rough diamonds, that are worth working, is about £2 for the first carat. The value of a cut diamond is equal to that of a rough diamond of double weight, exclusive of the price of workmanship; and the whole cost of a wrought diamond of

1 carat	may be about		$36, or	£ 8
2 carats	is	$2^2 \times$	£8 =	32
3 do.	is	$3^2 \times$	8 =	72
4 do.	is	$4^2 \times$	8 =	128
100 do.	is	$100^2 \times$	8 =	80,000

This rule, however, is not extended to diamonds of more than 20 carats. The larger ones are disposed of at prices inferior to their value by that computation. The snow-white diamond is most prized by the jeweller. When transparent, and free from cracks, it is said to be of the *first water.*—The following are some of the most extraordinary diamonds known:—one in the possession of the rajah of Mattan, in the island of Borneo, where it was found about a century ago: it is shaped like an egg, and is of the finest water: its weight is 367 carats, or 2 oz. 169 grs. Troy. Another is the celebrated Pitt diamond, now among the crown jewels of France, weighing 136 carats; another in the sceptre of the emperor of Russia, of the size of a pigeon's egg; and another in the possession of the Great Mogul, which is said to weigh 280, and which, in a rough state, weighed 793 carats.—From the fact that transparent inflammable bodies refract light in a ratio greater than their densities, sir Isaac Newton conjectured that the diamond might consist of an unctuous matter coagulated. The Florentine academicians had rendered its combustibility probable, by exposing it to the solar rays of a powerful burning-glass, and observing that it gradually disappeared, or was consumed. Subsequent experiments settled the question, by proving, that the diamond lost none of its weight when calcined out of contact with the air; but, on the contrary, that it was dissipated when heated in contact with this fluid. It still remained, however, to be discovered, what was the true nature of the diamond. This was accomplished by Lavoisier, who enclosed diamonds in jars filled with atmospheric air or oxygen gas, and, after having

caused them to disappear by the heat of a burning-glass, examined the air in the vessels. He found it to exhibit precisely the same properties as the air which results from the combustion of charcoal. This experiment was also performed by Morveau, who demonstrated the nature of the diamond by still another arrangement. A diamond was enclosed in a cavity made in a piece of pure, soft iron; a stopper of the same metal was driven into it, and the mass was put into a small crucible, which was covered, and this into a second; the space between them being filled with pure silicious sand. The whole was exposed, for some time, to an intense heat. When examined, the diamond had disappeared, and the iron, with which it had been in contact, was converted into steel. Now steel is a compound of iron and carbon; and, as the diamond was not visible, and as there was no source from which the carbon could have been obtained, the conclusion was unavoidable, that the diamond was pure carbon. Yet so different is this mineral from charcoal, that it was, for a time, imagined that it contained some other element than carbon; but the numerous and delicate experiments of sir H. Davy, and several other chemists, failed of detecting any thing else in its composition; and, although there exists so great a difference between the diamond and charcoal, in their external properties, we are forced to believe that they are identically of the same nature. The diamond is, therefore, pure carbon, and differs from charcoal (leaving out of question its trifling impurities) only in the arrangement of its molecules.—The substance in which carbon exists next in purity is charcoal. For common purposes, this is prepared by piling billets of wood in a pyramidical form, with vacuities between them for the admission of air, covering them with earth, and inflaming them. In consequence of the heat, part of the combustible substance is consumed, part is volatilized, together with a portion of water, and there remains behind the ligneous fibre only of the wood, in the form of a black, brittle and porous body. When required pure, and in small quantities, for the purposes of the chemist, it may be obtained by immersing the wood in sand contained in a crucible exposed to heat. According to the experiments of Messrs. Allen and Pepys, the weight of charcoal obtained from 100 parts of different woods was as follows:—fir, 18.17; lignum vitæ, 17.25; box, 20.25; beech, 15; oak, 17.40; mahogany, 15.75.—*Lampblack* is charcoal in a state of minute division, and is prepared for the demands of trade from the dregs which remain after the eliquation of pitch, or else from small pieces of fir-wood, which are burned in furnaces of a peculiar construction, the smoke of which is made to pass through a long horizontal flue, terminating in a close, boarded chamber. The roof of this chamber is made of coarse cloth, through which the current of air escapes, while the soot, or lampblack, remains behind.—*Coke* is a peculiar kind of charcoal, which remains in the retort, after the heating of coal to procure the coal gas.—*Ivory-black*, or *animal charcoal*, is obtained from bones made red-hot in a covered crucible, and consists of charcoal mixed with the earthy matters of the bone.—Wood charcoal, well prepared, is of a deep-black color, brittle and porous, tasteless and inodorous. It is infusible in any heat a furnace can raise; but, by the intense heat of a powerful galvanic apparatus, it is hardened, and at length is volatilized, presenting a surface with a distinct appearance of having undergone fusion. The density of charcoal, according to Mr. Leslie, is little short of that of the diamond itself, although its specific gravity has usually been considered as low as 2.00. Charcoal is insoluble in water, and is not affected by it at low temperatures; hence wooden stakes, which are to be immersed in water, are often charred to preserve them.—Owing to its peculiarly porous texture, charcoal possesses the property of absorbing a large quantity of air, or other gases, at common temperatures, and of yielding the greater part of them when heated. It appears, from the researches of Saussure, that different gases are absorbed by it in different proportions. He found that charcoal prepared from box-wood absorbs, during the space of 24 or 36 hours, of

Ammoniacal gas,	90	times its volume;
Muriatic acid, . . .	85	do.
Carbonic acid, . . .	35	do.
Oxygen, ...	9.25	do.
Hydrogen, ...	1.75	do.

Charcoal likewise absorbs the odoriferous and coloring principles of most animal and vegetable substances. Thus, all saline substances, which, from the adherence of vegetable or animal extractive matter, are of a brown color,—as crude tartar, crude nitre, impure carbonate of ammonia, and other salts,—may, after being digested through the medium of water with charcoal, be obtained white

by a second crystallization. Resins, gum-resins, assafœtida, opium, balsams, essential oils, and many other substances, even those that have the strongest smell, are rendered nearly inodorous when they are rubbed with charcoal and water, or when solutions of them in alcohol are macerated with the charcoal, or filtrated repeatedly through it. A number of the vegetable tinctures and infusions also lose their color, smell, and much of their taste, by the same process. Common vinegar, on being boiled with charcoal powder, becomes colorless. Malt spirit, by distillation with charcoal, is freed from its disagreeable flavor. In the same manner wines, also, become colorless, and distilled waters lose their odors. Water, which, from having been long kept in wooden vessels, as during long voyages, has acquired an offensive smell, is deprived of it by filtration through charcoal powder, or even by agitation with it for a few minutes, especially when a few drops of sulphuric acid have also been added. Hence, also, it has been found that, by charring the inside of casks for keeping water, it may be preserved a long time without spoiling. Charcoal can even remove or prevent the putrescence of animal matter. If a piece of flesh has become tainted, the taste and smell may, in a great measure, be removed, by rubbing it with charcoal powder; and it may be preserved fresh for some time by burying it in the same substance. To produce these effects, however, it is necessary that the charcoal should have been well calcined and newly prepared.—The uses of charcoal are extensive. It is used as fuel in various arts, where a strong heat is required without smoke, as in dyeing, and in various metallurgic operations. By cementation with charcoal, iron is converted into steel. It is used in the manufacture of gunpowder, in its finer state of aggregation, under the form of ivory-black, lamp-black, &c. It is the basis of black paint; and, mixed with fat oils and resinous matter, to give a due consistence, it forms the composition of printing ink. It is used to destroy color and odor, particularly in sirups; to purify honey; to resist putrefaction; to confine heat, and for a number of other important purposes.—When charcoal is heated to a certain degree in the open air, or in oxygen gas, it takes fire, and burns with the production of an elastic vapor, which has been called *carbonic acid gas*. It is usually obtained, however, by other processes. It exists, combined with lime, in the different varieties of limestone, marble and chalk; and, if any of these substances be exposed to a strong heat, the affinity of the acid to the lime is so far weakened, that it assumes the elastic form, and may be collected. An easier mode is also practised for effecting its disunion, through the affusion of one of the more powerful acids.—From the experiment of the direct formation of this acid, by the combustion of charcoal in oxygen gas, its composition has been determined to be 27.4 carbon and 72.6 oxygen. Tennant illustrated its nature analytically, by passing the vapor of phosphorus over chalk, or the carbonate of lime, heated to redness in a glass tube. The phosphorus took oxygen from the carbonic acid, charcoal, in the form of a light, black powder, was deposited, and the phosphoric acid, which was formed, united with the lime.—Carbonic acid is a colorless, inodorous, elastic fluid, which possesses all the physical properties of the gases in an eminent degree, and requires a pressure of 36 atmospheres to condense it into a liquid. Its specific gravity, compared with common air, is 1.5277. It extinguishes burning substances of all kinds, and is incapable of supporting the respiration of animals, its presence, even in a moderate proportion, being soon fatal. An animal cannot live in air which contains sufficient carbonic acid for extinguishing a lighted candle; and hence the practical rule of letting down a burning taper into old wells or pits, before any one ventures to descend. When an attempt is made to inspire pure carbonic acid, a violent spasm of the glottis takes place, which prevents the gas from entering the lungs. If it be so much diluted with air, as to admit of its passing the glottis, it then acts as a narcotic poison on the system. It is this gas which so often proves destructive to persons sleeping in a confined room with a pan of burning charcoal. Lime-water becomes turbid when brought into contact with carbonic acid, from the union of the lime with the gas, and the insoluble nature of the compound thus formed. Hence, lime-water is not only a valuable test of the presence of carbonic acid, but is frequently used to withdraw it altogether from any gaseous mixture that contains it. Carbonic acid is absorbed by water. Recently-boiled water dissolves its own volume of carbonic acid, at the common temperature and pressure; but it will take up much more if the pressure be increased. Water and other liquids, which have been charged with carbonic

acid under great pressure, lose the greater part of the gas when the pressure is removed. The effervescence which takes place on opening a bottle of ginger beer, cider, or brisk champaign, is owing to the escape of carbonic acid gas. Water which is fully saturated with carbonic acid gas sparkles when it is poured from one vessel to another. The solution has an agreeably acidulous taste, and gives to litmus paper a red stain, which is lost on exposure to the air. On the addition of lime-water to it, a cloudiness is produced, which at first disappears, because the carbonate of lime is soluble in an excess of carbonic acid; but a permanent precipitate ensues, when the free acid is neutralized by an additional quantity of lime-water. The water which contains carbonic acid in solution is wholly deprived of the gas by boiling. The agreeable pungency of beer, porter and ale is, in a great measure, owing to the presence of carbonic acid; by the loss of which, on exposure to the air, they become stale. All kinds of spring and well-water contain carbonic acid, which they absorb from the atmosphere, and to which they are partly indebted for their agreeable flavor. Boiled water has an insipid taste, from the absence of carbonic acid. Carbonic acid is always present in the atmosphere, even at the summit of the highest mountains. Its origin is obvious. Besides being formed abundantly by the combustion of all substances which contain carbon, the respiration of animals is a fruitful source of it, as may be proved by breathing a few minutes into lime-water. It is also generated in all the spontaneous changes, to which dead animal and vegetable matters are subject. The carbonic acid proceeding from such sources is commonly diffused equably through the air; but, when any of these processes occur in low, confined situations, as in the galleries of mines or in wells, the gas is then apt to accumulate there, and form an atmosphere called *choke damp*, which proves fatal to any animals that are placed in it. These accumulations take place only where there is some local origin for the carbonic acid; for example, when it is generated by fermentative processes going on at the surface of the ground, or when it issues directly from the earth, as happens at the grotto del Cane, in Italy, and at Pyrmont, in Westphalia.—Though carbonic acid is the product of many natural operations, no increase of its quantity in the atmosphere is discoverable. Such an increase appears to be prevented by the process of vegetation. Growing plants purify the air by withdrawing carbonic acid, and yielding an equal volume of pure oxygen in return; but whether a full compensation for the deterioration of the air by respiration is produced in this way, has not, as yet, been satisfactorily determined. —Carbonic acid abounds in mineral springs, such as those of Tunbridge, Carlsbad and Saratoga. In combination with lime, it forms extensive masses of rock, which occur in all countries, and in every formation. It unites with alkaline substances, and the salts so produced are called *carbonates*. Its acid properties are feeble, so that it is unable to neutralize completely the alkaline properties of potash, soda and lilhia. For the same reason, all the carbonates, without exception, are decomposed by the muriatic and all the stronger acids; the carbonic acid is displaced, and escapes in the form of gas. —Another gaseous compound of carbon with oxygen, called *carbonic oxyde*, exists, or may be obtained by heating powdered chalk, or any carbonate which can bear a red heat without decomposition, with iron filings in a gun-barrel. It is evolved together with carbonic acid gas, from which it may be freed by agitating the mixed gases with lime-water, when the carbonic acid is absorbed, and the gas in question is left in a state of purity. It is colorless and insipid. Lime-water does not absorb it, nor is its transparency affected by it. When a lighted taper is introduced into a jar of carbonic oxyde, it takes fire, and burns calmly at its surface with a lambent, blue flame. It is incapable of supporting respiration. A mixture of 100 measures of carbonic oxyde, and rather more than 50 of oxygen, on being exploded in Volta's eudiometer by electricity, disappear, and 100 measures of carbonic acid gas occupy their place; from which the exact composition of carbonic oxyde is easily deduced. For carbonic acid contains its own bulk of oxygen; and, since 100 measures of carbonic oxyde, with 50 of oxygen, form 100 measures of carbonic acid, it follows that 100 of carbonic oxyde are composed of 50 of oxygen, united with precisely the same quantity of carbon as is contained in 100 measures of carbonic acid. Consequently, the composition of carbonic acid being,

By volume,

Vapor of carbon,	100
Oxygen gas, . . .	100
	100 carbonic acid gas,

By weight,
Carbon, ... 6
Oxygen, ... 16
22 carbonic acid,

that of carbonic oxyde must be,

By volume,
Vapor of carbon, 100
Oxygen gas, . . . 50
100 carbonic oxyde gas,

By weight,
Carbon, ... 6
Oxygen, ... 8
14 carbonic oxyde.

Its specific gravity is 0.9721.—The process for generating carbonic oxyde will now be intelligible. The principle of the method is to bring carbonic acid, at a red heat, in contact with some substance which has a strong affinity for oxygen. This condition is fulfilled by igniting chalk, or any of the carbonates, with half its weight of iron filings, or of charcoal. The carbonate is reduced to its caustic state, and the carbonic acid is converted into carbonic oxyde by yielding oxygen to the iron or the charcoal. When the first is used, an oxyde of iron is the product; when charcoal is employed, the charcoal itself is converted into carbonic oxyde.

Carbonari (*colliers*); the name of a large political secret society in Italy. According to the Memoirs of the Secret Societies of the South of Italy, particularly the Carbonari, translated from the Original Manuscript (London, 1821), it emerged from its former obscurity in 1818. It has published instructions, catechisms of the different degrees, statutes, rituals, and so on, which give, however, only a partial view of the subject, without entering into the secret motives of the leaders, and the real spirit of the whole society. They have a tradition, that they were founded by Francis I of France, on which account they drink to his memory at their festivals. It is evidently going too far to associate them with the disturbances among the German peasantry in the beginning of the 16th century, or to look for their origin in the oppressive forest laws of the Norman kings of England. If, however, as their antiquity is not to be disputed, they could be proved to be a branch of the Waldenses, their religious character, which aims at evangelical purity and a rejection of traditions, would be best accounted for. According to Botta's *Histoire d'Italie*, the republicans fled, under the reign of Joachim (Murat), to the recesses of the Abruzzi, inspired with an equal hatred of the French and of Ferdinand. They formed a secret confederacy, and called themselves *colliers*. Their chief, Capobianco, possessed great talents as an orator. The war cry—"Revenge for the land crushed by the wolf!"—revealed the objects of the society. Ferdinand and Caroline endeavored to obtain their assistance against the French. Prince Moliterni himself, a republican at heart, was sent to them for this purpose. Count Orloff, in his work on Naples, ascribes the foundation or revival of the Carbonari to queen Caroline of Naples: others assert that Maghella, the former minister of police, gave this society its present importance. Maghella, a native Genoese, was made minister of police in the time of the Ligurian republic, and, after it was united with France, director of the tobacco monopoly. When Murat ascended the throne of Naples, he employed him in the department of police, and, after the lapse of some time, appointed him minister. All his efforts were directed to the union and independence of Italy; and, for this purpose, he made use of the society of the Carbonaria, which he reformed and extended. In 1812, he urged his sovereign to make himself independent of Napoleon, and to raise the standard of liberty and independence in Italy. Murat was supported by the Carbonari (who desired a constitution) only during the short intervals in which it was hoped that he would act according to these suggestions. In the sequel, he informed his brother-in-law, Napoleon, of the designs of Maghella, and delivered him, as a native Genoese, to France, where he lived, for some time, under the superintendence of the police. In 1815, he returned to Italy, and exerted his influence chiefly in the States of the Church, then occupied by Murat. After the expulsion of Murat by the Austrian armies, he was first carried to a Hungarian fortress, afterwards delivered to the king of Sardinia, imprisoned for a year in Fenestrelles, and then set at liberty. The ritual of the Carbonari is taken from the colliery. Clearing the wood of wolves (opposition to tyranny) is the basis of their symbols. By this, they are said to have meant, at first, only deliverance from foreign dominion; but, in later times, democratical and antimonarchical principles have sprung up, which were probably discussed chiefly among the higher degrees of the order. They call one another *good cousins*. Those of the second degree

are called *Pythagoreans*, and the oath of admission is, "Hatred to all tyrants!" Of the third degree, whose existence cannot be doubted, little is known. There are even traces of a fourth degree. A general union of the order under a common head seems not to have been effected. The separate societies in the small towns entered into a connexion with each other; but this union extended no farther than the province. The place of assembly is called the *hut* (*baracca*): the exterior parts are called the *wood;* the interior of the hut is called the *colliery* (*vendita*). The confederation of all the huts of the province is called the *republic*, generally bearing the ancient name of the province; for instance, the *republic* of *West Lucania*, in *Principato Citra*, which consisted of 182 huts, and had its seat at Salerno; the *East Lucanian republic*, in the province of Basilicata, chief seat at Potenza; the *republics* of *Hirpinia*, *Daunia*, &c. The chief huts (*alta vendita*) at Naples and at Salerno endeavored to effect a general union of the order, at least for the kingdom; but the attempt appears to have been unsuccessful. To what degree, however, the feelings of the nation were prepared for the object, appears from the fact, that the order, soon after its foundation, contained from 24,000 to 30,000 members, and increased so rapidly, that it spread through all Italy. In 1820, in the month of March alone, about 650,000 new members are said to have been admitted. Whole cities joined it; the little town Lanciano, in Abruzzo Citra, in March, 1814, contained 1200 armed members of the order. The terms of admission could not, of course, have been difficult; even notorious robbers became Carbonari; and the assertion, that their admission effected an immediate reformation of their life, will not meet with much credit. The clergy, and the military, in particular, seem to have thronged for admission. The religious character of the order appears from its statutes: "Every *carbonaro* has the natural and inalienable right to worship the Almighty according to his own opinions and the dictates of his conscience:" and this spirit shows most clearly the importance of the order; for it is far more difficult to be suppressed than the political spirit, and indicates a more universal and profound excitement. The Carbonari seem to have borrowed many forms from the freemasons, but did not, probably, originate from them. Even in Italy, freemasonry is considered distinct. Besides the Carbonari, several other secret societies have been formed—the *European Patriots;* the *Resolute* (*Decisi*), at whose head was a famous robber, Giro Annichiarico (formerly a clergyman), who, in 1817, was taken prisoner and executed by general Church. With him his troop, consisting of a few members, was extinguished. (On the tendency and the constitution of the Carbonari, during the reign of Napoleon, see *Hermes*, xix.) After the suppression of the Neapolitan and Piedmontese revolution, in 1821, the Carbonari, throughout Italy, were declared guilty of high treason, and punished as such by the laws. Some interesting facts concerning them are contained in De Wit's Fragments from my Life and Time (Brunswick, 1827); but the book is such a mixture of presumption and exaggeration, that it is of little value to any reader who is not sufficiently acquainted with the political affairs of that time to distinguish the false from the true. The Carbonari have added one more to the attempts of Italy to realize a wish as old as its misfortunes; that is, to attain deliverance from a foreign yoke, and to become united under one government. There has not existed one Italian of talent, from Dante, who called his country *di dolor' ostello* (mansion of pain), down to the latest times, poet or politician, who has not lamented the divided state of his country, and subscribed the sentiment of Petrarca, *Italia mia, benchè sia indarno*, &c.

Carbonic Acid. (See *Carbon.*)

Carbonic Oxyde. (See *Carbon.*)

Carbuncle. (See *Garnet.*)

Carbuncle, in surgery; a roundish, hard, livid and painful tumor, quickly tending to mortification, and (when it is malignant) connected with extreme debility of the constitution. When this complaint is symptomatic of the plague, a pestilential bubo usually attends it. (See *Plague.*) The carbuncle is seated deeply, in parts provided with cellular membrane, and therefore does not soon discover its whole dimensions, nor the ill digested matter it contains.

Carcass (in French, *carcasse*), in military language; an iron case filled with combustible materials, which is discharged from a mortar, like a bomb. There were formerly two kinds, oblong and round ones, but they are now out of use.—In architecture, *carcass* signifies the timberwork of a house, before it is either lathed or plastered.

Carcinoma. (See *Cancer.*)

Card. Playing-cards are, probably,

an invention of the East, as appears from the name which cards originally bore in Italy (*naibi*), and still bear in Spain and Portugal (*naipes*), which word, in the Oriental languages, signifies *divination* or *prognostication*. If it could be proved that the Gipsies first made cards known in Asia and Africa, this supposition would be placed beyond doubt. It is asserted, that the Arabs or Saracens learned the use of cards from the Gipsies, and spread the use of them in Europe. The course that card-playing took, in its diffusion through Europe, shows that it must have come from the East, for it was found in the eastern and southern countries before it was in the western. The historical traces of the use of cards are found earliest in Italy, then in Germany, France and Spain. The first cards were painted, and the Italian cards of 1299 are acknowledged to have been so. The art of printing cards was discovered by the Germans, between 1350 and 1360. The Germans have, moreover, made many changes in cards, both in the figures and the names. The *lanzknechtsspiel*, which is regarded as the first German game with cards, is a German invention. Of this game we find an imitation in France, in 1392, under the name of *lansquenet*, which continued to be played there till the time of Molière and Regnard, and, perhaps, still longer. The first certain trace of card-playing in France occurs in the year 1361, and Charles VI is said to have amused himself with it during his sickness, at the end of the 14th century. The modern French figures are said to have been invented in France between 1430 and 1461. It has been said that cards were known in Spain as early as 1332, but this opinion is supported by no evidence. The earliest indication of card-playing in Spain is its prohibition by the king of Castile, John I, in 1387, when it must, consequently, have been very prevalent. One of the best works on the different games at cards is the well-known treatise of Hoyle. (For the different games, see the respective articles.)

Cardamom, small (*cardamomum minus; amomum cardamomum*, Linnæus); a perennial plant growing in the East Indies. The fruit is used as a stimulant and excitant. Triangular capsules, from four to five lines in length, of a yellowish-white, contain the seeds, which are of a brown color, a pleasant, aromatic smell, a warm, pepper-like taste, weaker, however, than that of the various peppers. In France, it is much less used than in England and the U. States.—The *great* and *middle cardamoms* are furnished by other species of *amomum*, as yet unobserved and undescribed. They may be only varieties of the preceding. Their properties are not so energetic.

Cardan, or Cardano, Geronimo (*Hieronymus Cardanus*). This famous philosopher, physician and mathematician was born in 1501, at Pavia, and was educated, from his fourth year, very carefully, in the house of his father, a physician and lawyer in Milan, distinguished for his learning and integrity. In his 20th year, he went to Pavia to complete his studies; and, after two years, he began to explain Euclid. He was, subsequently, professor of mathematics and medicine in Milan. He then returned to Pavia, again visited Milan, taught, for some time, at Bologna, and, meeting with some difficulties there, went to Rome. Here he was received into the medical college, and was allowed a pension by the pope. He declined the invitations of the king of Denmark, on account of the climate and of the religion of that country. The latter reason for his refusal appears strange from a man who was accused of irreligion; but his biographers differ with regard to his religious opinions. Contradictory passages are cited from his works, which cannot surprise us in one who was lost in cabalistic dreams and paradoxes, and pretended to have a familiar demon (*dæmon familiaris*), from whom he received warnings, &c. All this excited the theologians against him, who attacked his orthodoxy, and even accused him of atheism, but certainly without foundation. The truth is, that Cardan was superstitious, but his chimeras were in opposition to the reigning superstitions of the age. He believed so implicitly in astrology, that he drew his own horoscope several times, and ascribed the falsehood of his predictions, not to the uncertainty of the art, but to his own ignorance. His two works, *De Subtilitate* and *De Rerum Varietate*, contain the whole of his natural philosophy and metaphysics, and are curious as an instance of a strange mixture of wisdom and folly. Cardan wrote, also, on medicine. His writings on this subject, amid much trash, contain some sound ideas. His fame as a physician was so great, that the primate of Scotland, who had been sick for 10 years, and had consulted the physicians of the king of France and of the emperor of Germany without success, invited him to Scotland, and was restored to health by his

prescriptions. His highest claims to the gratitude of the learned rest on his mathematical discoveries. Algebra, which, from the time of its origin, had been cultivated almost exclusively in Italy, excited, at that time, much rivalry among the mathematicians, who carefully kept their discoveries secret, in order to triumph over each other in their public disputes. Cardan, it is said, was told that Tartalea had discovered the solution of equations of the third degree, and obtained the secret from him by stratagem and under promise of silence, but published the method, in 1545, in his *Ars magna*. A violent dispute arose, which cannot now be decided with certainty. The honor of giving his name to the invention has remained to him who first made it known, and it is still called the *formula of Cardan*. It is universally believed that Cardan discovered some new cases, which were not comprehended in the rule of Tartalea; that he discovered the multiplicity of the roots of the higher equations, and, finally, the existence of negative roots, the use of which he did not, however, understand. His tranquillity was disturbed, not only by the attacks of his enemies, but also by his own extravagancies, which are related in his work *De Vita propria*, no doubt with much exaggeration. They are exposed with so much frankness, that those who have judged him with indulgence have been obliged to suppose him subject to fits of insanity. He died, probably, in 1576, according to some accounts, by voluntary starvation, that he might not survive the year in which he had predicted that his death would occur. All his works, to the number of more than 50, are contained in the edition of Lyons, 1663, in 10 vols., fol.

Cardinal; a clergyman of the Catholic church, who has a right to a vote in the choice of the pope. The cardinals are next in dignity to the pope, enjoy the rank of princes, and, since 1631, have borne the title of *eminence*. The origin of the dignity of cardinals is uncertain. The name is derived from *cardinalis* (distinguished.) The same name was given, under the emperor Theodosius, to the highest civil officers in the state. Till the 11th century, the title of *cardinal* was common to all clergymen who actually officiated in any church. From this time the popes, having grown powerful, formed a college, a secret council of ecclesiastics of high rank, to whom, alone, the title of *cardinal* was soon reserved, by way of eminence; and, under Alexander III, in 1160, they obtained the exclusive right of choosing the pope, with much opposition, however, on the part of the other Roman clergy, and much scandal. Innocent IV (1243—1254) gave them a rank above the bishops, together with the red hat, and Boniface VIII assigned to them the princely mantle. Urban VIII gave them the title *eminence*, instead of *illustrissimi*, which they had enjoyed till then. With the pope, they form the sacred college, and are divided into three ranks—14 cardinal-deacons, 50 cardinal-priests, and 6 cardinal-bishops, who take their names from the ancient bishoprics Ostia (to which is added that of St. Rufin), Porto, Sabina, Palestrina, Frascati, and Alba. In 1526, their number was fixed at 70 by Sixtus V; but it is by no means necessary that this number should be always full, and, in modern times, it has generally not been so. The number of bishops only is always complete. The choice of the cardinals depends solely on the pope. He causes the names of those appointed to be read in the consistory, with the formula "*Fratres habebitis*" (Ye shall receive as brethren, &c.). The red cardinal's hat is sent to those elected, to inform them of their election. Their dress consists of a surplice, with a short purple mantle, and a small cap, over which they wear a hat, with silk strings and tassels at the end. The color is either red or violet. The prerogatives of cardinals, in different countries, are different. (For those which they enjoy in France, see the article *Cardinal* in the *Dictionnaire de Theologie*, Toulouse, 1817.) The king of France gives a cardinal the title of *cousin*. A cardinal, sent to a prince in a diplomatic character from the pope, is called *legatus a latere* or *de latere*. A province, the governor of which is a cardinal, takes the title of a *legation*. The income of the cardinals is, at present, not large, and, compared to that of some of the rich clergy in England, is small. The importance and authority of the cardinals has, of course, sunk very much in modern times, like those of the other dignitaries of the Catholic church, the pope himself included. Formerly, they preceded the princes of the blood, sat at the right of kings, on or near the throne, and were considered equal to kings in rank. (For the manner in which they choose the pope, see *Conclave*.)

Cardinal Points; the four intersections of the horizon with the meridian and the prime vertical circle. They co-

incide with the four cardinal regions of the heavens, and are, of course, 90° distant from each other. The intermediate points are called *collateral points*.

Cardinal Virtues, or *principal virtues*, in morals; a name applied to those virtues to which all the rest are subordinate, or which comprehend all the others. The distribution of the virtues, which lies at the foundation of this notion, had its origin in the old Grecian philosophy; and the same number is found here as in the elements of nature. These principal virtues, as enumerated by Plato, are, prudence, temperance, fortitude and justice. The three first seem to relate to the duties of man towards himself, and to correspond with the triple division of the soul into the intellectual, the irrational (the seat of the sensual desires), and the seat of the affections, which connects the two first. Justice either relates to our duties to others (God and men), or is the union of the three first virtues. This division appears to be peculiar to the old Pythagoreans. Aristotle divided them still further. The Stoics, too, made the same division in their system of morals, and Cicero introduced it into his Offices. Plotinus and many New-Platonists divide the virtues into four classes—civil or political, philosophical or purifying, religious, and, lastly, divine or pattern virtues; a division coinciding with the rest of his philosophical views. The influence of the ancient philosophers has made the preceding cardinal virtues also a part of the Christian code. Some add to them the three *Christian virtues*, so called—faith, charity and hope—and call the former *philosophical*. The imagination of artists has represented the cardinal virtues under sensible images. In modern times, this division is regarded as useless in treating of ethics; and, in order to judge of it correctly, we must form a just notion of the idea which the ancients attached to the words ἀρετη and *virtus* (virtue).

Carding; a preparation of wool, cotton, hair or flax, by passing it between the iron points, or teeth, of two instruments, called *cards*, to comb, disentangle and arrange the hairs or fibres thereof for spinning, &c. Before the wool is carded, it is smeared with oil, whereof one fourth of the weight of the wool is required for wool destined for the woof of stuffs, and one eighth for that of the warp.

Careening (in French, *faire àbattre*, *carèner*); heaving the vessel down on one side, by applying a strong purchase to the masts, so that the vessel may be cleansed from any filth which adheres to it by breaming.—A *half careen* takes place when it is not possible to come at the bottom of the ship; so that only half of it can be careened.

Carew, Thomas, an English poet, supposed to have been born in 1589, was educated at Corpus Christi college, Oxford. Cultivating polite literature in the midst of a life of affluence and gayety, he was the subject of much eulogy to Ben Jonson, Davenant, and other writers of the period. He seems to have died in 1639, having, in the mean time, exhibited the not unusual transformation of the courtly and libertine fine gentleman into the repentant devotee. Carew is coupled with Waller, as one of the improvers of English versification. It does not appear that any edition of his poems was published during his life-time; but Oldys, in his notes on Langbaine, asserts that his sonnets were in more request than those of any poet of his time. The first collection of his poems was printed in 1640, 12mo.; the last, in 1772. His elegant masque of *Cœlum Britannicum* was printed, both in the early editions and separately, in 1651, and the whole are now included in Chalmers's British Poets. Carew was much studied by Pope; and doctor Percy also assisted to restore him to a portion of the favor with which he has lately been regarded. Specimens both of the sublime and the pathetic may be found in his works; the former in his admirable masque, and the latter in his epitaph on lady Mary Villiers.

Cargillites; a name of the sect more generally known under the denomination of *Cameronians*. (q. v.)

Cariaco; a seaport town in Colombia, in the province of Cumaná; lon. 63° 39′ W.; lat. 10° 30′ N.; population, 6500. It is situated to the east of the gulf of Cariaco, near the mouth of a river of the same name, on a large plain, covered with plantations. The climate is very hot, the air damp and unhealthy. Its trade is in cotton and sugar. The gulf of Cariaco is 68 miles long, and 35 broad, from 80 to 100 fathoms deep, surrounded by lofty mountains, and the waters quiet.

Cariati, prince, a Neapolitan diplomatist, of the ancient family Fuscaldo, served under Joseph Bonaparte and Joachim Murat, in the marine and in the army, in the latter as field-marshal. In March, 1815, together with the duke of Campo-Chiaro, he negotiated, at the congress of Vienna, the acknowledgment of Joachim Murat as king of Naples. Ferdinand

allowed the prince to retain the rank of a field-marshal, and, in 1820, the government intrusted him, under the direction of general Nugent, minister of war, with the command of the troops sent against the rebels in the province of Avellino; but he was unsuccessful. He was now commissioned to declare at Paris, and afterwards at Laybach, the king's acceptance of the Spanish constitution; but he was refused an audience. He then left his native country for England, where he has since lived.

Cariatides. (See *Caryatides*, also *Architecture*, volume 1, page 340, near the bottom.)

Caribbean Sea; that part of the Atlantic ocean, which is bounded N. by the islands of Jamaica, St. Domingo, Porto Rico, and the Virgin islands, E. by the Caribbean islands, S. by Colombia, and W. by Guatimala.

Caribbee Islands; the *West India islands*, so called, which lie in a line from Anguilla N. to Tobago S., and form the eastern boundary of the sea called *Caribbean sea*. The name has been loosely applied to the whole of the West India islands, but is more particularly understood of that archipelago which lies between the 58th and 63d° W. lon., and the 11th and 19th° N. lat. The principal are St. Christopher's, Guadaloupe, Antigua, Montserrat, Mariegalante, called *Leeward islands* (q. v.); Dominica, Martinico, St. Lucia, St. Vincent's, called *Windward islands* (q. v.); Grenada, Tobago, Barbadoes, &c.

Caribbee or St. Lucia Bark. Under the general denomination of *cinchona*, several barks have been comprehended which are not the products of the real cinchona (q. v.), and which, in fact, neither contain cinchonia nor quinia, and cannot, consequently, be substituted as a febrifuge for the true species of cinchona. One of the principal substitutes of this kind is the Caribbee or St. Lucia bark, which is procured from the *exostema Caribæa* (Persoon), a tree growing in the West Indies. This bark is in convex fragments, covered with a yellow epidermis, commonly thin, but sometimes hard and spongy, with deep fissures, of a yellow, red or brown tint internally, of a fibrous texture, offering here and there small, shining and crystalline points, of a very bitter taste, and very faint smell.

Caribbees; the original inhabitants of the Caribbee islands (q. v.), who, in consequence of domestic broils, emigrated from North America, in the neighborhood of Florida, to these islands, and to Guiana, in South America, where they live independent, and have been joined by many runaway Negroes. They often engage in wars against the European colonists. They were almost entirely expelled from the islands in the 18th century. On St. Vincent, there are only 100, and on Dominica, only 30 families of red Caribbees. They are of an olive-brown color, but they paint themselves with arnotto, as a defence against insects. On the island of St. Vincent, there are black Caribbees, sprung from the intercourse of black slaves and Caribbean women. Their number amounts to 2000 families. They are of a dark-brown color, and, notwithstanding all the efforts of the English, they maintain the independence of their quarter of the island. The red Caribbees are distinguished for their activity and courage. They inhabit villages, governed by an elective chief, whom the Europeans call *captain*. They assemble for battle at the sound of a conch. Next to the Patagonians, they are perhaps the most robust nation with which we are acquainted. They devour the flesh of their enemies with great voracity. Their language, one of the most sonorous, and one of the softest in the world, contains nearly 30 dialects.

Caribs. (See the preceding article.)

Caricature (from the Italian *caricare*, to load, to overcharge; *charger*, with the French). A caricature is therefore an exaggerated representation of the qualities and peculiarities of an object; but in such a way that the likeness is preserved, or even made more striking. The effect of such a representation need not be always ridiculous; it may also be terrible. Ben David says, "A child of the usual size, with the head and arms of a giant, is a horrid caricature, whilst a large man, with a diminutive nose, with a little mouth, and a small voice, is a ridiculous one." Considered in reference to the fine arts, external deformities, which do not spring from the fault of the persons afflicted, and therefore excite compassion rather than disgust, can never be the proper subjects of caricature; for, besides that the moral sense is offended, the arts are not permitted to idealize deformities, unless for the purpose of imbodying and representing character. Such corporeal disfigurements, however, as arise from moral defects, and all disagreeable peculiarities of manner and appearance which spring from the same cause, are fair subjects of caricature. These caricatures are to be considered as poetical representations of moral and in-

tellectual deformities, of the vices and follies of individuals, or of whole classes, sects, &c.; as dramatic pictures, which acquire interest from the moral views with which they are composed by the painter, and understood by the spectator. With this object, Leonardo da Vinci has drawn his caricatures. He represents the quarrelsome, the peevish, the braggart, the slothful, the bloated glutton, the dissipated rake, the awkward clown, the laughing fool, &c., all with fidelity, but with exaggeration. Caricatures may be tragic or comic. To the former belong illustrations of moral depravity; to the latter, those of intellectual deficiencies, arising from self-neglect. They were in use even among the ancients, who had among their masks a number of caricatures. Hogarth (q. v.) is an unrivalled master of caricature. Leonardo da Vinci, Annibale Caracci, Ghezzi, Callot and Ramberg (q. v.) were also distinguished in this branch of art. The political caricatures of the English are of a striking and peculiar kind, often exhibiting a greater sensibility for political liberty than for dignity and beauty, but abounding in wit and bold humor. Gilray and Bunbury may be considered as the chief masters in this kind of caricature. The French caricatures are rather exaggerated representations of life than satirical ideals. The Italians have too strong a sense for the beautiful to relish caricatures, and the Germans are too grave to excel in these sportive productions. Grose, in London (1788), published rules for the drawing of caricatures, with an essay on comic painting; and Malcolm, a Historical Sketch of the Art of Caricaturing, with Graphic Illustrations (London, 1813, 4to).

Carignano, Charles Amadeus Albert, prince of Savoy, was born Dec. 28, 1798, and, in 1817, married Maria Theresa, daughter of the grand-duke Ferdinand of Tuscany, heir apparent to the crown of Sardinia, as the king, Charles Felix Joseph, had no male heir. Until the insurrection of a part of the Sardinian army, in the night of March 11 and 12, 1821, the prince had taken no part in state affairs; and, when he at length came forward, he showed himself extremely irresolute, and destitute alike of sound views and manly character. The leaders of the insurrection well knew how to make the prince, who had no knowledge of the political condition of the state, approve the steps of the insurgents, which he did by a public proclamation of March 12. March 21, the prince travelled to Novara, without giving instructions to the *provisorial junta*; and from Novara he proceeded, March 31, to the Austrian head-quarters, and, subsequently, to France, as he was not allowed to return to Turin. In 1823, under the duke of Angoulême, he made a campaign in Spain, distinguished himself somewhat before Cadiz, and, since 1824, has lived again in Turin. The founder of the line of Savoy-Carignan was Thomas Francis, youngest son of Charles Emanuel I, duke of Savoy, who married Maria de Bourbon, countess of Soissons, in 1624. This line possesses considerable private estates, both in France and Piedmont. The former remained entire during the period of the French revolution, as the duke Charles Ferdinand received the rights of a French citizen. There have sprung, likewise, from this house, the chevalier de Savoy, a son of count de Villafranca; Maria Louis (who died in 1785), brother of the grandfather of the heir apparent, and Louisa Anna de Mahon, wife of the count. But this marriage was never acknowledged by the chief of the ruling house, as entitling the heirs of it to be regarded in the line of succession to the throne. The possibility of the succession of the house of Carignano, even before the declaration of the congress of Vienna, could not be contested; but, as the line of Savoy-Carignano, for 200 years, had been confounded with the principal line, disputes might arise, whether the new acquisitions of the latter, consisting, among other places, of the duchy of Montferrat, the western part of Milan, the island Sardinia, and Genoa, would not admit of a female succession to the last possessor of the crown in the chief line. The succession was more involved, from the circumstance that many parts of Savoy and Piedmont had been undoubted German fiefs; and it might be thought that the possessor of the crown of the chief line of this family could settle how they should be disposed of, after the dissolution of the German empire. The experience drawn from history, how contests for succession to the thrones of Europe, after the direct lines had become extinct, have often involved this continent in bloody wars, induced the congress of Vienna to put an end to all uncertainty, by a distinct acknowledgment of the right of succession in the house of Carignano, in case of a failure of male heirs in the principal line. The marriage of the prince of Carignano has already been blessed by the birth of two princes. (See *Sardinian Monarchy*.)

Carillons. (See *Chimes*.)

Carinthia; a duchy of the Austrian monarchy. (See *Austria.*)

Carissimi, Giacomo; a famous Italian musical composer of the 17th century. He was born at Padua, and was living as late as 1672. He wrote many oratorios, cantatas and motets, and his contemporaries praised him for his characteristic expression of feeling, and his easy, flowing style. He deserves the most honor for the improvement of the recitative, having given it a more expressive and natural language. He wrote, also, it is said, the first church cantatas.

Carità (Italian, from the Latin *caritas*); a name, in the fine arts, applied to the representation of Christian love. It is exhibited under the figure of a tender mother, in the midst of her children, manifesting her kindness and affection for them. In this way, for instance, Andrea del Sarto has represented it in a picture which was formerly in the Napoleon museum. A careful and tender mother, holding two children, of whom one lies upon her breast, and the other is refreshing itself with sweet fruits, while a third, on whom her eyes are fixed, slumbers softly near her, are the prominent parts of the picture. This representation of loveliness and tenderness united was unknown to ancient art.

Carleton, sir Guy, lord Dorchester, was born at Strabane, in Ireland, in 1724, and, entering the army, became lieutenant-colonel in the guards in 1748. In 1758, he accompanied general Amherst to America, where he distinguished himself at the siege of Quebec. He was promoted to the rank of colonel in the army in 1762, and, at the siege of the Havannah, signalized himself by his bravery. In 1772, he was appointed governor of Quebec, and created major-general. By his great exertions, he saved the whole of Canada, the capital of which was besieged by the American generals Montgomery and Arnold. The inhabitants joined the British troops, and, after an obstinate resistance, the Americans were repulsed, and Montgomery was killed at the head of his army. In consequence of this exploit, he was knighted, and, the next year, became a lieutenant-general. In 1781, he was appointed to succeed sir Henry Clinton, as commander-in-chief in America, where he remained until the conclusion of the war. In 1786, he was again created governor of Quebec, Nova Scotia and New Brunswick; and, as a reward for his long services, was raised to the peerage, by the title of *lord Dorchester*, of Dorchester in the county of Oxford. He died in 1808, aged 85.

Carli (Giovanni Rinaldo), count, called sometimes *Carli-Rubbi*, from the title of his wife, was born in 1720, at Capo d'Istria, of an ancient noble family, and early manifested an inclination for the study of the middle ages, with which he connected the study of belles-lettres and of poetry. In his 21st year, the senate of Venice made him professor of astronomy and naval science. On account of a ridiculous controversy between him and the abbé Tartarotti, on witches and witchcraft, he was accused of heresy. Maffei put an end to the controversy by his *La Magia Annihilata.* The care which his large estates required compelled Carli to resign his professorship and retire to Istria, where he spent his time in the study of antiquities, on which he has written some valuable treatises. He was afterwards appointed, by the emperor, president of the highest commercial court at Milan, and, subsequently, president of the college of finance in the same city. He published his works, 1784—1794, complete in 15 volumes, under the title *Opere del Sig. Commendatore D. Gian. Rinaldo, Conte Carli, Presidente,* &c.; but, in this edition, his American letters are not contained, which form a work of five volumes. He died in 1795.

Carlin; the most celebrated harlequin of the French stage. Some writers consider the word *harlequin* as derived from his name. He was born at Turin in 1713. His true name was Carlo Antonio Bertinazzi, and *Carlin* is the abbreviation of *Carlino*, the Italian diminutive of *Carlo.* In 1741, he went to Paris, took part in the Italian comedy there, and performed, for 42 years, in the character of harlequin, with constant applause. Goldoni praises him not only as one of the best comic actors, but also for his excellent manners and elegant appearance in society. He enjoyed the greatest favor with the *parterre*, and addressed the audience with a familiarity not allowed to any other actor. He was still more successful in improvisation than in the performance of written parts, and has performed a whole piece of five acts (*Les vingts-six Infortunes d'Arlequin*) in this manner. The union of mirth and benevolence, the grace of his figure and manners, and the respectability of his private character, made him so beloved, that it was said of him,—

Dans ses gestes, ses tons, c'est la nature même,
Sous la masque on l'admire, à découvert on l'aime.

Many bon-mots and witty sayings by him were long current in Paris. The melancholy temper of his latter years formed a remarkable contrast with his mirth on the stage. He was the author of a piece in five acts—*Les nouvelles Métamorphoses d'Arlequin* (1763).

Carlisle (anciently, *Luguvallium*, and *Lugubalum*); a city of England, and capital of Cumberland; 300 miles N. of London; lon. 2° 50′ W.; lat. 54° 54′ N. Population, 12,531. It is a bishop's see. It is surrounded with a wall, and defended by a castle and citadel. The wall and citadel are in a ruinous state, but the castle is kept in repair. It contains two churches, with several other places of religious worship. It sends two members to parliament. It is situated at the conflux of the rivers Eden, Peterell and Canda, which soon after fall into the sea, in Solway Frith. The principal manufactures in Carlisle are cotton-yarn, cotton and linen checks, gray cottons, osnaburgs, coarse linen, drills, pocketing, worsted shag, silk and cotton fancy pieces, stamped cottons, hats, chamois and tanned leather, linseys, nails, coarse knives, stockings, dressed flax, soap, candles, nankeens and ropes.

Carlisle; a post-town and capital of Cumberland county, Pennsylvania; 16 miles W. of Harrisburg, 114 W. Philadelphia; lon. 77° 10′ W.; lat. 40° 12′ N. Population in 1820, 2908. It is pleasantly situated, regularly laid out, built chiefly of stone and brick, and has considerable trade. It contains a court-house, a jail, a market-house, and seven houses of public worship.—Dickinson college was founded in this town, in 1783, and continued a respectable and flourishing institution till about 1816, when its operations were suspended. It has been reorganized, and its operations were resumed in January, 1822. The principal officers are a president and three professors. There is a grammar-school connected with the college.—In the United States and in Canada, there are several other places called *Carlisle*.

Carlos, don; infante of Spain; son of Philip II and Maria of Portugal; born at Valladolid, 1545. His mother died four days after his birth. He himself was sickly; and one of his legs was shorter than the other. The extreme indulgence with which he was educated by Joan, sister of the king, confirmed his violent, obstinate and vindictive disposition. In 1560, Philip caused him to be acknowledged heir of the throne by the estates assembled at Toledo, and, in 1562, he sent him to the university of Alcala de Henarez, in hopes that the study of the sciences would soften his turbulent character. An unlucky fall threw him into a burning fever, and the physicians lost all hopes of his recovery. The king immediately hastened to his son, and, as it was recollected that the prince had a very great veneration for St. Didacius, who was not yet canonized, Philip commanded the corpse of the saint to be brought in a procession. It was laid upon the bed of the sick prince, and his hot face covered with the cold shroud. He fell asleep: when he awoke, the fever had left him: he demanded food, and recovered. All believed a miracle had been wrought, and Philip requested the canonization of Didacius. Contemporary historians differ in the description of the prince. According to some, he had a thirst for glory, an elevated courage, pride, and a love of power. According to others, he was fond of whatever was strange and uncommon; an accident or opposition irritated him to frenzy; address and submission softened him. He is also represented as a favorer of the insurgents in the Netherlands, and, in particular, as an enemy of the inquisition; yet he possessed neither knowledge nor principles, nor even sufficient understanding to be capable of liberal views. With him, all was passionate excitement, which resistance converted into fury. Llorente has corrected the accounts of the character and fate of this prince, from authentic sources, in his work on the Spanish Inquisition. (q. v.) According to him, don Carlos was arrogant, brutal, ignorant and ill-educated. Thus much is certain, that, at the congress of chateau Cambresis (1559), the marriage of don Carlos with Elizabeth, daughter of Henry II of France, was proposed; but Philip, being left a widower by the death of Mary of England, took the place of his son. Don Carlos is said to have loved Elizabeth, and to have never forgiven his father for having deprived him of her. Llorente proves, however, that don Carlos never had fallen in love with the queen, and that she was never too intimate with him. In 1563, Philip, who had no other heir than don Carlos, considering him unfit for the throne, sent for his nephews, the archdukes Rodolph and Ernestus, to secure to them the succession to his dominions. Don Carlos, who lived in continual misunderstanding with his father, resolved, in 1565, to leave Spain, and was on the point of embark-

ing, when Ruy Gomez de Silva, a confidant both of Philip and Carlos, dissuaded him from his resolution. In 1567, when the rebellion in the Low Countries disquieted Philip, don Carlos wrote to several grandees of the kingdom, that he had the intention of going to Germany. He disclosed his plan to his uncle, don Juan of Austria, who mildly dissuaded him from it, and represented to him, that most of the grandees to whom he had written would not omit to inform the king. This was, in fact, done; and, indeed, don Juan himself told Philip what don Carlos had confided to him. It is believed that he was touched by the sufferings of the people of the Netherlands; that he had been invited by them to place himself at their head, and that this plan, from its bold and extravagant character, had gained his approbation. Philip himself seemed to believe that his son intended to go to the Netherlands. The baron Montigny lost his head on this account. The infante had often shown a vehement desire to participate in the government. But Philip, jealous of his own authority, treated his son coolly and with reserve, whilst he gave his confidence to the duke of Alva, to Ruy Gomez de Silva, don Juan of Austria, and Spinola. Don Carlos conceived an invincible aversion to them. He could not bear that Alva should have received the government of Flanders, which he had requested for himself. The architect of the Escurial, Louis de Foix, gives the following facts relating to don Carlos, which have been preserved to us by De Thou. The prince had always under his pillow two naked swords, two loaded pistols, and, at the side of his bed, several guns, and a chest full of other firearms. He was often heard to complain, that his father had deprived him of his bride. On Christmas evening, he confessed to a priest that he had resolved to murder a man. The priest, therefore, refused him absolution. The prior of the monastery of Atocha artfully drew from him expressions, from which it could be inferred that he meditated an attempt upon his own father. The confession was then communicated to the king, who exclaimed, "I am the man whom my son intends to murder; but I shall take measures to prevent it." Thus Philip, a jealous husband, a gloomy and suspicious king, and an unfortunate father, impelled by hatred or fear, by policy or superstition, resolved on the destruction of his only son, in whom he saw only a criminal, unworthy of the crown. On the night of Jan. 18, 1568, while don Carlos was buried in a deep sleep, count Lerma entered his chamber, and removed his arms. Then appeared the king, preceded by Ruy Gomez of Silva, the duke of Feria, the grand prior of the order of St. John, brother of the duke of Alva, and several officers of the guard, and state counsellors. Don Carlos still slept. They awaked him: he beheld the king, his father, and exclaimed, "I am a dead man." Then, addressing Philip, he said, "Does your majesty wish to kill me? I am not mad, but reduced to despair by my sufferings." He conjured, with tears, those who were present to put him to death. "I am not come," answered the king, "to put you to death, but to punish you as a father, and to bring you back to your duty." He then commanded him to rise, deprived him of his domestics, ordered a box of papers under his bed to be seized, and committed him to the care of the duke of Feria and six noblemen, enjoining them not to permit him to write, nor to speak with any one. These guards clothed don Carlos in a mourning dress, took from his chamber the tapestry, the furniture, and even his bed, leaving him nothing but a mattress. Don Carlos, full of rage and despair, caused a large fire to be kindled, under pretext of the extreme cold of the winter, and threw himself suddenly into the flames, for the purpose of suffocating himself. It was with difficulty that he was rescued. He attempted, by turns, to finish his life by thirst, by hunger, by eating to excess; he also attempted to choke himself, by swallowing a diamond. After Philip had endeavored to justify his measures to the pope, and the principal sovereigns of Europe, and had also given notice to the superior clergy, to the courts of justice, and to the cities of his empire, of what had passed, he referred the case of the prince, not to the inquisition, but to the council of state, under the direction of cardinal Espinosa, who was state counsellor, grand inquisitor, and president of the junta of Castile. This court is said, after a minute examination, and hearing many witnesses, to have condemned him to death. But it is a mistake to suppose that the sentence was executed by means of a poisoned soup, or that his arteries were opened in a bath, or that he was strangled. Ferreras and other Spanish historians report, that he died of a malignant fever, after having taken the sacrament with much devotion, and having asked his father's pardon. According to Llorente, the king

signed, March 2, the judicial order for the formal arrest of the prince, for whom the pope, and all the princes to whom Philip had written, in particular the emperor Maximilian II, had interposed in vain. The execution of the order of imprisonment was committed, by Philip, to Ruy Gomez de Silva, prince of Evoli. The prince displayed all the violence of his passionate disposition. He obstinately refused to confess, lived irregularly, and his fury inflamed his blood to such a degree, that even ice-water, which he used daily, could not refresh him. He ordered a great quantity of ice to be laid round his bed, went naked and barefoot upon the stone floor, and, for 11 days in June, took no food but ice. The king then visited him, and addressed to him some words of consolation; after which, the prince eat to great excess. This brought on a malignant fever. Meanwhile, don Diego Bribiesca de Mugnatones, member of the council of Castile, conducted the trial. The prince had not the slightest official notice of it. In July, Mugnatones drew up a report to the king, from the testimony of the witnesses, and from the papers of the prince, which had been seized, stating that don Carlos was guilty of treason, in having plotted against the life of his father, and in having attempted to make himself master of the government of Flanders by a civil war; but that it must depend on the king whether he would have the infante judged according to the common laws of the kingdom. Philip declared that, as king, his conscience did not permit him to make any exception from the laws in favor of a prince who had shown himself so unworthy of the throne. He believed that the recovery of the prince's health was not to be expected; and that, therefore, he ought to be permitted to take food without any restraint, which would cause his death; that he ought, however, to be convinced, that his death was inevitable, in order to induce him to confess, and secure his eternal welfare. The judicial records make no mention of this resolution of the king; no judgment was written or signed; and the secretary Pedro del Hoyo observes, in a note, "that the judicial process had proceeded thus far, when the prince was carried off by sickness, and that, therefore, no judgment was rendered." With this the written accounts of other persons, who were employed in the palace of the king, agree. In consequence of the declaration of the king, the cardinal Espinosa and the prince of Evoli thought it advisable to leave the death of the prince to the progress of the disease. To the physician of the king, Olivarez, who had the care of the prince, this purpose of the prince of Evoli was communicated. On the 20th of July, he administered a medicine to the patient, after which the disease appeared to become fatal, and advised the infante to prepare himself for his approaching death by taking the sacrament. This don Carlos did, July 21, and asked pardon of the king, his father, through his confessor. Philip granted it, and also his blessing. Upon this, don Carlos received the sacrament, and made his will. The struggle lasted during the 22d and 23d of July. The prince listened, during that time, with calmness, to the prayers of the clergyman. On the night of the 23d, the king visited him, gave him his blessing, without being recognised by the prince, and withdrew weeping. Soon afterwards, at 4 o'clock in the morning of the 24th of July, 1568, don Carlos expired. He was buried, as became his rank, yet without any funeral sermon, in the convent of the Dominican nuns, El Real, at Madrid.—The virtuous queen Elizabeth died, Oct. 23 of the same year, in child-bed, and not by poison, as the enemies of Philip asserted. Philip II, in 1592, ordered the judicial acts to be locked in a box, and to be deposited in the royal archives at Simancas. The melancholy fate of don Carlos has served as a subject for several tragedies—those of Schiller, Alfieri, Otway and Campistron.

Carlovitza, or Carlowitz, or Karlowitz; a town of Austrian Sclavonia, on the Danube; 7 miles S. E. Peterwardein; population, 5800. It is the see of a Greek archbishop. Here is a Greek gymnasium, which had, in 1817, 164 students. This town is remarkable for a peace concluded here, in 1699, between the emperor of Germany, Poland, Russia, Venice and the Turks, by the mediation of England and Holland. By the terms of this peace, the emperor Leopold I received Siebenbürgen and Sclavonia; Poland received back Kaminiec, Podolia and the Ukraine; Venice retained the conquered Morea; Russia, Azoph. (See *Austria* and *Ottoman Empire*.)

Carlsbad, in the kingdom of Bohemia, one of the most famous watering-places in the world, is situated in a deep, narrow valley of the river Tepel. It is said that Charles IV discovered the warm springs here, in 1358, during a chase. Peter Baier, his physician, directed him

to use them, to obtain relief for a disorder of his foot. The application proved most effectual; and, in consequence of this, the emperor is related to have built a castle here; and houses gradually accumulated round it. *Carlsbad* signifies, in German, *Charles' bath*. The town has 450 houses, with 2510 inhabitants. Ample provision has been made for the amusement of the visitors of this place. Fine buildings have been erected, and beautiful promenades laid out. A great number of strangers are attracted here every year. (See *Mineral Waters*.) Carlsbad is also known on account of the

Congress of Carlsbad. This congress was only for Germany, and is to be considered as one of the many consequences of the increase of a liberal spirit in the German nation, and the unwillingness of the monarchs to keep their promises respecting liberal institutions. The final act of this congress was closed May 15, 1820, and made a law of the German confederation on July 2. The object of the congress, according to its own resolves, was, to decide upon measures for the safety and internal order of Germany. Laws were passed for the establishment of a stricter police in the universities, which, since that time, have been brought into closer contact with the governments, and officers have been appointed to watch over the conduct of the students. Periodical works, and such as contain less than 20 sheets, were put, for five years, under a severe censorship; and the diet was to have the right to suppress any books which disturbed the peace or attacked the dignity of any member of the confederation, or tended so to do. For the detection and prosecution of secret political societies throughout Germany, and the checking of "*demagogic* tendencies," a central police-commission was organized. The congress, moreover, complained of dangerous theories every day becoming more and more widely spread, &c.

Carlscrona, or Carlscroon; a seaport of Sweden, capital of the province of Blekingen, or Carlscrona; lon. 15° 33′ E.; lat. 56° 17′ N.: population in 1810, 10,639; in 1815, 11,860. The greatest part stands upon a small, rocky island, which rises gently in a bay of the Baltic. The suburbs extend over another small rock, and along the mole close to the basin, where the fleet is moored. It is adorned with one or two handsome churches, and a few tolerable houses of brick; but the buildings in general are of wood. The suburbs are fortified, towards the land, by a stone wall. The entrance into the harbor, which, by nature, is extremely difficult, from a number of shoals and rocky islands, is still further secured from the attack of an enemy's fleet by two strong forts, built on two islands, under the batteries of which all vessels must pass. The harbor is large and commodious, with depth of water sufficient for ships of the first rate. The exports are timber, tar, potash, tallow and marble. Carlscrona is the principal depôt of the Swedish navy.

Carlsruhe (German, which means *the rest of Charles*), the capital of the grand-duchy of Baden, was laid out in 1715, and is one of the most regularly-built towns in Europe. The castle of the grand-duke stands in the centre of the city, from which nine streets run at regular distances from each other, to the circumference of a circle enclosing the area of the city, and thus forming a star. Other streets intersect these in parallel circles. The roads leading to the city correspond to this regular disposition, which, as is often the case in strictly regular cities, often leaves upon the traveller the impression of monotony, rather than that of agreeable order. The city contains 17,232 inhabitants and 1170 houses. It is ornamented with several beautiful public buildings. The court library contains 70,000 volumes; the botanical garden, 6000 species of plants. There are also here several valuable museums and cabinets, several institutions for the promotion of literature and the fine arts, one for the deaf and dumb, and some manufactories. Lon. 20° 45′ E.; lat. 49° N.

Carlstadt (so called from his native town, *Carlstadt*, in Franconia; his proper name was *Andrew Bodenstein*) is celebrated, in the history of the reformation, for his fanaticism as well as his misfortunes. He was professor of theology at Wittenberg. His learning enabled him to render great support to Luther in his first steps for the introduction of a reformation. In 1520, he was included in the bull which condemned Luther; and his spirited appeal from the pope to a general council, of which he gave the first example, as well as his opinion, openly expressed, in favor of the marriage of the priesthood, which soon gained ground, was among the many proofs which he gave of his zeal for the reformation. Whilst Luther was at Wartburg, Carlstadt's zeal urged him to acts of violence. He even instigated the people and students to the destruction of the altars and

the images of the saints, greatly to the displeasure of Luther, who lost the friendship of Carlstadt by his opposition to his outrages. In 1524, he declared himself publicly the opponent of Luther, who had preached at Jena against the disturbances which he had excited, so that the elector Frederic banished him from the country, in September, 1524. Carlstadt, upon this, commenced the controversy respecting the sacrament, denying, in opposition to Luther, the bodily presence of Christ in the sacrament. This controversy was carried on with the bitterest animosity; and, Zwinglius having declared himself in favor of Carlstadt's doctrine, a dispute commenced between the Swiss and Wittenberg theologians, which ended in the separation of the Calvinists and Lutherans. Carlstadt, in the mean time, being suspected, not without reason, of having taken part in the revolt of the peasants in Franconia, was obliged to wander through Germany, and, being ultimately reduced to extreme distress, sought relief of Luther, who procured him an asylum at Kemberg, on condition that he should refrain from the expression of his opinions. Here he lived nearly three years. His restless mind, however, soon led him to break his promise, by the publication of some writings, in 1528; and he even went so far as to plot against Luther's person. To escape from the consequences of his conduct, he repaired to Switzerland, at the end of the same year, where he was appointed vicar of Altstadt, in the valley of the Rhine; in 1530, deacon at Zürich, and, in 1531, vicar and professor of theology at Basle, where he died in 1541 or 1543.

Carmagnole; a name applied, in the early times of the French republic, to a dance, and a song connected with it. The appellation originated, probably, from the city of Carmagnola, in Piedmont. The dance was first used at the time of the indignation of the people on account of the *veto* allowed to the king on the resolves of the national assembly. The carmagnole was commonly sung and danced at popular festivals, executions, and eruptions of popular discontent. Afterwards the name was also applied to the national guards, who wore a dress of a peculiar cut, and to the enthusiastic supporters of the revolution. Several members of the national convention,—Barrère, for instance,—by way of jest, gave this name to their communications to the assembly.—*Petits carmagnoles* is a name given, by the people in Paris, to boys who sweep chimneys and black boots, chiefly Savoyards; probably taken from the name of the city before mentioned.

Carmel; a mountain in Palestine, constituting part of Lebanon, on the southern frontier of Galilee, in the pachalic of Acca. It consists of several rich, woody heights, separated by fertile and habitable valleys, within a circuit of about 28 miles, and terminates, at the mouth of the Kischen, in a lovely plain, which forms the southern coast of the gulf of Ptolemais or Acca, on the Mediterranean. Upon different parts of this mountain there are ruins of churches and monasteries from the time of the Christian kingdom of Jerusalem, and the cave which, according to tradition, was inhabited by the prophet Elias. From the 4th century, Christian hermits have chosen mount Carmel for their abode. It was not, however, till about the middle of the 12th century, that pilgrims, under the direction of Berthold of Calabria, established an association for the purpose of leading a secluded life upon this mountain, which received its rules from Albert, the patriarch of Jerusalem, in 1209, and the papal confirmation from Honorius III, in 1224. Their rules coincide nearly with those of the ancient Basilians. This is the origin of the order of Our Lady of mount Carmel. The Carmelites enumerate among their members all the prophets and holy men mentioned in the Scriptures, from Elias to Jesus; also Pythagoras, the Gallic Druids, the holy women of the New Testament, and the hermits of Christian antiquity. Christ they consider as their particular protector, and his apostles as missionaries from mount Carmel. The Jesuit Papebroch has shown how utterly unfounded their pretensions are, and no well-informed man believes their account of their origin. Yet they were allowed, as late as in the 18th century, by Benedict III, to erect the statue of the prophet Elias, as the founder of their order, in St. Peter's church in Rome. Being driven by the Saracens to Europe, they adopted, in 1247, a milder rule, and the forms of monastic life. They also became divided into four independent bodies:—1. the *observantes*, who wore shoes; 2. the *congregation of Mantua*; 3. the *bare-footed friars*, and *bare-footed* or *Theresian nuns*, in Spain; 4. the *bare-footed friars* in Italy. The two latter classes observe the elder and stricter rule. The knightly order of Our Lady of mount Carmel, established by Henry IV in France, is connected with the Carmelites only by the

name. As their mode of life precludes all useful exertion, governments, in modern times, have taken measures to prevent the extension of their order, and the admission of novices has been forbidden, except in Spain, Portugal and America. In Paris, a nunnery of this order was established in 1817, under the royal protection.

Carmer (John Henry Casimir) count of; high chancellor and minister of justice in Prussia. He rendered the greatest service to Prussian jurisprudence by the assistance which he afforded in the preparation of the Prussian code, and still more by the improvements which he introduced into the civil process of that country. (See *Prussian Code.*) He was born in 1721, entered the Prussian service early, and was soon noticed by Frederic the Great. After 50 years' service, he retired from official life, and died, in 1801, near Glogau, in Silesia.

Carmine, the most splendid of all the red colors, is made from the cochineal insect, or *coccus cacti*. It is deposited from a decoction of powdered cochineal in water, to which alum, carbonate of soda, or oxyde of tin, is added. As the beauty of this valuable color is affected, not only by the mode of applying it, but also by the quantity of the ingredients mixed with it, we find various recipes for the preparation of it. The manufactories which prepare the best carmine carefully conceal the method. The best natural cochineal is found in Mexico.

Carmontelle, a French poet, known by his *Proverbes dramatiques* (10 vols.), born in 1717, at Paris, died there 1806. These little pieces are without much connexion in themselves, being, in fact, only a series of dramatic scenes, but are well adapted for private theatres. The fertility of Carmontelle was as extraordinary as his ease in writing. He is said to have left, besides his printed works and his pieces for the theatre, more than a hundred volumes of manuscripts.

Carnatic; a country in Hindostan, lying along the coast of Coromandel, from cape Comorin, in lat. 8°, to 16° N.; 500 miles in length, and from 40 to 100 in breadth. The Carnatic or Carnada, anciently called *Narasinha*, in early periods, was subject to the king of Bisnagar. Since the year 1787, the whole country has been under the authority or absolute control of the English East India company. The soil is generally sandy, and the climate is one of the hottest in India. The country of Ongole, Mudura and Tinevelly is included in the Carnatic. The principal towns are Arcot, Madras, Ongole, Pondicherry, Cuddalore, Tanjore, Tritchinopoly, Madura and Tinevelly. The principal rivers are the Pennar, the Paliar and the Cauvery.

Carnation (from the Latin *caro, carnis*, flesh) signifies, in the fine arts, the coloring of the flesh of the human body. The use of carnation requires very attentive study, and great skill in the artist. It varies with the sex of the individual, with the classes and countries to which the subjects belong, with the passions, the state of the health, &c. The cheeks are, in a healthy subject, of a lively red; the breast, neck, and upper part of the arms of a soft white; the belly yellowish. At the extremities, the color becomes colder, and, at the joints, assumes a violet tint, on account of the transparent appearance of the blood. All these shades require to be softly blended. Two faults in carnation are chiefly to be avoided—hardness, the fault of the masters of the 15th century, and too great weakness. Guido Reni not unfrequently painted his flesh so that it appeared almost bloodless. The French school has gone furthest in this respect. The flesh of the followers of this school often looks like porcelain or wax. Titian is still unrivalled in carnation.

Carneades, an eminent Greek philosopher, founder of the third or new academy, was a native of Cyrene, in Africa, and is supposed to have been born in the third year of the 141st Olympiad. He studied first under Diogenes the Stoic, but subsequently attended the lectures of Egesinus, who explained the doctrines of Arcesilaus; and, succeeding his master in the chair of the academy, he restored its reputation by softening the prevailing pyrrhonism, and admitting practical probabilities. The doctrine of Carneades specifically was, that, "as the senses, the understanding and the imagination frequently deceive us, they cannot be the infallible judges of truth, but that from the impression made by the senses we infer appearances of truth, which, with respect to the conduct of life, are a sufficient guide." He was a strenuous opposer of Chrysippus, and attacked, with great vigor, the system of theology of the Stoics. He was an advocate of *free-will* against the *fate* of the same sect, and urged just the same difficulties in reconciling divine prescience with the freedom of human actions, as have divided some contending sects of Christianity. One of

the most distinguished events of his life was his being joined in an embassy to Rome with Diogenes the Stoic and Critolaus the Peripatetic, in order to gain the mitigation of a fine levied by the Roman senate on the Athenians. This extraordinary embassy was successful, and Carneades so captivated the people by his eloquence, that Cato the censor, fearful of its effect on the Roman youth, persuaded the senate to send the philosophers back to their schools without delay. C. died in the ninetieth year of his age, continually complaining of the shortness of life, and lamenting that the same nature which composed the human frame could dissolve it.

Carnelian. (See *Quartz.*)

Carniola; a duchy in the Austrian dominions. (See *Austria*, vol. i., page 493.)

Carnival. The same views which led men to propitiate the higher invisible powers by gifts, sacrifices and purifications, also introduced fasts, abstinence from pleasure, and penances. By *fast* is meant an abstinence from the usual means of nourishment, in order to mortify the appetites, and thereby to propitiate the Deity. In every nation of importance, customs of this kind are found. Their historical origin is in the religious customs of the East, where the priests were originally the physicians of the people, and prescribed these fasts as a part of the regimen necessary in this warm region, as well as from religious views. Fasts are observed to this day in the East. The religions of the Persians and the Hindoos, those of Mohammed and Moses, and of the worshippers of the Lama, insist much on fasts. Few traces of them are found in the religion of the ancient people of the North. The earliest Christians fasted on the vigils. (q. v.) The fasts on the *jejunia quatuor tempestatum*, which continued for three days every quarter of the year, were penances, as was that of the period of 40 days (before Easter, or rather before Good Friday, *Quadrigesimæ*), which was called, by way of excellence, *the fast*, and which commemorated the 40 days' fast of Jesus in the wilderness. With regard to the origin of fasts, opinions differ. The most common is, that Telesphorus, bishop of Rome, in the middle of the 2d century, first instituted the 40 days' fast as a rule of the church. By pope Gregory the Great, about 600, Ash-Wednesday was made the beginning of the fast, and the day before was called *fast-eve*, because in the night of this day, at 12 o'clock, the fast began. This fast was preceded by a feast of three days, very obnoxious to the strict zealots. "Christians," it is said, "on these days, deliver themselves up to voluntary madness, put on masks, exchange sexes, clothe themselves like spectres, give themselves up to Bacchus and Venus, and consider all pleasure allowable." This is the origin of the present carnival, or *Faschings*, as it is called in the south of Germany, and which continues, in that country, from Twelfth-day to Ash-Wednesday. The name *carnival* is derived from the Latin words *carne* and *vale* (according to Ducange, from the Latin denomination of the feast in the middle ages, *carne levamen*), because at that time people took leave of flesh. Previously to the commencement of their long abstinence, men devoted themselves to enjoyment, particularly during the three last days of the carnival. The carnival is nothing but the *Saturnalia* of the Christian Romans, who could not forget their pagan festivals. At least it greatly resembles the *Saturnalia*, which were celebrated, annually, in December, with all kinds of mirth, pleasure and freedom, in honor of Saturn, and the golden age when he governed the world, and to preserve the remembrance of the liberty and equality of man in the youth of the world. In Rome, the carnival brought to view, in a lively manner, the old *Saturnalia* in a new form. During the last days of the carnival, and particularly during the day which preceded the long fast, mummeries, plays, tricks, and freedom of every kind, abounded. From Italy, the modern *Saturnalia* passed to the other Christian countries of Europe. In the amusements of this period the dramatic poetry of Germany had its origin, after the cities had attained a flourishing condition. Its first traces appeared in the 13th century. The mummeries of the carnival produced the idea of adopting some character, and carrying it through. To please the multitude, and make the laugh more certain, the manners of common life were caricatured. These exhibitions afterwards became more cultivated and developed. "On fast-eve," says Flögel, in his History of Comic Literature, vol. 4, p. 292, "persons in disguise sometimes went from one house to another, to make sport with their friends and acquaintances. A merry society of this kind formed a plan to represent some scene in their disguises, and hold a regular conversation at one of these mummeries. The unknown players received praises, entertainments or

presents. Encouraged by this success, the company grew stronger, their fables and speeches became longer by degrees, until they attained to regular representations of human life." It was in Nuremberg, renowned for its wares and its wit, that the first fast-eve's play was produced, coarse and frolicsome, to suit the taste of the citizens. These pieces have a near relationship to the masques of the English and the farces of the French, as have the spiritual fast-eve's plays, religious burlesques, to the Mysteries and Moralities. According to the ancient custom, these plays were opened and closed by a crier or herald. The carnival is celebrated, in modern times, with the greatest show and spirit at Venice and Rome. In the former place, it begins after Christmas. The diversions of it are shows, masquerades, the amusements of the place of St. Mark, and sometimes, in case of the visits of great princes, a *regatta*, or boat-race. After this, there was a second carnival in Venice, the Venetian mass, called also the *festival of the Ascension*, and the *Bucentaur festival*, because it commonly began on Ascension-day, and because the celebration of the marriage of the doge with the Adriatic sea was connected with it. It continued 14 days. No character-masks were worn there, however, except Venetian dominos. The carnival at Rome (see Göthe's excellent description, *Das Römische Carneval*, and that of lady Morgan) continues but eight days, and is occupied mostly in masquerades and races. Since the return of peace, the carnival has been celebrated again in Cologne, on the Rhine, under the direction of the *committee of fools*, to the great satisfaction of all who were present. In Spain, the carnival is called *carnestolendas*.

Carnot, Lazare Nicholas Marguerite; born at Nolay, in Burgundy, 1753; the son of an advocate. From his youth, he exhibited an uncommon talent for the mathematical and military sciences, entered the corps of engineers, and rose in office by the favor of the prince of Condé. He published, afterwards, Mathematical Essays, which caused him to be elected a member of several learned societies. His eulogy on Vauban received the prize of the academy at Dijon. At the beginning of the revolution, he was captain in the corps of engineers. In 1791, he was appointed deputy to the constituent assembly, but at first took part only in military affairs. At his proposal, the officers of the nobility were removed from the army, and others substituted from the citizens. As a member of the convention, he voted for the death of Louis. In the following March, he was sent to the *army of the north*, where he deprived the cowardly general Gratien of his command on the field, put himself at the head of the army, and repulsed the enemy. On his return to the convention, he was made a member of the committee of public safety. (q. v.) The influence of Carnot in the military operations now began to be more deeply felt. In possession of all the plans deposited in the archives of Louis XIV, he organized and directed the French armies; and his direction undoubtedly contributed very much to their success. After the fall of Robespierre, he was often accused, but always acquitted, because his duty had been to take care of the defence of the country, and he could not be made answerable for the cruel decrees of Robespierre, in which Carnot's name, as he was a member of the committee, of course, was to be found. At the establishment of the directory, in 1795, Carnot was chosen a member, and, for some time, maintained an important influence. Barras at length succeeded him in the department of war, and was, ever after, his enemy. His plan for the overthrow of Barras was unsuccessful, and, with some others, he was sentenced to transportation on the 18th Fructidor (Sept. 4), 1797. He fled to Germany, and published a defence, which was eagerly read in Paris, and, by the exposure of the conduct of his former colleagues, hastened their overthrow on the 30th Prairial (June 18), 1799. After the 18th Brumaire, Carnot was recalled and appointed *inspecteur aux revues*, and, two months later, in April, 1800, minister of war. He soon after retired into the bosom of his family, but was called to the tribunate, March 9, 1802. The same inflexible integrity and republican principle, which had hitherto distinguished him, did not now desert him. He often opposed the views of the government, voted alone against the consulship for life, and resisted strenuously the proposal for the imperial dignity. He remained, however, a member of the tribunate till it was abolished, passed the next seven years of his life in retirement, and published several valuable military works. In 1814, Napoleon gave him the chief command at Antwerp. He connected a vigorous defence with a careful regard for the interest of the city, which, by the command of Louis XVIII, he afterwards surrendered to the English gen-

eral Graham. He still retained his titles and his honors, but, as a firm republican, he could never expect the favor of the court; particularly as, in his memorial to the king, he openly and severely censured the measures of government, in consequence of which he was passed over in the new organization of the academy of sciences. When Napoleon was once more at the helm of state, in 1815, he made Carnot count and peer of the empire, and pressed upon him the ministry of the interior. Carnot discharged the difficult duties of this office with his usual integrity. After the emperor's second fall, he was made a member of the provisory government of France, and was afterwards the only one of the members of it comprehended in the ordinance of July 24. He retired to Cerney, where he employed his pen on political subjects; then to Warsaw, in 1815, with his family; and, finally, to Magdeburg, where he died Aug. 3, 1823. (See the *Corresp. de Nap. Buonap. av. le Cte. Carnot pend. les* 100 *Jours* (Paris, 1819), and *Carnot's Leben* (Carnot's Life), by Körte.) The brothers Baudouin, in Paris, who have in their possession all Carnot's manuscripts, published, in 1824, *Mem. histor. et militaires sur Carnot, redigés d'après ses Manuscrits, sa Corresp. inédite, et ses Écrits*, etc., *par Tissot*. Among Carnot's writings, the most valuable are his *Essai sur les Machines; Reflexions sur la Métaphysique du Calcul infinitesimal; Sur la Géometrie du Position; De la Défense des Places fortes; Exposé de la Conduite politique de Carnot, depuis le* 1 *Juill.*, 1814. In Magdeburg, Carnot published *Mémoire sur la Fortification primitive*, and a volume of poems. He was rigid in his love of virtue, a scholar, a general, and an inflexible republican. He was universally esteemed, both in France and in foreign lands, and was honored by all parties. Carnot's life is one of those which ought to be familiar to every young republican, like that of Barneveldt. (q. v.)

Caro, Annibale, one of the most celebrated Italian authors of the 16th century, born 1507, at Città-Nuova, in the March of Ancona, after the death of his patron, Gaddi, 1543, was appointed secretary to Pietro Ludovico Farnese, duke of Parma and Piacenza, who intrusted him with several missions to Charles V. After the assassination of the duke, his own life was in considerable danger. He took refuge in Parma, and was treated in a friendly manner by the new duke, Octavio Farnese, whose two brothers, the cardinals Ranuccio and Alexander, took him successively into their service. With the latter he remained from 1548 to his death in 1566, and received from him several ecclesiastical preferments. Caro devoted himself chiefly to the study of numismatics and the Tuscan language, and his pure and elegant style, in verse and prose, soon became generally admired. His translation of the Æneid, in blank verse, is excellent. After his death, appeared a translation by him of Longus, and of Aristotle's Rhetoric; also *Rime* and *Lettere*, the former of which are admired for the elegance of the verse, and the latter as models of beautiful Italian prose. He belongs to the most elegant writers of Italian literature.

Carolina. This name is generally given to a famous law of the German empire, of the year 1532, under Charles V, which he called himself an ordinance of criminal procedure (*Peinliche Gerichtsordnung*). From him, it was, at a later period, called *Constitutio criminalis Carolina*, or, shortly, *Carolina*. The arbitrary administration of justice, the disorder and cruelty which had become customary in the courts of Germany, where many a process was begun and ended with the torture, and persons were sentenced even to death without regular process, gave occasion to this law. From the beginning of the *peace of the land*, the necessity of such a law was felt throughout the country; but it was difficult, in this, as in all other cases, to make the different members of the empire agree on one general measure. The baron John von Schwarzenberg, a man of talent and a patron of science (of the family of the present princes of Schwarzenberg), was chiefly instrumental in introducing this ordinance. He was born in 1463, became minister of state of the prince-bishop of Bamberg, and succeeded in procuring an ordinance of criminal procedure for Bamberg to be drawn up and published in 1507. The same was also adopted, in 1510, by the margrave of Brandenburg and Franconia; and, at last, a law of criminal procedure for the empire at large was passed by the diet at Regensburg, in 1532, which, for that time, was a very great step, and had a salutary influence. Several German princes, as the elector of Saxony, the elector of Brandenburg, and of the palatinate, protested against it, in order to protect the laws of their states and their own privileges against the legislative power of the emperor; but at last the *Caroling* was

established in almost every part of the empire. (See Malblank's *Geschichte der peinlichen Gerichtsordnung Kaiser Karls V*, 1783.)

Carolina Maria; wife of Ferdinand I, king of the Two Sicilies, daughter of the emperor Francis I and of Maria Theresa, born 13th August, 1752; an ambitious and intelligent woman, but, unfortunately, without firmness of character. According to the terms of her marriage contract, the young queen, after the birth of a male heir, was to have a seat in the council of state; but her impatience to participate in the government would not allow her to wait for this event, previous to which she procured the removal of the old minister, Tanucci, who possessed the confidence of the king and of the nation, and raised a Frenchman named Acton (q. v.) to the post of prime minister, who ruined the finances of the state by his profusion, and excited the hatred of all ranks by the introduction of a political inquisition. The queen, too, drew upon herself the dislike of the oppressed nation by coöperating in the measures of the minister; and banishments and executions were found insufficient to repress the general excitement. The declaration of war by Naples against France (1798) was intended to give another turn to the popular feeling; but the sudden invasion of the French drove the reigning family to Sicily. The revolution of cardinal Ruffo in Calabria, and the republican party in the capital, restored the former rulers in 1799. The famous lady Hamilton (q. v.) now exerted the greatest influence on the unhappy queen, on her husband, on the English ambassador and admiral Nelson, and sacrificed more victims than Acton and Vanini had formerly done. (See *Speziale*.) After the battle of Marengo, 12,000 Russians could not prevent the conquest of Naples by the French, and the formation of a kingdom out of the Neapolitan dominions for Joseph (Bonaparte), who was afterwards succeeded in the same by Joachim (Murat). The queen was not satisfied with the efforts which the English made for the restoration of the old dynasty, and thereupon quarrelled with lord Bentinck, the British general in Sicily, who wished to exclude her from all influence in the government. She died in 1814, without having seen the restoration of her family to the throne of Naples.

Carolina, North; one of the United States; bounded N. by Virginia, E. by the Atlantic, S. by South Carolina, and W. by Tennessee; lon. 75° 45′ to 84° W.; lat. 33° 50′ to 36° 30′ N.; 430 miles long and 180 broad. Square miles, 50,000. Population in 1790, 393,751: in 1800, 478,103: in 1810, 555,500; 179,090 blacks. Population in 1820, 638,829; whites, 419,200; white males, 209,644; white females, 209,556; slaves, 205,017; free colored, 14,912: persons engaged in agriculture, 174,196; in manufactures, 11,844; in commerce, 2,551. Militia in 1817, 50,387.—This state is divided into 63 counties. There are no large towns in this state. Raleigh is the seat of government. The other most considerable towns are Newbern, Fayetteville, Wilmington, Edenton, Washington, Hillsborough, Halifax, Tarborough, Salisbury and Salem.—The legislative power is vested in a senate and house of commons, both chosen annually. One senator and two members of the house of commons are sent from each county, and one of the latter from each of the towns of Newbern, Wilmington, Edenton, Fayetteville, Halifax, Salisbury and Hillsborough. The governor is chosen by joint ballot of both houses, and is eligible three years in six.—The principal denominations of Christians in North Carolina are Methodists, Baptists, Presbyterians, Quakers, Moravians and Episcopalians.—There is a respectable institution, entitled the *university of North Carolina*, at Chapel Hill. Academies are established at various places, and an increasing attention has, of late, been paid to education.—The principal rivers are the Roanoke, Chowan, Neuse, Pamlico or Tar, cape Fear, Yadkin and Catawba. Of these, the cape Fear affords the best navigation, and is ascended by vessels of 300 tons to Wilmington, and by steam-boats to Fayetteville. The two most considerable sounds on the coast are those of Pamlico and Albemarle.—Dismal swamp lies partly in North Carolina and partly in Virginia. Little Dismal or Alligator swamp is between Pamlico and Albemarle sounds.—There are three noted capes on the coast, viz., cape Hatteras, cape Lookout and cape Fear, which are all dangerous to seamen.—North Carolina, in its whole width, for about 60 miles from the sea, is generally a dead level, varied only by occasional openings in the immense forest with which it is covered. After traversing this tedious plain, we are at length relieved by the appearance of hills and mountains, from the summits of which we behold a beautiful country, which stretches west far beyond the range of vision, and is adorned with forests of lofty trees.—In

the level parts, the soil, generally, is but indifferent. On the banks of some of the rivers, however, and particularly the Roanoke, it is remarkably fertile; and in other parts of this champaign country, glades of rich swamp, and ridges of oak-land, of a black and fruitful soil, form an exception to its general sterility. The sea coasts, the sounds, inlets, and lower parts of the rivers, have, invariably, a soft, muddy bottom. That part of the state which lies west of the mountains is, for the most part, remarkably fertile, and abounds with oak-trees of various kinds, walnut, elm, linn and cherry-trees; the last of which not unfrequently attains the size of 3 feet in diameter. The soil and productions, in the hilly country, are nearly the same as in the Northern States. Wheat, rye, barley, oats and flax are the crops most generally cultivated, and seem to suit well the nature of the soil. Throughout the whole state, Indian corn and pulse of all kinds are abundant. Cotton is raised in considerable quantities. North Carolina abounds in iron ore; and it is the only one of the U. States in which gold has been found in any considerable quantities. The gold mines, which have lately excited a good deal of interest, though they have not yet proved very productive, are found on the Yadkin and its branches, and extend over a district comprising about 1000 square miles. In almost any part of this territory, gold may be found in greater or less abundance, mixed with the soil. It exists in minute grains or particles, and is also sometimes found in lumps of one or two pounds weight. Of the plains in the low country, the large natural growth is, almost universally, pitch pine, a tall and beautiful tree, which grows here to a size far superior to the pitch pine of the Northern States. This valuable tree affords pitch, tar, turpentine, and various kinds of lumber, which, together, constitute about one half of the exports of North Carolina. It is of two kinds, the common and the long-leaved. The latter differs from other pines, not in shape, but in the length of its leaves, which are nearly half a yard long, and hang in large clusters. The trees in the low countries, both of North and South Carolina, are loaded with quantities of a long, spongy moss, which, hanging in clusters from the limbs, gives the forests a singular appearance. The misletoe frequently engrafts itself upon the trees in the back country. In this part, plums, grapes, blackberries and strawberries grow spontaneously; also several valuable medicinal plants, as ginseng, Virginia snakeroot, Seneca snakeroot, and some others. The rich bottoms are overgrown with canes, the leaves of which continue green through the winter, and afford good pasture for cattle.—North Carolina is far removed from that perfection of culture, which is necessary to give it the full advantage of the natural richness of its soil and the value of its productions. One great cause of its backwardness, in agricultural improvement, is the want of inland navigation, and of good harbors. It has several large rivers, but their mouths are blocked up with bars of hard sand. The best of the indifferent harbors in this state are those of Wilmington, Newbern and Edenton. The most of the produce of the upper country, consisting of tobacco, wheat, maize, &c., has hitherto been carried to Charleston, S. C., and to Lynchburg, and Petersburg, Va. Since 1815, the state has been zealously engaged in an extensive system of internal improvements. These improvements relate to the navigation of the sound, inlets, and the rivers Roanoke, Tar, Neuse, cape Fear, Yadkin, Catawba, &c.; the construction of canals and roads, and the draining of marshes and swamps.—Like all the Southern States, North Carolina has a considerable diversity of climate, occasioned by the physical peculiarities of its different parts. In the level part of the country, intermittent fevers are frequent during the summer and autumn. During these sickly seasons, the countenances of the inhabitants have a pale-yellowish hue, occasioned by the prevalence of bilious affections. Many fall victims, during the winter, to pleurisies and peripneumonies. In the western and hilly parts, the air is as pure and salubrious as in any part of America, and the inhabitants live to a great age. The heat of the summer's day is succeeded in the evening by a grateful and refreshing coolness. Autumn is temperate and serene, and, in some years, the winters are so mild, that autumn may be said to continue till spring. The wheat harvest commences in the beginning of June, and that of Indian corn early in September.—In 1827, merchandise to the value of $276,791 was imported into North Carolina, and $449,237 worth exported. (For similar accounts of preceding years, see Watterson and Zandt's *Tabular Statistical Views*, Washington, Jan. 1829).

Historical Sketch of North Carolina. In 1586, the first attempt was made by the English to colonize North America, under

a patent to sir Francis Drake. A small colony was left on the Roanoke in 1587, but was never again to be found; all attempts to ascertain their fate were fruitless. Some emigrants from Virginia penetrated into the country about 1650, and made the first actual settlement of whites. On the early Spanish maps, what is now called *Carolina* had been marked as part of Florida. The French had given it the name of *Carolina* in honor of king Charles IX, when they made the disastrous attempt to colonize the North American coast, noticed under the head of *Florida*. The name *Carolina* prevailed. In 1661, a second English colony from Massachusetts arrived, and established themselves at cape Fear river. In 1667, after many vexatious struggles, the infant colony obtained a representative government. Two years later, the fanciful constitution, so famous under the name of *Locke's scheme of government*, was introduced. This wild project was soon abandoned; and, like other English colonies, Carolina advanced but slowly, and experienced the horrors of Indian warfare as late as 1712. Previous to 1717, Carolina had been a proprietary government, but, in that year, became a royal one by purchase, and continued such until the revolution in 1775. In 1720, the two Carolinas were separated into North and South Carolina. The inaccessible coast of North Carolina gave it very great advantages in the revolutionary war. Those destructive inroads, from which other states along the Atlantic suffered so much, were here impracticable. Though, however, less exposed, the people of this state evinced their full share of sympathy with the residue of the American people. A convention was assembled at Halifax, where, on Dec. 18, 1776, the existing constitution was adopted. Since that auspicious event, it may be doubted whether any other community ever passed 52 years with less disturbance. (*Darby's View of the U. States.* See *Carey and Lea's American Atlas.*)

Carolina, South; one of the U. States; bounded N. by North Carolina, E. by the Atlantic, S. W. and W. by Georgia; lon. 78° 24′ to 83° 30′ W.; lat. 32° to 35° 8′ N.; 200 miles long, 125 broad; containing 30,000 square miles. Population in 1790, 240,000: in 1800, 345,591: in 1810, 415, 115; 200,919 blacks: in 1820, 502,741; whites, 237,440; white males, 120,934; white females, 116,506; slaves, 258,475; free colored, 6,826. Militia in 1821, 23,729. —S. Carolina is divided into 30 districts. Columbia is the seat of government, but Charleston is the largest town.—The legislature consists of a senate and house of representatives. The senate consists of 43 members, chosen every 4 years by districts. The representatives are chosen every 2 years. The governor and lieutenant-governor are chosen biennially, by a joint ballot of both houses.—The principal denominations of Christians in South Carolina are Presbyterians, Episcopalians, Baptists and Methodists.—Education is liberally patronised by the state government. The two literary institutions are the college of South Carolina at Columbia, and Charleston college, in the city of Charleston.—The distinguishing virtues of the Carolinians are hospitality to strangers, and charity to the indigent and distressed. The planters in the low country, who, in general, have large incomes, live in a luxurious and splendid style, devoting much of their time to the pursuit of pleasure, and possessing much of that pride and dignity of spirit, which characterize an independent country gentleman. The virtues of the farmers of the upper country are less brilliant, but more substantial. They have fewer vices, are of more frugal and industrious habits, and exhibit greater fortitude in the reverses of fortune. In the low or alluvial country, labor in the field is performed almost wholly by slaves, who, in this part of the state, exceed the free inhabitants in the ratio of more than three to one. This division, comprising less than one third of the territory of South Carolina, contains more than half of the slaves, and only about one fifth of the whites.—The principal rivers are the Waccamaw, Pedee, Black river, Santee, Cooper, Ashley, Stono, Edisto, Asheppo, Cambahee, Coosaw, Broad and Savannah.—South Carolina is divided by nature into two parts, which, from their physical situation, have been called *Upper* and *Lower Carolina*. The latter is supposed to have once been under the ocean. Towards the coast, the country is a level plain, extending more than 100 miles westward from the sea. Here the eye finds no relief from the dull uniformity of boundless forests, swamps, and level fields. This fatiguing plain is succeeded by a curious range of little sand hills, resembling the waves of an agitated sea. This singular country occupies an extent of about 60 miles. It is extremely barren, enlivened here and there by spots of verdure, or by some straggling pines; and its few inhabitants earn a scanty subsistence by the

cultivation of corn and sweet potatoes. After passing these sand hills, we come next to a remarkable tract of ground, called the *Ridge*, which, on its approach from the sea, is lofty and bold, but on the northwest is level from its summit. This is a fine belt of land, extending from the Savannah to Broad river, fertile, well cultivated, and watered by considerable streams. The country beyond this ridge resembles, in its scenery, the most interesting of the Northern States. The traveller is gratified by the pleasant alternation of hill and dale. The lively verdure of the hills is contrasted with the deeper tints of the extensive forests, which decorate their sides; and, in the valleys, broad rivers roll their streams through the varied beauties of luxuriant and cultivated fields. From these delightful regions, the ground still continues to rise, till we reach the western limit of the state. Here 7 or 8 mountains run in regular direction, the most distinguished of which is Table mountain. Other mountains are Oolenoy, Oconee, Paris's, Glassey, Hogback and King's. These are all in the districts of Pendleton, Greenville, Spartanburg and York.—The soil of South Carolina is divided into six classes:—1. tide swamp; 2. inland swamp; 3. high river swamp, or low grounds, distinguished by the name of *second low grounds;* 4. salt marsh; 5. oak and hickory high land; 6. pine barren. The first two classes are peculiarly adapted to the culture of rice and hemp; the third is most favorable to the growth of hemp, corn and indigo. The salt marsh has been much neglected. The oak and hickory land is remarkably fertile, and well adapted to the culture of corn, as well as indigo and cotton. The pine barren, though the least productive, is so much more salubrious than the other soils in the low country, that a proportion of pine barren is an appendage indispensable to every swamp plantation.—The staple commodities of this state are cotton and rice, of which great quantities are annually exported. These articles have so engrossed the attention of the planters, that the culture of wheat, barley, oats, and other crops equally useful, but less profitable, has been almost wholly neglected. So little wheat is raised throughout the state, that considerable quantities are annually imported. Cotton was not raised in any considerable quantities till as late as 1795. Before that period, indigo was, next to rice, the most important article of produce; but it is now neglected. Tobacco thrives well. The fruits which flourish best are pears, pomegranates and water-melons: the latter, in particular, grow to an enormous size, and are superior, perhaps, to any in the world. Other fruits are figs, apricots, nectarines, apples, peaches, olives, almonds and oranges.—The period of vegetation comprehends, in favorable years, from 7 to 8 months, commencing in January or February, and terminating in October or November. The frosts, generally, in the months of November, December, January and February, are too severe for the delicate productions of more southern latitudes. The low country is seldom covered with snow, but the mountains near the western boundary often are. Frost sometimes binds up the earth, but seldom penetrates deeper than 2 inches, or lasts longer than 3 or 4 days. At some seasons, and particularly in February, the weather is very variable. The temperature has been known to vary 46 degrees in one day. In Charleston, for 7 years, the thermometer was not known to rise above 93° or to fall below 17° above 0. The number of extremely hot days in Charleston is seldom more than 30 in a year; and there are about as many sultry nights, in which the heat and closeness of the air are such as to prevent the enjoyment of sound sleep.—The low country is infested with all the diseases which spring from a warm, moist and unelastic atmosphere. Of these the most frequent are fevers, from which the inhabitants suffer more than from any, or perhaps from all other diseases together. The districts of the upper country enjoy as salubrious a climate as any part of the U. States. —In 1827, merchandise to the value of $1,434,106 was imported into South Carolina, and $8,322,561 worth exported. (For similar accounts of preceding years, see Watterson and Zandt's *Tabular Statistical Views*, Washington, Jan. 1829.)

Historical Sketch of South Carolina. The first settlement of South Carolina by the whites appears to have been made at Port Royal, about 1670; but, until 1680, no permanent establishment was formed, when the few settlers then in the country fixed on Oyster point, between Ashley and Cooper rivers, and laid the foundation of the city of Charleston. A grant had, however, been made, in 1662, previous to the founding of Charleston, by Charles II, to lord Clarendon and seven others, of all that zone of North America from N. lat. 31° to 36°; and, two years afterwards, the boundaries were extended

to N. lat. 36° 30′. The proprietary government of Carolina was, if possible, more complex than any other similar government in the English colonies. This confusion was augmented by Locke's scheme, and by religious contention, and was terminated, in 1719, by a separation of the two Carolinas, and the establishment of a royal government. One of the events of most importance in the history of South Carolina was the cultivation of rice, introduced by governor Smith, in 1695: that of cotton followed; and the colony flourished until its progress was checked by war with the Indians, and, subsequently, by the revolution. South Carolina suffered severely in the latter contest, and was the theatre of some of the most remarkable events which it produced. The names of Marion, Sumter and Lee conferred honor on the state. The existing government or constitution of South Carolina was adopted June 3, 1790, amended Dec. 17, 1808, and again Dec. 19, 1816. (See *Carey and Lea's Atlas.*)

Caroline Amelia Elizabeth; wife of George IV, king of Great Britain and Hanover, second daughter of duke Charles William Ferdinand of Brunswick (who was mortally wounded in the battle at Auerstadt), and of the princess Augusta of England, sister of George III. She was born May 17, 1768. The young princess spent her youth in her father's court, under much constraint, till 1795, when she was married to the prince of Wales, now king of Great Britain. The next year, she rejoiced the royal family and the British nation by the birth of a daughter, Charlotte Augusta. (Charlotte died Nov. 6, 1817, wife of prince Leopold of Saxe-Coburg.) She had scarcely recovered from her confinement, when her husband abandoned her, declaring that no one could force his inclinations. This was the beginning of the disgraceful dispute between the two parties, which lasted till the death of Caroline, and exposed her honor to repeated accusations from her husband; while George III, and all the British nation, favored the deserted bride. (See *George IV.*) The princess of Wales lived retired from the court, at a country-seat at Blackheath, where she devoted herself to the arts and sciences, to benevolence and the gratification of her taste, till 1808. Meanwhile, many reports were circulated, accusing her of illicit connexions with captain Manly, sir Sidney Smith and others, and of being the mother of a boy; on account of which the king instituted an inquiry into her conduct, by a ministerial committee. They examined a great number of witnesses, and acquitted the princess of the charge, declaring, at the same time, that she was guilty of some imprudences, which had given rise to unfounded suspicions. The king confirmed this declaration of her innocence, and paid her a visit of ceremony. She afterwards received equal marks of esteem from the princes, her brothers-in-law. The duke of Cumberland attended the princess to court and to the opera. The reports above-mentioned were caused by the adherents of the prince of Wales and the court of the reigning queen, who was very unfavorably disposed towards her daughter-in-law. On this occasion, as on many others, the nation manifested the most enthusiastic attachment to the princess. In 1813, the public contest was renewed between the two parties; the princess of Wales complaining, as a mother, of the difficulties opposed to her seeing her daughter. The prince of Wales, then regent, disregarded these complaints. Upon this, in July, 1814, the princess obtained permission to go to Brunswick, and, afterwards, to make the tour of Italy and Greece. She now began her celebrated journey through Germany, Italy, Greece, the Archipelago and Syria, to Jerusalem, in which the Italian Bergami was her confidant and attendant. Many infamous reports were afterwards circulated, relating to the connexion between the princess and Bergami. On her journey, she received grateful acknowledgments for her liberality, her kindness, and her generous efforts for the relief of the distressed. She afterwards lived in Italy a great part of the time, at a country-seat on lake Como. When the prince of Wales ascended the British throne, Jan. 29, 1820, lord Hutchinson offered her an income of £50,000 sterling, the name of *queen of England*, and every title appertaining to that dignity, on the condition that she would never return to England. She refused the proposal, and asserted her claims, more firmly than ever, to the rights of a British queen, complained of the ill treatment shown to her, and exposed the conspiracies against her, which had been contrived by a secret agent, the baron de Ompteda, of Milan. Attempts at a reconciliation led to no favorable result. She at length adopted the bold resolution to return to England, where she was neither expected nor wished for by the ministry, and, amid the loudest expressions of the public joy, arrived from Calais, June 5, and, the next day, entered London in triumph. The minis-

ter, lord Liverpool, now accused the queen before the parliament, for the purpose of exposing her to universal contempt as an adulteress. Whatever the investigations of the parliament may have brought to light, the public voice was louder than ever in favor of the queen; and, after a protracted investigation, the bill of pains and penalties was passed to a third reading only by a majority of 123 to 95; and the ministers deemed it prudent to delay proceeding with the bill for six months, which was equivalent to withdrawing it. Thus ended this revolting process, which was, throughout, a flagrant outrage on public decency. In this trial, Mr. Brougham acted as the queen's attorney-general, Mr. Denman as her solicitor, and Drs. Lushington, Williams and Wilde as her counsel. Though banished from the court of the king, her husband, the queen still lived at Brandenburg house, in a manner suitable to her rank, under the protection of the nation. In July, 1821, at the coronation of George IV, she first requested to be crowned, then to be present at the ceremony. But, by an order of the privy council, both requests were denied, and, notwithstanding the assistance of the opposition, she suffered the personal humiliation of being repeatedly refused admission into Westminster abbey. She then published in the public papers her protest against the order of the privy council. Soon after her husband's departure to Ireland, July 30, in consequence of the violent agitation of her mind, she was suddenly taken sick in Drury lane theatre. An inflammation of the bowels (*enteritis*) succeeded, and she foretold her own death before the physicians apprehended such an event. She died Aug. 7, 1821. The corpse, according to her last will, was removed to Brunswick, where it rests among the remains of her ancestors. Her tomb-stone has a very short inscription, in which she is called the *unhappy queen of England.* The removal and the entombing of her mortal remains gave rise to many disturbances, first in London, and afterwards in Brunswick. These were founded more in opposition to the arbitrary measures of the ministry than in respect for the memory of the queen. Two causes operated much in favor of the queen—the unpopularity of the ministry and the general feeling that the king was perhaps the last man in the whole kingdom, who had a right to complain of the incontinencies of his wife, which many, even of her friends, undoubtedly believed.

Caroline Laws. (See *Carolina.*)

Caroline Matilda, born 1751, daughter of Frederic Lewis, prince of Wales, married, 1766, king Christian VII of Denmark, and became mother of the present king of Denmark, Frederic VII, who was born 1768. Though young and beautiful, and universally esteemed by the nation, yet she was treated with hatred and neglect by the grandmother of her husband, queen Sophia Magdalena, as well as by his step-mother, Juliana Maria, who, for some time, influenced even her husband against her. Struensee (q. v.), by profession a physician, the favorite of the king, became her friend, and both, in union with Brandt, endeavored to gain the king from the influence of the party opposed to the queen. The reins of government came into the hands of Struensee, but the party of the king's step-mother and her son, prince Frederic, procured (1772) the imprisonment of the queen, the counts Struensee and Brandt, and all their friends. Struensee and Brandt were tried, and executed for high treason. Even the queen was at first in danger of being condemned to death. April 6, she was separated from her husband, and confined in Aalborg, but liberated by the interference of her brother, king George III. She died May 10, 1775, at Celle, in Hanover, scarcely 24 years old, of a lung fever, the consequence of her grief. The interesting letter, in which she took leave of her brother, the king of England, is to be found in the small work *Die lezten Stunden der Königin von Dänemark.* She was of a mild temper, and beloved by all around her.

Carp (*cyprinus*, L.); a genus of soft-finned abdominal fish, which Cuvier makes the fourth family of the order. This is a very natural genus, containing very numerous species. It is easily distinguishable by the small mouth, toothless jaws, and gills of three flat rays. The tongue and palate are smooth, but the gullet is admirably constructed for mastication, having large teeth attached to the inferior pharyngeal bones, which press the food between themselves and a gelatinous knob, connected with a bony plate that is united with the first vertebra, commonly called the carp's *tongue.* They have but one dorsal fin, and the body is covered with scales, generally of large size. They frequent fresh and quiet waters, feeding on herbs, grains, and even mud, being, perhaps, the least carnivorous of the finny race. Some of the species have a beard of small, fleshy threads at the angles of

the upper jaw.—The most noted of the species are the common carp (*C. carpio*, L.), which, in many parts of the world, are bred in ponds, for the use of the table, and the goldfish (*C. auratus*), believed to be originally from China, very commonly bred in ponds and vases as an ornament, on account of its beautiful colors. In his memoir on American Icthyology, doctor Mitchill enumerates four species of carp, under the names of *C. teres*, fresh-water sucker; *C. oblongus*, chub of New York; *C. chrysoleucas*, New York shiner; and *C. atronasus*, brook minnow.—The common carp of Europe is esteemed very highly for stocking ponds, being of quick growth, spawning thrice a year. As the females do not commence breeding until eight or nine years old, it is necessary to keep up a supply of carp of that age by avoiding to destroy the females. The proportion of males to be preserved is four for every twelve females. Under common circumstances, the carp grows two or three inches in length in a year; but, where the ponds are exceedingly well supplied with food, they have been known to grow from five to eighteen inches in the same time. They thrive best in ponds having clayey or marly sides, and well provided with aquatic vegetables. In order to furnish them with fresh vegetable food, it is usual to rake the sides of the pond, left dry by evaporation, with an iron rake, and then to sow grass-seed, so that, when the pond is again filled up by the rains, there may be a growth of tender herbage for the fish. Grains of various sorts, and garbage, are frequently thrown into the pond, with a view to aid in fattening carp. A pond of one acre in extent is said to be sufficient to feed 300 carp of two or three years, or 400 of one year old. Carp, in their native condition, frequent the deepest places of ponds or rivers, where there is the least current. It is a fish which requires much patience and address in the angler. They seldom bite in cool weather, but, during hot seasons, bite very freely. The bait commonly used in angling for carp is worms, and sometimes grasshoppers. Various sweet pastes are also used, formed of honey or sugar, mingled with flour and small quantities of veal, pounded together in a mortar, till sufficiently tough to adhere to a hook without being easily washed off. A little white wool, mixed with the other ingredients, is of great assistance in giving the mass the requisite tenacity. To increase the pleasure and profit of carp fishing, it is well, for a few days previous, to have some brewer's grains or other food thrown into the water, by which the fish will be induced to collect at any particular place in greater numbers.

Carpathian Mountains; one of the most extensive ranges of mountains in Europe, which covers an area of about 39,432 square miles; running from the Black sea, between Walachia and Moldavia, through Transylvania, Galicia and Hungary, to Silesia, there uniting itself with the Riesengebirge, at the pass of Jablunka (where are the sources of the Oder and Vistula), and sending out spurs, which reach as far as the Danube, and the spurs of the Alps. The highest points (covered with perpetual snow), called *Tatra*, rise in peaks, of which the most elevated, the Lomnitz peak (*Lomnitzer Spitze*), is over 8162 feet high. The principal chain contains much salt. On the branches, the vine is cultivated, and various metals, precious and base, are found in them. The Carpathian mountains have lately been attentively investigated by geologists, and interesting facts have been ascertained respecting them. They afford refuge to a great number of Gipsies.

Carpentaria; a large bay on the N. coast of New Holland; lon. 130° 50′ E.; lat. 10° 20′ S. That part of the country which borders on the bay is also called *Carpentaria*.

Carpets are thick textures, composed wholly or partly of wool, and wrought by several dissimilar methods. The simplest mode is that used in weaving Venetian carpets, the texture of which is plain, composed of a striped woollen warp on a thick woof of linen thread.—Kidderminster carpeting is composed of two woollen webs, which intersect each other in such a manner as to produce definite figures.—Brussels carpeting has a basis composed of a warp and woof of strong linen thread. But to every two threads of linen in the warp, there is added a parcel of about ten threads of woollen of different colors. The linen thread never appears on the upper surface, but parts of the woollen threads are, from time to time, drawn up in loops, so as to constitute ornamental figures, the proper color being each time selected from the parcel to which it belongs. A sufficient number of these loops is raised to produce a uniform surface. To render them equal, each row passes over a wire, which is subsequently withdrawn. In some cases, the loops are cut through with the end of the wire, which is sharpened for the pur-

pose, so as to cut off the thread as it passes out. In forming the figure, the weaver is guided by a pattern, which is drawn in squares upon a paper.—Turkey carpets appear to be fabricated upon the same general principles as the Brussels, except that the texture is all woollen, and the loops larger, and always cut.—There are several carpet-manufactories in New England, which make handsome goods. The English and Americans are the only nations among whom carpets are articles of general use.

Carpi, Ugo da, a painter and engraver, flourished in the beginning of the 16th century. He is generally considered as the inventor of that species of engraving denominated *chiaro-oscuro*, which was afterwards carried to such perfection by Balthasar Peruzzi.

Carpi, Girolamo da, a painter of the 16th century, a native of Ferrara, painted many pictures for the churches there and at Bologna. He was a great admirer of Correggio and Parmegiano, whose works he copied with great success. He died in 1556.

Carracci; the name of a celebrated family of painters.—Ludovico Carracci, son of a butcher, born 1555, at Bologna, appeared, at first, to be more fit for grinding colors than for transferring them to canvas. But his slowness did not, in fact, arise from deficiency of talent, but from zeal for excellence. He detested all that was called ideal, and studied only nature, which he imitated with great care. At Florence, he studied under Andrea del Sarto, and enjoyed the instruction of Passignano. He went to Parma for the purpose of studying Correggio, who was then imitated by almost all the Florentine painters. At Bologna, he endeavored to obtain popularity for his new principles among the young artists, and united himself with his cousins, Agostino and Annibale Carracci, whom he sent, in 1580, to Parma and Venice. On their return to Bologna, the three artists began to acquire reputation, but met with the most violent opposition. Annibale, the most resolute of them, was of opinion, that they should refute the slanders in circulation by the excellence of their productions. Ludovico resolved to establish an academy for painters at Bologna, which he called the *accademia degli incamminati* (from *incamminare*, to put in the way). His first principle was, that the study of nature must be united with the imitation of the best masters. He soon gave an example of this principle in the *Prophecy of John the Baptist*, in the monastery of the Carthusians, imitating, in single figures, the style of Raphael, Titian and Tintoretto. The finest works of Ludovico are at Bologna; for instance, those which adorn the hall in the monastery of St. Michael, in Bosco, and the *Annunciation*, in the cathedral at Bologna. He excelled in architectural views and in drawing, and, in general, was very thorough in all the branches of his art. After having enjoyed his fame for a long time, at least as long as his cousins were alive, Ludovico died, in 1619, almost in poverty, 17 years after the death of Agostino, and 10 after that of Annibale. The chief reproach to which he is liable is, that he did not unite the study of the antiques with that of nature. His coloring has also been blamed.—Paolo Carracci, a brother of Ludovico, is of no importance.—Agostino Carracci, mentioned above, was born in 1558, at Bologna. He soon became one of the most accomplished disciples of Ludovico, and excelled particularly in invention. He engraved more pieces than he painted, in order to please his brother Annibale, who became envious of his fame, after a picture of Agostino had obtained a prize in preference to one of his own, and another excellent picture —the *Communion of St. Jerom*—had gained his brother universal admiration. Subsequently, Agostino accompanied Annibale to Rome, and assisted him in painting the Farnesian gallery. As many persons said that the engraver worked better than the painter, Annibale removed his brother, under pretext that his style, though elegant, was not grand enough. Agostino went then to the court of the duke of Parma, and painted there a picture representing the heavenly, the earthly and the venal love. There was only one figure wanting, when, exhausted by labor and mortification, he died, in 1601. He wrote a treatise on perspective and architecture. As an engraver, he deserves great praise, and often corrected the imperfect outlines of his originals. Among his engravings are many obscene ones, which have become rare.—Annibale Carracci, his brother, born 1560, at Bologna, worked, at first, with his father, who was a tailor. By the advice of his cousin Ludovico, he learnt drawing, and made the most astonishing progress, copying first the pieces of Correggio, Titian and Paul Veronese, and painting, like them, small pictures before he undertook large ones. In the academy founded by the Carracci, he taught the rules of arrange-

ment and distribution of figures. He is one of the greatest imitators of Correggio. His *St. Roque distributing Alms*, now in Dresden, was the first painting which gave him reputation. His *Genius of Glory* is likewise celebrated. In the Farnesian gallery, which he painted, there breathes an antique elegance, and all the grace of Raphael. You find there imitations of Tibaldi (who painted at Bologna, about 1550, with Nicolo del Abate), of Michael Angelo (the style, indeed, somewhat softened), and the excellences of the Venetian and Lombard schools. Out of Bologna, he is acknowledged as the greatest of the Carracci. In that city, however, Ludovico is more admired. Agostino, perhaps, had more invention, and Ludovico more talent for teaching; but Annibale had a loftier spirit, and his style is more eloquent and noble. He died of grief (1609), at the ingratitude of cardinal Farnese, who paid him for 20 years' labor with 500 gold scudi. He was buried at the side of Raphael, in the Pantheon of Rome.—Francesco Carracci, another brother, is unimportant.—Antonio Carracci, a natural son of Agostino, born, 1583, at Venice, has more merit. Among the many well-known disciples of the Carracci, Domenichino deserves to be particularly named.

Carreras; three brothers, distinguished in the revolution of Chile. José Miguel Carrera, Juan José Carrera, and Luis Carrera, were the sons of a rich landholder in Santiago, don Ignacio Carrera. One of them served in Europe until 1811, and attained the rank of lieutenant-colonel and commandant of a regiment of hussars. The three brothers took an active part in the revolution from its commencement, and, in November, 1811, obtained the effective control of the revolutionary government; don José Miguel, the eldest, being a member of the junta, and colonel in the army, and the two younger brothers being also colonels in different corps, and the military being strongly in their favor. They continued in the possession of power until 1813, when they were taken prisoners by the Spaniards, and confined at Taloa. During their confinement, O'Higgins placed himself at the head of affairs. But they soon regained their liberty, and, by means of their popularity with the army, were enabled to displace O'Higgins, and resume their former influence, although not without a conflict with their antagonist. They became reconciled to him, however, and acted in concert with him at the battle of Rancagua, in October, 1814, in which the patriots were defeated, and in consequence of which the Carreras and their associates fled across the Andes. Don José Miguel left South America for the U. States, seeking supplies of men and money. Meanwhile, don Juan José and don Luis remained in Buenos Ayres, where they were detained, on their parole, by Pueyrredon, and not allowed to join the army sent for the liberation of Chile, commanded by their personal enemy, O'Higgins, and his bosom friend, general San Martin. Don José Miguel found them in this condition upon his return in 1817, and was himself arrested at Buenos Ayres, but made his escape. His brothers fled from Buenos Ayres, but were apprehended, Aug. 17, 1817, near Mendoza, and thrown into prison. Upon learning this, general San Martin despatched his secretary, Monteagudo, to bring them to trial, and, if possible, invent some plausible cause for their execution, so as to prevent their return to Chile. Accordingly, a false accusation of having murdered some obscure person in 1814 was brought against don Juan José; but, as this did not inculpate don Luis, a plot was contrived with the soldiers, and the brothers were induced to attempt their escape; after which the proceedings were resumed, and they were condemned, on the 8th of March, 1818, to be shot on the same day. They heard their sentence at three o'clock in the afternoon, and were slaughtered at six. They walked arm in arm to the place of execution, gave the word to the soldiers to fire, and embraced each other in death. So causeless were these legal murders, that public opinion charges them upon San Martin, who, finding the friends of the Carreras numerous in Chile, employed his creature Monteagudo to procure their death. With brutal cruelty, San Martin sent their aged father an account of the expenses of their execution, with an order for its immediate payment. He paid the bloody charge, and, two days afterwards, expired of a broken heart. Don José Miguel resolved to avenge their death. He raised a small body of troops, natives and foreigners, and marched across the *pampas*, having found means to correspond with his friends in Santiago. His progress was viewed with great uneasiness by O'Higgins, then supreme director of Chile; for the people cherished the fondest recollections of the Carreras, whose wisdom in government, and personal condescension, affability and munificence, had won all

hearts. A conspiracy in favor of Carrera, unfortunately, was detected by O'Higgins, and suppressed. Don José Miguel arrived near Mendoza in January, 1822, and was there unexpectedly met by a superior force, and surrounded and taken prisoner, after a brave resistance. Being conducted to Mendoza, he was hurried through a brief form of trial, and executed on the very spot where his brothers suffered. Thus, by a singularly adverse fortune, perished a family of brothers, who left not their equals in patriotism, talents and purity of character in Chile. Their friend and adviser, Rodriguez, also perished, a victim of the same enemies. —In testimony of their respect for the memory of the Carreras, the government of Chile have recently ordered the removal of their remains from Mendoza to their native country. (Stevenson's *South America*, vol. iii; *North American Review*, vol. xxiv, p. 313; Miller's *Mem.*, i. p. 383.)

Carrier, common. (See *Common Carrier.*)

Carrier, John Baptist, born in 1756, at Volai, near Aurillac, in Upper Auvergne, an obscure attorney at the beginning of the revolution, was chosen, in 1792, member of the national convention, aided in the establishment of the revolutionary tribunal, March 10, 1793, and exhibited the wildest rage for persecution. He voted for the death of Louis XVI, demanded the arrest of the duke of Orleans, April 6, 1793, and contributed greatly to the revolution of May 31. Oct. 8, 1793, he was sent to Nantes with a commission to suppress the civil war by the exercise of greater severity than had yet been used. The prisons were already full, while the defeat of the Vendeans near Savenay increased the number of prisoners. Multitudes, informally and precipitately condemned, were executed daily; but Carrier found this process too slow. He resolved, therefore, to destroy the prisoners in a mass, and without a trial. He caused 94 priests to be conveyed to a boat with a perforated bottom, under pretence of transporting them, but, in reality, with a view of having them drowned by night. Every day this artifice was repeated. In the evening, the destined victims, of every age and of both sexes, were brought to the boats. Two were tied together, and plunged into the water, at the point of the bayonet and the edge of the sabre. The executioners sometimes amused themselves by tying together a young man and woman; and they called these *noyades* (republican marriages). Besides this, more than 500 prisoners were daily shot in the quarries at Gigan. For more than a month, these deeds of madness were perpetrated. It has been estimated that 15,000 individuals perished in this way. The banks of the Loire were strewed with the dead, and the water was so polluted, that it was prohibited to drink it. Some months before the fall of Robespierre, Carrier was recalled. The 9th Thermidor (July 27), 1794, he was apprehended, and brought before the revolutionary tribunal, which condemned him to death, Dec. 16, 1794.

Carrier Pigeon (*pavedette, columba tabellaria*). This bird is a native of the East; and the practice of sending letters by pigeons belongs, therefore, principally to Eastern countries. The pigeons chosen for this service are called, in Arabic, *hamahn*. They have a ring of particolored feathers round the neck, red feet, covered with down, and build their nests in the neighborhood of human habitations. In the province of Irak (that is, Chaldæa, Babylonia and Assyria), white pigeons are trained with the least difficulty. The first pigeon used as a messenger some consider to be that which Noah sent from the ark, and which returned with the leaf of the olive. An actual post-system, in which pigeons were the messengers, was established by the sultan Noureddin Mahmood, who died in 1174. It was improved and extended by the caliph Ahmed Alraser-Lidiv-Allah, of Bagdad, who died in 1225. The price of a well-trained pair of such pigeons was, at that time, 1000 dinars, that is, Arabic ducats. This flying post lasted till 1258, when Bagdad fell into the hands of the Mongols, and was destroyed by them. At present, only a few wealthy individuals in the East keep these pigeons. It requires much time and patience to train them. As soon as the young (a cock and a hen are preferred) are fledged, they are made as tame as possible, and accustomed to each other's society. They are then sent, in an uncovered cage, to the place whither they are usually to carry messages. If one of them is carried away, after having been well treated for some time, it will certainly return to its mate. A small letter is written on the finest silk-paper, sometimes on a particular kind called *bird-paper*. This is placed lengthwise under one wing, and fastened with a pin (the point being turned from the body) to a feather. It needs not to be mentioned, that no part of the letter must hang loose, lest the wind should be collected in it,

the wing become tired, and the pigeon be compelled to alight. A pigeon of this kind can go a distance of upwards of 1000 parasangs (more than 2700 English miles) in a day. There were similar posts in Egypt, in 1450, for which columbaries were prepared in towers, erected at certain distances for the public security.—This custom is, however, not confined to the nations of the East. Decius Brutus, according to the elder Pliny's account, sent despatches from Modena by pigeons; and in modern times, they were made use of, during the Dutch war, by the inhabitants of Haerlem, when besieged in 1573, and in Leyden, in 1574. It is also well known, that some merchants in Paris and Amsterdam employ carrier-pigeons, in order that the course of exchange and the prices of stocks, in Paris, may be known as soon as possible in Amsterdam.

Carro, Giovanni di; a physician of Milan, who settled in Vienna. He is celebrated for his efforts in spreading inoculation, as a protection from the small-pox, in Germany, Poland, Hungary and Russia. He found means to overcome even the prejudices of the Turks, by sending to lord Elgin, at Constantinople, in 1800, a quantity of *virus*, together with a work of his, translated into Turkish, on inoculation. All the attempts of the English to introduce inoculation into India had been hitherto unsuccessful, because the *virus* had always been spoiled on the way. Carro procured the matter from Lombardy cows, for doctor Harford, at Bagdad. It retained all its strength, and was the means of imparting the benefits of kine-pock inoculation to India, which the Indians consider as derived from a sacred cow, and to which they have given the name of *amurtum* (immortality). Carro's *Observations et Expèriences sur la Vaccination, avec une Planche colorée* (Vienna, 1801 and 1802), and his translation (Vienna, 1802) of an English work, by J. J. Loy, on the origin of the kine-pock virus, are very valuable works. In the *Bibliothèque Britannique* are some letters deserving of notice, written by him, particularly one, dated Aug. 27, 1803, on the antipestilential nature of the kine-pock matter.

Carroll, John, first Catholic bishop of the U. States, was born in Maryland, in the year 1734. His parents were Catholics of distinguished respectability, and sent him, at the age of 13, to the college of St. Omer's, in Flanders, where he remained for six years, when he was transferred to the colleges of Liege and Bruges. In 1769, he was ordained a priest, and soon after became a Jesuit. In 1770, he accompanied the present lord Stourton, the son of an English Catholic nobleman, on a tour through Europe, in the capacity of private tutor; and, on his return to Bruges, in 1773, accepted a professorship in the college. Shortly afterwards, he was on the point of going back to his native country; but his voyage was prevented by the intelligence of the entire suppression of the Jesuits by the pope; and he retired to England, where he resided until 1775, when he returned to America. His stay in Europe was prolonged in order that he might assist his brethren in procuring a mitigation of the severe sentence that had been passed upon them. He acted as secretary-general to the dispersed fathers in their remonstrances with the courts, by which they had been persecuted. Upon his arrival in Maryland, he entered upon the duties of a parish priest. In 1776, at the solicitation of congress, he accompanied doctor Franklin, Charles Carroll of Carrollton, and Samuel Chase, on a mission to Canada, designed to induce the people of that province to preserve a neutral attitude in the war between England and the colonies, but was unsuccessful. The Roman Catholic clergy of the U. States having requested from the pope the establishment of a spiritual hierarchy here, in preference to being under the superintendence of one in England, Mr. Carroll was appointed vicar-general in 1786, when he fixed his abode in Baltimore. In 1789, he was named first Catholic bishop of the U. States, and went to England, in the summer of 1790, where he was consecrated. In the same year, he returned to Baltimore, and, as the seat of his episcopal see was established in that city, assumed the title of *bishop of Baltimore*. He was universally esteemed and beloved for the exemplary manner in which he discharged his duties, the mildness and courtesy of his manners, and the sanctity of his life. He lived in friendly communion with persons of other sects, his character being entirely devoid of intolerance. A few years before his demise, he was elevated to the archiepiscopal dignity. He died Dec. 3, 1815, in the 81st year of his age.

Carron; a village of Scotland, on the banks of a stream of the same name, in Stirlingshire, and about three miles from the shore of the Forth. Its extensive iron-foundery is one of the most noted in Great Britain. This was established in 1760, and now employs nearly 2000 men. There are about 20 furnaces, and

many kinds of iron articles are made in great quantities, as heavy pieces of ordnance, cylinders for steam-engines, pumps, boilers, wheels, with all kinds of ponderous apparatus used in the arts. That species of ordnance called a *carronade*, used in the navy, derived its name from being first made here. Immense numbers of shot and shells, of all sizes, are annually sent from Carron. Carron is about 2 miles north-east of Falkirk, and 26 in the same direction from Edinburgh. The banks of the river Carron were the boundary of the Roman empire in Britain; for the wall of Antoninus stood within a short distance, and ran parallel to them for several miles. Two mounds, one of them 50 feet in height, called the *hills of Dunipail*, rise about the middle of its course. Tradition affirms that they were monuments of a peace between the Romans and Caledonians, and that they take their name from *dun*, a hill, and *pax*, peace. It is more probable that they are barrows.

Carronades (from the river *Carron*, in Scotland, where they were first made); a sort of artillery, resembling howitzers. They are of very large caliber, and carry balls, shells or cartouches. They are much lighter than common cannon, and have a chamber for the powder, like mortars. They are mostly used on board of ships, in close engagements, from the poop and forecastle. Sometimes they are employed in fortifications. They have been cast from 12 to 68 pounders. They were first used in the North American revolutionary war.

Carrot (*daucus carota*, Linnæus) is a biennial plant, a native of Britain. The leaves are pinnatifid, and much cut. The plant rises to the height of two feet, and produces white flowers, succeeded by rough, hispid seeds. The root of the plant, in its wild state, is small, dry, sticky, of a white color, and strong-flavored; but the root of the cultivated variety is large, succulent, and of a red-yellow or pale straw-color, and shows remarkably the improvement which may be effected by cultivation. Though long known as a garden plant, it is comparatively of recent introduction in agriculture. It appears to have been cultivated from an early period in Germany and Flanders, and introduced from the latter country to Kent and Suffolk early in the 16th century. The various uses of the carrot in cookery are well known. But, although it contains much nutriment, it is difficult of digestion, particularly if eaten raw or imperfectly boiled. Carrots are an excellent fodder for cattle and horses, either alone or mixed with hay; and, if given to cows in winter or the early part of spring, they are said to cause a great increase of milk, which will have a much less offensive taste and smell than when they are fed on turnips. Hogs thrive well upon carrots boiled with their wash. In some parts of England, this vegetable has been cultivated as a winter food for deer; and the tops have even been made into hay. Carrots contain a large proportion of saccharine matter, and various but unsuccessful experiments have been made to extract sugar from them. They have been more advantageously employed in distillation. Ten pounds weight of carrots will yield about half a pint of very strong ardent spirit; and the carrots produced by an acre of ground, amounting to 20 tons, have been known to yield 240 gallons of spirit. A sirup made of these roots, and clarified with the whites of eggs, has been found useful for several purposes. An infusion of the seeds, and the expressed juice of the roots, are said to afford relief in fits of the gravel. A marmalade of carrots has been used with success in sea-scurvy, and a poultice prepared from them is sometimes employed in cancerous ulcers. Crickets are so fond of these roots, that they may easily be destroyed by making a paste of flour, powdered arsenic and scraped carrots, and placing this near their habitation. Parkinson informs us that, in his day, ladies wore carrot leaves in the place of feathers. In winter, an elegant ornament is sometimes formed by cutting off a section from the head or thick end of a carrot, containing the bud, and placing it in a shallow vessel with water. Young and delicate leaves unfold themselves, forming a radiated tuft of a very handsome appearance, heightened by contrast with the season of the year.

Carrying Trade. (See *Commerce*.)

Carstares, William, a Scotch divine of political eminence, was born in 1649, at Cathcart, near Glasgow, where his father was minister. He pursued his studies at the university of Edinburgh, whence he was removed to that of Utrecht, was introduced to the prince of Orange, and intrusted with all his views in regard to Britain. He, however, returned to Scotland, with the view of entering the ministry, but, after receiving a license to preach, resolved to return to Holland. As he was to pass through London, he was employed by Argyle and his party to treat with the English exclusionists, and became privy

to the rye-house plot. On the discovery of that conspiracy, he was apprehended. After a rigorous confinement in irons, he was subjected to the torture, and endured this trial with great firmness; but, being afterwards deluded with the hopes of a full pardon, and assured that his answers should never be made evidence against any one, he submitted to make a judicial declaration. The privy council violated their engagement, by producing his evidence in court against his friend, Mr. Baillie, of Jerviswood. Being released, he returned to Holland, and was received by the prince of Orange as a sufferer in his cause. The prince made him one of his own chaplains, and procured his election to the office of minister of the English congregation at Leyden. He accompanied the prince in his expedition, and always remained about his person, both at home and abroad. During this reign, he was the chief agent between the church of Scotland and the court, and was very instrumental in the establishment of the presbytery, to which William was averse. On the death of William, he was no longer employed on public business; but Anne continued him her chaplain-royal, and made him principal of the university of Edinburgh. When the union of the two kingdoms was agitated, he took a decided part in its favor. He did not long survive this event, dying in 1715, at the age of 66. The memory of Carstares is, for the most part, revered by his countrymen as that of an enlightened patriot; and few men of active power and influence have steered between parties more beneficially and ably.

Carstens, Asmus Jacob, a distinguished painter, born at St. Jurgen, near Sleswic, in 1754, died at Rome in 1798. He studied at Copenhagen, where he produced his first picture—the *Death of Æschylus*. In 1783, he set out for Rome; but, after having seen some works of Julio Romani and Leonardo da Vinci, was obliged to return to Germany, from want of means, and ignorance of the Italian language. In Lübec, he lived almost five years by painting likenesses. A piece, containing more than 200 figures—the *Fall of the Angels*—procured him the place of a professor in the academy at Berlin. In 1792, he went to Rome. His picture of *Megapont* was compared to the productions of Raphael and Michael Angelo. His subjects were almost all taken from Homer, Pindar, Sophocles, Æschylus, Shakspeare and Ossian. In Carstens' works, we find that effort to attain correctness of form and outline, gracefulness of attitude, and loftiness and vigor of expression, by which the works of the ancients are distinguished; but they frequently exhibit a certain harshness, arising from too close imitation. He was often defective in anatomy and perspective, and, having begun late to paint in oil, was unacquainted with the secrets of coloring. (See *Fernow*.)

Carte, Thomas, an English historian, was born at Dunmoor, Warwickshire, in 1686. He was admitted at University college, Oxford, in 1698, and was afterwards incorporated at Cambridge, where he took his degree of M. A. in 1706. His first publication was entitled the *Irish Massacre set in a true Light*, &c. Incurring suspicions during the rebellion of 1715, a warrant was issued for his apprehension, which he eluded by concealment in the house of a clergyman at Coleshil. He subsequently acted as secretary to bishop Atterbury; and, as it was supposed that he was concerned in the conspiracy imputed to that intriguing prelate, he was charged with high treason, and a reward of £1000 was offered for his apprehension. He was again successful in making his escape, and, reaching France, he resided there several years under the name of *Philips*. Having obtained various introductions to persons of influence and learning, he obtained free access to the principal libraries, and employed himself in collecting materials for an English edition of the History of Thuanus. At length, queen Caroline, the liberal patroness of literary merit of every party, procured leave for his return to England. His important work, the Life of James Duke of Ormond, was published in 3 vols, folio, 1735—6. This work gained him great reputation, especially with the tory party, and led him to meditate a general history of England, as a counterbalance to the tendency of that of Rapin de Thoyras, which the tories charged with error and partiality. In 1744, he was arrested, under a suspension of the habeas corpus act, and examined, on a suspicion of being employed by the Pretender. Nothing, however, appearing against him, he was discharged. The first volume of his history, in folio, concluded with the death of king John, and might have been very well received, had not the author materially injured the credit of his work, and his own reputation as a man of sense, by the unnecessary insertion of a note, containing the ridiculous story of the cure of one Christopher Lovel, who went from Somersetshire to Paris to

be touched for the king's evil by the Pretender. Still he proceeded with his work, and published two more volumes, in 1750 and 1752; the fourth, which brought down the history to 1654, not appearing until after his death. The character of this work is deservedly very high for useful and elaborate research, for which qualities it has risen greatly in esteem, since the obligations of Hume to it have been rendered apparent. In point of style, it is mean; and the prejudices of the author, who was utterly destitute of the philosophical impartiality requisite for a historian, are every where conspicuous: but its diligence and exactness, with regard to facts, and the intimate knowledge of original authors displayed by the writer, will always render it valuable. Mr. Carte died in April, 1754. He is the author of several works besides those already mentioned. He was a man of indefatigable industry, cheerful and entertaining in conversation, but very slovenly and ungainly in his appearance.

Cartel; an agreement for the delivery of prisoners or deserters: also, a written challenge to a duel.—*Cartel-Ship;* a ship commissioned, in time of war, to exchange prisoners; also to carry any proposal between hostile powers. She must carry no cargo, ammunition, or implements of war, except a single gun for signals.

Carter, Elizabeth, an English lady of great learning, was the daughter of doctor Nicholas Carter, a clergyman in Kent, and was born in 1717. She was educated by her father, and soon became mistress of Latin, Greek, French and German; to which she afterwards added Italian, Spanish, Portuguese, Hebrew, and even Arabic. Several of her poetical attempts appeared in the Gentleman's Magazine, before she attained her 17th year, and these procured her much celebrity. In 1739, she translated the *critique* of Crousaz on Pope's Essay on Man; and, in the same year, gave a translation of Algarotti's explanation of Newton's philosophy, for ladies. In 1749, she commenced her translation of Epictetus. In 1791, Miss Carter had an interview with queen Charlotte, by the queen's own desire, and, during the remainder of her life, occasionally received visits from different members of the royal family, who paid her particular attention. She died in 1806, in the 89th year of her age, and lies interred in the burying-ground of Grosvenor chapel. The year following her death, her Memoirs were published, and a new edition of her poems; and, subsequently, her correspondence with Miss Talbot (in 2 vols., 4to.), and letters to Mrs. Montague and Mrs. Vesey (4 vols. 8vo.), all which are much esteemed.

Cartes, Des. (See *Descartes.*)

Carthage; the most famous city of Africa in antiquity, capital of a rich and powerful commercial republic. Dido (q. v.), fleeing from Tyre, came to this country, where the inhabitants, according to tradition, agreed to give her as much land as could be compassed by an ox-hide. Dido cut the hide into small thongs, with which she enclosed a large piece of land. Here she built the castle of Carthage, and gave the newly-founded state excellent institutions. The first period of the history of Carthage extends to the beginning of the war with Syracuse, from B. C. 878 to 480. Carthage extended its conquests in Africa and Sardinia, carried on a commercial war with the people of Marseilles and the Etruscans, and concluded a commercial treaty with Rome, B. C. 509, the original document of which, on stone, is still extant. The Carthaginians then directed their chief attention to the conquest of Sicily, with which commences their second and most splendid period, extending to the beginning of their war with the Romans, B. C. 265. When Xerxes undertook his campaign into Greece, the Carthaginians made a league with him against Gelon, king of Syracuse, but were defeated at Himera, B. C. 480, and obliged to sue for peace, and abstain from the practice of offering human sacrifices. (See *Gelon.*) In the war with Hiero, the next king, the Carthaginians conquered the cities Selinus, Himera and Agrigentum. Dionysius the elder obtained a temporary peace. But, after Timoleon had delivered Syracuse and Sicily from the yoke of tyranny, the Carthaginians were peculiarly unfortunate. Contagious diseases and frequent mutinies reduced the strength of the city. When Sicily suffered under the tyranny of Agathocles, Carthage engaged in a war with him, and was soon attacked and severely pressed by the usurper. After the death of Agathocles, Carthage once more took part in the commerce of Sicily, when difficulties broke out there with their auxiliaries, the Mamertines. The Romans took advantage of these troubles to expel the Carthaginians from Sicily, although they had previously received assistance from them (in 275) in a war against Pyrrhus of Epirus, in Sicily and Lower Italy. Here begins the third period of Carthaginian history, embracing the thrice re-

peated struggle for dominion between Rome and Carthage, in the interval between 264 and 146 B. C. The first Punic war (see *Punic*) continued 23 years. The fleets and armies of Carthage were vanquished. By the peace (B. C. 241), the Carthaginians lost all their possessions in Sicily. Upon this, the mercenary forces, whose wages could not be paid by the exhausted treasury of the city, took up arms. Hamilcar Barcas conquered them, and restored the Carthaginian power in Africa. Notwithstanding the peace with Carthage, the Romans took possession of Sardinia in 228, where the mercenary troops of Carthage had revolted. Hamilcar, who was at the head of the democratic party, now undertook the conquest of Spain, whose rich mines tempted the Carthaginians. For the success of this enterprise, within 17 years, Carthage was indebted to the family of Barcas, which could boast of the glorious names of Hamilcar, Asdrubal and Hannibal. To secure the possession of this acquisition, Asdrubal founded New Carthage (now *Carthagena*), the most powerful of all the Carthaginian colonies. The second Punic war (218—201 B. C.), notwithstanding the abilities of the general, ended with the subjugation of Carthage. Hannibal, neglected by his countrymen, and weakened by a victory that cost him much blood, was obliged to leave Italy, in order to hasten to the assistance of Carthage, which was threatened by the Romans. The battle at Zama, in the neighborhood of Carthage, resulted in favor of the Romans. Scipio granted the city peace under the severest conditions. Carthage ceded Spain, delivered up all her ships of war except 10, paid 10,000 talents (about $10,000,000), and promised to engage in no war without the consent of the Romans. Besides this, Masinissa, the ally of Rome, and implacable enemy of Carthage, was placed on the Numidian throne. This king, under the protection of Rome, deprived the Carthaginians of the best part of their possessions, and destroyed their trade in the interior of Africa. The third war with the Romans was a desperate contest. The disarmed Carthaginians were obliged to demolish their own walls. Then, taking up arms anew, they fought for death or life. After three years, the younger Scipio ended this war by the destruction of the city, B. C. 146. Augustus peopled it anew, and it regained some degree of renown. From A. D. 429 to 534, it was the residence of the Vandal kings. But the Arabians destroyed it a second time, and few traces now remain of it, except an aqueduct.

The government of Carthage, according to the common opinion, in its origin, was monarchical; afterwards, it is not known how nor when, it became republican. The Phœnician states, likewise, had kings, and their government, too, was republican. As no distinct period is mentioned when the government received its form, the constitution seems to have been gradually formed, mostly by and through domestic troubles. The government was composed of the *suffetes*, the senate, the tribunal of the hundred, and the freemen. The *suffetes* were at the head of affairs, and were commonly called *kings*, by the Greek authors, and *consuls* by the Romans. They were permanent officers, and not, like the Roman consuls, chosen for short periods. The Carthaginian senate seems to have been a permanent and numerous body, in which there was a smaller committee, composed, probably, of the elder members. As regards the power of the senate, and its relation to the people, we know that the former had the right of deliberating beforehand on all affairs that were to be referred to the people. If the *suffetes* agreed with the senate, the business might be referred to the people, or not, as these magistrates saw fit; but if they disagreed, it was always referred to the people; and every citizen had the right of expressing his opinions freely. War and peace, likewise, depended on the decision of the senate. The tribunal of the hundred was chosen from the most respectable families, and was the highest political tribunal. It seems, also, to have been in possession of supreme civil jurisdiction. A highly remarkable peculiarity of the Carthaginian government was, the separation of the civil and military power at so early a period. The *suffetes* were never their generals. The latter were chosen by the people, and, in time of war, had unlimited power in regard to military operations. Affairs of state, on the contrary, alliances, and the like, were administered by a committee of the senate, which was associated with the generals. In this respect, the Carthaginian constitution was superior to the Roman, in which the union of the two powers cost the state its freedom. The religion of Carthage was a branch of the worship of the stars and of fire, which prevailed in the East. Concerning Moloch (Baal or the Sun), the supreme god of the Phœnicians, the human sacrifices, and other peculiarities

of the Phœnician worship, the bishop of Zealand, doctor Frederic Münter, has published the result of his interesting inquiries, in his Religion of the Carthaginians (Copenhagen, 1821, 2d edition, 4to.).

Carthagena; an ancient town on the coast of the kingdom of Murcia, with considerable trade, one of the three great naval harbors of Spain, and the best port of the Mediterranean. The basin is very deep, even quite close to the town. The hills that surround it, with steep ascents, and an island at the mouth of the harbor, protect the vessels from all winds. The town, with the citadel, is situated on a peninsula in the harbor. It contains 29,000 inhabitants, fine wharves, a naval arsenal, a naval school, a mathematical, nautical and pilot academy, an observatory, a botanical garden, a sail-cloth manufactory, has some fisheries, and some trade in barilla, silk, &c. In the neighborhood of the town, the Carthaginians possessed mines of silver of such richness, that Hannibal was enabled to carry on the war against the Romans out of their produce. There are hot springs and salt mines in the neighborhood. The town was built by the Carthaginian general Asdrubal.

Carthagena; a province of Colombia, forming, with the provinces Santa Martha and Rio Hacha, the department Magdalena (see *Colombia*), bordering on the Caribbean sea and the gulf of Darien. The country is composed of mountains and valleys, covered with large and small forests. The variety of plants and trees, as well as fruits, is wonderful. The earth is covered with perpetual verdure. Wheat and other kinds of European grain do not flourish well, but Indian corn and rice are raised in sufficient quantity for the consumption of the inhabitants. The climate is very hot. From May to December, there is a great deal of rain. The variety and beauty of the birds is remarkable. Poultry, pigeons, partridges and geese, are good and plentiful. The fruits of the country are pine-apples, papayas, plantains, &c. The principal town is Carthagena.

Carthagena; a city and seaport of Colombia, capital of the province of the same name; lat. 10° 25′ N.; lon. 77° 30′ W. The population is rated at 24,000. It contains a handsome cathedral, several churches, convents and monasteries. The city is situated on a sandy island, which forms a narrow passage on the S. W. The bay is one of the best in the country. It extends seven miles from N. to S., and has a safe anchorage, though the many shallows at the entrance make a careful steerage necessary. There are among the inhabitants of Carthagena very many of Indian descent. The city, like the whole province, is subjected to the inconvenience of periodical rains.

Carthusians; a religious order, instituted by St. Bruno (q. v.), who, in 1086, built several hermitages in a desert surrounded by hills and rocks, four leagues from Grenoble, and, with six companions, united the ascetic with the monastic life, like the Camaldulians. The inhabitants of this desert built a church, and, by industry and skill, converted into gardens a place which seemed to have been destined for the haunt of wild beasts only. At the same time, they practised the greatest abstinence, wore coarse garments, and eat only vegetables and the coarsest bread. From their original seat (*La Chartreuse*), they were called *Carthusians*, and their monasteries, at first only a few in number, were called *Chartreuses*. Their fifth general, Guigues (died 1137), prescribed, besides the usual monastic vows, eternal silence and solitude. Mechanical labors and copying of books, together with religious worship, constituted their occupation. They observed a strict temperance, and submitted to bleeding five times a year. In 1170, they were confirmed by the pope. In the following centuries, they received additional statutes, which forbade altogether the eating of flesh, and allowed them to speak only during certain hours on Thursdays and the days on which the chapter met. With increasing wealth, however, many embellishments were added to their solitary life, as the great Chartreuse, near Grenoble, and their elegant palace at Naples, prove. The monks were, in general, well informed, hospitable, and remarkable for their neatness. Excessive penance was interdicted, but their laws were exceedingly severe against disobedience. Their habit was entirely white within, covered with a black mantle. The lay brothers were distinguished by the beard and a shorter scapulary. The Carthusian nuns originated in 1616. They were dressed in white, like the monks, with a black veil. They obtained permission to dine in common, and to interrupt their silence more frequently. The general of the whole order was always the vicar of the Chartreuse at Grenoble. In the middle of the 18th century, the Carthusian monks occupied 172 monasteries, of which 75 were in France, the others mostly in

Germany and Italy. The Carthusians in Sicily and Spain only have escaped the general abolition of the order.

Cartilage is a semi-pellucid substance, of a milk-white or pearly color, entering into the composition of several parts of the body. It holds a middle rank, in point of firmness, between bones, or hard parts, and the softer constituents of the human frame. It appears, on a superficial examination, to be homogeneous in its texture; for, when cut, the surface is uniform, and contains no visible cells, cavities, nor pores, but resembles the section of a piece of glue. It possesses a very high degree of elasticity, which property distinguishes it from all other parts of the body. Hence it enters into the composition of parts whose functions require the combination of firmness with pliancy and flexibility, the preservation of a certain external form, with the power of yielding to external force or pressure. Anatomists divide cartilages into two kinds, the *temporary* and the *permanent*. The former are confined to the earlier stages of existence; the latter commonly retain their cartilaginous structure throughout life. The *temporary cartilages* are those in which the bones are formed. All the bones except the teeth are formed in a *nidus* of cartilage. The *permanent cartilages* are of various kinds. They compose the external ear and external aperture of the nostrils and eyelids. The larynx is formed entirely of this substance, and the trachea or windpipe, with its branches, is furnished with cartilaginous hoops, by which these tubes are kept permanently open for the ready passage of air to and from the lungs. The bodies of the vertebræ are joined by large masses of a peculiar substance, partaking of the properties and appearance of cartilage and ligament, which allow of the motions of these parts on each other, without weakening the support that is afforded to the upper parts of the body in general, and to the head in particular, by the vertebral column. These cartilages impart great elasticity to the spine, by which the effects of concussion from jumping, from falls, &c., are weakened and destroyed before they can be propagated to the head. When the body has been long in an erect position, the compression of these cartilages, by the superior parts, diminishes the height of the person. They recover their former length when freed from this pressure. Hence a person is taller when he rises in the morning, than after sustaining the fatigues of the day, and the difference has sometimes amounted to an inch. Cartilages are sometimes interposed between the articular surfaces of bones, where they fill up irregularities that might otherwise impede the motions of the part, and increase the security of the joint by adapting the articular surfaces to each other. These surfaces are, in every instance, covered by a thin crust of cartilage, having its surface most exquisitely polished, by which all friction in the motions of the joint is avoided.

Cartoon has many significations. In painting, it denotes a sketch on thick paper, pasteboard, or other material, which is used as a model for a large picture, especially in fresco, oil, tapestry, and, formerly, in glass and mosaic. In fresco painting, cartoons are particularly useful; because, in this, a quick process is necessary, and a fault cannot easily be corrected. In applying cartoons, the artist commonly traces them through, covering the back of the design with black lead or red chalk; then, laying the picture on the wall, or other matter, he passes lightly over each stroke of the design with a point, which leaves an impression of the color on the plate or wall; or the outlines of the figures are pricked with a needle, and then, the cartoon being placed against the wall, a bag of coal-dust is drawn over the holes, in order to transfer the outlines to the wall. In fresco painting, the figures were formerly cut out, and fixed firmly on the moist plaster. The painter then traced their contour with a pencil of wood or iron; so that the outlines of the figures appeared on the fresh plaster, with a slight but distinct impression, when the cartoon was taken away. In the manufacture of a certain kind of tapestry, the figures are still cut out, and laid behind or under the woof, by which the artist directs his operations. In this case, the cartoons must be colored. Of this kind are the cartoons which Raphael executed for pope Leo X, from which the famous tapestries of Raphael (see *Tapestry* and *Raphael*) in the Netherlands were woven. There were twelve of them, representing histories taken from the New Testament. Seven of them are still extant, and may be seen at Hampton court, near London. The best copy of them has been taken by Nicholas Dorigny, and the collection is called *Pinacotheca Hamptoniana*. (See Richardson's historical and critical description of them). Rubens bought these cartoons for Charles I, and king William built a gallery for them at Hampton court. The cartoon of the school of Athens, carried

to Paris by the French, and a fragment of the battle of Maxentius and Constantine, are preserved in the Ambrosian gallery at Milan. There are likewise cartoons by Giulio Romano in the Sala Borgia, by Domenichino and other Italian masters, who caused their pictures to be executed, in a great degree, by their scholars, after these cartoons. The value set upon cartoons by the old Italian masters may be seen by Giov. B. Armenini's *Precetti della Pittura* (Venice, 1687, 4to.). In later times, large paintings, particularly in fresco, were not executed so frequently. The artists also labored with less care, and formed their great works more from small sketches. In modern times, some German artists have prepared accurate cartoons. Among them is Cornelius, whose cartoons, for his fresco-paintings in Münich, have acquired much celebrity. He prepared, too, a cartoon for the fresco picture representing *Joseph interpreting the Dream*. Overbeck, also, has made cartoons, from which he has painted the *Seven Years of Famine*, and the *Selling of Joseph*. The *Seven Years of Plenty* he executed, with the assistance of William Schadow and Philip Veit. The representations of Joseph's history, just mentioned, the late Prussian consul-general Bertholdy has caused to be executed in fresco, at his residence in Rome, by the above-named artists. For the villa Massimi, near Rome, Overbeck has prepared cartoons representing scenes from Tasso's Jerusalem Delivered; Julius Schnorr, illustrations of Ariosto, and Veit, scenes taken from Dante.

Cartouch, in architecture, sculpture, &c., denotes an ornament representing a scroll of paper, being usually in the form of a table, or flat member, with wavings, whereon is some inscription or device.—In heraldry; a name given to a sort of oval shields, much used by the popes and secular princes in Italy, and others, both clergy and laity, for painting or engraving their arms on.—In the military art; a wooden case, about three inches thick at bottom, and girt round with marline, holding 2, 3, or 400 musket balls, with 8 or 10 iron balls, weighing one pound each, to be fired from a mortar, gun or howitzer, for the defence of a pass, retrenchment, &c. It is also used for a cartridge-box, now employed mostly by the cavalry. The charge of a cannon is also sometimes called by this name.—*Cartouche* is likewise the name given by the French literati to that oval ring, or border, which includes, in the Egyptian hieroglyphics, the names of persons of high distinction, as M. Champollion has proved. This border was thought, at first, by Zoëga, to include every proper name.

Cartouche, Louis Dominique. The pilfering propensities of this man, who was born at Paris, near the end of the 17th century, early showed themselves. Being expelled from school, and afterwards from his father's house, for theft, he joined a band of rogues in Normandy, and then put himself at the head of a numerous company of banditti in Paris, over which he exercised the power of life and death. He was first apprehended in a tavern, in 1721, and brought to the *Châtelet*. On the rack, he named none of his accomplices. But when he arrived at the place of execution, where he was to be broken alive on the wheel, and found that his companions had not assembled to his rescue, he retracted, and named his accomplices, to gain a respite. His execution soon followed. Various authors have described his adventurous, and, in some respects, interesting life.

Cartridge; a case of paper, parchment, or flannel, fitted to the bore of fire-arms, and filled with gun-powder, to expedite the discharge of the piece. Cartridges are of two sorts, viz. *ball*-cartridges, used in firing balls, and *blank*-cartridges, used in firing without ball. Riflemen avoid the use of cartridges, because the cartridge injures the shot of a rifle. In most armies, a soldier carries 60 cartridges into battle.

Cartwright, Edmund, was born in 1743, in Nottinghamshire (brother of major John Cartwright, the well-known advocate of parliamentary reform), and studied at Oxford. His poems were very popular, especially a ballad entitled *Armyne and Elvira*, 1771. He was one of the principal contributors to the Monthly Review. He is also distinguished for his mechanical inventions. In 1786, he took out a patent for a weaving machine; for which he obtained from parliament a grant of £10,000, and was often rewarded with prizes for his inventions. For the last 30 years of his life, he was employed in plans for propelling carriages and boats by steam. He died in 1824.

Cartwright, John, an English gentleman, celebrated for his exertions in the cause of political reform, was born in 1740, at Marnham, Nottinghamshire, of an ancient family. His early education was rather deficient; but he made some progress in mechanics and practical mathematics. He entered the navy, and be-

came a first lieutenant in 1766. In 1774, his attention was turned to politics. In his Letters on American Independence, written in this year, he advocated a union between the colonies and the mother state, under separate legislatures, and argued this great question on the foundation of natural, inherent right; maintaining "that the liberty of man is not derived from charters, but from God, and that it is original in every one." In 1775, he was appointed major of the Nottinghamshire militia, and, after several ineffectual attempts, on the part of government, to remove him from that post, his dismission was finally accomplished, in 1792, in consequence of an act of parliament. In the American war, lord Howe was desirous of having him with him in America; but major Cartwright, although always eager for promotion in the navy, refused the proposal, alleging that he could not fight in a cause which he disapproved.—From this time, he devoted himself to the two great objects of annual parliaments and universal suffrage. In 1779, he succeeded in the establishment of a Society for Constitutional Information, and was the author of a Declaration of Rights, distributed by the society, which, sir William Jones said, "ought to be written in letters of gold."—The French revolution was warmly welcomed by Cartwright, as by other friends of liberty. The alliance of the sovereigns, which soon followed, he considered equally irreconcilable with policy and with national justice. The subsequent prosecutions against the friends of reform, the fate of Muir and of Holt, occasioned no small dismay among the people. In the trials of Tooke, Hardy, Thelwall and others, Cartwright took a great interest, was present as a witness, and displayed much openness, fearlessness and firmness. By his writings, public addresses, &c., he continued to promote the work of reform and constitutional liberty; and, as late as 1819, he was tried for conspiracy and sedition, for advising the inhabitants of Birmingham to send what he called their "*legislatorial attorney*" to the house; but he escaped with a fine of £100.—Major Cartwright was not a political reformer only. The plan of making the slave-trade piracy, is said to have been first developed in his Letters on the Slave-Trade. The information which he furnished to Daines Barrington respecting the possibility of approaching the north pole; his plan for a perpetual supply of English oak for the navy, which has since been partially adopted, and several other useful projects and inventions, are sufficient evidences of his enterprise, activity and diversified knowledge. He died in 1824, in the 84th year of his age. He has been described as alike just in all the relations of life, as a citizen, a politician, a husband and a friend; disinterested, firm and fearless; and Fox, upon presenting one of his petitions to the house, remarked, "He is one, whose enlightened mind and profound constitutional knowledge place him in the highest rank of public characters, and whose purity of principle, and consistency of conduct through life, command the most respectful attention to his opinions." The most prominent traits of his character are enterprise, firmness and perseverance. He was a fruitful writer, quick, ingenious, powerful in argument, and sometimes eloquent. His language is plain, pure and strong.

Carver, Jonathan, was born in Connecticut, in 1732. He embraced a military career, and, in the French war, commanded with reputation a company of provincials, in the expedition across the lakes, against Canada. When peace was concluded, in 1763, captain Carver undertook to explore the vast territory which Great Britain had gained. His object was, to acquire a knowledge of the manners, customs, languages, soil, and natural productions of the nations and region beyond the Mississippi, and to ascertain the breadth of the continent by penetrating to the Pacific over its widest part, between N. lat. 43° and 46°. He accordingly set out from Boston in 1766, and, having reached Michillimackinac, the remotest English post, applied to Mr. Rogers, the governor, for an assortment of goods, as presents for the Indians dwelling in the parts through which his course was to be directed. Receiving a portion of the supply which he desired, and a promise that the residue should be sent to him at the falls of St. Anthony, he continued his journey. But, not obtaining the goods at the appointed place, in consequence of their having been disposed of elsewhere by those to whom the governor had intrusted them, he found it necessary to return to la Prairie du Chien. He then, in the beginning of the year 1767, directed his steps northward, with a view of finding a communication from the heads of the Mississippi into lake Superior, in order to meet, at the grand portage on the north-west side of that lake, the traders that usually come, about this season, from Michillimackinac, from whom

he intended to purchase goods, and then to pursue his journey. He reached lake Superior in good time; but, unfortunately, the traders whom he met there could not furnish him with any goods, as they had barely enough for their own purposes, and, in consequence, he was obliged to return to the place whence he first departed, which he did in October, 1768, after remaining some months on the north and east borders of lake Superior, and exploring the bays and rivers that empty themselves into that body of water. He soon after repaired to England, with the view of publishing his journal and charts, and of obtaining a reimbursement for the expenses which he had incurred. Having undergone a long examination before the lords commissioners of trade and plantations, he received permission to publish his papers; but, when they were nearly ready for the press, an order was issued from the council-board, requiring him to deliver immediately into the plantation-office all his charts and journals. He was, consequently, obliged to re-purchase them, at a great expense, from the bookseller to whom he had disposed of them—a loss for which he received no indemnification, but was forced to be satisfied with that obtained for his other expenses. He had fortunately kept copies of his papers, and he published them ten years afterwards, in Boston, while in the situation of clerk of a lottery. Having sold his name to a historical compilation, which was published in 1779, in folio, entitled *The New Universal Traveller*, containing an account of all the empires, kingdoms and states in the known world, he was abandoned by those whose duty it was to support him, and died in want of the common necessaries of life, in 1780, aged 48 years.—Besides his travels above noticed, captain Carver published a tract on the culture of tobacco.

Cary, Lucius (viscount Falkland), one of those rare characters who serve as proverbial instances of social excellence, was born about the year 1610. Being carried young into Ireland, he received part of his education at Trinity college, Dublin, and part at St. John's college, Cambridge. His youth did not pass without irregularities, but they were suddenly closed by his marriage with a young lady of small fortune, whom he passionately loved. After passing some time abroad, he returned home, and devoted himself to a life of retirement, and the cultivation of polite literature. In 1633, he was appointed one of the gentlemen of the bedchamber to Charles I, but still chiefly resided at his seat at Burford, near Oxford, which he made a kind of academy of learned men, being continually surrounded by the most eminent men of the neighboring universities. Here it was that Chillingworth composed his famous work against popery; and questions of morals, theology and literature were discussed, in a congenial circle, with the utmost freedom. Lord Falkland himself was deeply read in works of controversy; but in him they produced only strictness of principle, and an aspiration after perfection, without debasing the man in the exaltation of the scholar. In 1639, he joined the expedition against Scotland; and, in 1640, his peerage being Scotch, he was chosen member of the house of commons for Newport, in the Isle of Wight. In the first instance, like many of the most honorable characters of the day, he warmly supported parliament. He spoke with severity against Finch and Strafford, and was so disgusted with the proceedings of Laud, that he concurred in the first bill for depriving the bishops of a vote in the house of lords. A strong attachment, however, to established forms, and some doubts of the ultimate objects of the parliamentary leaders, caused him to retract; and he afterwards strongly opposed the same measure. He still, however, kept at a distance from the court; but his high character rendered it so great an object to gain him over to the king's service, that at length he was induced to accept a seat in the council, and the office of secretary of state. While in office, he refused to employ spies or open suspected letters. He very decidedly embraced the party of the king, when hostilities commenced, and attended him at the battle of Edge-hill, and the siege of Gloucester. A view, however, of the evils impending over the country, and, very probably, a conviction of sinister objects on both sides, broke his spirits. He would frequently sit abstracted among his friends, and, sighing deeply, exclaim, "Peace, peace!" and exhibit every sign of grief and anxiety. His closing scene almost proves a determination to die in battle, as he volunteered his services at the battle of Newbury, without a command, and, putting himself in the front rank of lord Byron's regiment, was struck from his horse by a musket-shot, and was found, the next day, dead upon the field.—Such was the fate of lord Falkland, at the age of 34; and, while the universal praises which he has received are, doubtless, very

much owing to the elaborate character drawn of him by his friend Clarendon, there can be no doubt of the strict integrity of his character and intentions. As a man of active talent, he claims little admiration, and was evidently framed for that life of studious retirement and mental culture in which he so much delighted. One of his sayings marks his taste and character—"I pity unlearned gentlemen on a rainy day." Lord Falkland left behind him several published speeches and pamphlets on political and theological subjects, as also a few poems.

Caryatides; a kind of pillars, which represent the upper part of female bodies. The name is of Greek origin. The goddess Diana, who had a temple in Karyatis, a Peloponnesian city, was, for this reason, called *Karyatis*. In honor of her, virgins danced in a festive procession, on the feast of *Karyatis*, which suggested to architects the idea of adopting the image of virgins in a kind of column which ornamented the Pantheon. Thus Lessing explains the name and form of the Caryatides. Another explanation of the origin of Caryatides is the following: The inhabitants of Carya, a city of Peloponnesus, allied themselves with the barbarians in the Persian war. The Greeks, on the successful termination of that struggle, exterminated the males of Carya, and reduced all the women to slavery. The captives, as a further mark of infamy, were forbidden to lay aside the robes in which they had decorated the conquerors' triumph; and the architects of the time, to perpetuate the memory of the transaction, made statues representing these women in the servile office of supporting entablatures. (See *Architecture*, i. 340.)

Casa, Giovanni della, an Italian poet and orator, of an ancient and noble family of Mugello, near Florence, was born 1503, studied at Bologna, Padua, Rome, and entered, as an ecclesiastic, into the service of the two cardinals Alessandro Farnese, the first of whom, in 1534, ascended the papal chair, under the name of *Paul III.* He rose through various offices in the church, till Paul IV made him his private secretary. He died probably in 1556. His most celebrated work is *Galateo, ovvero de' Costumi*, to which one, *Degli uffizj, Communi tra gli Amici Superiori e Inferiori*, forms a supplement. This last is a translation of his Latin treatise, *De Officiis inter Potentiores et Tenuiores Amicos.* The best and most complete edition of his works appeared at Venice, 1752, in 3 vols., 4to.

Casanova, Francis, a painter famous for his battle-pieces, born at London, 1730, went, while a boy, to Venice, where he applied himself to the art of painting. He afterwards obtained admission into the academy in Dresden, and painted several pieces for the prince Condè. The spirit and liveliness of his coloring and execution cannot be surpassed. At the request of Catharine of Russia, he painted, in Vienna, a piece representing the victory of this princess over the Turks, which she afterwards put up in her palace. He was constantly occupied with his art, and died at Brühl, near Vienna, 1805.—His brother John, likewise a painter, was born 1729, at London; died, 1795, at Dresden, where he was professor and superintendent in the academy of painting, and had instructed many able pupils in his art. His work on the Ancient Monuments of Art, published in Italian, and also in German (Leipsic, 1771), is still in esteem.

Casanova, John James de Seingalt; eldest brother of the preceding; born at Venice, 1725; known by his Memoirs as an original and gay-tempered man, who acted an interesting part in all situations, amongst all classes of society, and in all the large cities of Europe. His various adventures are related by himself in a most entertaining manner. They were first published, in part, at Leipsic, 1826, in a German translation. The French original has since appeared. His father, Cajetan John James, a descendant of the Spanish family of Palafox, falling in love with a dancer, turned actor, but afterwards united himself with the daughter of a shoemaker, Fanosi, who followed the profession of her husband. James Casanova, their eldest son, received the rudiments of his education in Padua, and made rapid progress in the Latin language, as well as in the other branches of learning. His ardent temperament, early developed, soon, however, involved him in many adventures, that served to sharpen his observation, and enlarge his knowledge of human nature. He studied law, and, in his 16th year, wrote two dissertations; one, *De Testamentis*, the other on the question, *Utrum Hebræi possint construere novas Synagogas.* His talent for shining in society introduced him, at Venice, into the select circles, in which a refined but frivolous tone of manners prevailed. The patriarch of Venice gave him the inferior ordination, and his first sermon was received with general applause. But he failed in his second; and from this period commences his restless

career, in which he became entangled in a series of love adventures, that can be understood only from his memoirs. He is arrested in Venice, comes into personal contact with pope Benedict XIV at Rome, goes to Constantinople, is in the military service at Corfu, and, in short, visits all the principal cities of Europe, being continually connected with the highest personages, is followed and caressed, till at last he accompanies the count of Waldstein to Dux, in Bohemia, where he becomes his librarian. He died at Vienna, in 1803. The escape of Casanova from the lead prisons of Venice was managed with admirable address and ingenuity. He has left several works in Italian and French, which give proof of the great powers of this Proteus, though he was more at home in the bustling world than in the pursuits of learning. Of these may be mentioned *Confutazione della Storia del Goberno Veneto d'Amelot de la Houssaie, divisa in tre Parti* (Amsterdam, 1769); *Istoria delle Turbulenze della Polonia dalla Morte di Elisabet Petrowna fino alla pace fra la Russia e la Porta Ottomana, in cui si trovano tutti gli Avenimenti Cagioni della Rivoluzione di quel Regno* (Grätz, 1774, 3 vols.); *Histoire de ma Fuite des Prisons de la Republique de Venise, qu' on appelle les Plombs* (Prague, 1788). His memoirs are a mirror of the manners of his time.

Casas, Bartholomew de las, a Spanish prelate, was born at Seville in 1474, and, in his 19th year, accompanied his father, who sailed with Columbus, to the West Indies. Five years afterwards, he returned to Spain, and, pursuing his studies, entered the ecclesiastical order. He again accompanied Columbus in his second voyage to Hispaniola, and, on the conquest of Cuba, settled there, and distinguished himself by his humane conduct towards the oppressed natives, of whom he became, in a manner, the patron. He set at liberty the Indians who had fallen to his share in the division; and so much was he interested for them, that, in 1516, he went to Spain to lay a statement of their case before king Ferdinand, whose death, at that time, prevented any measures for their redress. The regent, cardinal Ximenes, however, appointed a commission to examine circumstances upon the spot, and to determine accordingly. Las Casas was to accompany them, with the title of *protector of the Indians*. The commissioners found that it was impossible to liberate the Indians, and therefore endeavored to secure them humane treatment; but Las Casas, still dissatisfied, remonstrated so warmly, that he was obliged to take refuge in a convent, from the rage of the planters. He again returned to Europe, and, on the accession of Charles V, in consequence of his representations, the council appointed a chief judge, to reëxamine the points of controversy between the partisans of Indian liberty and the colonists. Las Casas, by a singular inconsistency, in his zeal for the Indians, became the author of the slave-trade, by proposing to purchase Negroes from the Portuguese in Africa, to supply the planters with laborers, of the want of whom they complained; and this was unfortunately put into execution. He next applied for a grant of an unoccupied tract, in order to try his own plan with a new colony. This he at length obtained, and, with 200 persons, whom he persuaded to accompany him, landed at Porto Rico in 1521, but found that an expedition was advancing to ravage this very tract, and convey its inhabitants to Hispaniola as slaves. He endeavored in vain to prevent the threatened danger, and, with the few who still adhered to him, returned to Hispaniola to solicit succor. During his absence, the natives attacked the colonists with such success, that, in a short time, not a Spaniard remained in that part of South America. Las Casas, in despair at the failure of his project, retired to the Dominican convent at St. Domingo, and assumed the habit of the order. Notwithstanding his retirement, his zeal in the cause of the Indians did not abate; and, being sent on a mission to Spain, by a chapter of his order at Chiapa, in 1542, he pleaded their cause with his pristine warmth, and composed his famous treatise *Brevissima Relacion de la Destruccion des Indes*, in which he exposed the cruelties practised by the Spaniards. His unremitting perseverance at length obtained a new set of laws and regulations, by which the natives were greatly relieved. In 1544, he returned to America as bishop of Chiapa, and continued there until 1551, when he resigned his bishopric, and again returned to Spain. He died at Madrid in 1556, in the 92d year of his age. Besides the treatise abovenamed, he was also the author of a treatise, in Latin, on the question—"Whether sovereigns may in conscience, by virtue of any right, alienate their subjects from their crown, and transfer them to the dominion of any other lord?" which difficult question he treats with great freedom, spirit and delicacy. He also composed

several works which have never been published, among which is a General History of the Indies, which was a great assistance to Antonio de Herrera in his history. All his works evince profound learning, and solid judgment and piety; and, notwithstanding his great inconsistency in regard to the Negroes, he must be regarded as a very benevolent man, and a lover of mankind.

Casaubon, Isaac de (commonly called *Casaubonus*), born Feb. 18, 1559, at Geneva, of a family from Dauphiny, was educated by his father, a clergyman. In his 9th year, he spoke Latin fluently. In his 19th year, he entered the university at Geneva, where he studied jurisprudence, theology, and the Oriental languages, and, in 1582, succeeded Portus as professor of the Greek language. He here married the daughter of Henry Stephens, and published, every year, editions of Greek and Latin authors, with critical notes and translations. In 1596, he accepted a professorship of Greek and belles-lettres at Montpellier, but held it only two years. Henry IV invited him to Paris. His religious principles (the same as those for which his father had left his country), the jealousy of the other professors, and perhaps his rather unyielding character, were the occasion of many unpleasant occurrences, for which, however, he was indemnified by the office of royal librarian. After the death of Henry IV, he followed sir Henry Wotton, envoy extraordinary from James I, to England, where he was received with distinction, had two benefices and a pension conferred on him, and died at London, July 1, 1614. He was buried in Westminster abbey. Casaubon was a liberal theologian, a man of extensive learning, a good translator, and an excellent critic. As a critic, he has commented on Diogenes Laertius, Aristotle, Theophrastus, Suetonius, Persius, Polybius, Theocritus, Strabo, Dionysius of Halicarnassus, Athenæus, Pliny the Younger, &c. Nearly all the ancient classics are indebted to his valuable researches. His profound dissertation on the satirical poetry of the Greeks and the satire of the Romans (*De Satyrica Græcorum Poësi et Romanorum Satyra*) deserves particular praise. His theological writings are of less value.

Casaubon, Meric, son of the preceding, born at Geneva, 1599, likewise distinguished himself by his learning. He followed his father to England, and was made doctor of divinity at Oxford. He filled successively several offices in the church, when the revolution, which brought Charles I to the scaffold, deprived him of his income. Still he rejected the proposal of Cromwell to write the history of his time, as also the invitation of queen Christina to live in Sweden. On the return of the Stuarts, he was rewarded for his loyalty by restoration to his office in the church, which he held till his death, 1671. His learning was various and extensive, but not so profound as his father's. He published, besides his theological works, observations on several classic authors; e. g., Terence, Epictetus, Florus, Polybius, &c.

Casco Bay; a bay in Maine, between cape Elizabeth on W. S. W. and cape Small Point on E. N. E. Within these capes, which are about 20 miles apart, there are about 300 small islands; most of which are cultivated, and are much more productive than the main land on the coast of Maine. Portland harbor is on the W. side of the bay.

Case, Action upon the. *Actio super causam* is a general action, given for the redress of a wrong done any man without force, and not especially provided for by law, in order to have satisfaction for damage. This is called an *action on the case*, because the whole cause or case is set down in the writ; and there is no other action given in the case, except where the plaintiff has his choice to bring this or another action. This action lies in a variety of instances; as for words spoken or written, which affect a person's life, reputation, office or trade, or tend to his loss of preferment in marriage or service, or to his disinheritance, or which occasion him any particular damage. Action on the case likewise lies upon an assumpsit. (q. v.) It lies, also, in all instances wherein no general action could be framed; e. g., against carriers; against a common innkeeper, for goods stolen in his house; for deceit in contracts, bargains and sales; for neglect or malfeasance; for injuries done in commons; for malicious prosecution and false arrests; against sheriffs, for default in executing writs, permitting escapes, &c.; for conspiracy, nuisances, &c. &c.

Case, in grammar. (See *Language*.)

Case-hardening is a process by which iron is superficially converted into steel, in such articles as require the toughness of the former, conjointly with the hardness of the latter substance. The articles intended for case-hardening are first manufactured in iron, and are then placed in an iron box, with vegetable or animal

coals in powder, to undergo cementation. Immersion of the heated pieces into water hardens the surface, which is afterwards polished. Coarse files and gun-barrels are among the articles most commonly case-hardened.

Casemates (from the Spanish *casa*, a house, and *matare*, to kill), in fortification; vaults which are proof against bombs, under the main wall, particularly in bastions, for the purpose of defending the moat of a fortification, also for making countermines. They serve, at the same time, as a place for keeping the heavy ordnance, and, in case of necessity, as habitations for the garrison.

Case-shot, in artillery, is formed by putting a quantity of small iron balls into a cylindrical tin box, called a *canister*, that just fits the bore of the gun. In case of necessity, the canister is filled with broken pieces of iron, nails, stones, &c. The case is closed at both ends by wood. Shot of this sort are thrown from cannons and howitzers. In sieges, sometimes, instead of cases, bags are used. This kind of shot is very injurious to the enemy, because the balls contained in the canister spread, diverging in proportion to the distance. The amount of divergence is, to the distance which the shot reaches, generally in the proportion of 1 to 10; thus, at the distance of 600 paces, they make a circle of 60 paces diameter. The canisters used in the Prussian army contain balls of 1, 1½, 3, 4, 6, 8 and 12 ounces and of 1 pound. The distance which the shot will reach varies according to the weight and number of the balls. A six-pounder shoots canister balls of 1 ounce from 200 to 500 paces; twelve and twenty-four-pounders shoot balls of 1 pound 800 to 1000 paces. The number of the balls varies according to their weight.

Cases, Emanuel, count of. (See *Las Cases.*)

Cashmere (17,291 sq. miles, 2,000,000 inhabitants) in Hindostan, now a province of the Afghan state of Cabul, in Asia, is a very celebrated valley, surrounded by the gigantic mountains of Asia, the Himalaya and Hindoo Koh, and traversed by the river Behat or Chelum (formerly *Hydaspes*). From three sides, seven passes only lead to this region; to the east, the Himalaya presents an insurmountable barrier of snow. The splendor and sublimity of the diadem of snow-capped mountains, the beauty and richness of the hills, which form the ascent to the higher peaks, it is impossible to describe. The elevated situation of the valley, and the mountains of snow which surround it, render the climate rather cold; but it is, on the whole, moderate and mild. This region, so rich in romantic scenery, is watered by numerous streams, and is blessed with an abundance of the finest productions. The Asiatics, therefore, call it the *paradise of India*, the *flower-garden*, and the *garden of eternal spring*. The hills are covered with forests and Alpine pastures; at the foot of these are fields of corn; along the sides of the rivers, rice is planted; rich orchards extend over the foremost range of hills; mulberry trees are cultivated in abundance, for the support of silk-worms, and are entwined with vines, from whose grapes wine, very similar to Madeira, is prepared. The fruits of warm climates do not ripen here. The valley is famous for its flowers, with which all the gardens and meadows abound. Violets, roses, narcissuses, and innumerable European flowers, besides many that are not known in Europe, grow wild. The inhabitants are Hindoos, of the religion of Brama, although they are under the dominion of the Afghans, who profess the Mohammedan religion. Their language is a dialect of the Sanscrit. They manufacture their celebrated shawls in great perfection. The wool which they use for this purpose comes from Thibet and Tartary, in which countries, only, the goat, from which it is taken, is said to thrive. About 80,000 shawls are made yearly, in 16,000 looms, each of which employs 3 workmen. The capital, Cashmere (likewise *Serinagur*), the largest town in the whole empire of Afghanistan, is situated on the Behat, and contains 200,000 inhabitants.

Cashmere Goat, a nobler species of the common goats, is descended from the goat of Thibet, which pastures on the Himalaya. The climate in Thibet is subject to sudden changes. There is little rain, but much snow, as the cold in winter is below the freezing point. Thibet is situated at the northern descent of the Himalaya mountains, and Cashmere at the southern; hence the latter is a little warmer than Thibet. In Thibet, this goat is a domestic animal. It is not allowed a very luxuriant pasture. The favorite food of these animals is buds, aromatic plants, rue and heath. The people of Thibet give their goats, at least once a week, some salt, which has always proved a useful accompaniment to the customary food of these animals. If they are transferred from their cold, mountainous abode into a warmer country, the

natural consequence follows, that the wool becomes inferior in quantity and fineness. It grows, also, very slowly in the warm part of the year, and more vigorously as the cold season approaches. The head of the Asiatic goat is large, the horns situated backwards, and somewhat curved, the legs slender. The colder the region where the animal pastures, the heavier is its fleece. Proper food and careful tending increase the fineness of the wool. Yearlings, as in the case with the Merino sheep, afford the finest wool. A full-grown goat yields not more than 8 ounces. The goats which pasture in the highest vales of Thibet have a bright ochre color. In lower grounds, the color becomes of a yellowish-white, and, still farther downwards, entirely white. The highest mountains of the Himalaya, inhabitable by man, contain also a kind of goats with black wool, which, in India, and in the mountainous country of the goats, obtains the highest price, as a material for shawls. The goats of Thibet and Cashmere have the fine curled wool close to the skin, just as the under-hair of our common goat lies below the coarse upper-hair. The wool is shorn in the spring, shortly before the warm season—the time when the animal, in its natural state, seeks thorns and hedges in order to free itself from the burden of its warm covering. All the hard and long hairs are picked out most carefully. The wool, thus purified, is washed, first in a warm solution of potash, and afterwards in cold water, in which process felting must be carefully avoided. It is then bleached upon the grass, and carded for spinning. The shawl-wool is three times dyed—before carding, after spinning, and in the shawl. The Asiatics avoid spinning the wool hard, in order that the shawl may be soft. They use a spindle, which consists of a ball of clay, with an iron wire attached. The finger and the thumb of the spinner are kept smooth by steatite powder. A large shawl, of the finest quality, requires 5 pounds of the wool; one of inferior quality, from 3 to 4 pounds. Main, in London, has invented a machine, which spins this wool, in a very simple way, finer than can be done by the best spindles of Thibet, and, at the same time, of a firmer thread. The flesh of the Cashmere goat tastes as well as that of the common one; and its milk is as rich, if it is well tended. Since 1820, this species has been introduced into France, and succeeds very well. The enterprising baron Ternaux (q. v.) ordered 1289 of these goats to be brought to France (1820), under the care of the celebrated professor of Oriental languages in Paris, Amadée Joubert. Joubert found these goats already spread from Cashmere to the Ural, over Bucharia, in Independent Tartary, purchased them in the deserts there, and transported them over the Volga along the coast to Theodosia, in the Crimea, where they were put on board vessels to be carried to France. On the voyage, which lasted a long time, a great number died: there remained, however, more than 400 healthy animals, which were sent from Toulon and Marseilles, partly to the Pyrenees of Roussillon, partly to the lime-hills of Provence, and to the pastures of Alsatia and Rambouillet.

Cashna, or Cassina, or Kassina; a city in Africa, capital of a kingdom, between Bornou and Timbuctoo; 220 miles W. N. W. Bornou, 690 E. S. E. Timbuctoo; lon. 11° 34′ E.; lat. 16° 30′ N. A large proportion of the country of Cashna consists of land of great fertility, interspersed with arid wastes. Cashna is level, and said to contain 1000 towns and villages. The monarch is called *sultan of all Soudan*, i. e. Negroland. The principal articles of traffic are senna, gold dust, slaves, cotton cloths, goat skins, ox and buffalo hides, and civet. Cashna has no salt lakes or mines, but is supplied with salt from Bornou.

Cashoo; the common name of the *anacardium occidentale* of Lin.; a native of Bahar. The fruit of the tree is called *cashoo-nut*. The expressed juice makes a pleasant wine; and an aromatic and medicinal drug is prepared by a decoction and maceration of several parts of the tree, afterwards consolidated by evaporation. The Indians chew it. The Europeans employ it as a digestive, and a soother of coughs.

Casimir III, the Great, king of Poland, son of Uladislaus Loketek, distinguished himself by his valor, under the reign of his father, who had commissioned him to take revenge on the knights of the Teutonic order; and, that he might learn the art of governing, made him regent of Great Poland. In 1333, he ascended the throne, and had many contests with the Teutonic knights, made himself master of Little Russia, which had formerly belonged to Poland, conquered Silesia, repelled the Tartars, who had advanced to Poland, and the Bohemians, who attempted to gain possession of Silesia, as a fief of Bohemia. He died in 1370, without children, having named a son of the

king of Hungary his successor, in 1339. He caused a new code of laws to be compiled, and protected the peasants with much energy, on which account he was called the *peasants' king*. He had a great number of mistresses, among whom was a Jewess, named *Esther*, who procured for her nation those liberties which they enjoy in Poland to the present day. With Casimir, the line of the Piasti, which had ruled in Poland for 523 years, became extinct. From that time, the Poles chose foreigners for their kings, and thus laid the foundation of the troubles which distracted the kingdom till its final ruin.

Casino, in Germany, is used to signify a clubhouse. They are now to be found in almost every place of middling population.

Casiri, Michael, a learned Orientalist and Syro-Maronite clergyman, was born at Tripoli, in Syria, 1710, came to Rome, where he studied in the college of St. Peter and St. Marcellino, and, in 1734, entered the clerical profession. The following year, he accompanied the learned Assemanni to Syria, where he was going, at the command of the pope, to attend the synod of the Maronites, and, in 1738, gave, at Rome, an exact account of the religious tenets of the Maronites. He afterwards taught, in his monastery, the Arabic, Syrian and Chaldee languages, theology and philosophy; and, in the year 1748, was invited to Madrid, where he was appointed to an office in the royal library. In 1749, he devoted his attention, by the king's orders, to the library of the Escurial, of which he subsequently became the superintendent. Here he collected the materials for his celebrated work, *Bibliotheca Arabico-Hispana* (Madrid, 1760—70, 2 vols., folio), which enumerates, in 1851 articles, the manuscripts of the Escurial library, perhaps the richest in Europe in Arabic manuscripts. This work, though not entirely free from errors, contains very important information and valuable extracts, and is indispensable to every Orientalist. Casiri died at Madrid in 1791.

Caspian Sea; a large lake, or inland sea, in Asia; bounded N. by Russia, E. by Tartary and Persia, S. by Persia, and W. by Persia, Circassia and Russia; 646 miles in length from N. to S., and from 100 to 265 in breadth; supposed to be the largest lake in the eastern part of the globe. The water is less salt than that of the ocean, of a bitter taste, and of an ochre color, without ebb or flow. In some places it is exceedingly deep, yet it abounds in shallows, so as to prevent the navigation of ships which draw more than 9 or 10 feet of water. Among the rivers which flow into it are the Volga, Ural and Kur. It has no outlet. The fisheries here, which are very valuable, occupy and train many seamen. The coasts are divided among the Russians, Persians and Tartars. The Caspian sea was, by the ancients, called the *Hyrcanian sea*; the Tartars call it *Akdingis*, i. e. the *White sea*; the Georgians call it the *Kurtshensian sea*; and by the Persians it is styled *Gursen*. The level of the Caspian sea is 375 feet lower than that of the ocean. The Truchmenes, on the shores of the Caspian sea, assert, that the lake Kuli-Daria, which is connected with the gulf of Karabogaskoi, a part of the Caspian sea, contains a whirlpool, which takes in the water of the latter. In fact, the current from the Caspian sea into the gulf of Karabogaskoi is very great. The most recent information respecting the shores of the Caspian sea is that given by Murawiew in his Journey to Khiwa, in the year 1819, in Russian.

Cassander, George, born in 1515, in the island of Cadsand, or Cassand, near Bruges, in the Netherlands, from which he received his name, is celebrated for his endeavors to settle the disputes between religious parties. At Bruges, Ghent and Cologne, he studied, and taught philology, the canon law and Catholic theology, and accepted no public office, on account of his ill health. In 1561, he published a work designed to allay religious disputes, in which his censure of Calvin for his violence and intolerance drew upon him the attacks both of Calvin and Beza. In 1564, he was employed by the duke of Cleves to convert the Anabaptists. The emperor Ferdinand I invited him to Vienna, to compose articles of union between the Catholics and Protestants. These he published, under Maximilian II, the successor of Ferdinand—*De Articulis Religionis inter Catholicos et Protestantes Controversis ad Impp. Ferd. I, et Max. II, Consultatio, ed. Hug. Grot.* (1642.) Though a sincere Catholic, he founded his opinions on the doctrines of the old Christian fathers, and showed his concurrence with the Protestants, in regard to fundamental doctrines, by proposing communion under both forms, the marriage of priests, the abolition of image-worship, the reform of many abuses, and a modification of the Catholic system. But he asserted the supremacy of the pope, supported the

doctrine of transubstantiation, and the importance of the sacrament, *ex opere operato*. His proposals were not relished by the zealots of either party. He died at Cologne, in 1566, with the reputation of a learned and liberal theologian.

Cassandra, also Alexandra; daughter of Priam and Hecuba, and twin-sister of Helenus. Both children, according to tradition, were playing in the vestibule of the temple of the Thymbræan Apollo, not far from Ilium; and, having staid there too late to be carried home, a couch of laurel twigs was prepared for them, for the night, in the temple. When the nurses went to them the next morning, they found two serpents at the side of the children, which, instead of injuring them, harmlessly licked their ears. This miracle produced a still greater one; the hearing of the children was rendered so acute, that they could distinguish the voices of the gods. Cassandra subsequently spent much of her time in the temple of Apollo, who, becoming enamored of her charms, disclosed to her all the secrets of the prophetic art, and, in return, demanded her love. But Cassandra, when her curiosity was satisfied, refused the dishonorable reward. Apollo, incensed at this, put a curse on her prophesies, that they should never find belief. She frequently and continually foretold the destruction of Troy, and warned her countrymen in vain against the deceitful horse. When Troy was conquered, and Cassandra, with the other maidens, fled to the temple of Minerva, Ajax tore her from the altar, deflowered the virgin in the sacred place, and dragged her away to the other female slaves, with her hands tied. On the division of the booty, she fell to Agamemnon, who carried her, as his slave and mistress, to Mycene. Clytemnestra murdered them both. Agamemnon had twins by her—Teledamus and Pelops. The ancients regarded this rape of Cassandra as a most infamous atrocity. It has often afforded a subject to poets and sculptors. The Locrians, the countrymen of Ajax, were afflicted, on this account, for many years, with storms, and their country was desolated with the plague.

Cassas, Louis Francis, born in 1756, inspector and professor in the Gobelin manufactory, celebrated as a draughtsman, is a pupil of Lagrenée, junior, and Le Vien. He travelled as companion of the count of Choiseul-Gouffier, about 1770, over Asia Minor, Palestine, Syria, a part of Egypt, Istria, Dalmatia, and Troas. He compared the present topography of those places with the accounts of the ancients, took exact measurements of the finest remains of architecture, made drawings of the most remarkable places with equal taste and accuracy, and published his labors, engraved by the best masters, in splendid editions. His *Voyage Pittoresque de la Syrie, de la Phénicie, de la Palestine, et de la Basse Egypte* (1799 et seq. 30 *livraisons*, folio, text by De la Porte du Theil), is fully described by Landon (ii., 133—6). The original drawings are preserved in the king's library at Paris. In his *Voyage Pittor. de l'Istrie et de la Dalmatie*, he has inserted a journal and a short history of this province, digested by Joseph la Vallée (Paris, 1802, grand fol., with engravings).

Cassation; a term used in the courts on the continent of Europe. It is derived from the middle ages, and signifies the annulling of any act or decision, if the forms prescribed by law have been neglected, or if any thing is contained in it contrary to law.

Cassation, Court of (*Cour de Cassation*); one of the most important institutions of modern France, which gives to the whole jurisdiction of that country coherency and uniformity, without endangering the necessary independence of the courts. It was established by the first national assembly, and has been preserved, in every essential respect, under all the changes of the revolution and restoration. It has been maintained even in those districts which, by their union with France, became subjected to French laws, but, by the peace of Paris, have become part of the Prussian monarchy. In France, as early as the reign of Louis IX (1226—1272), petitions were presented to the king by appellants from the decisions of the courts. In later times, appeals to the parliaments, as the highest courts of the kingdom, came into use, and their decisions were not liable to be set aside by the ordinary forms of law. Yet the parties were allowed to dispute even these decisions, if they were founded upon errors of fact, or violated undisputed principles of law; and, by an ordinance of 1302, it was provided, that the parties should be allowed royal letters for the defence of their rights against the decisions of the supreme courts (*lettres de grâce de dire contre les arrets*), which should be issued from the chancery (by the chancellor of France). The case was then sent back to the parliament for further investigation, but was examined and decided in the

presence of the king himself or of a special commissioner. An abuse, however, crept in, of transferring these cases to the royal council, where they were decided by officers called *maîtres des requêtes*. These letters received the name of *lettres de proposition d'erreur*, and, during the civil commotions at the end of the 14th century, began to be more frequently presented to the council, which, as soon as one party complained of the partiality of the parliaments, transferred the case to its own bar, and obstructed the course of justice by *lettres d'état* (suspensions of the process, on the pretext of the absence of one of the parties in the service of the king). Under the chancellor Poyet (1538—1542), this abuse reached its highest pitch; but the chancellors Olivier (1545—1551) and Hôpital (1560—1568), the two great reformers of French jurisprudence, limited the use of these *lettres*, till, by the ordinance of Blois (1576), all the provisions against the decisions of the parliaments were reduced to these three:—the *proposition d'erreur*, for an error of fact; *requête civile*, to restore the parties to their former condition, on account of the fraud of one of the parties, or the mistakes of the attorney; and *cassation* (petition for abrogation), for violation of forms or settled principles of law. By the famous order of procedure of 1667, the first of these provisions was abolished, but the province of the *requête civile* and *cassation* was enlarged, and more precisely defined. The former was always brought before the court itself, and decided there, the latter before the council. For this purpose, in the *conseil privé*, or *cons. des parties*, a particular committee was formed, consisting of the chancellor, the four secretaries of state (ministers of the departments), the council of state, and all the *maîtres des requêtes* (in 1789, 78 in number). The decisions of this committee were too much influenced by the will of the king and the ministers, and by various other circumstances, so that they did not enjoy great respect, though they often exposed acts of great injustice on the part of the parliament, and other high courts. It was therefore abolished in the first national assembly, and its place supplied by an independent court—the *tribunal of cassation* (law of Nov. 27, 1790), which was retained in all the constitutions, and received, under the imperial government, (1804), the name *court of cassation*, which it still retains. It consisted, according to the organization of 1800, of 48 members, chosen from the senate, on the nomination of the consuls, who elected their own president from among themselves. The appointment of president was afterwards vested in the emperor. In the *Charte Constitutionnelle* of 1814, the right of appointing the counsellors was vested in the king; but they are not removable. The minister of justice or keeper of the seals (*garde des sceaux*) has the right of presiding when the tribunal exercises its right of censorship over the *cours royales:* it has, besides, a first president and three presidents of sections. This court never decides on the main question at issue, but on the competency of the other courts, and on the petitions to have their decisions reviewed or annulled, and assigns the question to another court, if a decision is to be set aside for an evident violation of the forms or the principles of the law. For this purpose, it is divided into three sections:—the *section des requêtes*, which decides on the admissibility of the petitions in civil cases; the *section de cassation civile;* and the *section de cassation criminelle*. After a decision has been reversed, if a second court decides the same case in the same way, and an appeal is entered again, the court of cassation must either request an authentic explanation of the law from the government, or, at least, all the three sections must unite, to pronounce a second reversal, or cassation; and if a third decision is the same as the preceding, a repeated petition for a reversal makes the authentic explanation indispensably necessary. The sentences of the court of cassation are not only recorded in the journals of the courts, the decisions of which are reversed, but published likewise in an official bulletin, by which consistency and uniformity are preserved. The tribunal of cassation has enjoyed, from its commencement, the respect and confidence of France, and numbers among its members several of the most distinguished lawyers, as the president Henrion de Pansey, the counsellors Chabot, Merlin and Carnot.—For the Prussian province on the Rhine (the districts of Cleves, Düsseldorf, Coblentz, Aix-la-Chapelle, Treves and Cologne), by the ordinance of June 21, 1819, a court of revision and cassation was established at Berlin (consisting of a president and 16 judges, among whom is professor Savigny), which has under it the court of appeal at Düsseldorf (consisting of a president, together with 32 other officers), and six district courts (the former resembling the French royal courts, the latter the French tribunals of original jurisdic-

tion). (See *Appeal*, *Writs of Error*, and *Courts*.)

Cassava, or Cassada. The cassava or cassada (*jatropha manihot*) is a South American shrub, about three feet in height, with broad, shining, and somewhat hand-shaped leaves, and beautiful white and rose-colored flowers. It is a very remarkable circumstance, that the roots of the cassava, if eaten raw, are a fatal poison, both to man and beast, and that, when prepared by heat, they yield a safe and valuable food; on which, indeed, many, both of the Indian and European inhabitants of South America, almost wholly subsist. The roots are the only edible parts of the plant. These are white, soft and farinaceous, from one to two feet in length, and five or six inches in circumference. They are dug out of the earth, washed, stripped of their rind, and ground to a pulp. The juice, or poisonous part, is carefully pressed out, and thrown away; since cattle and other animals, which have accidentally drank of it, have almost instantly died. The flour that remains after pressure is formed into thin, round cakes, and baked. To a European, accustomed to eat bread, these, though sweetish and not unpalatable, have an insipid taste. If placed in close vessels, and preserved from the attacks of insects, cassava bread may be kept for several months without injury. With the natives of South America, it is not unusual to throw a great number of cakes of cassava together to heat; after which they soak them in water, which causes a rapid fermentation to take place; and, from the liquor thus obtained, they make a very sharp and disagreeable, but intoxicating beverage, which will not keep longer than 24 hours without spoiling. From the pure flour of cassava is formed the substance called *tapioca*, which is frequently used for jelly, puddings, and other culinary purposes. This is separated from the fibrous part of the roots by taking a small quantity of the pulp, after the juice is extracted, and working it in the hand till a thick, white cream appears on the surface. This, being scraped off and washed in water, gradually subsides to the bottom. After the water is poured off, the remaining moisture is dissipated by a slow fire, the substance being constantly stirred, until, at length, it forms into grains about the size of sago. These become hard by keeping, and are the purest and most wholesome part of the cassava.—The roots of another species of this shrub, called *sweet cassava*, are usually eaten with butter, after being roasted in hot ashes. They have much the flavor of chestnuts, and are an agreeable and nutritive food.

Cassel, the residence of the elector of Hesse Cassel, lies on the Fulda; lat. 51° 19′ 20″ N.; lon. 9° 35′ 18″ E.; and has 1586 houses and 23,300 inhabitants, among whom are 500 Jews. One part of the city is quite regular. The river Fulda is navigable at this place. The situation renders the climate pure and healthy. It has 19 squares, 9 churches, and many public buildings, containing highly valuable libraries, collections of works of art, &c. The gallery of paintings contains some famous masterpieces. An observatory is likewise situated here. The city was much embellished under the government of Jerome, king of Westphalia, whose capital it was till the dissolution of this kingdom, in October, 1813. The old elector again took possession of it, Nov. 21, 1813. About a league distant is the summer palace, called *Wilhelmshöhe*. Cassel has considerable manufactories.

Cassel (Hesse-Cassel). (See *Hesse*.)

Cassia. Wild cinnamon, or cassia, is the bark of a tree of the bay tribe (*laurus cassia*), which grows in the East Indies and China, and is distinguished by having spear-shaped leaves, each with three nerves. This bark was well known to the ancients, and highly esteemed by them. But since the use of cinnamon has been generally adopted, the cassia bark has fallen into disrepute, on account of its inferiority. It is thicker and more coarse than cinnamon, of weaker quality, and abounds more with a viscid, mucilaginous matter. For many purposes, cassia, as being much less expensive, is substituted for cinnamon, but more particularly for the preparation of what is called *oil of cinnamon;* and nearly the whole of what is at present sold under the name either of *simple* or *spirituous cinnamon waters*, is prepared from cassia. The buds as well as the bark of this tree are used in cooking, &c. Cassia is imported mostly from China.

Cassina. (See *Cashna*.)

Cassini; a name famous in the history of astronomy and geography for three generations.—1. Giovanni Domenico, born July 8, 1625, at Perinaldo, near Nice, studied at Genoa with the Jesuits. Chance turned his attention to astronomy, in which he made such rapid progress, that, in 1650, the senate of Bologna

bestowed on him the first professorship of astronomy at the university. A meridian had been drawn by Ignatio Dante (1575), in the church of St. Petronia, in that city. In 1653, Cassini conceived the idea of extending and correcting it. In two years he completed this difficult task, the first fruits of which were more correct tables of the sun, a more precise determination of its parallax, and an excellent table of refractions. By an observation at Città della Piave, he discovered the shadows cast by the satellites of Jupiter on the disk of that planet, when they are between it and the sun. By means of these, he corrected his theory of the motion of the satellites, and determined the period of Jupiter's revolution. At the same time, he made a number of observations on insects, which were published by Aldrovandi. In 1668, he published his Ephemerides of the Satellites of Jupiter. In 1673, Colbert prevailed on him to settle in France. He discovered four new satellites of Saturn, and the zodiacal light, proved that the axis of the moon is not perpendicular to the plane of the ecliptic, and showed the causes of her libration. The laws of this motion, which he determined with much accuracy, are one of his finest discoveries. He also wrote observations on the Indian calendar. The meridian commenced by Picard and Lahire was continued by Cassini, in 1700, to the extreme limits of Roussillon, and, when measured 100 years later, showed a difference of only 21 toises. He died Sept. 14, 1712, having lost his sight some years before. Lalande gives a catalogue of his writings in the *Bibl. Astronom.* His first work was *Observ. Cometæ, Anni* 1652—53 (Modena, 1653, fol.). His *Opp. Astronom.* (Rome, 1666) contain a complete collection of his earlier works. His nephew, Cassini de Thury, has published his biography, written by Cassini himself, under the title *Mémoires pour servir à l'Hist. des Sciences* (4to.)—2. James, son of the preceding, born at Paris, Feb. 18, 1677, was admitted into the academy of sciences in 1694. After several essays on subjects in natural philosophy, &c. he completed his great work on the inclinations of the orbits of Saturn's satellites and ring. His labors to determine the figure of the earth (q. v.) are well known. The first measurement of 1669 made the degrees of the meridian shorter towards the north than towards the south; whence it was concluded that the earth was an oblong spheroid. Cassini continued the measurement, and maintained this opinion in his work *De la Grandeur et de la Figure de la Terre* (Paris, 1720). In order to settle the question, the academy was commissioned, in 1733, to measure the whole length of France from Brest to Strasburg. Cassini directed this undertaking, but was led into some errors by the defective instruments of former observers. He died in 1756, at Thury. Besides the above-mentioned works, he wrote *Elemens d'Astronomie* (Paris, 1740, 4to.), and *Tables Astr.* His *eloge* in the *Mém. de l'Acad.* contains a biographical notice of him.—3. Cassini de Thury, Cæsar François, son of the preceding, born June 14, 1714, member of the academy from his 22d year. He undertook a geometrical survey of the whole of France, embracing the determination of the distance of every place from the meridian of Paris, and from the perpendicular of that meridian. When the support of the government was withdrawn, in 1756, Cassini formed a society for advancing the requisite sums, which were to be repaid by the sale of the maps constructed from the survey. The work was almost entirely finished, when he died (1784), leaving many writings relating to his great topographical undertaking.—4. Jacques Dominique, count, son of the preceding, born at Paris, 1740, is director of the observatory, and member of the academy, and is a statesman of ability, as well as a mathematician. In 1789, he presented to the national assembly the *Carte Topographique de France*, in 180 sheets, now increased to 182, by the addition of the *Carte des Assemblages des Triangles.* The *Atlas Nationale* is a reduction of it on a scale of one third, prepared by Dumey, and other engineers. Cassini was arrested by order of the revolutionary tribunal. He escaped with life, but lost the copperplates of the *Carte de France*, which had cost half a million francs. There is a second reduction of the large map, being only a fourth of the size of the original, in 24 plates.

Cassino; a game at cards, in which four are dealt to each player, four being also placed on the board. The object is to take as many cards as possible, by making combinations. Thus a ten in the player's hand will take a ten from the board, or any number of cards which can be made to combine into tens. The greatest number of cards reckons three points, and of spades, one; the ten of diamonds, two; the two of spades, one; and each of the aces, one.

Cassiodorus, Marcus Aurelius, a

learned Roman, lived at the time of the dominion of the Ostrogoths, and contributed to the promotion and preservation of learning. He was born at Squillace (*Scylaceum*), 480 A. D., or, as some say, 470, filled several public offices in Rome, and became secretary of the Ostrogoth king Theodoric, but, in 537, voluntarily retired to a monastery in Calabria, where he died, 577. He made the monks of his convent copy the manuscripts of the ancient authors, and his book *De Septem Disciplinis liberalibus*, in which he treated of the *trivium* and *quadrivium*, and inserted extracts from the ancient classic literature, was of much value in the middle ages. For Theodoric he also wrote his compilation of letters, *Variarum Epistolarum Libri XII.* He likewise composed *Historia Gothorum* (a History of the Goths), of which we have an epitome by Jornandes, and several theological works of little importance. His works have been collected by J. Caret (Venice, 1679, fol.; new edit. 1721).

Cassiopeia; daughter of Arabus, and wife of Cepheus, to whom she bore Andromeda. She dared to compare her beauty to that of the Nereides, who, enraged thereat, besought Neptune for vengeance. The god, in compliance with the request of the water-nymphs, laid waste the dominions of Cepheus by means of a deluge and a dreadful sea-monster. Thus it appears that in ancient times, as well as in modern, nations have had to suffer for the faults of their masters. Cassiopeia was the mother of Atymnius by an intrigue with Jupiter.—In astronomy, Cassiopeia is a conspicuous constellation in the northern hemisphere, situated next to Cepheus. In 1572, a new and brilliant star appeared in it, which, however, after a short time, gradually diminished, and at last disappeared entirely. It was thought, at that time, by many persons, that this was the star which appeared to the wise men in the East. The constellation Cassiopeia contains 52 stars of the first six magnitudes.

Cassiquiari; a river of Colombia, being a large branch of the Rio Negro, and remarkable as forming a communication between the two great rivers, the Amazon and Orinoco. The Cassiquiari flows from the Orinoco, and joins the Rio Negro, which last is a large tributary of the Amazon. The reality of this communication, which had been previously asserted by the Jesuit missionaries, was confirmed by the celebrated traveller Humboldt.

Cassiterides, in ancient geography; a name given by Strabo to 10 islands, N. W. of Spain, in the open ocean, abounding in tin and lead. Strabo says the Phœnicians only visited them. There are no islands where he describes them to have been. They are, perhaps, the modern *Scilly islands*. It is probable that the ancient merchants kept their true situation secret from interested views, which, in those times, could easily be done.

Cassius, Longinus Caius, the friend of Brutus, was the questor of Crassus, and preserved the few troops of that general who escaped from the bloody battle with the Parthians. With these he defended Syria against the Parthians till the arrival of Bibulus. In the famous civil war that broke out between Pompey and Cæsar, he espoused the cause of the former, and, as commander of his naval forces, rendered him important services. When Cæsar, after the victory at Pharsalia, was in pursuit of Pompey, he advanced with a few vessels, while crossing the Hellespont, against a fleet of 70 sail commanded by Cassius, and called upon him to surrender. The latter, astonished by his daring courage, surrendered at his summons. But, when it became evident that Cæsar was aiming at sole sovereignty, Cassius, who was a zealous republican, resolved to destroy the usurper, and executed his plan, with the aid of several fellow-conspirators, B. C. 44. He then, together with Brutus, raised an army to maintain his country's freedom. They were met by Octavius and Antony, who professed themselves the avengers of Cæsar, at Philippi. The wing which Cassius commanded being defeated, he imagined that all was lost, and killed himself, B. C. 42. Brutus called him the last of the Romans. (See *Brutus* and *Cæsar*.)

Cassowary (*casuarius*, Briss.); a genus of birds, arranged by Cuvier in his family *brevipennes*, the first of the order *grallæ*, waders, to which they are related solely by their long, naked, stilt-like legs, and long neck. In the form of the bill and their mode of living, they more closely resemble the gallinaceous birds. The shortness of their wings totally unfits them for flying, and it would seem impossible for nature to have furnished muscular power sufficient to move wings large enough to sustain their great weight in the air. Unlike other birds, their pectoral or wing muscles are comparatively slight and weak, while those of their posterior limbs are very robust and powerful.

The wings of the ostrich are of some assistance to it in running, but those of the cassowary are too short even to be of service in this way. Indeed, its whole plumage is so poorly supplied with feathers as to resemble, at a little distance, a coat of coarse or hanging hair. The cassowaries have three toes, all provided with nails. Two species of the genus are well known, the *common cassowary* (*casuarius*, B.; *struthio casuarius*, L.), inhabiting various islands of the Indian archipelago; and the *emeu* (*C. Novæ Hollandiæ*), or *New Holland cassowary*. The first species, called *galeated* or *helmeted cassowary*, has a laterally compressed beak, with a head surmounted by an osseous prominence, covered with a sort of horny helmet; the skin of the head and superior part of the neck is naked, of a deep-blue and fiery-red tint, with pendent caruncles, similar to those of the turkey-cock. There are some naked, rigid quills on the wings, which are used as weapons of defence. The inner toe-nail is the largest of all. The ostrich is the only bird which surpasses the cassowary in size and strength. From the form of its head, and bright eyes, the cassowary is of a fierce and threatening aspect. This, however, is not a true indication of its character, which is rather timorous and shy. It is about 5½ feet long, from the tip of the bill to the extremity of the longest claw. The head and neck together measure 18 inches, and the largest toe, including the claw, is 5 inches long. The claw of the inner toe is 3½ inches long. All the feathers of the cassowary are of the same kind, being entirely designed for covering, and externally are all of one color. They generally grow double, having two long shafts growing out of a short one attached to the skin. The double feathers are all of unequal length, some on the rump being 12 or 14 inches long, while others are only 3. The stem or shaft is flat, shining, black, and knotted below, having a beard arising from each knot. The beards at the ends of the large feathers are perfectly black, and towards the root of a tawny gray. The feathers on the head and neck are so short and scattered, that the skin appears naked, except towards the hind part of the head, where they are somewhat longer. The wings, without the feathers, are not more than 3 inches long. The rigid quills or prickles already mentioned are 5; the longest is 11 inches in length and a quarter of an inch thick at the base. The helmet is black in front and yellow behind. The eye is of a bright yellow, and more than an inch in diameter.—The anatomy of the cassowary differs very materially from that of the ostrich, which it resembles so much in general appearance and habits. The intestines are short, and the *cæcum* small; there is no stomach intermediate to the crop and gizzard, and the *cloaca* is not larger, in proportion, than that of other birds. It feeds on fruits, eggs of birds, &c., but never on grain. It swallows its food with great voracity, and, like the ostrich, bolts down bits of iron, broken brick, glass, &c., without injury. In fact, such substances perform the service, in the digestion of these great birds, that gravel does in that of ordinary fowls.—As might be inferred from its structure, the cassowary is a swift runner, and its mode of progression, being unaided by wings, is as peculiar as it is efficient. In running, the cassowary appears to strike out powerfully with one leg, so as to project its body violently forward with a bounding motion, far surpassing the speed of a horse. It also kicks violently when, in a state of captivity, it is provoked to anger, and can inflict a very severe blow. The eggs of the galeated cassowary are of a grayish-ash color, verging to green, and are neither as round nor as large as those of the ostrich. The shell is not very thick, and is marked by numerous little deep-green tubercles. The largest of their eggs measure about 15 inches in length and 12 round.—The *emeu*, or *New Holland cassowary*, differs from that of the old world by being much larger, and standing higher on its legs, being 7 feet 2 inches in length. The head is destitute of the helmet, and feathered throughout, except around the ear. The plumage is thicker, and the webs of the feathers more perfect. It has neither caruncles to the neck nor prickles on the wings. The nails of the toes are nearly equal. The legs are stout, similar to those of the galeated species, but jagged or dentated along the whole of their back part. The emeu is swifter in running than the fleetest gray-hound. It has not yet been found any where but in New Holland. The flesh has a considerable resemblance to beef. The young of the New Holland cassowary are striped with white and brown.

Cast. (See *Casting*.)

Cast Engravings. An important discovery has lately been made, which consists in taking moulds from every kind of engraving, whether line, mezzotinto, or aquatinta, and in pouring on this mould an

alloy in a state of fusion, capable of taking, as it is stated, the finest impression. No sooner is one cast worn out, than another may immediately be procured from the original plate, so that every impression may be a proof.

Castagno, Andrea del, an eminent painter, was born at the village of Castagno, in Tuscany, in 1409. Being deprived, when young, of his parents, who were extremely poor, he was employed by his uncle to attend the cattle in the fields, and, in that situation, by his surprising and untutored essays in the art, attracted the notice of Bernardetto de Medici, who placed him under the tuition of one of the best masters Florence then afforded. At first, he painted only in distemper and fresco, and was in high reputation when Domenico Venetiano visited Florence, who had learned, from Antonello da Messina, the new method of painting in oil and varnish, till then unknown in Tuscany. The splendor of this new mode of coloring was very much admired, and, by a pretended friendship for Domenico, Castagno obtained his secret from him; but, not satisfied with this, he desired to be the sole possessor, and determined to murder his friend and benefactor. This he effected without any suspicion, and continued to practise his ill-acquired art with great success. The real author of this atrocious act was never discovered until Andrea made a full confession of his guilt, shortly before his death, which happened in 1480. The best of his remaining works are at Florence, in the church of St. Lucia de Magnuoli, and in the monastery degli Angeli. The latter contains a crucifixion, by him, painted on a wall.

Castanets; small wooden rattles, made in the shape of two bowls or cups, fitted together, and tied by a string, and then fastened to the thumbs. The fingers being rapidly struck upon them, a tremulous sound is produced, which marks exactly the measure of the dance. Something similar to this was the *crotalon* of the ancients, who also made use of small cymbals in their dances and festivals in honor of Bacchus. It is probable, however, that they had their origin in the East, and were brought by the Moors into Spain. Here, too, they received their name *castanuelas*, from being commonly made of the wood of the chestnut (*castano*), or from their color. They are still in use in Spain, and here and there in the south of France. The charm of variety has also procured for them a place in ballets and operas, as, for example, in John of Paris.

Castaños, don Francisco de, a Spanish general, born 1743, compelled the French general Dupont de l'Etang to lay down his arms, July 20, 1808, in the Sierra Morena, and concluded with him the important capitulation of Baylen. He is descended from a distinguished family in Biscay, and was a pupil of the celebrated general count O'Reilly, whom he accompanied to Germany, where he studied tactics in the school of the great Frederic. In 1794, he served as colonel in the army of Navarre, under Caro. In 1798, he was made lieutenant-general, and soon after was banished, with many other officers, for enmity to the prince of peace. On the invasion of the French, he received, in 1808, the command of a division of the army, on the frontiers of Andalusia, towards which Dupont was preparing to advance his forces. With 9000 regular troops, and about 30,000 militia, he defeated general Dupont. (See *Baylen*.) He lost, however, a battle at Tudela (November, 1808). In 1811, the regency appointed him commander-in-chief of the fourth Spanish army, and governor of several provinces. He was now the companion in arms of the duke of Wellington, and displayed great military talent in the battle of Vittoria, which was, in part, won by his bravery and the valor of his troops. The regency deprived him of his command, and appointed him counsellor of state. He wrote to the minister of war, "I have the satisfaction of delivering up to field-marshal Freyre, on the frontiers of France, the command which I received before Lisbon, in 1811." On the return of Ferdinand, he was made captain-general of Catalonia, and had several orders conferred on him. In 1815, he commanded the army that was to invade France. In 1816, he resigned his commission. In 1824, he succeeded in defending himself from the charge of constitutional sentiments, was again appointed captain-general, and, in 1825, made counsellor of state.

Caste; certain classes whose burdens and privileges are hereditary. The word is derived from the Portuguese *casta*, and was originally applied, by the conquerors of the East Indies, to the Indian families, whose occupations, customs, privileges and duties are hereditary. This term has been sometimes applied to the hereditary classes in Europe; and we speak of the spirit or the prerogatives and usurpations of a caste, to express particularly that un-

natural constitution of society, which makes distinction dependent on the accidents of birth or fortune. The division into castes, among the people of the old world, comes to us from a period to which the light of history does not extend; hence its origin cannot be clearly traced: but it is highly probable that, wherever it exists, it was originally grounded on a difference of descent, and in the modes of living, and that the separate castes were originally separate races of people. This institution is found among many nations. According to the accounts collected by Clavigero, some traces of it are apparent among the Peruvians and Mexicans; but it prevails principally in the East, where it has existed from the earliest times, and has become blended with the political condition of the people, because it favors despotism, which is the prevailing form of government. Thus, in Persia, even before Zoroaster, there was a division into four classes or castes; priests (magi), soldiers, husbandmen, tradesmen. But the division into castes was nowhere so perfectly formed, and so entirely interwoven in the whole fabric of civil society, as in Egypt and India. In Egypt (q. v.), this division was perfected, as a political institution, in the flourishing period of the Pharaohs; and the lines of separation which had been drawn, in earlier times, by a difference of descent, and different modes of living, were then rendered still more distinct. The number of castes in that country was originally seven. The class of priests, who formed, in some respects, a highly-privileged order of nobility, and maintained possession of the offices of state, was the highest. Next followed the soldiers, who were divided into two classes, and whose occupation was hereditary. Of the remaining castes, the husbandmen, the watermen (who navigated the Nile), the interpreters (who arose subsequently to the rest, and sprung from the Greeks who were invited into the country), and the two castes of herdsmen, formed a gradation of ranks, the order of which is not known, any further than that the herdsmen were the lowest. Among these the swineherd was considered impure, and despised, and was excluded from the temples. In India, there were originally four castes. (See *Hindoos.*) Probably the deep researches into Egyptian antiquities recently made, or in a state of progress, particularly those of Champollion, will throw much light upon this interesting subject.

Castelcicala (don Fabricio Ruffo), prince of, descended from a very ancient Neapolitan family, obtained great influence under the minister Acton (1796), in the infamous political inquisition or junta. When Acton resigned his ministry, prince Castelcicala became minister, and Vanini committed suicide. After the battle of Aboukir, Castelcicala persuaded his court to declare war against France. In 1799, he fled with his monarch to Sicily. Two years after, he was Sicilian ambassador in London, and still later at the French court. In 1816, he signed the important treaty admitting all British productions and manufactures into Sicily on paying 10 per cent. duty. After the revolution (1820), he was appointed ambassador to Madrid, but remained in Paris.

Castello, Gabriel Lancelot, an eminent antiquary, was born at Palermo, in 1727, of a noble family, and was placed under a private tutor, with a view to study botany, chemistry, &c.; but, accidentally meeting with some old coins, which had been dug up by a ploughman, he was seized with a great desire to decipher them, and from that time devoted himself to antiquarian pursuits. He formed a splendid collection of the remains of antiquity found in Sicily, and his museum was always open to foreigners as well as to natives. On his death-bed, he bequeathed a large quantity of books, &c. to the public library of Palermo. He died in 1794, being at that time an honorary member of the royal society, and of the academy at Paris. He published several works.—There was another Castello (Ignatius Paterno), who published an account of the earthquake in Sicily in 1783.

Casti, Giambattista, a poet, born in 1721, at Prato, in the vicinity of Florence, studied at Montefiascone, became professor there, was appointed a canon, and made a journey to France. Receiving an invitation from the prince of Rosenberg, who became acquainted with him in Florence, he went to Vienna, and was presented to Joseph II, who knew how to appreciate the genius of the poet, and delighted in his conversation. Casti took advantage of every opportunity of visiting other courts, and joined several embassies, without office or title. Catharine II received him in the most flattering manner. He visited also the court of Berlin, and several other German courts. After his return to Vienna, prince Rosenberg, the director of the imperial theatre, caused him to be appointed *poeta Cesareo* on the

death of Metastasio. After the death of Joseph II, Casti requested his dismission, and retired to Florence, where he wrote many of his works. In 1783, he went to Paris. Notwithstanding his advanced age, the vigor and activity of his mind were still unimpaired. His vivacity, his *naiveté*, seasoned by a delicate irony, and his knowledge of the world, made his conversation very attractive. At the same time, he was remarkable for the firmness of his character and the regularity of his habits. He died suddenly, Feb. 6, 1803, at the age of 82. His *Novelle galanti* were republished at Paris, 1804, under the title *Novelle di Giamb. Casti*, in 3 volumes. They are 48 in number. Almost all are of a licentious character, but written in a lively, original and graceful style. The same may be said of his didactic-satirical poem, *Gli Animali parlanti, Poema epico, diviso in* 26 *Canti, di Giamb. Casti* (Milan, 1802, 5 vols.), which he wrote between 1792 and 1799, and which did not receive the attention it deserves until the present day, probably because people formerly feared to speak openly on the bitter truths which it contains. There are two translations of it in French and one in German. It has been also translated into English by Rose. Casti's *Rime Anacreontiche* are pleasing, and his comic operas *La Grotta di Trofonio*, and *Il Re Teodoro in Venezia*, &c., are full of wit and originality.

Castiglione, Baldassare; one of the most elegant of the elder Italian writers; born 1478, at Casatico, in the territory of Mantua; studied at Milan, and entered into the service of the duke Ludovico Sforza, and, afterwards, of the duke of Urbino, of whose elegant and splendid court he soon became an ornament. In 1505, he was sent as ambassador to Henry VIII of England, and, in 1507, in the same capacity, to Louis XII, at Milan. In 1513, Castiglione appeared as ambassador at the court of Leo X, where he became intimate with the most distinguished literati and artists. In 1521, he obtained for the new duke of Urbino, Federigo, the command of the papal troops, and, in 1524, was employed by pope Clement VII, to conduct his negotiations with Charles V. When Rome was plundered by the constable of Bourbon, in 1527, he was accused of negligence, and his health was undermined by chagrin. He refused to accept the rich bishopric of Avila, which was offered to him by the emperor, until the pope should be reconciled with Charles. He died Feb. 8, 1529, at Toledo. Among his works the *Libro del Cortigiano* is the most celebrated. It teaches the art of succeeding at court. His few Italian and Latin poems are elegant. His letters (Padua, 1769) are valuable contributions to political and literary history.

Castile, New; a province of Spain, bounded N. by Old Castile, E. by Arragon and Valencia, S. by Murcia, Jaen and Cordova, and W. by Estremadura; 220 miles long, and 160 broad. It contains the following subdivisions or provinces:—

Provinces.	*Sq. m.*	*Pop.*	*Capitals.*
Madrid, ...	1,330	228,500	Madrid.
Guadalaxara,	1,970	121,100	Guadalaxara
Cuença, . . .	11,410	294,300	Cuença.
Toledo, ...	8,863	370,600	Toledo.
La Mancha, .	7,620	205,600	Ciudad Real.
	31,193	1,220,100	

The surface is diversified, consisting partly of extensive plains, and partly of ranges of mountains, of which the most remarkable is the Sierra de Cuença. The principal rivers are the Tagus, Guadiana and Xucar. The climate is temperate, the soil naturally fertile, but the cultivation backward, and the country thinly inhabited. The productions are wheat, barley, hemp, flax, wine, oil, saffron, honey, sheep, cattle, &c. It contains one archbishopric (Toledo), one bishopric (Cuença) and formerly had three universities, Alcala, Toledo and Siguença. (For further information, see *Spain*.)

Castile, Old; a province of Spain, bounded N. by Asturia and Biscay, E. by Navarre and Arragon, S. by New Castile, and W. by Leon; 220 miles long, and, where widest, 120 broad. It contains the following provinces or subdivisions:—

Provinces.	*Sq. m.*	*Pop.*	*Capitals.*
Avila, ...	2600	118,100	Avila.
Segovia, . .	3502	164,000	Segovia.
Soria, ...	4118	199,000	Soria.
Burgos, . . .	7752	470,600	Burgos.
	17,972	951,700	

The surface is diversified with mountains, plains and valleys. The soil is generally fertile, but, in some parts, stony and unfruitful. The productions are rye, barley, wheat, madder, in some parts, wine; but its chief wealth consists in its hundreds of thousands of sheep and cattle. Its butter is excellent, and its wool, particularly that of Segovia, is much celebrated for its fineness. The country is remarkably bare of trees, as is also much of New Castile. The rivers are the Ebro, Duero, Xalon,

Carrion and Tormes. (For further information, see *Spain*.)

Castillo, José Maria del, in 1809, was an advocate of the province of Tunja; and, in the junta of notables, convened at Bogotá by the viceroy D. Antonio Amar, in September of that year, in consequence of the revolutionary movement at Quito, and on other occasions previous to the deposition of Amar, he distinguished himself by his zeal in the cause of America. He was also a member of the *constituent college*, as it was called, which assembled at Bogotá in 1811, and organized the state of Cundinamarca. During the dissensions among the patriots of New Grenada, in the first years of the revolution, Castillo acted in opposition to Nariño, the political chief of Cundinamarca, and was active and influential in support of the deputies assembled at Ibague, being repeatedly appointed on missions to treat with Nariño. In the congress at Neyba, in October, 1812, he was one of the two delegates from Tunja, of which province, in the following year, we find him the acting governor. In 1813, likewise, he and D. José Fernandez Madrid were despatched by the congress to Bogotá, with full powers to make a final arrangement with Nariño, and remained in the city for some time as representatives of the congress. After the change in the form of government in 1814, when the authority of the executive was increased, the three persons elected to exercise the executive power being absent, Castillo was one of the deputies appointed to the temporary discharge of their duties. When the Spaniards, under Morillo, took possession of Bogotá in 1816, Castillo's life was spared; but he was imprisoned at Omoa, in the government of Guatemala. After the union of New Grenada and Venezuela, and the adoption of the constitution of Colombia, Castillo was made secretary of the department of the treasury, in which office he continued until the year 1828. He was a member of the convention of Ocaña for the province of Carthagena, and was elected president of that body. He was one of the twenty deputies who withdrew from the assembly, and testified their confidence in Bolivar in a printed exposition of their motives. When the liberator assumed all the powers of the state, after the dissolution of the convention, Castillo was appointed, by decrees dated the 27th and 28th of August, 1828, president of the council of ministers, and also of the council of state, by which the new government was to be administered, with a rank next to that of Bolivar himself.

Castine; a seaport town, and capital of Hancock county, Maine, on the east side of Penobscot bay; 34 miles S. Bangor, 122 E. N. E. Portland; lat. 44° 24′ N.; lon. 68° 46′ W.; population in 1820, 975. It is situated on a promontory, on the east side of Penobscot bay, a little below the entrance of Penobscot river into the bay. It has an excellent and very spacious harbor, capable of receiving ships of the largest size, and accessible at all seasons of the year. Its situation is such that it might easily be made a place of great strength. It is a pleasant town, and has considerable trade.

Casting. Iron, as well as brass, and other metals which melt at temperatures above ignition, is cast in moulds made of sand. The kind of sand most employed is loam, which possesses a sufficient portion of argillaceous matter to render it moderately cohesive when damp. The mould is formed by burying in the sand a wooden pattern, having exactly the shape of the article to be cast. The sand is most commonly enclosed in flasks, which are square wooden frames, resembling boxes, open at top and bottom. If the pattern be of such form that it can be lifted out of the sand without deranging the form of the mould, it is only necessary to make an impression of the pattern in one flask; and articles of this kind are sometimes cast in the open sand upon the floor of the foundery. But, when the shape is such that the pattern could not be extracted without breaking the mould, two flasks are necessary, having half the mould formed in each. The first flask is filled with sand, by ramming it close, and is smoothed off at the top. The pattern is separated into halves, one half being imbedded in this flask. A quantity of white sand, or burned sand, is sprinkled over the surface, to prevent the two flasks from cohering. The second flask is then placed upon the top of the first, having pins to guide it; the other half of the pattern is put in its place, and the flask is filled with sand, which, of course, receives the impression of the remaining half of the pattern on its under side. After one or more holes are made in the top, to permit the metal to be poured in, and the steam and air to escape, the flasks are separated, and the pattern withdrawn. When the flasks are again united, a perfect cavity, or mould, is formed, into which the melted metal is poured. The arrangement of the mould

is, of course, varied for different articles. When the form of the article is complex and difficult, as in some hollow vessels, crooked pipes, &c., the pattern is made in three or more pieces, which are put together to form the mould, and afterwards taken apart to extract them. In some other irregular articles, as andirons, one part is cast first, and afterwards inserted in the flask which is to form the other part. The metal for small articles is usually dipped up with iron ladles, coated with clay, and poured into the moulds. In large articles, such as cannon, the mould is formed in a pit dug in the earth near the furnace, and the melted metal is conveyed to it in a continued stream, through a channel communicating with the bottom of the furnace. Cannon-balls are sometimes cast in moulds made of iron, and, to prevent the melted metal from adhering, the inside of the mould is covered with powder of black lead. Rollers for flattening iron are also cast in iron cases. This method is called *chill casting*, and has for its object the hardening of the surface of the metal, by the sudden reduction of temperature, which takes place in consequence of the superior conducting power of the iron mould. These rollers are afterwards turned smooth in a powerful lathe, which has a slow motion, that the cutting tool may not become heated by the friction.—*Casting in Plaster.* Copies are most frequently taken, both from new models, and from old statues, by casting them in plaster. For this purpose, a mould in plaster is first made from the surface of the statue or figure itself; and this mould is afterwards used to reproduce the figure by casting. Plaster is prepared for use by pulverizing common gypsum, and exposing it to the heat of a fire until its moisture is wholly expelled.* While in this dry state, if it be mixed with water, to the consistence of cream or paste, it has the property of hardening in a few minutes, and takes a very sharp impression. The hardness afterwards increases by keeping, till it approaches the character of stone. Moulds are formed in the following manner:—The statue, or figure to be copied, is first oiled, to prevent it from cohering with the gypsum. A quantity of liquid plaster sufficient for the mould is then poured on, immediately after being mixed, and suffered to harden. If the subject be a bass-relief, or any figure which can be withdrawn without injury, the mould may be considered as finished, requiring only to be surrounded with an edging. But, if it be a statue, it cannot be withdrawn without breaking the mould; and, on this account, it becomes necessary to divide the mould into such a number of pieces as will separate perfectly from the original. These are taken off from the statue, and, when afterwards replaced, or put together without the statue, they constitute a perfect mould. This mould, its parts having been oiled, to prevent adhesion, is made to receive a quantity of plaster, by pouring it in at a small orifice. The mould is then turned in every direction, in order that the plaster may fill every part of the surface; and, when a sufficient quantity is poured in to produce the strength required in the cast, the remainder is often left hollow, for the sake of lightness, and economy of the material. When the cast is dry, it is extricated by separating the pieces of the mould, and finished by removing the seams and blemishes with the proper tools.* If the form or position require it, the limbs are cast separately, and afterwards cemented on. Moulds and busts are obtained in a similar manner from living faces, by covering them with new plaster, and removing it in pieces, as soon as it becomes hard. It is necessary that the skin of the face should be oiled; and, during the operation, the eyes are closed, and the person breathes through tubes inserted in the nostrils. Elastic moulds have been formed by pouring upon the figure to be copied a strong solution of glue. This hardens upon cooling, and takes a fine impression. It is then cut into suitable pieces, and removed. The advantage of the elastic mould is, that it separates more easily from irregular surfaces, or those with uneven projections and under cuttings, from which a common mould could not be removed without vio-

* The heat requisite for this purpose must be greater than that of boiling water. Care must be taken not to raise the heat too high, as, in that case, the sulphate of lime would be decomposed.

* Plaster casts are varnished by a mixture of soap and white wax in boiling water. A quarter of an ounce of soap is dissolved in a pint of water, and an equal quantity of wax afterwards incorporated. The cast is dipped in this liquid, and, after drying a week, is polished by rubbing with soft linen. The surface produced in this manner approaches to the polish of marble. When plaster casts are to be exposed to the weather, their durability is greatly increased by saturating them with linseed oil, with which wax or rosin may be combined. When intended to resemble bronze, a soap is used, made of linseed oil and soda, colored by the sulphates of copper and iron. Walls and ceilings are rendered water-proof in the same way. (See an abstract of a memoir of D'Arcet and Thenard, in Brande's Journal, vol. xxii., 184, and Franklin Journal, ii., 276.)

lence.* For small and delicate impressions in relief, melted sulphur is sometimes used; also a strong solution of isinglass in proof spirit.—*Bronze Casting.* Statues intended to occupy situations in which they may be exposed to violence are commonly made of bronze. This material resists both mechanical injuries and decay from the influence of the atmosphere. The moulds in which bronze-statues are cast are made on the pattern, out of plaster and brick-dust, the latter material being added to resist the heat of the melted metal. The parts of this mould are covered on their inside with a coating of clay, as thick as the bronze is intended to be. The mould is then closed, and filled, on its inside, with a nucleus or core of plaster and brick-dust, mixed with water. When this is done, the mould is opened, and the clay carefully removed. The mould, with its core, is then thoroughly dried, and the core secured in its central position by short bars of bronze, which pass into it through the external part of the mould. The whole is then bound with iron hoops, and, when placed in a proper situation for casting, the melted bronze is poured in through an aperture left for the purpose: of course, the bronze fills the same cavity which was previously occupied by the clay, and forms a metallic covering to the core. This is afterwards made smooth by mechanical means. (*Bigelow's Technology.*)

Castlereagh. (See *Londonderry.*)

Castor. (See *Beaver.*)

Castor and Pollux; the sons of Tyndarus, king of Lacedæmon, and Leda, or, according to some, of Jupiter and Leda. The fable runs, that Leda brought forth two eggs, one of which contained Pollux and Helen, the other Castor and Clytemnestra. Pollux and Helen, being the offspring of Jupiter, were immortal; but Castor and Clytemnestra were begotten by Tyndarus, and mortal. The two brothers were inseparable companions, equally brave and spirited, and attached to each other with the fondest affection. Castor was particularly skilled in the art of breaking horses, and Pollux in boxing and wrestling. They were among the heroes of the Argonautic expedition, in which they acquired divine honors; for, a terrible tempest having arisen on the voyage, and all, with loud voices, calling on the gods to save them, there suddenly appeared over the heads of Castor and Pollux two star-like meteors, and the tempest subsided. From this time, they were the patron deities of mariners, and received the name of *Dioscuri*; and, from them, the name of *Castor and Pollux* was given to the fires that are often seen on vessels' masts in storms, and which are electrical phenomena. After their return, they released their sister Helen from the confinement in which Theseus had for some time held her. They were also among the heroes of the Calydonian hunt. They wooed the daughters of Leucippus, Phœbe and Ilaria, and were each obliged to contend for their mistresses with their rivals, Idas and Lynceus, the sons of Aphareus. Castor killed Lynceus, and was slain by Idas. Pollux revenged his brother's death by killing Idas; but, full of grief for the loss of Castor, he besought Jupiter either to take away his life, or grant that his brother might share his immortality. Jupiter listened to his request, and Pollux and his brother alternately descended to Orcus, and returned to life. It is doubtful whether the ancients understood them as being together or separate in their alternate passage between the upper and the lower worlds. The former opinion seems to be the oldest; the latter, to have gained ground subsequently. Temples and altars were consecrated to them. In great perils, especially in battles, the ancients believed that they frequently appeared to mortals as two youths on white steeds, in shining garments, with meteors over their heads; and then they were chiefly called *Dioscuri.* They were also represented side by side, either riding or standing, each holding a horse by the rein, with spears in their hands and stars on their heads.—In the heavens, the *Dioscuri* appear as one of the 12 constellations of the zodiac (the Twins).

Castor-Oil. The castor-oil plant (*ricinus palma Christi*) is a native both of the East and West Indies, and has a stem from 5 to 15 or 16 feet in height, and large, bluish-green leaves, divided into 7 lobes, serrated and pointed, the foot-stalks long, and inserted into the disk. The flowers are produced in a terminating spike, and the seed-vessels are covered with spines, and contain three flattish, oblong seeds.—It is to the seeds of this plant that we are indebted for the drug called *castor-oil.* It is now often prepared by pressing the seeds in the same way as is practised with oil of almonds. The oil thus obtained is called *cold expressed.* But the mode chiefly adopted in the West Indies is first to strip the seeds of

* See a paper by Mr. Fox, republished in the Franklin Journal, vol. iii.

their husks or pods, and then to bruise them in mortars. Afterwards they are tied in linen bags, and boiled in water until the oil which they contain rises to the surface. This is carefully skimmed off, strained, to free it from any accidental impurities, and bottled for use. The oil which is obtained by boiling is considered more mild than that procured by pressure, but it sooner becomes rancid. The mildest and finest Jamaica castor-oil is very limpid, nearly colorless, and has scarcely more smell or taste than good olive-oil. Many people, however, have so great an aversion to castor-oil, even in its purest state, that they do not take it without great reluctance. The uses of castor-oil in medicine are well known. It is at present prepared, in great quantities, in various parts of the U. States, and of an excellent quality.

Castrametation; strictly, the art of tracing out and disposing to advantage the several parts of a camp on the ground. It is sometimes used more extensively to include all the ordinary operations of a campaign. A camp, whether composed of tents or barracks, or merely of places assigned for bivouacking, must be divided in such a way that the several divisions shall be disposed as they are intended to be when drawn up in order of battle; so that, on a sudden alarm, the troops may rise in their proper posts. At the same time, the places for cooking, for the baggage, and for ammunition, must be conveniently arranged.

Castrates. The change produced in men by emasculation is highly remarkable, and assimilates their constitution, in some respects, to that of females. The elasticity of the fibres and muscles is weakened, and the cellular membrane becomes charged with a much larger quantity of fat; the growth of the beard is prevented; the upper part of the windpipe contracts considerably, and the castrate acquires the physiognomy and voice of a female. On the moral character it likewise appears to have some influence, by weakening the intellectual faculties, and rendering the subject unfeeling, morose, faint-hearted, and, on the whole, incapable of performing those deeds which require a high, magnanimous disposition. The most numerous class of castrates are those who are made such by the removal of the testicles. Another class are not deprived of the parts of generation, but have them ingeniously injured in such a manner as to leave them the faculty of copulating, but deprive them of the power of begetting. Juvenal mentions these as the particular favorites of the licentious Roman ladies. To the third class belong those who are entirely deprived of their genital members. They are used in preference, by the Turks, as keepers of their women. The castrates of all three classes are called *eunuchs*. Those of the third class, to distinguish them from the two others, are frequently termed *entire eunuchs*. The word *eunuch* is Greek, and signifies *guard* or *keeper of the bed*. The castration of adults produces some change in the disposition, but little in the bodily constitution. Even the power of engendering continues for a short time. According to the accounts of ancient historians, the Greeks, particularly the Lydians, castrated women. The latter are said to have used these beings as guards of their wives and daughters. With females, the operation produces a completely opposite effect to that which it has on men. The sexual appetite ceases, a beard appears on the chin and upper lip, the bosom vanishes, the voice becomes harsh, &c. Boerhaave and Pott relate modern instances of this kind. Nothing but an immediate and fatal injury to the parts authorizes an operation of such vital consequence to the human race. Among the evils which religious enthusiasm has at all times produced, castration is conspicuous. The emperors Constantine and Justinian were obliged to use their utmost power to oppose this religious frenzy, and could put a stop to it only by punishing it like murder. The Valerians, a religious sect, whose minds had been distracted by the example of Origen (q. v.), not only considered this mutilation of themselves as a duty which religion imposed on them, but believed themselves bound to perform the same, by fair means or foul, on all those who came into their power. In Italy, the castration of boys, in order to form them for *soprano* singers, has been in use for a long time, *evirati* having been employed in the pontifical chapel, ever since the beginning of the 17th century, to sing the treble parts. Clement XIV prohibited this abuse, which, notwithstanding, continued for a long time, and, in some Italian towns, was not only suffered, but exercised with such shameful openness, that the practitioners gave public notice of their profession. In modern times, severe laws have been enacted against castration, and the custom is going out of use. Beings thus mutilated, however, are sometimes to be found on European stages and in Catholic churches. Among the papal singers, we

found castrates as late as 1823. It is remarkable that so odious and unnatural an operation should produce the fine effect on the tones of the singer, which all must acknowledge who can rid themselves of the disagreeable effect of the association. In the Catholic church, no castrate, however he became such, is permitted to be an officiating priest. The part which eunuchs have always played, wherever they have belonged to the household of princes, is well known; and some authors have compared them to Catholic priests, who, like them, have often been the intriguing advisers of sovereigns, and, like them, are not connected with society by the gentle bonds of marriage and family relations.

Castriot. (See *Scanderbeg*.)

Castrum Doloris, a Latin term, signifying *castle of grief*, has a different meaning from *catafalco*. The latter is used to denote an elevated tomb, containing the coffin of a distinguished person, together with the tapers around, ornaments, armorial bearings, inscriptions, &c., placed in the midst of a church or hall. The *castrum doloris* is the whole room in which the *catafalco* is elevated, with all the decorations. The sarcophagus, usually empty, is exposed for show upon an elevation covered with black cloth, under a canopy surrounded with *candelabra*. Upon the coffin is laid some mark of the rank of the deceased, as his epaulette or sword, and, when the deceased was a sovereign or a member of a ruling family, princely insignia are placed on surrounding seats. The French call the *castrum doloris*, *chapelle ardente*, which is to be distinguished from *chambre ardente*. (q. v.)

Casuistry; that part of the old theology and morals, which relates to the principles by which difficult cases of conscience (especially where there is a collision of different duties) are to be settled. Kant calls it the *dialectics of conscience*. Hence a casuist is a moralist, who endeavors to solve such doubtful questions. There have been many celebrated casuists among the Jesuits (e. g., Escobar, Sanchez, Busenbaum, &c.), famous for their ingenuity in the invention of such cases, and for the ambiguity and singularity of their solutions. It is impossible, without reading the works of some of the casuistical writers, to form an idea of the ingenious and fine-spun sophistry which they contain.

Cat (*felis catus*, L.); a well-known domesticated, carnivorous quadruped, whose attachment appears to be rather to the dwellings than the persons of her protectors; in which respect her conduct is very opposite to that of the dog, whose alliance with man is founded upon disinterested, personal attachment, not to be affected by changes of place or fortune. Her youthful sportiveness, beautiful fur, and gentle demureness of manner in after life, dispose mankind to regard the animal with kindness; but the most persevering attempts to cultivate her good dispositions are followed with such slight success, and met with so much of deceit and ingratitude, as to weary the patience of the most benevolent. The cat is capable of showing considerable fondness for an individual, but never appears to confide fully, even in the warmest demonstrations of kindness. Her treacherous calmness of disposition needs but slight provocation to be changed to vengeful malignity. When hurt, or much alarmed, she is ready to attack her best benefactor with as much fury as a stranger. Being highly sensitive, and fond of ease, the cat evinces little anxiety, except for the continuance of her enjoyment, and is ever prepared to seek more comfortable quarters, whenever the condition of her patrons may render a movement politic. At what period cats became inmates of human habitations, it is scarcely possible, at this period, to determine. Beyond doubt, their usefulness in destroying rats, mice, and other small animals, first introduced them to notice. The first mention we find made of them, in profane history, is by Herodotus, the father of historians, in his account of Egypt. (*Euterpe, vel* lib. ii.) He speaks of them as diminishing the vermin infesting human dwellings; states some of the Egyptian superstitions relative to them, as well as some observations upon their breeding, dispositions, &c. The celebrated naturalist Temminck, in his excellent monography of the genus *felis*, adduces strong reasons for believing that the cat was originally domesticated in Egypt, and that the gloved cat, *F. maniculata* (*chat ganté* of Southern Africa) is, in all probability, the original stock of the domestic cat. Its strong resemblance in size, proportions, &c., renders this opinion more acceptable than that which attributes the origin to the common European wild cat, which is smaller, has a shorter, thicker tail, and, indeed, would seem rather to be the domestic cat returned to the savage state, than its original stock. The subtlety and circumspection of the common cat are evinced by all its habits and movements; and the ob-

servation of this disposition has obtained for it the name it bears in most of the living languages of Europe. In Greek, it is called *αἴλουρος*, for which we have found no derivation. In Latin, it was called *catus*, from the adjective signifying *cunning*, *wary*, *subtle*, &c. According to Varro, this adjective is a Sabine, and not a Roman word; but, as we find it used by Horace, in his ode *Ad Mercurium*,* its admission into the classic vocabulary can scarcely be denied. From this name, *catus*, we have the English *cat*, the German *katze*, the French *chat*, &c. The domestic cat belongs to a genus (*felis*) better armed for the destruction of animal life than all other quadrupeds. The short and powerful jaws, moved by vigorous muscles, are supplied with most formidably trenchant teeth: a cunning disposition, combined with nocturnal habits and much patience in pursuit, gives them great advantages over their prey; and their keen, lacerating claws, which are always preserved in the most acute state by the peculiar arrangement that keeps them concealed when not in use, enables them to inflict a death-blow on their victims with as much certainty as ease. The cat, in a degree, partakes of all the attributes of her race—lies in ambush for her prey, and seizes it by a sudden leap; plays with her captives before putting them to death; and does not limit her destruction to the mere gratification of appetite. Cold and wet are disagreeable to the cat, and electricity is especially feared by her: advantage may be taken of the latter circumstance to avert the troublesome visits of the animal. After having once received a shock from a Leyden vial, but little apprehension need be entertained of the cat's return to the same place. Of various aromatic substances, as catnep or catmint, &c., puss is remarkably fond; and the odor of valerian appears to throw her into an ecstasy of pleasure. The food of the cat, in a state of domestication, is necessarily very various, but always of flesh or fish, if it can be obtained. A desire to possess herself of the latter article of diet, proves one of the strongest temptations to theft that the cat is exposed to: in fact, it takes a very severe education to make her any better than a thief under any circumstances. The cat is remarkable for the fetor of its eructations, as well as the powerfully offensive and phosphorus-like odor of its urine, &c. But, personally, it is a very cleanly animal, avoiding to step in any sort of filth, and preserving its fur in a very neat condition. Of its habits, when well taken care of and much petted, it cannot be necessary to speak here, as they are universally known. Equally notorious is their clamorous mode of making love, which is designated by the term *caterwauling*, and, once heard, can never be forgotten. The cat goes with young for sixty-three days, and brings forth from three to six at a litter, which remain blind for nine days.

* Mercuri, facunde nepos Atlantis
Qui feros cultus hominum recentum
Voce formasti *catus* et decoræ
More palæstræ. *Lib. i. Carm.*

Cat-Bird (*turdus felivox*, Viell; *T. lividus*, Wils.); a numerous and well-known species of thrush, which annually advances from the south with the progress of agriculture, and, during the summer, is found throughout the Middle and New England States, frequenting thickets of brambles, or the shrubberies of gardens. The note from which the bird obtains its name is strikingly similar to the plaint of a kitten in distress, and would almost certainly deceive the ear of any one unacquainted with the cry of this species. The cat-bird is exceedingly familiar and unsuspicious, allowing itself to be closely approached, and saluting every one passing near its abode by its cat-like note. It is lively and active in its movements, and, but for the unfortunate resemblance of its ordinary cry to the voice of an animal by no means a favorite, would be considered an agreeable bird, notwithstanding its plain, lead-colored plumage. Wilson informs us, that the cat-bird arrives in the lower parts of Georgia about the end of February, whence he infers that its winter residence is not far distant from Florida. It reaches Pennsylvania by the second week in April, and has its nest built by the beginning of May. For this purpose, a brier or bramble thicket, a thorn-bush, thick vine, or fork of a sapling, is selected. Little attention is paid to concealment, though few birds are more solicitous for the safety of their young. The nest is constructed of dry leaves, weeds, small twigs, and fine, dry grass, the inside being lined with fine, black, fibrous roots. The female lays 4 or 5 eggs, of a uniform greenish-blue color, free from spots. They generally raise two, and sometimes three, broods in a season. The admirable naturalist above mentioned relates, that he sometimes, when in the woods, amused himself with imitating the violent chirping or squeaking of young birds, in order to discover what species were in his vicinity; and these sounds, to birds in the

breeding seasons, he compares to the alarm of fire in a large and populous city. On such occasions of alarm and consternation, the cat-bird is the first to make his appearance, not singly, but sometimes half a dozen at a time, flying from different quarters to the spot. Other birds are variously affected, but none show symptoms of such extreme suffering. He hurries backward and forward with hanging wings and open mouth, calling out louder and faster, and actually screaming with distress, till he appears hoarse with his exertions. He attempts no offensive measures, but he bewails, he implores, in the most pathetic terms with which nature has supplied him, and with an agony of feeling which is truly affecting. This species does not readily desert its nest; and, when the eggs or young of other birds are placed in it, they are content to throw out the intruders, and continue their attentions to their own family. When the nest and eggs are carefully removed to another place by man, the parents follow, and do not remit their cares. Before the dawn, when there is scarcely light enough to render it visible, the cat-bird generally begins its song, while fluttering with great sprightliness from bush to bush. His notes are more singular than melodious, consisting of short imitations of other birds, but failing where strength and clearness of tone are requisite. He appears to study certain passages with great perseverance, commencing in a low key, and, as he succeeds, ascending to a higher and freer note, unembarrassed by the presence of a spectator, even within a few yards. An attentive listener discovers considerable variety in his performance, apparently made up of a collection of odd sounds and quaint passages. The cat-bird is a great enemy to the common black snake or horse-runner (*coluber constrictor*), which rifles its nest whenever an opportunity offers. As the cat-bird uniformly attacks or pursues this snake, and is frequently seen in the act of hopping eagerly after it, numerous ridiculous stories are related of its being fascinated or charmed by the snake. The testimony of Wilson and Bartram show that the bird is almost uniformly the aggressor and victor, driving the snake to its hiding-place. In one instance, the writer witnessed an attack of a cat-bird on the black snake, almost precisely similar to that related in Wilson's Ornithology, by his venerable friend, the naturalist Bartram. The cat-bird is nine inches long, and, at a short distance, appears nearly black, but, on a closer inspection, is seen to be of a deep slate-color above, lightest on the edges of the primaries, and of a considerably lighter slate-color below, except under the tail coverts, which are of a very dark red; the tail, which is rounded, and the superior part of the head, as well as the bill and legs, are black. (See *Wilson*, 1st ed., vol. ii. p. 90.)

Cat Island, or St. Salvador, or Guanahani, or Guanimina; one of the Bahama islands; about 60 miles in length from N. to S., and 12 in its mean breadth. Population, in 1797, 657. This island is remarkable for being the first land of America discovered by Columbus, who landed here Oct. 12, 1492, and named it *St. Salvador*. Lon. 75° W.; lat. 24° 30′ N.

Catacombs (caverns, grottoes, subterraneous caves, destined for the sepulture of the dead). The respect felt for the dead, by all nations, naturally led them to some outward manifestation of regard, such as the pomp of funeral solemnities, or the consecration of a particular spot for sepulture, or the erection of monuments, to transmit to posterity the remembrance of the services or virtues of the deceased. Some nations, as the Egyptians, constructed pyramids and labyrinths to contain their mortal remains. Others, as the Phœnicians, and, after them, the Greeks, hollowed out the rocks for tombs, surrounding their towns with vast magazines, containing the bones of their fathers. Asia Minor, the coast of Africa, and Cyrenais, afford instances of these singular and gigantic works. The Romans, not so bold, but still more magnificent, embellished their roads with superb mausoleums and sarcophagi of marble, consecrated to their distinguished families. At a later period, when the change of their religion made it necessary to conceal these last marks of regard, they consecrated vast subterraneous caverns to the purpose of tombs. The discovery of these monuments has always excited the curiosity of travellers and the attention of artists. The latter have applied themselves to learn from them the character of architecture and painting at different epochs; and, though they have often found only coarse representations, the productions of art in its infancy or decline, they have occasionally met with types of perfection. Many monuments of this description have been preserved to our days, and still contain traces of the painting and architecture with which

they were decorated. There are catacombs existing in Syria, Persia, and among the most ancient Oriental nations. But the revolutions in these countries, and the changes which they have occasioned, have deprived us of the documents which would have given us exact information regarding them. The description of the catacombs in Upper Egypt gives us an idea of those whose existence is still unknown to us. They contain the history of the country, and the customs and manners of the people, painted or sculptured in many monuments of the most admirable preservation. The subterraneous caves of these countries, like almost all of the kind, have their origin in quarries. From the depths of the mountains which contain them, stone was taken, which served for the building of the neighboring towns, and also of the great edifices and pyramids which ornament the land. They are dug in a mountain situated in the neighborhood of the Nile, and furnished the Romans with materials for the construction of buildings in their colonial establishments. The excavations in these mountains are found throughout a space of 15 to 20 leagues, and form subterraneous caverns, which appear to be the work of art; but there is neither order nor symmetry in them. They contain vast and obscure apartments, low and irregular vaults, supported, in different parts, with piles, left purposely by the workmen. Some holes, of about six feet in length and two feet in width, give rise to the conjecture, that they were destined for sepulchres. Cells of very small dimensions, formed in the hollows of these obscure caverns, prove them to have been the abode of recluses. In Sicily and Asia Minor, a prodigious number of grottoes and excavations have been discovered, containing sepulchres. Some appear to have served as retreats to the victims of despotism: the greater part are the work of the waters which traverse the mountains of these regions, as, for instance, the great cave of Noto, which passes for one of the wonders of Sicily. This cave, the height, length and breadth of which are equal, has been formed by the river Cassibili, which runs at the bottom, and traverses it for the length of 100 fathoms. In the interior of this cave are a number of houses and tombs. In the ancient Hybla, there is a grotto containing many sepulchres, near which is the tomb of Æschylus. At Yela are abodes for the living and sepulchres for the dead, cut in the rocks; at Agrigentum, subterraneous caves, labyrinths and tombs, arranged with great order and symmetry. There are also caverns in the environs of Syracuse, which may be ranked with the principal monuments of this description, from their extent and depth, their architectural ornaments, and from some historical recollections attached to them. In the catacombs of Rome, coffins are sometimes found, and it is supposed that the bones in them belonged to Christians. Inscriptions are also seen on the walls of the apartments. But, though they may not have been used by the Christians as tombs, it is certain that they served for places of assembling for secret exercises of devotion. (See Artaud's *Voyage dans les Catacombes de Rome*, Paris, 1810.)— The catacombs in the tufa mountains of Capo di Monte, near Naples, consist of subterraneous galleries, halls, rooms, basilicas, and rotundos, which extend to the distance of two Italian miles. Throughout there are seen niches for coffins (*loculi*) and bones. A description of them was given by Celano, in 1643. They probably owe their origin to the quarries which afforded tufa for the walls of the cities Palæopolis and Neapolis, and afterwards served as sepulchres for the Christian congregations. The catacombs of Paris are extensive subterraneous galleries, to which you descend from the buildings on the western side of the *barrière d'enfer*. The name itself, which has been given to this labyrinth of caverns and galleries, from its resemblance to the asylums and places of refuge of the persecuted Christians under Naples and Rome, informs us of the purpose to which it has been applied since 1786. These galleries were originally the quarries from which materials were excavated for constructing the edifices of the capital. The weight of the superincumbent houses rendered it necessary to prop them; and when the cemeteries of the demolished churches and the burying-grounds were cleared in 1786, the government resolved to deposit the bones in these quarries, which were consecrated for that purpose. The relics of ten generations were here united in the repose of the grave. Eight times as great as the living tide that rolls over this spot is its subterraneous population. By the light of wax tapers you descend 90 feet to a world of silence, over which the Parisian police keeps watch as strictly as over the world of noise and confusion above. You enter a gallery, where two can just go

abreast. A black streak on the stones, of which the walls consist, points out the way, which, from the great number of intersecting by-passages, it would be difficult to retrace without this aid, or without guides. The plain of Montrouge and the great suburb St. Jacques, as well as St. Germain, and, according to some, the channel of the Seine, are thus undermined. Among the curiosities of this part of that lower world is a plan of the harbor of Mahon, which, in his hours of leisure, an ingenious soldier faithfully copied, from memory, in the material of the quarries. You finally enter the hall, whence you are ushered into the realms of death by the inscription which once stood over the entrance to the churchyard of St. Sulpice:—*Has ultra metas requiescunt beatam spem exspectantes.* Narrow passages between walls of skeletons; chambers in which mausoleums, altars, candelabras, constructed of human bones, with festoons of skulls and thigh-bones, interspersed, occasionally, with inscriptions, not always the most happily selected, from ancient and modern authors, excite the gloomy impression which is always produced, even in the most light-minded, by the sight of the dissolution of the human frame. Fatigued with these horrible embellishments, you enter a simple chapel, without bones, and containing an altar of granite. The inscription D. M. II et III Septembr. MDCCXCII. recalls to memory the victims of those mournful days, whose remains are here united. It is the only spot in the whole labyrinth, that speaks immediately to the heart of every body. On leaving these rooms, consecrated to death, where, however, the air is always preserved pure by means of secret passages, you may visit a geological cabinet, formed by Mr. Hericourt de Thury, the director of the *carrières sous Paris*, who has also published a description of them (Paris, 1815). Specimens of the minerals furnished by the regions you have traversed, and a collection of diseased bones, in a contiguous hall, scientifically arranged, are the last curiosities which these excavations offer. 300 toises east of the road to Orleans you finally return to the light of day. We understand that it has lately been prohibited to visit this remarkable spot, because a person had lost himself in this labyrinth, and had never been heard of again. In Rome, there is a Franciscan church, under which, for centuries, the bones of the monks of the convent, and of many persons, who think their eternal happiness will be promoted by their burial there, have been preserved, ingeniously arranged in columns, altars, arches, garlands, festoons and architectural ornaments. Every year, mass is read there.

CATACOUSTICS (from κατα, and ἀκοῦω, *I hear*), called, also, *cataphonics;* the science of reflected sounds, or that part of acoustics which considers the properties of echoes. (See *Acoustics.*)

CATAFALCO. (See *Castrum Doloris.*)

CATALANI, Angelica, by marriage *Valabrègue;* a celebrated singer, born, according to her own statement, in 1784, at Sinigaglia, in the Ecclesiastical States, and educated in the convent of St. Lucia, near Rome. Angelica displayed, in her seventh year, an uncommon talent for singing, and such multitudes came to hear her, that the magistrates of the place prohibited her singing any longer in the convent. But the favor of a cardinal, and the love of the celebrated Bosello, enabled her to cultivate her talents. After leaving the convent, she appeared, in her fifteenth year, at the theatre in Venice, and then in other Italian cities. In Lisbon, she was, for five years, together with Crescentini and Gafforini, the ornament of the Italian opera. Her first concert in Madrid brought her more than $15,000; and, from her concerts in Paris, her fame spread over all Europe. In London, she had, in the first year of her engagement, a salary of 72,000 francs ($12,931), and, in the following, of 96,000 francs ($17,241). Two concerts, besides, brought her 30,000 francs ($5,388) each, and she received immense sums in her journeys through the country towns during her eight months' stay in the island. In 1814, she undertook, in Paris, the direction of the Italian opera, left it on the return of Napoleon, and obtained it anew on the restoration of the king, after an interval which she spent in journeys through Belgium. In 1816, she visited the chief cities of Germany and Italy. She owes her fame to an agreeable exterior, to a lively way of acting, to an uncommon fulness and a rare flexibility of voice, a singularly fine shake, and an exceeding richness of difficult and striking, but brilliant rather than beautiful, figures and ornaments, particularly in chromatic passages, and an original combination of all those excellences in a whole, which is more fit to excite astonishment and admiration than to touch the heart. As the French government, after her return were continually obliged to advance considerable sums for the support of the Ital-

ian opera in Paris, whilst she never yielded to the wish of the public in the choice of the pieces performed, and, through jealousy, removed other female singers of merit, she was dismissed, and travelled anew, in 1818, through the chief cities of Germany, and then to Petersburg and Warsaw; in 1822 to London, in 1825 to Italy, in 1826 to Stuttgart. She is married to M. Valabrègue, formerly a captain in the French service, by whom she has several children. The latest accounts inform us that she has determined not to sing publicly any more, except for charitable purposes. She lives retired in Italy.

Catalepsy. This is a spasmodic disease, and, by some, regarded as a species of *tetanus*. It affects the whole body, so as to render it immovable, as if dead. *Tetanus* differs from *catalepsy* in its subjects and causes. Females are most liable to the last, while the first is equally produced in both sexes by appropriate causes. Tetanus is most frequently produced by punctured wounds of tendinous textures, and most readily in hot weather. Sometimes, however, it occurs, like catalepsy, independently of wounds. The spasm is more limited in tetanus; sometimes being most severe in the muscles of the face, producing lock-jaw; now it attacks the muscles of the trunk, on the fore part, producing *emprosthotonos*, and now the muscles of the back part, producing *opisthotonos*, or curvature of the trunk backwards. During all this, the natural temperature may remain, the pulse be perfectly natural, and the senses unimpaired. Under the most active and varied treatment, tetanus has always been a very fatal malady.—Catalepsy is a universal spasmodic disease of the organs of locomotion. The body remains in the position in which it may have been when attacked with the fit, and the limbs preserve any situation in which they may be placed. The senses are obliterated, and the mind totally inactive, nothing being able to rouse the patient. The pulse and temperature remain natural. The fit is of uncertain length; according to some writers, not lasting more than a quarter of an hour, though known by others to be much longer. This disease is an obstinate one, and is very liable to recur, even when the patient seems in the least respect liable to a recurrence. It is, for the most part, a consequence of some other disease. This may be a local affection; but it more frequently occurs in a generally enfeebled constitution, induced by some grave malady, or one which has been caused by the gradual operation of unobserved morbid causes.

Catalogues of Books. (See *Books, Catalogues of.*)

Catalonia (anciently *Taraconensis*); a province of Spain, bounded N. by France, E. and S. E. by the Mediterranean, S. W. by Valencia, and W. by Arragon. Its form is nearly that of a triangle, the base towards the Mediterranean being about 140 miles in length, the side towards France 120, and that towards Arragon 140. The country in general is mountainous, but intersected with fertile valleys, while the mountains themselves are covered with valuable woods and fruit-trees. Corn, wine, oil, flax, hemp, legumes, and almost every kind of fruit, are abundant. Here are quarries of marble of all colors, of crystal, and alabaster; also topazes, rubies, jaspers and other precious stones; mines of lead, tin, iron, alum, vitriol and salt, and, formerly, of gold and silver. On the coast is a coral-fishery. Catalonia is naturally much less fertile than either of the Castiles; but it far surpasses both, and, indeed, every other province in Spain, in the industry of its inhabitants, as well as the improvements which they have effected in manufactures, agriculture and commerce. Pop. 858,818; square miles, 12,111. It has usually been divided into 15 vigueries or jurisdictions. The principal towns are Barcelona, Tortosa, Tarragona, Gerona, and Villa Franca de Panades. (See *Spain.*)

Catamenia (derived from these two Greek words,—κατα, according to, and μην, the month); menses, the monthly discharge from the uterus of females, between the ages of 14 and 45. Many have questioned whether this discharge arose from a mere rupture of vessels, or whether it was owing to a secretory action. There can be little doubt of the truth of the latter. The secretory organ is composed of the arterial vessels situated in the fundus of the uterus. The dissection of women who have died during the time of their menstruating proves this. Sometimes, though very rarely, women, during pregnancy, menstruate; and, when this happens, the discharge takes place from the arterial vessels of the vagina. During pregnancy and lactation, when the person is in good health, the catamenia, for the most part, cease to flow. The quantity a female menstruates at each time is very various, depending on climate and a variety of other circumstances. It is com-

monly, in England, from five to six ounces: it rarely exceeds eight. Its duration is from three to four, and sometimes, though rarely, five days. With respect to the nature of the discharge, it differs very much from pure blood. It never coagulates, but is sometimes grumous, and membranes like the decidua are formed in difficult menstruations. In some women, it always smells rank and peculiar; in others, it is inodorous. The use of this monthly secretion is said to be, to render the uterus fit for the conception and nutrition of the fœtus; therefore girls rarely conceive before the catamenia appear, and women rarely after their entire cessation, but very easily soon after menstruation.

Catania (anciently *Catana*); a city of Sicily, in the valley of Demona, on the borders of the valley of Noto, the see of a bishop, the suffragan of Monreal; 47 miles S. S. W. Messina, 85 E. S. E. Palermo; lat. 37° 30′ N.; lon. 15° 6′ E. The population is variously estimated at from 40 to 80,000. It is situated on a gulf of the Mediterranean, at the foot of mount Ætna. This city has been repeatedly visited by tremendous earthquakes, and was laid in ruins by one in 1693, when 18,000 people were destroyed; and upon the situation which it occupied, the present city is built; the lava serving, at the same time, for a foundation, as well as a quarry, from which stone was dug for its construction. Catania is reviving with great splendor, and has much more the features of a metropolis and royal residence than Palermo. The principal streets are wide, and well paved with lava. Most of the edifices have an air of magnificence unknown in other parts of the island, and the town has a title to rank among the elegant cities of Europe. Here is a university with three faculties, much celebrated in Sicily. The inhabitants have always been noted for their superiority over the other Sicilians in politeness. The Benedictine convent of St. Nicholas is very large. Every part has been rebuilt since the earthquake of 1693. An obelisk of red granite, placed on the back of an antique elephant of touchstone, stands in the centre of the great square, which is formed by the town-hall, seminary and cathedral. The cathedral, dedicated to St. Agatha, the patroness of the city, has suffered so much by earthquakes, that little of the original structure remains. The other religious edifices are profusely ornamented, but in a bad taste. The harbor, though one of the largest in the island, is not much frequented; but the trade is considerable. The exports are wheat, barley, wine, oil, &c.

Cataplasms, or Poultices, are soft compounds, intended to be applied to the surface of the body. They are commonly made of meals, powders, boiled pulps, &c., mixed with water, milk, or some other liquid. They are called *sinapisms* when mustard forms their base.

Catapults (Latin, *catapultæ*; Greek, καταπέλται); certain machines of the ancients, corresponding to our heavy cannon. The catapults differed from the *ballistæ* by throwing more horizontally, the latter more in a curve. The form also differed, and the catapults resembled, in their general shape, a cross-bow. The whole machine rested on a frame, and, if intended for the field, had wheels. The size of these machines varied much. The large catapults shot arrows of 3 cubits, or 4½ Roman feet, in length, often larger ones, and sometimes beams 12 feet long. Burning arrows were likewise often thrown by the catapults. The large ones threw their arrows 4 stadia, but not more than 2 stadia with precision. Pliny ascribes the invention of catapults to the Syrians; Plutarch and Diodorus, to other nations. At the siege of Jerusalem, the Romans had 300 catapults and 40 ballistæ. The Romans did not carry all the parts of these machines with them, but only the ropes and fastenings, with the necessary tools; and the soldiers built the catapults when they wanted them. The terms *catapult* and *ballistæ* were often used indiscriminately; and, in later times, the word *catapult* went entirely out of use. Vegetius and Ammianus Marcellinus never introduce it, and employ *ballistæ* to signify all machines throwing large arrows or beams, and *onager* for those throwing stones.

Cataract. By this term two very different diseases are designated by some writers, viz. the true *cataract*, and *amaurosis*, or *gutta serena*. By the first of these terms, in its most common signification, is understood opacity of the crystalline lens, or its capsule, or both. By the second is meant a disease of the retina, by which it is rendered unsusceptible of the action of light. In cataract, the lens becomes opaque, loses its transparency, and is no longer capable of transmitting the light. The causes of cataract are numerous. Inflammation may produce it. Sometimes it is ascribed to a state of the vessels of the part which prevents a proper nourishment of the lens or its

capsule. It is produced by various diseases, such as gout, rheumatism, scrofula, and accompanies old age. Its earliest approach is marked by a loss of the natural color of the pupil; this becoming turbid, or slightly gray. *Muscæ volitantes* accompany this period. The opacity is not, at first, over the whole crystalline, and, most frequently, first attacks the centre portion; this being turbid, and of a grayish color, while the surrounding portions remain transparent, and of the usual black color. While it exists in this degree only, the person can see in an oblique direction. The color of the pupil is various; mostly grayish-white or pearl-colored; sometimes milk-white, or of a yellowish-gray; now and then of a grayish-brown, and even of a dark-brown or dark-gray. The consistence of the lens differs in different cases, being either hard, and even horny, or very soft, as if dissolved.—The treatment of cataract is by a surgical operation on the eye, and different operations have been tried and recommended. They all consist in removing the diseased lens from its situation opposite the transparent cornea. By one of these operations, the cataract is *depressed*, removed downwards, and kept from rising by the vitreous humor. This is called *couching*. Another operation is *extraction*, and consists in making an incision of the cornea, and of the capsule of the lens, by which the lens may be brought forward, and through the cut in the cornea. The third operation is by *absorption*. This consists in wounding the capsule, breaking down the crystalline, and bringing the fragments into the anterior chamber of the eye, where they are exposed to the action of the aqueous humor, and are, at length, absorbed. This last operation has the name *keratonyxis* applied to it. The choice of the operation is determined by the character of the cataract. After the operation, the patient is to be kept from the light, and from all means of irritation. Such medicines and such articles of food are to be prescribed as will most effectually prevent inflammation; and should this occur, it must be treated by such means as are the most sure to restrain or overcome it.—*Amaurosis* is a disease of the optic nerve, and its continuation, the retina. Its causes are numerous. It may be occasioned by organic disease of the parts referred to, by mechanical pressure upon the nerve, by too powerful light, by long-continued use of the eyes in too weak light, by rapid transition from darkness to light, and, finally, by old age. Various other, and some more general, causes may produce amaurosis. Among these are wounds of the head, compression of the brain, fits of apoplexy, suppressed colds in the head, habitual inebriety, vomiting, coughing, sneezing, affections of the alimentary canal, and some of the neighboring viscera—the liver, for example. According to the activity of these various causes, the malady comes on suddenly or gradually. The patients are sometimes unable to bear the light, and, therefore, seek the darkness, where sparks and flames frequently appear to their eyes. Objects sometimes appear of different colors, or fluctuate, swim, and confuse themselves. At other times, the patients begin to squint, suffer a severe pain in the ball of the eye, and a straining above the eyebrows: finally, they begin to see as if through a crape or fog, and only in bright daylight can distinguish accurately: black flakes and specks appear to hover before their eyes. The greatest insensibility of the retina is often opposite the centre of the cornea; but ultimately the disease produces total blindness, the pupil losing its motion, and becoming permanently dilated. Deep in the eye a white speck is often visible, which is traversed by veins. According to the different causes, the malady is either easily cured or is incurable. Regard is especially to be had to them in the selection and use of remedies.

Cataract, in geography (from the Greek καταρακτης). The English language has more words than most European languages, to express different degrees of rapid and sudden descent in streams of water. The most general term is *falls*. A considerable declivity in the bed of a river produces rapids; when it runs down a precipice, it forms a cataract; and, if it falls from steep to steep, in successive cataracts, it is often called a *cascade*. In primary and transition countries, rivers abound in rapids: they also sometimes occur in secondary regions, but the descent is always more gentle. In alluvial districts, falls, of course, are very rare: they are almost always found in the passage of streams from the primitive to the other formations: thus falls are found where the alluvial formations, on the coast of the U. States, border on the primitive formations; but none are found in the alluvion below. Rapids and cataracts are often the greatest blessing to rugged countries, since they furnish the cheapest means to move machines in

manufactories, &c. In flat countries, as Holland, the lower part of Germany, and the West Indies, people must resort to windmills, on account of the want of falls. Many cataracts are remarkable for their sublimity; and the falls of *Niagara* surpass all others of the known world in grandeur. The whole mass of water which empties itself from the great inland seas of North America is here compressed into a channel of three quarters of a mile in width, and plunges over a precipice of 150 to 160 feet in height. The river, more than a mile above the falls, is divided by Grand and Navy islands, and has a gradual descent of 57 feet from this place. The banks preserve the level of the country, and, in some parts, rise 100 feet from the water: the whole stream is covered with foam and waves. At the grand falls, the river is three quarters of a mile broad, and the precipice curves nearly in a semicircle, extending in the longest line on the American or eastern side. An island, called *Goat island*, divides the cataract into two principal portions—the American fall on the east, and the Horse-shoe on the west, or Canada side. A small portion of the fall on the American side is cut off by a small island on the precipice: the rest descends in one body, almost perpendicularly, from a height of 164 feet, and 1000 feet in width. Both the falls on the American side are crossed by bridges. The Horse-shoe fall is 14 feet less in height, but surpasses the other much in grandeur. The great body of the water passes the precipice with such force, that it forms a curled sheet, which strikes the water below 50 feet from the base of the precipice, and visitors can pass behind the sheet of water. The best view of this cataract is from Table rock. It is frequently adorned with a rainbow. Sometimes three are seen in the clouds of spray, which rise 100 feet above the precipice. (See Dwight's *Travels*.)—The river *Montmorency* forms a cataract 250 feet in height and 50 feet in breadth; nine miles below Quebec.—The falls of the river *Chaudière*, not far from the cataract just mentioned, are about 100 feet in height.—The *Mississippi* forms a cataract of 40 feet in height, above its junction with the Ohio. The stream is 700 feet in width, and the surrounding country level.—The *Missouri*, at a distance of 500 miles from its sources, descends 360 feet in 18 miles. There are three principal cataracts; one of 87, one of 47, and one of 26 feet in height. The river is 1000 feet broad, and the whole scene is described as most beautiful, only surpassed by the falls of Niagara.—The falls of *Passaic*, in New Jersey, at Patterson, about 15 miles from Newark, are among the most celebrated of the U. States. The river is 150 feet broad, and falls, in one entire sheet, into a chasm 70 feet in depth, and 12 wide. Its waters form the moving power for one of the most manufacturing districts of the U. States.—The *Mohawk* river, near its junction with the Hudson, forms the falls termed the *Cohoes*, about 60 feet high.—The *Housatonic* river, in the north-west of Connecticut, forms the finest cataract in New England.—In Georgia, the cataract in the *Tuccoa* creek is interesting. It passes through a channel 20 feet wide, over a precipice of 187 feet, in one sheet, if the season is wet.—A similar cataract occurs in the river *Ache*, in Bavaria; falling 200 feet, by five steps, and being entirely scattered in spray. Its noise is heard at a distance of several miles.—*Bellows falls*, on the Connecticut river, near Walpole, are grand and striking.—*Glen's falls*, in the Hudson river, are similar.—The highest cataract in America is that of *Tequendama*, in the river Bogotá, or Funza, a branch of the Magdalena. The river rises in the lofty plain, in which Bogotá is situated, 9000 feet above the sea, and is precipitated into the lower country, through deep ravines and over steep precipices, and finally plunges 600 feet into a deep chasm.—The cataracts of the *Nile* (one at Syene, and the other some distance above) have been described, by Mr. Bruce, as grand, principally from the wildness and desolation of the scene; but the highest of them does not exceed 40 feet in height.—The primary regions of Europe abound in cataracts. The torrents are seldom of great size, but the rocky beds over which they roar and dash in foam and spray, the dark glens into which they rush, and the wildness of the whole scenery, often produce awful emotions.—The most remarkable cataract in Scotland is the *Fyers*.—The river Gotha has a fall of celebrity at *Trolhatta*, in Sweden. It descends 100 feet.—One of the most considerable falls in Europe has lately been discovered in the river *Lattin*, in Swedish Lapland. It is described as half a mile in width and 400 feet in height.—Another, of immense size, has been discovered by Mr. Esmark, in the river *Maamelven*, in Norway, consisting of three separate falls, the whole height being 800 feet.—The Alpine highlands, in Europe, abound in beautiful falls. The

cataract near *Schaffhausen* is 400 feet broad and 70 high.—The river *Orco*, descending from mount Rosa into Italy, forms a cascade, the height of which is estimated at 2400 feet.—The fall of the *Evanson*, flowing from the same mountain, is stated to be 1200 feet high.—At *Staubbach*, in the canton of Bern, in Switzerland, a small stream descends a height of 1400 feet.—In Italy, the falls of *Terni* and *Tivoli* are beautiful, and were celebrated even among the ancients.—At Terni, about 45 miles north of Rome, the *Evelino* plunges over a precipice of marble rocks, 300 feet high. The waters contain lime, which produces many petrifactions.—At Tivoli, 18 miles north-east of Rome, are the falls of the *Anio* or *Teverino*, a branch of the Tiber. It falls nearly 100 feet deep. (See Woodbridge's *System of Universal Geography*, Hartford, 1827.)

Catarrh (from καταρρεω, I flow down); an increased secretion of mucus from the membranes of the nose, fauces and bronchia, accompanied with fever, and attended with sneezing, cough, thirst, lassitude, and want of appetite. There are two species of catarrh, viz: *catarrhus à frigore*, which is very common, and is called a *cold in the head;* and *catarrhus à contagio*, the influenza, or epidemic catarrh, which sometimes attacks a whole city. Catarrh is also symptomatic of several other diseases. It is seldom fatal, except in scrofulous habits, by laying the foundation of phthisis; or where it is aggravated, by improper treatment, or repeated exposure to cold, into some degree of peripneumony; when there is hazard of the patient, particularly if advanced in life, being suffocated by the copious effusion of viscid matter into the air-passages. The epidemic is generally, but not invariably, more severe than the common form of the disease. The latter is usually left to subside spontaneously, which will commonly happen in a few days, by observing the antiphlogistic regimen. If there should be fixed pain of the chest, with any hardness of the pulse, a little blood may be taken from the arm, or topically, followed by a blister; the bowels must be kept regular, and diaphoretics employed, with demulcents and mild opiates, to quiet the cough. When the disease hangs about the patient in a chronic form, gentle tonics and expectorants are required, as myrrh, squill, &c. In the epidemic catarrh, more active evacuations are often required, the lungs being more seriously affected; but, though these should be promptly employed, they must not be carried too far, the disease being apt to assume the typhoid character in its progress; and, as the chief danger appears to be that suffocation may happen from the cause above-mentioned, it is especially important to promote expectoration, first by antimonials, afterwards by squill, the inhalation of steam, &c., not neglecting to support the strength of the patient as the disease advances.

Catechesis; the science which teaches the proper method of instructing beginners in the principles of the Christian religion by question and answer, which is called the *catechetical method.* (See *Method.*) Hence *catechist* and *catechise.* The art of the catechist consists in being able to elicit and develope the ideas of the youthful minds of learners. This part of religious science was first cultivated in modern times, and Rosenmüller, Dinter, Schmid, Wolrath, Doltz, Gräffe, Daub, Winter, Heinrich Müller, and others have particularly distinguished themselves by their writings upon it.

Catechetical Schools; institutions for the elementary education of Christian teachers, of which there were many in the Eastern church from the 2d to the 5th century. They were different from catechumenical schools, which were attached to almost every church, and which were intended only for the popular instruction of proselytes, and of the children of Christians; whereas the catechetical schools were intended to communicate a scientific knowledge of Christianity. The first and most renowned was established about the middle of the 2d century, for the Egyptian church at Alexandria, on the model of the famous schools of Grecian learning in that place. (See *Alexandrian School.*) Teachers like Pantænus, Clement and Origen gave them splendor and secured their permanence. They combined instruction in rhetoric and oratory, in classical Grecian literature, and the Eclectic philosophy, with the principal branches of theological study, exegesis, the doctrines of religion, and the traditions of the church; distinguished the popular religious belief from the Gnosis, or the thorough knowledge of religion; established Christian theology as a science, and finally attacked the dreams of the Chiliasts (believers in a millennium); but, by blending Greek speculations and Gnostic phantasies with the doctrines of the church, by an allegorical interpretation of the Bible, and the assumption of a secret sense in the Scriptures, different

from the literal, contributed to the corruption of Christianity. The distraction of the Alexandrian church by the Arian controversies proved the destruction of the catechetical schools in that place, about the middle of the 4th century. The catechetical school at Antioch appears not to have been a permanent institution, like the Alexandrian, but only to have been formed around distinguished teachers, when there happened to be any in the place. There were some distinguished teachers in Antioch, about the year 220. We have no certain information, however, of the theological teachers in that place, such as Lucian, Diodorus of Tarsus, and Theodore of Mopsuestia, until the latter part of the 4th century. These teachers were distinguished from the Alexandrian by more sober views of Christianity, by confining themselves to the literal interpretation of the Bible, by a cautious use of the types of the Old Testament, and by a bolder discussion of doctrines. The Nestorian and Eutychian controversies, in the 5th century, drew after them the ruin of the schools at Antioch. Of a similar character were the catechetical school instituted at Edessa, in the 3d century, and destroyed in 489, and the school afterwards established at Nisibis, by the Nestorians, in its stead; both of which were in Mesopotamia. To these catechetical schools succeeded, at a later date, the cathedral and monastic schools, especially among the Western Christians, who, as late as the 6th century, made use of the heathen schools, and had never established catechetical schools even at Rome. (See *Schools.*)

Catechism; a book which contains the principles and first instructions to be communicated in any branch of knowledge, particularly in religion. In modern times, the word has been applied more freely than formerly. Thus we see catechisms of chemistry, history, and, in France, *catechism des gens de bon sens* (a satire), *catechism du bon ton*, &c. The word is derived from the Greek κατηχέω, I sound, i. e., into the ears of the person to be instructed. The word, however, is chiefly used to denote the books that contain the religious instruction which any sect deems most important to be taught to the children and the people, in a popular and easy form, generally in the form of question and answer. In the Catholic church, each bishop has the right to make a catechism for his diocese. But, in modern times, their catechisms are generally a pretty close copy of the one drawn up by the council of Trent, of which an English translation was published in London (1687), "*permissu superiorum*," under the patronage of James II. Among Protestants, the catechism of Luther acquired great celebrity, and still continues to be used by many clergymen in Germany, where regular instruction in religion, during a certain period prescribed by law, must precede the confirmation, which takes place between the 13th year of age and the 17th. Clergymen, however, in some parts of that country, have been allowed to publish and use their own catechisms; and it is a matter of no little interest, to observe how the many different philosophical schools of Germany have influenced the tone of the catechisms by their various systems of morals, &c. Some, which we have seen, were books of 300 pages, and rather philosophical systems, supported by numerous quotations from the Bible, than simple catechisms. Such catechisms, however, are going out of use. The catechetical mode of giving instructions in Christianity had much declined previous to the reformation, when it was revived, and numerous catechisms sprung up. The proper preparation of such manuals, the communication of religious and moral instruction in a short compass and a simple form, is a thing of no small difficulty. In England, soon after the reformed religion was established there, a short catechism was introduced, consisting of the creed, the Lord's prayer, and the decalogue, to which a few cautious, explanatory passages were added, about 1549, it is supposed by archbishop Cranmer. "A Shorte Catechisme or Playne Instruction, conteynynge the Summe of Christian Learninge, sett fourth by the King's Maiesties Authoritie for all Scholemaisters to teach," was the work which closed the labors of the reformers in the reign of Edward VI, whose name it commonly bears. It was printed both in Latin and in English, in 1553, and may fairly be considered as containing the sense of the church of England then established. The catechism of the English church, now in use, is drawn up, after the primitive manner, by way of question and answer. The questions and answers relative to the sacraments were subjoined to it, at the revision of the liturgy, in the first year of James I. As now extant, it consists of five parts, viz.:—1. the doctrine of the Christian covenant; 2. the articles of belief; 3. the commandments; 4. the duty and efficacy of prayer; and, 5. the nature

and end of the holy sacraments.—Calvin wrote a catechism, as Luther did; but that of the former has not enjoyed so much popularity, nor been translated into so many languages, as that of the latter.—In France, the catechisms of later times exhibit plain marks of political influence. The catechism of Napoleon, in its tenth chapter, explicitly states in what light he and his family were to be regarded. This celebrated chapter has generally been thought scandalous, though it was approved, after a fashion, by the papal nuncio. Most of the catechisms published since 1814 are equally scandalous, because they contain illegal, nay, anti-constitutional, precepts. When the complaints on this score became too loud to be disregarded, the pitiful excuse was made, that the offensive turn of the passages was owing to errors of the press.

Catechu (*terra japonica*); an extract prepared from the wood and the green fruit of the *mimosa catechu* (Lin.) and of several other trees of the same family, which grow in the East Indies, principally in Bengal. There are three sorts of catechus. The first, *Bombay catechu*, is in square pieces, of a reddish-brown color, friable, of a uniform texture, fracture uneven, of a specific gravity of about 1.39. The second, *Bengal catechu*, is in round pieces, of the weight of three or four ounces, of a deep chocolate color internally, and resembling iron rust externally, more friable, of the specific gravity of 1.28. The third kind, *catechu in masses*, is in irregular pieces of two or three ounces, of a reddish-brown color, shining, homogeneous, and wrapped up in large-nerved leaves. These three kinds of catechu are inodorous, of an astringent taste at first, but, soon after, sweet and agreeable; at least, this is the case with the first and last sort. Catechu is one of the best astringents to be found in the *materia medica*, and likewise one of the most in use.

Catechumens is a name which was applied to those converted Jews and heathens, in the first ages of the church, who were to receive baptism, had a particular place in the church, but were not permitted to be present at the celebration of the sacrament. Afterwards, it was applied to those young Christians, who, for the first time, wished to partake of this ordinance, and, for this purpose, went through a preparatory course of instruction.

Category, in logic; an assemblage of all the beings contained under any genus or kind, ranged in order. The school philosophers distribute all beings, all the objects of our thoughts or ideas, into certain genera or classes, which classes the Greeks call *categories*, and the Latins, *predicaments*, and which Mr. Harris has styled *philosophical arrangements*. The ancients, following Aristotle, generally make 10 categories. Under the first all substances are comprised, and all accidents or attributes under the 9 last, viz., *quantity*, *quality*, *relation*, *action*, *passion*, *time*, *place*, *situation* and *habit*. This arrangement, however, is arbitrary, and now almost excluded. Accordingly, some philosophers think that all nature may be better considered under these seven divisions—*spirit*, *matter*, *quantity*, *substance*, *figure*, *motion* and *rest*. Others make but two categories, *substance* and *attribute*, or *subject* and *accident*; or three, accident being divided into the *inherent* and *circumstantial*. The arrangement of the 10 categories was borrowed from the Pythagorean school. It is said to have been invented by Archytas of Tarentum. From him it passed to Plato (who, however, admitted only five categories—*substance*, *identity*, *diversity*, *motion* and *rest*), and from Plato to Aristotle. The Stoics held four—*subjects*, *qualities*, *independent circumstances*, *relative circumstances*. (For the categories of Kant, see *Kant*.)

Catel, Charles Simon, composer of music, born about 1773, a pupil of Gossec, professor of harmony at the conservatory (q. v.) in Paris, has published many musical works, of which none has obtained so much fame as his *Traité d'Harmonie* (1802), which the conservatory has chosen as a text-book for instruction in composition. Among the works of Catel, besides a great number of compositions for wind instruments, particularly for military music, are the operas *Semiramis*, *Les Bayadères*, *L'Auberge de Bagnères*, and *Les Artistes par Occasion*.

Caterpillar. (See *Papilio*.)

Catgut. The strings of certain musical instruments, the cords of clock-weights, and those of some other machines and implements, are made of a dense, strong animal substance, denominated *catgut*. It is made from the intestines of different quadrupeds, particularly those of cattle and sheep. The manufacture is chiefly carried on in Italy and France. The texture from which it is made is that which anatomists call the *muscular coat*, which is carefully separated from the peritoneal and mucous membranes. After a tedious and troublesome process of steeping, scouring, fermenting, inflating, &c., the

material is twisted, rubbed with horse-hair cords, fumigated with burning sulphur, to improve its color, and dried. Cords of different size, and strength, and delicacy, are obtained from different domestic animals. The intestine is sometimes cut into uniform strips, with an instrument made for the purpose. To prevent offensive effluvia during the process, and to get rid of the oily matter, the French make use of an alkaline liquid, called *eau de Javelle*. Catgut for stringed instruments, as violins and harps, is made principally in Rome and Naples. For the smallest violin strings, 3 thicknesses are used; for the largest, 7; and, for the largest bass-viol strings, 120. In the kingdom of Naples, whence the best strings, commonly called *Roman*, are obtained, there are large manufactories of this article.

Cathari; a denomination which was applied, from the middle of the 11th to the 13th century, to several parties and sects, that appeared first in Lombardy, and afterwards in other countries of the West, and which were violently persecuted, on account of their Manichean tenets and usages. As they originated in Bulgaria, they were sometimes termed *Bulgarians*, whence arose the French term of abuse, *Bougres*. Sometimes, in token of their contemptibleness, as men of the lowest class, they were called *Patarenes*, or *Patarines*, from Pataria, a region of bad reputation near Milan; sometimes *Publicans*, or *Popelites*, and, in the Low Countries, *Piphles*. But the most general name, by which they were denoted, in the middle ages, was *Cathari* (either from καθαροι, the pure, which they claimed to be, or from the national appellation *Chazars*, because they were said to have proceeded from Chazary, the present *Crimea;* whence *ketzer*, the German word for *heretics*). The religious views and practice of the sects comprehended under this name differed much, according to the age and country in which they appeared, and according to the spirit of their leaders; but they all agreed in an obstinate resistance to Catholicism, and in the following points of doctrine and religious life:—In common with the old Manicheans, but without esteeming Manes a prophet, they entertained an aversion to the mixture of Judaism in Christianity, professed the dualism couched in scriptural language, which places the devil nearly on a level with God, and entertained the conceit of a high moral perfection. The influence of Arian and Platonic notions was conspicuous in their explanations of the doctrine of the Trinity, which defined the Father to be the unity of the divine will, the Son, or Logos, to be his first thought, and the Spirit to be their common operation. In every good man they saw a Christ, and, therefore, in their congregations, separated the elect from the novices. The merit of the Redeemer they believed to consist more in his example than in his expiatory death, and built their hopes of happiness, for the consummation of which a resurrection of the body did not appear to them requisite, on their own virtue. They regarded the exaltation of the soul over the mortal nature, so as to become wholly absorbed in mystical contemplation, as the highest stage in the religious life of man. They despised the mass, the service of the altar, and similar ceremonies, as mere vanity. The adoration of the cross, of saints and relics, together with all arbitrary penances and good works, so called, they deemed idle superstition. The daily blessing of their meats and drinks they esteemed equivalent to the celebration of the eucharist. The imposition of the hands of spotless teachers served for the communication of the spirit, for baptism, and as a pledge of the forgiveness of sins. Deep devotion of the heart in prayer, and a life of purity, connected with abstinence from sexual pleasure, and from the use of stimulating food, were their exercises of piety. The tenets of popery, and the whole establishment of the Catholic priesthood, as it then existed, they looked upon as unchristian and pernicious. They insisted on the restoration of the apostolic simplicity, and the literal fulfilment of the precepts of the New Testament, which they read, indeed, with assiduity, but frequently misunderstood. In an age when the heartless subtilties of dialectics, the mechanical administration of divine worship, and the scandalous morals of the clergy, widened more and more the breach between religion and the established church, such doctrines and maxims necessarily met with approbation, on account of their opposition to the prevalent practices. The piety and morality at which most of the separatists diligently aimed, the charm of their secret connexion, and the high intelligence of things sacred to which they made claim, the warmth of their mysticism, and the moving power of their simple worship, procured them many adherents, and those not from the common people merely. They were joined by the discontented of all classes, even by the clergy and nobles; whence they were

called, in France, *bons hommes*, good, i. e., noble, people; and, in the rude state of the existing political constitutions, amid the confusion of civil wars and ecclesiastical controversy, their congregations, with little mutual connexion, and not menacing the state with danger, were able to pursue with impunity, for years, their quiet course. But these sects were not free from corruptions. The nocturnal assemblies, the community of goods, the homeless, roving life (on account of which several of them were called *Passageri*, *Passagini*), and the contempt of the marriage state, which originated in ascetic views, gave rise, in many cases, since they permitted the two sexes to live together, to gross immoralities; and the mystery, in which they enveloped their religious exercises, sometimes served to conceal the errors of an unbridled fanaticism. But, when the old denominations became disgraced by such errors, new leaders, and reforms in doctrine and life, gave rise to new sects, and imparted a fresh impulse to the once excited spirit of separatism. From this originated the excitements occasioned among the people of France, Switzerland and Italy, by Peter Bruys, and Henry and Arnold of Brescia, in the 12th century, which introduced the names *Petrobrusians*, *Henricians* and *Arnoldists*. (See *Arnold of Brescia*.) The ecclesiastical authority now became zealous in searching out and punishing heretics; so that these new, but unconnected, classes of Cathari soon became extinct. The older Cathari, Publicans, Patarenes, &c., had the prudence, wherever they were settled, to adhere publicly to the Catholic church, and to hold their private meetings in the night. They even allowed the persecuted members to have recourse, before the spiritual courts, to an apparent recantation; but, the attention of these authorities being once excited, and the popes carrying on the persecution of the heretics by their own legates, and establishing the horrible inquisition in the 13th century, the most blameless life, and the utmost secrecy in the performance of religious exercises, no longer afforded security to these heterodox believers. The fate of the Albigenses (q. v.), who were mainly Cathari, finally produced the overthrow of all this family of sects in the 13th century. The Waldenses (q. v.) alone, who were unjustly confounded with the Cathari, escaped. No sects, of a later origin, have borne this general appellation.

Catharine, St.; a virgin of Alexandria, who, according to Catholic tradition, suffered martyrdom under Maximin, about A. D. 236. She is represented with a piece of a wheel; and the legend of her marriage with Christ has been painted by several of the first masters. Correggio's *Catharine*, in Dresden, is beautiful.—There are two other St. Catharines mentioned.—The knights of St. Catharine on mount Sinai are an ancient military order, instituted for the protection of the pilgrims who came to visit the tomb of St. Catharine, on this mountain. In Russia, the order of St. Catharine is a distinction for ladies, instituted by Catharine, wife of Peter the Great, in memory of his signal escape from the Turks in 1711.

Catharine of France, queen of England, youngest child of Charles VI and Isabella of Bavaria, was born in 1401, and, in 1420, was married to Henry V of England, who was then declared successor to the crown of France. To this prince she bore Henry VI, crowned in his cradle king of both countries. After the death of Henry, Catharine privately married Owen Theodore, or Tudor, a Welsh gentleman of small fortune, but descended from the ancient British princes. By this marriage she had two sons, the eldest of whom, Edmund, earl of Richmond, by a marriage with Margaret Beaufort, of the legitimated branch of Lancaster, became father of Henry VII, and founder of the house of Tudor. Catharine was treated with some rigor, on the discovery of her second marriage, and died in the prime of life, in 1438.

Catharine of Arragon, queen of England, the youngest daughter of Ferdinand of Arragon and Isabella of Castile, was born in 1483. In 1501, she was married to Arthur prince of Wales, son of Henry VII. Her husband dying about five months after, the king, unwilling to return her dowry, caused her to be contracted to his remaining son Henry, and a dispensation was procured from the pope for that purpose. In his 15th year, the prince made a public protest against the marriage; but, at length, yielding to the representations of his council, he consented to ratify the contract, and, on his accession to the throne, in 1509, was crowned with her. The inequality of their ages, and the capricious disposition of Henry, were circumstances very adverse to the durability of their union, and it seems surprising that Catharine should have acquired and retained an ascendency over the affections of the king for nearly 20 years. The want of male issue, however, proved a

source of disquietude to him, and scruples, real or pretended, at length arose in his mind concerning the legality of their union, which were greatly enforced by a growing passion for Anne Boleyn, one of the queen's maids of honor. He speedily made application to Rome for a divorce from Catharine. An encouraging answer was returned, and a dispensation promised, it being the interest of the pope to favor the English king. Overawed, however, by the power of the emperor Charles V, Catharine's nephew, the conduct of the pontiff, who depended upon the empire, became embarrassed and hesitating. Catharine, meanwhile, conducted herself with gentleness and firmness, and could not in any way be induced to consent to an act, which would render her daughter illegitimate, and stain her with the imputation of incest. Being cited before the papal legates, cardinals Wolsey and Campeggio, in 1529, she declared that she would not submit her cause to their judgment, but appealed to the court of Rome; which declaration was declared contumacious. The subterfuges of the pope at length induced the king to decide the affair for himself; and the resentment expressed on this occasion, by the court of Rome, provoked him to throw off his submission to it, and declare himself head of the English church—a result of royal caprice more curious and important than most in history. In 1532, he married Anne Boleyn; upon which Catharine, no longer considered queen of England, retired to Ampthill in Bedfordshire. Cranmer, now raised to the primacy, pronounced the sentence of divorce, notwithstanding which Catharine still persisted in maintaining her claims. She died in January, 1536. Shortly before her death, she wrote a letter to the king, recommending their daughter (afterwards queen Mary) to his protection, praying for the salvation of his soul, and assuring him of her forgiveness and unabated affection. The pathos of this epistle is said to have drawn tears from Henry, who was never backward in acknowledging the virtues of his injured wife, who certainly acted with eminent dignity and consistency. Several devotional treatises have been attributed to Catharine, which belong to queen Catharine Parr.

Catharine de Medici; wife of Henry II, king of France; born at Florence in 1519; the only daughter of Lorenzo de Medici, duke of Urbino, and the niece of pope Clement VII. Francis I consented that his son Henry should marry her, only because he did not believe she ever would ascend the throne, and because he was in great want of money, which Lorenzo could furnish him. The marriage was celebrated at Marseilles in 1533. Catharine was equally gifted with beauty and talents, and had cultivated her taste for the fine arts in Florence; but, at the same time, imbibed the perverted principles of politics then prevailing in Italy, which justified a constant resort to cabal, intrigues and treachery, and are particularly unsuited to the government of large empires. Catharine's ambition was unbounded. She sacrificed France and her children to the passion for ruling; but she never aimed steadily at one great end, and had no profound views of policy. The situation in which she was placed, on her arrival at the French court, gave her great opportunity to perfect herself in the art of dissimulation. She flattered alike the duchess d'Etampes, the mistress of the king, and Diana de Poitiers, the mistress of her own husband, though these two ladies hated each other. From her apparent indifference, she might have been supposed inclined to shun the tumult of public affairs; but, when the death of Henry II, in 1559, made her mistress of herself, she plunged her children in a whirl of pleasures, partly to enervate them by dissipation, partly from a natural inclination towards prodigality; and, in the midst of these extravagances, cruel and bloody measures were executed, the memory of which still makes men shudder. Her authority was limited under the reign of Francis II, her eldest son, since this prince, by his marriage with the unfortunate Mary Stuart, was entirely devoted to the party of the Guises. Jealous of a power she did not exercise, Catharine then decided to favor the Protestants. If it had not been for her patronage, by which the ambition of the chiefs of the Huguenots was stimulated, the conflicting religious opinions in France never would have caused such lasting civil wars. Catharine felt herself embarrassed, by this indulgence towards the innovators, when the death of Francis II placed the reins of government, during the minority of Charles IX, in her hands. Wavering between the Guises on one side, who had put themselves at the head of the Catholics, and Condé and Coligny on the other, who had become very powerful by the aid of the Protestants, she was constantly obliged to resort to intrigues, which failed to procure her as much power as she might easily have gained by openness of

conduct. Despised by all parties, but consoled if she could deceive them; taking arms only to treat, and never treating without preparing the materials for a new civil war, she brought Charles IX, when he became of age, into a situation in which he must either make the royal authority subordinate to a powerful party, or cause part of his subjects to be massacred, in the hope, at best a doubtful one, of subduing faction. The massacre of St. Bartholomew (see *Bartholomew, massacre of*) was her work. She induced the king to practise a dissimulation foreign to his character; and, as often as he evinced a disposition to free himself from a dependence of which he was ashamed, she knew how to prevent him, by the fear and jealousy which she excited in him by favoring his brother Henry. After the death of Charles IX, Catharine became again regent of the kingdom, till the return of Henry III, then king of Poland. She contributed to the many misfortunes of his reign, by the measures which she had adopted previously to its commencement, and by the intrigues in which she was uninterruptedly engaged. At her death, in 1589, France was in a state of complete dismemberment. The religious contests were, in reality, very indifferent to her. The consequences she was not able to conceive. She was ready to risk life for the gratification of her ambition. She was equally artful in uniting her adherents, and in promoting dissension among her adversaries. She was extravagant to folly, and was unable to limit her expenses. To those who directed her attention to the prodigal expenditure of the public treasure, she used to say, "One must live." Her example contributed greatly to promote the corruption of morals which prevailed in her time. Her manners, however, were elegant, and she took a lively interest in the sciences and arts. She caused valuable manuscripts to be brought from Greece and Italy, and the Tuileries and the Hotel de Soissons to be built. In the provinces, also, several castles were erected by her order, distinguished for the beauty of their architecture, in an age when the principles of the art were still unknown in France. She had two daughters, Elizabeth, married to Philip II of Spain in 1559, and Margaretta (q. v.) of Valois, married to Henry of Navarre, afterwards Henry IV.

Catharine of Braganza, wife of Charles II, king of England, and daughter of John IV, king of Portugal, was born in 1638. In 1661, she married Charles II, in whose court she long endured all the neglect and mortification his dissolute conduct was calculated to inflict upon her. This endurance was also rendered greater by her proving unfruitful; but she supported herself with great equanimity, and, after the death of Charles, received much attention and respect. In 1693, she returned to Portugal, where, in 1704, she was made regent by her brother, don Pedro, whose increasing infirmities rendered retirement necessary. In this situation, Catharine showed considerable abilities, carrying on the war against Spain with great firmness and success. She died in 1705, aged 67.

Catharine I, empress of Russia. The early history of this remarkable woman is uncertain. According to some accounts, she was the daughter of a Catholic peasant in Lithuania, by name *Samuel*, for he had (as is frequently the case there) no family name. It is said that she was born in 1686, named *Martha*, and placed, by her poor parents, in the service of a Lutheran clergyman, named *Daut*, at Roop, in the circle of Riga, where she imbibed the principles of the Protestant religion. She then removed to Marienburg, a small village in the circle of Wenden, and entered the service of a clergyman named *Glück*, who caused her to be instructed in the Lutheran religion. Here she was married to a Swedish dragoon. But, a few days after, he was obliged to repair to the field, and the Russians, within a short period, took Marienburg, in 1702. Martha fell into the hands of general Scheremetjeff, who relinquished her to prince Menzikoff. While in his possession, she was seen by Peter the Great, who made her his mistress. She became a proselyte to the Greek church, and assumed the name of *Catharine Alexiewna*. In 1708 and 1709, she bore the emperor the princesses Anna and Elizabeth, the first of whom became the duchess of Holstein by marriage, and mother of Peter III. The second became empress of Russia. In 1713, the emperor publicly acknowledged her his wife. She was subsequently proclaimed empress, and crowned in Moscow. Besides the daughters above-named, she bore the emperor five more children, all of whom died early. The princesses Anna and Elizabeth were declared legitimate. By her kindness, by her perseverance, and, above all, by her intelligence, she gained possession of the heart of the emperor. When Peter, with his army, seemed irreparably lost on the Pruth, in 1711, Catharine, in connexion with Ostermann and Schaffi-

roff, endeavored to win over the grand vizier; and, having succeeded, by bribing his confidant with her jewels, she disclosed her plan to the emperor, who gave it his approbation, and was soon relieved. She afterwards received many proofs of the gratitude of her husband. (Her coronation, as empress, in Moscow, which some place in 1718, took place, according to Weber and Bergholz, in 1724.) Peter even deemed her worthy of being his successor. But, in the latter part of 1724, she fell under his displeasure. Her chamberlain Mons, with whom Peter had found her *tête à tête*, was beheaded, on pretence that he had been bribed by the enemies of Russia; and she was obliged to view the head of Mons nailed to a gibbet. This, however, is only an anecdote, and the affair of Mons remains a mystery. Menzikoff, who had always manifested much attachment to her, had now been in disgrace for some time, and Peter had very frequent attacks of bodily pain, which were interrupted by dreadful explosions of rage. These circumstances made Catharine's situation critical, and her anticipations of the future must have been the more melancholy, as the emperor had uttered some threats of a change in the succession to her disadvantage. To prevent such an event, she applied to Menzikoff; and, by the prudence of Jaguschinski, who then enjoyed the favor of Peter, and whom she gained over, a reconciliation was effected with the emperor. The empress and the favorite were laboring to confirm their improving prospects, when Peter the Great died, Jan. 28, 1725. Catharine, Menzikoff and Jaguschinski considered it necessary to keep the death of the emperor secret, until, by judicious arrangements, they had secured the succession of the throne to the empress. Theophanes, archbishop of Plescow, swore before the people and troops, that Peter, on his death-bed, had declared Catharine alone worthy to succeed him in the government. She was then proclaimed empress and autocrat of all the Russias, and the oath of allegiance to her was taken anew. At first, the cabinet pursued the plans of Peter, and, under Menzikoff's management, the administration was conducted with considerable ability. But the pernicious influence of favorites was soon felt, and great errors crept into the administration. Catharine died suddenly, on the 17th of May, 1727, in the 42d year of her age. Her death was probably hastened by excess in the use of Tokay wine and ardent spirits.

Catharine II, empress of Russia, a woman of remarkable ability, was born at Stettin, April 25, 1729, where her father, Christian Augustus, prince of Anhalt-Zerbst, and Prussian field-marshal, was governor. Her name was originally *Sophia Augusta*. The empress Elizabeth, at the instigation of Frederic II, chose her for the wife of Peter, her nephew, whom she appointed her successor. The young princess accompanied her mother to Russia, where she joined the Greek church, and adopted the name of *Catharine Alexiewna*, given to her by the empress. The marriage was celebrated Sept. 1, 1745. It was not a happy one, but Catharine found recreation in the improvement of her mind. She was endowed with uncommon strength of character; but the ardor of her temperament, and the ill-treatment of her husband, led her into errors which had the most injurious influence on her whole political life. Amongst the friends of her husband, count Soltikoff was distinguished for talent and the graces of his person. He attracted the attention of Catharine, and an intimate connexion between them was the consequence. When Soltikoff, who was employed in foreign embassies, grew indifferent to Catharine, a young Pole, Stanislaus Augustus Poniatowski, celebrated both for his good and ill fortune, gained the affections of the grand princess. Their intimacy was known to the empress, but did not appear to displease her; and it was at her recommendation that Augustus III appointed Poniatowski his ambassador at the court of St. Petersburg. This connexion created alarm at Paris. France, at that time at war with England, had formed a secret treaty with Austria, and drawn Russia into the same. Poniatowski was known to be a warm adherent of England, and it was feared that, through his influence on the princess, he might prejudice Elizabeth against France; and Louis XV endeavored to induce the king of Poland to recall him. In the year 1761, Elizabeth died, and Peter III ascended the throne. The emperor now became still more alienated from his wife. Peter lived in the greatest dissipation, and on such intimate terms with a lady of the court, named *Elizabeth Woronzoff*, that it was generally thought that he would repudiate Catharine, and marry his mistress. The empress, therefore, was obliged to take measures for her personal security. At the same time, Peter grew continually more and more unpopular with his subjects, owing to his blind predilection for the Prussian military

discipline, his politics, and the faults of his character. This led to a conspiracy, at the head of which were the hetman count Rasumowski, count Panin, the enterprising princess Daschkoff, and a young officer of the guards, Gregory Orloff, who, since Poniatowski's departure, had taken his place in Catharine's affections. All those who were dissatisfied, or who expected to gain by a change, joined this conspiracy. Panin and the greater part of the conspirators were actuated only by the desire to place the minor prince, Paul, on the throne, under the guardianship of the empress, and a council of the empire. But this plan was changed through the influence of the Orloffs. The guards were the first to swear allegiance to the empress, on her presenting herself to them at Peterhoff, on the morning of July 9, 1762; and Alexei Orloff prevailed on Teplow, who was afterwards appointed senator, to read, at the Kazan church, instead of the proclamation of the conspirators in favor of the young prince, one announcing the elevation of Catharine to the throne. Peter died, a few days after, in prison. The accusation against Catharine, of having contributed to hasten this event, is without foundation. The young, ambitious princess, neglected by her husband, whom she did not respect, remained passive on the occasion, yielded to circumstances, which were, it is true, propitious to her, and consoled herself for an event which she could not remedy. She knew how to gain the affections of the people by flattering their vanity; showed great respect for their religion; caused herself to be crowned at Moscow with great pomp; devoted herself to the promotion of agriculture and commerce, and the creation of a naval force; improved the laws, and showed the greatest activity in the administration of the internal as well as the external affairs of Russia. A year after her ascension to the throne, she forced the Courlanders to displace their new duke, Charles of Saxony, and to recall Biren, who was extremely odious to the nobles. After the death of Augustus III, king of Poland, she was the means of Stanislaus Poniatowski's being crowned at Warsaw. But, whilst she was forcing this king on the Poles, the number of the malcontents in her own empire increased, and several attempts against her life were made at St. Petersburg and Moscow. The young Ivan (q. v.) was the person to whom the hopes of the conspirators were directed; but his sudden death, at the fortress of Schlüsselburg, overthrew the plans of the disaffected. After this, the court of the empress was only disturbed, from time to time, by intrigues, in which gallantry and politics went hand in hand, and which had no other object than to replace one favorite by another. In the midst of pleasure and dissipation, Catharine did not neglect the improvement of the laws. Deputies from all the provinces met at Moscow. The empress had herself prepared instructions for their conduct, which were read at the first session; but it was impossible for so many different nations to understand each other, or to be subject to the same laws. In the first sessions, the emancipation of the peasants was proposed. This alone would have been sufficient to cause a bloody revolution. Catharine, who presided at the debates, and received from the assembly the title of *mother of the country*, soon dismissed the discordant legislators. About this time, France formed a party in Poland against Russia; but these attempts only served to accelerate Catharine's plans. The war to which the Porte was instigated had the same result. The Turks were beaten. The Russian flag was victorious on the Greek seas; and on the banks of the Neva, the plan was formed of reëstablishing the republics of Sparta and Athens, as a check to the Ottoman power. The advancement of Austrian troops into Poland inspired Catharine with the desire to aggrandize herself in this quarter. She therefore entered into an agreement for the division of the country with the courts of Berlin and Vienna in 1772, by which the governments of Polotzk and Mohilow fell to her share, and she ensured to herself exclusive influence in Poland, by undertaking to guaranty the Polish constitution. At the same time, she abandoned all her conquests, with the exception of Azoph, Taganrog and Kinburn, in the peace with the Porte, concluded at Kainardschi in 1774, but secured to herself the free navigation of the Black sea, and stipulated for the independence of the Crimea. By this apparent independence, the Crimea became, in fact, dependent on Catharine. This peace was as opportune as it was advantageous to Russia; for, in the third year of the war, Moscow and several other cities were desolated by the plague; and, about the same time, an adventurer, named *Pugatscheff*, assuming the name of *Peter III*, had excited a revolt in several provinces of Eastern Russia. At this time, Potemkin exercised an unlimited influence on the empress. In

1784, he succeeded in conquering the Crimea, to which he gave its ancient name of *Tauris*, and extended the confines of Russia to the Caucasus. Catharine, upon this, traversed the provinces which had revolted under Pugatscheff, and navigated the Wolga and Borysthenes, taking greater interest in the expedition, as it was connected with some danger. She was desirous, likewise, of seeing Tauris. Potemkin turned this journey, which took place in 1787, into a triumphal march. Throughout a distance of nearly 1000 leagues, nothing but feasts and spectacles of various kinds were to be seen. Palaces were raised on barren heaths, to be inhabited for a day. Villages and towns were built in the wildernesses, where, a short time before, the Tartars had fed their herds. An immense population appeared at every step—the picture of affluence and prosperity. A hundred different nations paid homage to their sovereign. Catharine saw, at a distance, towns and villages, of which only the outward walls existed. She was surrounded by a multitude of people, who were conveyed on during the night, to afford her the same spectacle the following day. Two sovereigns visited her on her journey—the king of Poland, Stanislaus Augustus, and the emperor Joseph II. The latter renewed his promise, given at St. Petersburg, to assist her in her projects against the Turks. About this time, Prussia and England combined to instigate the Porte and Sweden to take up arms against Russia. The Turks were no more fortunate this time than before; and perhaps they would have been driven entirely out of Europe, had not Catharine been restrained by the interference of other states. (See *Reichenbach Congress*, 1790.) Peace was concluded at Jassy in 1792. Catharine kept Oczakow, and all the country between the Bug and the Dniester. Whilst Russia was occupied with the Turks, Gustavus III had commenced hostilities, and, at one time, threatened St. Petersburg. After a war of two years, peace was concluded at Werela, in 1790, leaving the possessions of both countries as they were before the commencement of hostilities. Thus all the wars undertaken against Russia had only tended to augment her political preponderance. Catharine's influence on Poland was equal to absolute dominion. When the republic, in 1791, wished to change its constitution, she took part with the opponents of the plan, gained the concurrence of Prussia, garrisoned Poland with her troops, and concluded a new treaty of partition with the cabinet of Berlin in 1792. (See *Poland*.) The insurrection, which broke out in Poland in 1794, could not save this unhappy country, which, after the storming of Praga, and the devastation of several of its provinces, was, at last, in 1795, entirely divided. Courland, too, was united with the Russian empire. A pension was given to the last duke of Courland, and the last king of Poland spent his pension at St. Petersburg. During these occurrences, Catharine could not take part in the war against France. She, however, broke off all connexion with the French republic, actively assisted the emigrants, and entered into an alliance with England against France. She likewise made war against Persia, and, as some historians assure us, entertained the project of destroying the power of the English in Bengal, when a fit of apoplexy put an end to her life, Nov. 9, 1796.—Catharine II has been equally censured and praised. With all the weakness of her sex, and with a love of pleasure carried to licentiousness, she combined the firmness and talent of a powerful sovereign. Two passions were predominant with her until her death, love and ambition. She was never without her favorite, who, by the manner in which she distinguished him, and by the valuable presents she gave him, was publicly designated as such. She never, however, lost sight of her dignity. She was distinguished for activity, working with her ministers, writing a philosophical letter to Voltaire, and signing an order to attack the Turks, or to occupy Poland, in the same breath. She favored distinguished authors, and was particularly partial to the French. At Paris, she had a literary agent (baron Grimm). She several times invited Voltaire to her court, proposed to D'Alembert to finish the Encyclopædia at St. Petersburg, and to undertake the education of the grand-duke. Diderot visited her at her request, and she often allowed him the privilege of familiar conversation with her. By these means, she gained the favor of the literati of Europe, who called her the greatest of rulers; and, in fact, she was not without claims to this title. She protected commerce, improved the laws, dug canals, founded towns, hospitals and colleges. Pallas and others travelled at her expense. She endeavored to put a stop to the abuses which had crept into the administration of the different departments of government; but she began without being able to finish. Civilization advanced but slowly in Russia under

her reign; and her anxiety to enlighten her subjects ceased when she began to entertain the idea that the French revolution had been brought about by the progress of civilization. Laws, colonies, schools, manufactures, hospitals, canals, towns, fortifications, every thing was commenced, but frequently left unfinished for want of means. She issued no paper money. Several letters, and other compositions by her, in the French and Russian languages, have been published. A statue of Catharine, of white marble, in a sitting posture, was executed by professor Göthe, at Stockholm, in 1825. The manners of the Russian court, in her time, are set forth in the diary of Krapomisky (St. Petersburg, 1826). Krapomisky was her private secretary for 10 years. Among several histories of her life are Tooke's Life of Catharine II (3 vols.), and Castera's *Histoire de Catharine II* (3 vols.).

Catharine Parr, sixth and last wife of Henry VIII, was the eldest daughter of sir Thomas Parr of Kendal, and was, at an early age, distinguished for her learning and good sense. She was first married to Edward Burghe, and secondly to John Neville, lord Latimer, and, after his death, attracted the notice of Henry VIII, whose queen she became in 1543. Her zealous encouragement of the reformed religion excited the anger and jealousy of Gardiner, bishop of Winchester, the chancellor Wriothesley, and others of the Catholic faction, who conspired to ruin her with the king. Taking advantage of one of his moments of irritation, they accused her of heresy and treason, and prevailed upon the king to sign a warrant for her committal to the Tower. This being accidentally discovered to her, she repaired to the king, who purposely turned the conversation to religious subjects, and began to sound her opinions. Aware of his purpose, she humbly replied, "that on such topics she always, as became her sex and station, referred herself to the wisdom of his majesty, as he, under God, was her only supreme head and governor here on earth." "Not so, by St. Mary, Kate," replied Henry; "you are, as we take it, become a doctor, to instruct, and not to be instructed by us." Catharine judiciously replied, that she only objected in order to be benefited by his superior learning and knowledge. "Is it so, sweetheart?" said the king; "and tended your arguments to no worse end? Then are we perfect friends again." After the death of the king, she espoused the lord admiral sir Thomas Seymour, uncle to Edward VI; but this connexion proved unhappy, and involved her in troubles and difficulties. She died in child-bed in 1548, not without suspicion of poison. She was a zealous promoter of the reformation. Among her papers, after her death, was found a composition, entitled *Queen Catharine Parr's Lamentations of a Sinner, bewailing the Ignorance of her blind Life*; a contrite meditation on the years she had passed in Catholic fasts and pilgrimages. It was published, with a preface, by the great lord Burleigh, in 1548. In her lifetime, she published a volume of "Prayers or Meditations, wherein the Mind is stirred patiently to suffer all Afflictions here, and to set at nought the vaine Prosperitie of this Worlde, and also to long for the everlasting Felicitee." Many of her letters have also been printed.

Catharine Pawlowna, queen of Würtemburg, grand-princess of Russia; born May 21, 1788; younger sister of the emperor Alexander, and widow of George, prince of Holstein-Oldenburg, whom she married in 1809, and thus got rid of a proposal of marriage made her by Napoleon. George died in Russia, December, 1812. Her two sons, by this marriage, born in 1810 and 1812, are still living. She was distinguished alike for beauty, talents and resolution, and exhibited the tenderest affection for her brother Alexander. After 1812, she was frequently his companion in the campaigns in Germany and France, as well as during his residence at London and Vienna, and evidently had an important influence on several of his measures. It is said that she effected, in 1814, the marriage of the prince of Orange with her younger sister. In 1813, William, crown-prince of Würtemburg, in Germany, formed an acquaintance with her, and, in 1814, saw her again in Paris. They were married Jan. 24, 1816, at Petersburg; and, after the death of his father, in October, 1816, he ascended with her the throne of Würtemburg.—She was a generous benefactor to her subjects in the famine of 1816. She formed the female associations existing throughout the country, and established an agricultural society. She labored to promote the education of her people, and founded valuable institutions for the poor (particularly a school for educating and employing poor children), a school for the females of the higher classes, and savings banks for the lower classes, after the example of the English savings banks. Indeed, she interfered, often arbitrarily, in the internal economy of the state, and

chiefly imitated the institutions of England. For the fine arts she had but little taste. She died Jan. 9, 1819, leaving two daughters.

Cat-Harpings; small ropes in a ship, running in little blocks, from one side of the shrouds to the other, near the deck. Their use is to force the main shrouds tight, for the ease and safety of the masts when the ship rolls.

Cathedral; the Episcopal church of a diocese. The word is derived from the Greek καθέδρα, a seat or bench. From the early times of the Christian church, the bishop presided in the presbytery, or the assembly of priests. He was seated on a chair, a little higher than that of the others. The whole meeting of priests was called *cathedra;* and, at a later period, when Christians were allowed to build churches, this name was applied to the Episcopal churches, and the name *basilica* to the particular churches erected in honor of a saint or a martyr. In the middle ages, the cathedral received the form of the cross. Several of the old churches are masterpieces of Gothic architecture. Among these are the cathedral at Oviedo, that at Milan [see *Storia e Descrizione del Duomo di Milano* (commenced in 1387, and not yet finished), by Gaet. Franchetti, with engravings, Milan, 1821, 4to.]; those at Toledo and Burgos; those at Rouen, Rheims, Amiens, and the church of Notre-Dame, in Paris (see *Cathédrales Françaises, dessinées, lithogr. et publ. par Chapuy, avec un Atlas historique et descriptif, par Jolimont*, 36 numbers, Paris, 1823 et seq. It contains views of 25 cathedrals). Those at Lund, Drontheim, Upsal, at York, Salisbury and Canterbury, also Westminster abbey, are celebrated (see J. Britton's *Hist. and Antiquities of the Metropolitan Church of Canterbury*, London, 1823, with engravings; and *Cathedratical Antiquities*, by the same author). The cathedrals at Oppenheim, Ulm, Marburg, Meissen, Freiburg (q. v.) in the Brisgau, are fine buildings (see doctor Moller's *Denkmale der Deutschen Baukunst*, Darmstadt, 1825; and F. W. Schwechten's *Der Dom zu Meissen, bildl. dargest. u. beschr.*, Berlin, 1826, 3 nos.). Respecting the cathedral of Cologne, see *Boisserée.* (For further information, see Wiebeking's work *Die Kathedralen von Rheims und York, nebst den Grundrissen von* 42 *andern merkwürdigen Kirchen*, Münich, 1825, fol., with engravings.) In Rome there has appeared, since 1822, the Collection of the oldest Christian Churches, or Basilicas, of Rome, from the 4th to the 13th Century; drawn and published by J. G. Gutensohn and J. M. Knapp (architects); accompanied by an Archæol. Histor. Description, by Anth. Nibby, professor of Archæology in the University at Rome; 7 numbers, each containing 7 plates. There is now in the course of publication at Milan, a splendid work, entitled *Chiese principali d'Europa*, which will extend to 36 numbers; each of them being devoted to one particular edifice. From the numbers already published, we extract the subsequent measurements of celebrated buildings.

St. Peter's, at Rome.

	English feet.
Width of the cathedral,	233
External diameter of the cupola,	158
Total height,	448

Cathedral at Milan.

	Feet.
Width of the front,	216
Width of the cross,	251
Total height,	350

Pantheon at Rome.

	Pieds*.
Length of the portico,	103
Width of do.,	61
Interior diameter,	132
Height from the pavement to the summit of the cupola,	132

St. Stephen's, at Vienna.

	Feet.
Width of the façade,	148
Great tower, from the ground to the top of the cross,	450
Greatest breadth between the two chief towers,	235

Santa Maria del Fiore, Florence.

	Feet.
Whole length,	517
Total height,	386

Catholic Emancipation. *Emancipation*, with the Romans, signified the release of a son from the power of his father, or of a slave from that of his master. It was performed before the pretor, attended by certain solemnities. By the emancipation of the Catholics is understood the abolition of those civil and ecclesiastical restraints, to which the Catholics of Great Britain, and particularly of Ireland, were once subjected. Ireland, from the time of its subjugation, was maltreated by its conquerors; and repeated attempts, on the part of the natives, to free themselves from foreign domination, only increased the severity

* The measurements of this edifice are given in feet; but they are neither Roman nor the Parisian, nor any other feet we are acquainted with.

of their rulers. (See *Orangemen.*) The Catholic inhabitants of the country were excluded from public offices, and from all participation in the choice of members of parliament. None but the Anglo-Irish, belonging to the Episcopal church, which had now become the established church in Ireland—men who possessed the greatest part of the landed property, that had been torn from the original inhabitants—were eligible to public offices, or to a seat in parliament. In this oppressed condition the Irish Catholics remained till 1793. But when the principles disseminated at the time of the French revolution produced a general fermentation, which extended to the Irish Catholics, a lively desire was awakened in them to obtain equal rights with their Protestant fellow-citizens. They were supported in England itself by a very respectable party. Burke repeatedly spoke in parliament in favor of their emancipation. In 1792, they presented a petition, praying for the abolition of all the restrictions to which they had hitherto been subjected. Upon this, a recommendation was addressed from the throne to the Irish parliament, to contrive means for the melioration of the condition of the Catholics. Accordingly, the *Irish act*, so called, was passed in 1793, which conferred the elective franchise on the Catholics, threw open to them all employments in the army in Ireland, and all offices in the navy. Three offices in the army only were excepted—those of the commander-in-chief, master-general of the ordnance, and generals on the staff. They continued to be excluded, however, from 30 public offices, and from parliament—an arrangement which could not be changed without a repeal of the corporation and test acts. (q. v.) A part of the Irish Catholics were satisfied with the concessions. Another party, however, encouraged by a few noblemen, who had entered into connexion with France, cherished the hope that Ireland would succeed, with the help of France, in freeing itself from the British power. An insurrection speedily broke out, which was quelled by the severity of the governor, lord Camden. It blazed forth again, however, in 1798, and Ireland became the theatre of a new civil war. By this rebellion, judicious men, both in England and Ireland, were convinced that, as long as the two kingdoms had separate legislatures, and that of the weaker was dependent on that of the stronger, and the inhabitants of the two kingdoms thought their interests inconsistent, jealousy and distrust would continue. The Anglo-Irish, also, who had previously desired the independence of Ireland, and, at first, supported the rebellion, perceived that the superior numbers of the Catholics, and their bitter enmity to the Protestants, would make the separation of Ireland from England a great misfortune for them. It was resolved, then, to unite Ireland with England; and, three years after the last rebellion, the union was effected, and the united parliament was opened Jan. 22, 1801. In regard to ecclesiastical affairs, nothing further was provided in the act of union, than that the Episcopal church in Ireland should remain the established church, and should constitute, with the English, one church. Respecting the condition of the Catholics nothing was done, and Pitt observed that it would be well to reserve this business for future deliberation. The united parliament had been in session but a few days, when reports were spread, which cast a dark shade over the union, and gave occasion for much anxiety. The Catholics in Ireland, it was said, complained of the non-fulfilment of expectations which had been held out to them, to make them favorable to the union. Full emancipation had been promised them, as a certain consequence of it. Pitt, the author of the union, had pledged himself, with his colleagues, to promote the fulfilment of this wish of the Catholics. After the union was completed, invincible obstructions were found in the way of the accomplishment of their promise. Pitt and his colleagues had encouraged these hopes with the expectation of being able to fulfil them. For this reason, they endeavored, after the union was completed, to obtain an act of parliament, by which admission to parliament and to offices of state, from which the Catholics were still excluded, should be made possible for a certain number of them, by dispensing with the test-oath. But the king set himself against this measure, as being inconsistent with his coronation-oath. Pitt and his colleagues, therefore, in 1801, resigned their places. Pitt foresaw that, if both houses agreed to this measure, the king would still withhold his permission; and thus the discontent of the Catholics would be directed against the person of the king himself. This, like a wise statesman, he wished by all means to avert; and, on this ground, in 1805, he spoke against the emancipation, when the opposition proposed anew to grant the Catholic a

seat and a voice in parliament, and admissibility to all offices of state. During late years, the petition for complete emancipation has been several times renewed in vain. In 1822, on the motion of Mr. Canning, a bill was passed, in the house of commons, by a majority of 21 voices, enabling Roman Catholic peers to sit in parliament; but, in the house of lords, the bill was rejected. The same happened in 1825, when the duke of York, who died in 1827, solemnly opposed it. In 1827, under Canning's administration, the motion for emancipation was lost, in the house of commons, by a majority of 3. The measure has, at last, been effected, under the administration of the duke of Wellington. The disturbances in Ireland were assuming continually a more organized character, under the influence of the Catholic association, which was spread through the country, and directed by men of great abilities—such as O'Connell and Shiels—so that his grace was, at last, driven to support the cause of emancipation. He said that he had to choose between concession to the Catholics and civil war. Mr. Peel, who had formerly spoken warmly against emancipation, now moved it in the house of commons. One of the chief opposers of the measure was lord Eldon, the former lord chancellor; one of the royal family—the duke of Cumberland—also took part with the opponents.—The emancipation of the Catholics is so interesting an event, that the following abstract of the fate of various motions respecting it may not be unacceptable to our readers. In the year 1805, a majority of 129 in the house of lords, and of 212 in the house of commons, refused to act on the petition of the Catholics, moved severally by lord Grenville and Mr. Fox. In 1807, lord Grenville withdrew his motion in favor of emancipation, it being understood that his majesty was averse to it. In 1808, Mr. Grattan's motion was rejected, in the house of commons, by a majority of 153, and lord Donoughmore's, in the house of lords, by a majority of 87. In 1810, a motion to the same effect, by the same members, was again lost, by a majority of 112 in the commons, and 86 in the lords. In 1812, there was a majority of 72 in the lords, and 85 in the commons, against the movers. Mr. Canning's motion was lost, in the same year, by a majority of 129 in the commons, and that of the marquis of Wellesley, by a majority of 113 in the lords. In 1813, the motions of Mr. Grattan, sir John Cox Hippesley and doctor Duigenan, drew forth majorities against the Catholics of 40, 48 and 42, and, on the 24th of May, the bill was given up. In 1821, Mr. Plunkett carried the bill through the house of commons by a majority of 19; but it was lost in the lords by a majority of 39. In 1822, Mr. Canning carried it, in the commons, by a majority of 21; but it was thrown out, in the lords, by a majority of 42. In 1825, sir Francis Burdett carried it, in the commons, by a majority of 27; but it was again thrown out, in the lords, by a majority of 48. In 1827, sir Francis Burdett's motion for a committee was lost, in the commons, by a majority of 3. In 1828, the motion for a conference with the lords was carried, in the commons, by a majority of 6; but thrown out, in the lords, by a majority of 45. And, in 1829 (April 10), a *relief bill*, abolishing the civil disabilities on Roman Catholics, by repealing the oaths of supremacy, &c., was carried through the commons by Mr. Peel, with a majority of 180 on the second reading, and 178 on the third; and through the lords, by the duke of Wellington, with a majority of 105 on the second reading, and 104 on the third. By this bill, Catholics are eligible to all offices of state, excepting the lord-chancellorships of England and Ireland, the lord-lieutenancy of Ireland, the office of regent or guardian of the United Kingdom, and that of high commissioner to the church of Scotland. They are still excluded from the right of presentation to livings, and all places connected with the ecclesiastical courts and establishment. The church patronage attached to any office in the hands of a Catholic is to be vested in the archbishop of Canterbury. Attached to the bill is a clause for the gradual suppression of the Jesuits and monastic orders (religious establishments of females excepted). At the same time, the duke carried a *disfranchisement bill*, by which the 40 shilling freeholders of Ireland were disfranchised, and the income of real estate necessary to entitle to a vote in elections in that country raised to £10 sterling. There has lately been published a History of the late Catholic Association of Ireland, from its Institution, in 1760, to its final Dissolution in 1829; by Thomas Wyse, junior, Esq., one of the members of that body; 2 vols. 8vo., London, 1829, Colburn.

Catholic Majesty; a title which pope Alexander VI gave to the kings of Spain, in memory of the perfect expulsion of the Moors out of Spain, in 1491, by Ferdi-

nand of Arragon. But even before that time, and especially after the council at Toledo, in 589, several Spanish kings had borne this title.

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