The toilet and cosmetic arts in ancient and modern times : with a review of the different theories of beauty, and copious allied information, social, hygienic, and medical, including instructions and cautions respecting the selection and use of perfumes, cosmetics, and other toilet articles, and a comprehensive collection of formulae and directions for their preparation / by Arnold J. Cooley.

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AND

DIRECTIONS FOR THEIR PREPARATION.

BY

ARNOLD J. COOLEY,

AUTHOR OF "CYCLOPÆDIA OF RECEIPTS, PROCESSES, DATA, AND COLLATERAL INFORMATION IN THE ARTS, MANUFACTURES, PROFESSIONS, AND TRADES;" "DICTIONARY OF THE ENGLISH LANGUAGE;" "LATIN GRAMMAR FOR TECHNICAL STUDENTS, AND SELF-TUITION;" "TWO MONTHS IN A LONDON HOSPITAL, ITS INNER LIFE AND SCENES," ETC.

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PREFACE.

THE present volume is not intended to instruct the learned, nor to amuse the idle, but simply to impress the reader with the importance of paying reasonable attention to the matters of which it treats, to enforce this as well as to interest him by historical facts and references, and to furnish him, in a popular form, with directions and information for his guidance. The aim has been to make the work useful and practical, rather than learned, showy, or sensational; and to address society at large, rather than any select class of it.

The matter which forms the three concluding Chapters of this work has been greatly extended beyond the author's original intention, in deference to the views of his able and experienced publisher. The formulæ in them have been carefully reduced from the author's wholesale laboratory-formulary, in order to adapt them to the requirements of private individuals and small venders; and ample directions and cautions have been added, to enable those uninitiated in chemical manipulations to employ them, and their products, with success and safety.

It may be stated here, that the orthography,

punctuation, and typographical arrangement, of the present work differ, in some respects, from the manuscript copy of it; and that, for these alterations, whether improvements or otherwise, the author is irresponsible. This remark appears necessary, as this volume, in the points alluded to, differs from the author's later works, and the system publicly advocated by him.

A very copious analytical Index has been added, in order to increase the usefulness of the work, by facilitating reference to its multifarious contents.

It need only be added, that the author has done his best to make this work as useful and accurate as possible. Whether he has successfully carried out his intentions remains for others to decide. His book, like a little skiff, is ready for the launch. Fair winds and a prosperous voyage betide it. He promises his readers, that the next time it reaches his hands it shall leave them more richly freighted, and more worthy of their approval and patronage.

A. J. C.

London, *May* 1*st*, 1866.

THE TOILET AND COSMETIC ARTS.

INTRODUCTORY REMARKS.

THE importance of the subjects of which this volume treats may be gathered from the following chapters, and therefore need only be generally referred to here. That "cleanliness is next to godliness" has been long a household proverb; and that many other duties connected with the "toilet" are subordinate only to personal cleanliness will, I think, be readily admitted. The choice and use of appropriate clothing, both as an ornamental and protective covering for the body, are also matters of equal importance. At the present day a due attention to the requirements, usages, and habits of society in these matters, as in others apparently more important, forms a portion of the common and necessary routine of daily life. Apart from health and comfort, to which I shall again allude, our social position, our welfare and advancement, often materially depend on these points, and are liable to be seriously implicated by their neglect. "A pleasing appearance" is said to be "the first letter of recommendation,"—a simple truth, which it would be insulting the reader to attempt

either to gainsay or to strengthen. Happily the Creator, in His wisdom, has not merely endowed man with an instinctive love of personal cleanliness, but has also implanted in his bosom a feeling of self-pride, or rather say, of self-respect, which, when controlled by reason and good taste, incites him to a laudable, but not an excessive attention to those duties and particulars which it is my desire to enforce and explain.

Besides those matters just referred to, there are others connected with our daily life, and the state in which we live, which demand the earnest attention of us all, since without it neither health nor beauty can be promoted, and even when existing, must rapidly decay. The complex structure of our bodies, and the various functions of the numerous organs on which both physical and mental life depend, are governed by certain laws, and require for their integrity and well-being certain concomitant conditions that cannot be violated, nor even neglected, with impunity. Among these last, pure air, good and appropriate food, exercise, sleep, and some other matters noticed in the following chapters, may be mentioned.

The necessity of attention to the above subjects being a point which I shall here assume as granted, the causes which lead to their neglect may claim a passing notice. These may be severally referred to absence or a low condition of the nobler moral feelings, to thoughtlessness, indolence, or ignorance, or to excessive vanity or vulgarity. The errors of some persons in these matters may be traced to a degraded or a morbid indifference to their present condition and future welfare, or to absolute inability to appreciate pleasures and luxuries which do not yield immediate

pecuniary advantage or sensual gratification; whilst those of others, and not a few, arise from the misdirection of the attention to points of minor importance and temporary display. The relations between the subjects referred to and health, and between health and personal beauty, as between cause and effect, are commonly forgotten. Present convenience and present appearance are the deities on whose fatal altars the health and fair looks of after-life are commonly sacrificed by the multitude. "Familiarity breeds contempt" of *duties*, as it frequently does of *men*. The necessity of constant repetition and frequent attention, instead of leading to greater skill and care, has often a contrary effect. Of the truth of these remarks, there are thousands of living illustrations in every direction we may choose to seek them. Premature baldness, grey hair, pallid cheeks, haggard looks, bilious skin, death-like eyes that once were sparkling, produced neither by unavoidable disease nor by the original curse of man's disobedience, are now so common in our larger towns and cities as no longer to attract attention, or to provoke inquiry as to their cause. But should this be? It would be useless to argue on the subject. The reader will, I trust, find an answer to the question in the facts recorded in the following pages.

It has been affirmed, and I think correctly, that, from the relative attention paid in any country to cleanliness, the cosmetic arts, dress, and hygiene, and from the respective prevalence, influence, and mutations of custom and fashion, may its claims to civilization, refinement, and luxury be vindicated. Indeed, there appear to be abundant historical, as well as

living data, in support of this opinion. They are national characteristics which are almost constantly associated together. We may thus, in general, safely infer the advancement of the last, from the known condition of the others. The disregard of these matters, and the rigid adherence to antique usages and forms, are, in like manner, certain indexes to a state of little progress, or of imbecility and barbarism. I shall avail myself of these facts in the "historical notice" that follows this chapter.

And here a few remarks respecting certain words which form a leading portion of the "title" of this little volume may, probably, be interesting to some of my readers :—

The word "*toilet*" comes from a nearly similar word in the French language.* Originally it simply denoted the cloth or cover of a "dressing-table;" but, like many other words, it rapidly acquired a more extensive application. By a common figure of speech, it soon came to be employed as the name of the table itself, and subsequently as a general term expressive of the mode and various operations of dressing, including all matters immediately connected with personal cleanliness, arrangement, and cosmetic treatment. In the expression "to make one's toilet," it denotes the "careful or usual adjustment of the person, dress," &c. In this way the word has gradually acquired a wide range of signification, and the limited sense, in which it was originally and is still sometimes employed, is almost sunk in the extended figurative ones which usage has assigned to it.

* *Toilette* (Fr.), diminutive of *toile*, linen cloth; from *tela* (Lat.), a web of cloth, or *texo*, I weave.

The word "*cosmetic*"* means "beautifying" or "that promotes personal beauty;" and, substantively, "anything that possesses this quality." Hence "*cosmetics*"† are "external applications for the promotion, preservation, or restoration of personal beauty." Formerly the term was generally understood to refer chiefly to substances applied to the skin, to improve the colour and clearness of the complexion; but later writers usually class under this head every topical application used with the like intention, and thus include a wide range of articles and preparations.

The "*cosmetic arts*" are all those that have for their object the beautifying of the person, or the improvement of the personal appearance, by external applications and treatment, and include the preparation and use of cosmetics.

In the following pages an attempt will be made to elucidate the subjects of our "title," in all their more important bearings and details—historical, personal, social, hygienic, and medical.

* Κοσμετικος, from κοσμεω (*orno*, Lat.), I embellish or adorn; *cosmétique*, Fr.

† *Cosmetica*, Lat. pl.

CHAPTER II.

HISTORICAL NOTICE:—EARLY AGES.

——— "History, with all her volumes vast,
Hath but *one* page."

(*Childe Harold*, iv. 108.)

A COMPLETE history of our subject would necessarily begin with that of our first parents in Eden, and, following the progress of our race in numbers and civilization, would embrace the long and interesting periods, both antediluvial and post-diluvial, prior to the commencement of written history, respecting which all is now involved in doubt and conjecture. That the practice of personal ablution, and even of bathing, has existed from the commencement of the world, is not merely highly probable, but almost certain; since it is founded in the most natural wants and desires of man, and in a well-defined instinct common to almost the whole animal creation. The necessity and comfort of personal cleanliness, of defending the body from the heat of a burning sun and the effects of climate, and the proneness to seek refreshment after the fatigues of the chase, war, or labour, must have taught man, from almost the earliest period of his history, the advantages derivable from bathing. In the beautiful and genial regions of the East, nature supplied him with baths in the rivers, streams, fountains, and

lakes, on the banks or margins of which he was located; nor was it probably long before simple utensils were formed out of the natural objects by which he was surrounded, and he had learned the convenience of bringing water into the shady bower or the rude hut that formed his earlier dwelling, in order to satisfy his thirst and to wash his person, without the necessity of visiting, at unpropitious times and seasons, the more distant stream or fountain.

The first "toilet" of man we may, therefore, fairly assume, consisted in mere personal ablution or bathing, followed occasionally by simple adjustment of the hair with the fingers, or with some extemporized implement, to keep it from falling over the face, to prevent it matting together, or to free it when entangled. Soon repetition and convenience would render these operations habitual, and experience and taste improve on them, and suggest others of a more complicated character. Then came the Fall, the use of dress, and the expulsion of our first parents from Eden.* After the prostration produced by this calamity had passed away, and "children were born unto Adam," the "toilet" and dress would undoubtedly have received more attention; and then it was that "fashion" had its birth. For some time the toilet and dress continued of the simplest kind, and the fashions that prevailed were equally simple and innocent. The twisted foliage of trees and the skins of beasts were

* "And they sewed fig-leaves together, and made themselves aprons" (*Gen.* iii. 7). In the original, "things to gird about them." And again, "Unto Adam also and to his wife did the Lord God make coats of skin, and clothed them" (*Gen.* iii. 21).

the only garments that then clothed the human race. Wild flowers plucked from the bush, the sunny bank, or the natural pasture, the richly-tinted berries of the trees and shrub, and the delicate shells of their lake and river margins, were their only ornaments. The only cosmetic that then tinted the beloved one's cheek and lips was the genial sunshine; and the only jewels that decked her person were the diamonds that sparkled in her health-beaming eyes.

As mankind increased in number and gathered in societies, and the various tastes, affections, desires, and passions of human nature—love, vanity, rivalry, ambition, war, &c., came into play, the "toilet" and dress would necessarily receive more attention, and the operations of the former would become more numerous and complicated. In many cases these would have for their object increase of the personal attractions, as well as mere comfort and cleanliness. In this way, in all probability, gradually arose the first "cosmetic processes," properly so called. In some form or other they appear to have been practised among all nations whose minor archæology has descended to modern times.

It is stated that even the rudest of the ancient barbarians were sedulous in their endeavours to bring their personal charms, real or imaginary, as near as possible to the condition, considered by the prevailing taste of their tribe or nation, to be the standard of beauty and perfection. Among those tribes characterized by their fierce and warlike habits, who were constantly engaged in social contentions or in the enterprises of arms, this taste principally developed itself in efforts to modify the natural form and colour

of the body, and in the employment of articles of personal adornment of a gaudy and *outré* character. With the males these efforts were chiefly intended to impart a ferocious or warlike appearance, for the purpose of striking terror into their enemies. In happier regions, where gentler habits prevailed, and the arts of life and luxury had made some little progress, the tastes and inclinations of the people took a corresponding turn. Here the more peaceful routine of their daily pursuits, the inoffensive occupations of pastoral life, and the consequent cultivation of the social virtues and affections, led to the adoption of more delicate and complicated, but also more effeminate operations for the promotion of personal beauty, or for obviating defects arising from its absence. In many cases these were probably chiefly prompted by, or borrowed from, the beautiful scenes of nature, and the more genial circumstances by which they were surrounded. The dress and personal ornaments worn by such a people were of a corresponding character. At first the latter probably consisted entirely of natural objects, as in the earlier ages; next, of imitations of them executed in inexpensive materials; and afterwards, with more taste and artistic skill, in rare and costly materials, until, at length, considerable elegance and beauty were attained. The rapid strides made in the same direction with the further progress of population and society may be readily imagined. The love of change and display, the gratification of vanity, and the desire of personal distinction, together with tastes and habits acquired by experience and example, or created by refinement, luxury, and wealth, or recommended by

their propriety or usefulness, rapidly multiplied and varied these practices, and invented new ornaments and styles of ornamentation, and established them, in some or other of their many forms, and in different degrees, among all civilized nations.

The progress just referred to was accompanied by a corresponding attention to personal cleanliness and dress, and particularly by an increased taste for bathing, which led to the introduction of artificial baths, and ultimately of the warm bath. The observation of the simple fact of the more agreeable sensation produced by water when heated by the sun, or the discovery of hot springs, which must have existed then, as now, on various parts of the earth's surface, no doubt suggested, at a comparatively early period, the happy idea of artificially communicating heat to water, in receptacles more convenient for bathing, and less dangerous than those provided by nature. It was not, however, until the inhabitants of the world had sufficiently increased in number for the existence of extensive and opulent communities, when architecture had made considerable progress, and art generally had begun to afford its material aid in supplying conveniences, pandering to the luxuries, and providing for the growing wants of life and civilization, that this suggestion was practically and systematically carried out by the formation of artificial reservoirs for bathing, and the erection of suitable apparatus for imparting an agreeable and salutary temperature to the water. At first these baths were probably of a simple character, confined to the neighbourhood of royal residences, and indulged in only by princes, courtiers, and nobles; but from this sparse beginning, they

multiplied rapidly, and grew in completeness and magnificence, until their use, with all their complicated manipulations, had become an institution of the people. The enormous extent, the architectural beauty, and the completeness of many of the ancient baths, gorgeous even in their ruins, have excited the admiration and wonder of succeeding ages.*

Hence, ultimately, arose all those numerous operations of the bath, the toilet, and the cosmetic arts, and all that variety, elegance, and richness of bijouterie, tire-ornament, and dress, which were so elaborately and carefully performed, and were so highly prized among many of the more polished Eastern nations of antiquity.

From Asia these tastes and usages were carried into Europe by the colonists who successively established themselves in Greece, Italy, Iberia, and Gaul; and, from these effeminate descendants of the old eastern monarchies, they have come down to modern time, and, variously modified and distributed, exist even at the present day.

In the immediately succeeding chapters I shall endeavour to gather a few fragments, in connection with my subject, from the history and ruins of individual nations.

* See *Index*.

CHAPTER III.

HISTORICAL NOTICES CONTINUED:—THE JEWS.

THE most ancient written history which we possess—that found in the books of the Old Testament—furnishes no inconsiderable amount of information respecting the social arts and habits of the earlier inhabitants of the world. The *Jews* appear to have been early characterized by a predilection for showy dress, for cosmetics, jewelry, and perfumes, and for the care which they bestowed on various operations of the toilet, particularly those connected with the hair. According to Moses, the art of working in silver, gold, and precious stones, very early reached a state of considerable facility and excellence, as these substances were then commonly manufactured into ornaments to decorate the person.* Abraham, we are told, "was very rich in cattle, in silver, and in gold;"† so much so, indeed, that he paid "four hundred shekels‡ of silver, current money," for a "burying-place" for his family. § The description given us of his

* Probably earlier than B.C. 2221; the date assigned by some chronologists to the first Chaldean monarchy, supposed to have been founded by Nimrod, about 25 years after the dispersion at Babel.

† *Genesis*, xiii. 2.

‡ The *silver shekel* was about equal in value to an English half-crown.

§ *Genesis*, xxiii. 16.

chief man-servant presenting "a golden ear-ring of half a shekel weight,* and two bracelets for the hand of ten shekels weight of gold," to the beautiful Rebekah, as she tripped with her pitcher from the fountain,† may serve to illustrate the usages, taste, and progress of this period; as may also the text which relates that the same "servant" subsequently "brought forth jewels of silver, and jewels of gold, and raiment, and gave them to Rebekah;" and "gave also to her brother, and to her mother precious things."‡

From the period last mentioned, the taste for personal decoration and display must have steadily progressed, as in the time of Moses it had become a passion among the Jewish people, as well as their Egyptian persecutors.§ When the Israelites begged Aaron to make them "gods" which should "go before them," he replied, "Break off the golden ear-rings which are in the ears of your wives, of your sons, and of your daughters, and bring them unto me."‖ Nor must the garments and insignia of the priestly office, and the operations connected with it—familiar to every Scripture reader—be passed over here; since they show the addiction to dress and personal decoration, and the high estimation in which they were thus early held, by this people. The ephod

* The *shekel-weight* was about half an ounce avoirdupois.

† *Gen.* xxiv. 22.

‡ *Gen.* xxiv. 53. About B.C. 2000; or nearly 4,000 (*i.e.* 3,900) years ago.

§ *Exod.* xi. 2, *et seq.*

‖ *Exod.* xxxii. 2. About B.C. 1500; or more than 33½ centuries prior to the present time.

and breastplate were formed "even of gold, of blue and purple and scarlet and fine twined linen," curiously wrought; and were enriched with precious stones of the most costly description, gorgeously mounted, and engraved "like the engravings of a signet;" the whole being secured to the person and connected with each other by means of rings, and chains of "pure gold" and "wreathen gold," and "a lace of blue." The "robe of the ephod" was "all of blue;" and "beneath, upon the hem of it," were "pomegranates of blue, and of purple, and of scarlet, and bells of gold between them round about." The coat was embroidered, and "of fine linen;" "the mitre of fine linen," and "the girdle of needle-work." These formed "the holy garments for Aaron thy brother, for glory and beauty."*

From the above, and from other like passages in the Pentateuch, relating to dress, jewelry, and the adornment of the person, we might fairly infer that an equal amount of attention was bestowed, by this ancient and singular people, on their toilet; since, as already noticed, a taste for the one is inseparable from a predilection for the other. This inference is shown to be correct by various subsequent passages in the sacred writings. Perfumes, precious ointments, spices, waters, and other articles connected with the ceremonies of "anointing" and "purification," and their use as cosmetics, are frequently referred to. Bezaleel "made the holy anointing oil and the pure incense of sweet spices according to the work of the apothecary."† The Psalmist compares the communion

* *Exod.* xxviii. 2-39.

† *Exod.* xxxvii. 29.

of saints and brethren to "the precious ointment (*pommade*) upon the head, that ran down upon the beard;"* and Job, in deprecating the burden of his afflictions, exclaims, "If I wash myself with snow-water, and make my hands never so clean," &c.† When David "returned and came to Jordan," after the conspiracy and death of Absalom, "Mephibosheth, the son of Saul, came down to meet the king (David), and had neither dressed his feet, nor trimmed his beard, nor washed his clothes from the day the king departed until the day he came again in peace."‡ It also appears that very long before this period the arts of medicine and mummification, introduced from Egypt, were not merely known, but evidently studied and practised. "And Joseph commanded his servants, the physicians, to embalm (Jacob) his father, and they embalmed Israel."§ Again, on the death of Joseph, "they (his brethren) embalmed him."‖

At a later period, but one not long subsequent to the death of Moses, the operations of the toilet are more distinctly alluded to. It appears probable that about this time "barbers" and "hairdressers," as well as "perfumers," similar to those of modern times, were common amongst the Jews.

Whether these trades were of native growth, or imported from the monarchies by which the Jews

* *Psalm* cxxxiii. 2.

† *Job*, ix. 30. It is generally thought that the Book of *Job* was written by Moses. If so, it proves that astronomy, mineralogy, natural history, and their sister arts and sciences, had attained a high degree of advancement at that time.

‡ 2 *Sam.* xix. 24.

§ *Gen.* l. 2. About B.C. 1700; or nearly 3,600 years ago.

‖ *Gen.* l. 26. See the last note.

were surrounded, is now uncertain. It is likely that the latter was the case.* However this may be, the instruments and operations connected with these trades are frequently noticed by the sacred writers, and that in a manner which evidently connects them with the habits and usages of the people. "There hath not come a razor upon mine head, for I have been a Nazarite unto God from my mother's womb. If I be shaven then will my strength go from me, and I shall become weak, and be like any other man." And "she called for a man, and she caused him to shave off the seven locks of his head."†

The magnificence and luxury of the reign of Solomon were so remarkable that they have since formed the burthen of a proverb.‡ The description handed down to us of his own palace, of the "house" (palace) he built "for Pharaoh's daughter," and of the Temple, exhibits a degree of extravagance and voluptuousness without a parallel in the history of the Jews.§ The example of this monarch appears to have had its effect upon his people; if, indeed, it was not itself a highly exaggerated and luxurious form of that which was already peculiar to them, blended with exotic growths. Perfumes and spices, always highly prized and expensive articles of luxury among the Jews, came into almost general use during his reign. "Ointment (*pommade*) and perfume rejoice the heart,"‖ he sung; whilst in another passage he informs us that "myrrh,

* See a subsequent allusion to this point.

† *Judges*, xvi. 17–19. This was before the time of David; about A.D. 1500, or nearly 3,000 years ago.

‡ Solomon began his reign B.C. 1011.

§ 1 *Kings*, vii. 23–6. ‖ *Prov.* xxvii. 9.

aloes, and cinnamon" were used as scents by the courtesans of his day.* These substances are also mentioned by the Psalmist,—"All thy garments smell of myrrh, and aloes, and cassia."† The singular fate of Absalom, another son of David, was occasioned, according to popular belief, by the fineness and extreme luxuriance of his hair. ‡

The transit of another century in the history of the Israelites places before us a distinct notice of the use of skin cosmetics. We are told that the "proud Jezabel," when preparing to meet King Jehu, "painted her face" (in the original, "put her eyes in painting"), and "tired her head."§

The prophet Isaiah, about a century later, furnishes us with several details connected with the female costume and toilet of his day in "the judgment which shall be for the pride of the women:"—"Because the daughters of Zion are haughty, and walk with stretched-forth necks, and wanton eyes, walking and mincing as they go, and making a tinkling with their feet,"—"the Lord will smite with a scab the crown of the head, and will take away the bravery of the tinkling ornaments about their feet, and their cauls, and their round tires like the moon, the chains, the bracelets, and the mufflers, the bonnets, the orna-

* *Prov.* vii. 17. † *Psalm* xlv. 8.

‡ 2 *Sam.* xviii. 9. The passage says that, in his flight, his *head* was caught by the boughs of an oak, from which he remained suspended. According to some learned writers, his *head*, and not his hair, was caught and jammed between the thick forked boughs of a terebinth.

§ 2 *Kings*, ix. 30. B.C. 884. Here *stibium* or *antimony* was used as an eye-paint. See *note* (*), p. 28.

ments of the legs, and the head-bands, the tablets, and the ear-rings, the rings, and the nose-jewels, the changeable suits of apparel, and the mantles, the wimples, and the crisping pins, the glasses, and the fine linen, and the hoods, and the veils; and instead of sweet smell (perfume), there shall be a stink; and instead of a girdle, a rent; and instead of well-set hair, baldness; and instead of a stomacher, a girding of sackcloth; and burning, instead of beauty."*

Another century and a half in the history of the Jews, chiefly distinguished by the "captivities" of Israel and Judah, and perpetual political contentions and domestic broils, brings us to the reign of Jehoiachin and the time of the prophet Ezekiel.† Here the trade of a "barber," as a separate and common occupation, is clearly mentioned in the prophet's typical foreshadowing of the approaching "judgment of Jerusalem":—"Son of man, take thee a barber's razor, and cause it to pass upon thine head, and upon thy beard: then take the balances to weigh and divide the hair."‡

In the lamentations of Jeremiah "for the miseries of Judah," about the same period, he alludes to rich dress, jewelry, and cosmetics, as things in use and highly valued:—"Though thou clothest thyself with crimson, though thou deckest thee with ornaments of gold, though thou rentest thy face" (in the *Heb.*, "eyes") "with painting, in vain shalt thou make thyself fair."§

* *Isa.* iii. 16–26. About B.C. 760. † About B.C. 600.

‡ *Ezek.* v. 1.

§ *Jer.* iv. 30. B.C. 612. See *note* (§), p 17.

Many other notices, of an equally direct character, are to be found in the books of the Old Testament.

In later periods of the history of the Jews, as may be gleaned from both sacred and profane writers, the predilection for dress and jewelry and the arts of the toilet continued unabated, and, surviving the vicissitudes of time and change, continues still to characterize this strange and scattered race. The modern Jewess, more particularly, offers a living proof that this taste has been neither extinguished nor materially diminished by denationalization, dispersion, and persecution. It is singular and worthy of remark, that though the modern Jews adopt the dress and habits of the nations among which they live, the inhabitants of Palestine, or the Holy Land, at the present time, differ little in their habits, dress, and appearance from what they were in the days of the patriarchs. Four thousand years have rolled over their heads, with all the vicissitudes recorded in the page of history, and the remnant of this ancient people, on the mountains, valleys, lakes, and rivers of their father-land, have, in all things apart from number, wealth, and religion, returned to their primeval condition, and the words of prophecy have been fulfilled.

CHAPTER IV.

HISTORICAL NOTICES CONTINUED :—EGYPT, ASSYRIA, BABYLONIA, PERSIA, ETC.

FROM the Jews, let us pass to those *Eastern nations* which were the earliest distinguished by their civilization and refinement, and whose domestic history and archæology are chiefly disclosed by profane writers; and, in its earliest periods, by the labours of recent travellers among the ruins of their buried cities and their sepulchres. The history of the Jews, at all times meagre, scarcely commences before the time of Abraham; that of the nations last referred to carries us back many centuries beyond even that remote period. The researches of Champollion, Lepsius, Layard, and others, in Egypt and Assyria, and the discovery of the key to the mystical inscriptions found on the wonderful remains of these mighty empires, have added a new era to the page of history. The pyramids of Memphis were built "between the times of Noah and Abraham, in biblical chronology; and between those of Menes, the first Pharaoh of Egypt, the founder of the first dynasty at Memphis, and the thirteenth dynasty in collateral Egyptian hieroglyphical chronology. Thus, all the pyramids existed, and were ancient, two thousand years before the birth of Christ. All the pyramids in lower Egypt are fully four thousand years old; and taking the pyramid of Mœris* as the last of

* Lepsius, in his "*Letters*," fixes the date of the building of this pyramid between B.C. 2151 and 2194.

this series, the rest will successively recede to above five thousand years ago."* This immense antiquity is truly surprising, and yet scarcely less surprising than that the epochs, builders, and objects of these stupendous structures, should have remained for upwards of two thousand years, and until a very recent period, "mere dreams, fallacies, and mysteries."†

On examining the vast mausoleums, and the other remains of *ancient Egypt*, the mind is almost paralyzed with wonder, at the immense progress which all the arts of life and civilization had made in the ante-Abrahamic ages of the world. The traveller finds himself suddenly surrounded with scenes and objects belonging to a people that existed long before the commencement of history, or even the fables of tradition; and which have, probably, for fifty centuries, set at defiance the ravages of time. The every-day life, appearance, and usages of the inhabitants of an empire which has long been blotted out from the map of the world, become, indeed, revived before us, with a freshness and fidelity resembling the doings of yesterday, startling man in his pride, and showing him the instability of all sublunary greatness. "These tombs are real museums of antiquity—utensils, toilet-tables, inkstands, pens, books, the incense-bearer, and smelling-bottle, are found among them." The scenes sculptured or painted on the temples, or in the sepulchres, furnish every detail connected with the social life of this ancient people. "They give us the portraits, history, geographical names, and characteristics of an infinite number of Asiatic and African

* Gliddon's "*Otia Ægyptiaca*," p. 25. † Ib. p. 24.

nations existing in days long anterior to the Exode, many of which have left no other record of their existence on earth, and others again whose names are only preserved in the Hebrew Scriptures."*

Egypt, then, thus early in the world's history, had become the seat of the arts and sciences, of luxury and splendour, alike copied, admired, and envied by the various nations and nomadic tribes by which she was surrounded. To her the Jews were chiefly indebted for their learning, refinement, and laws, as well as for the habits of luxury and effeminacy into which they subsequently and so readily fell. To her may be traced, apart from Divine inspiration, much of that beautiful simplicity, purity, and sublimity of diction, which pervades some of the writings of the Jewish lawgiver.† The luxury of her court and people knew no bounds; and the magnificence and costliness of their dress, and the elaborateness of their toilet, were only equalled by their own peculiar mode of sepulture. It is asserted that the expense of the embalming and burial of a single member of her vast community was, in many cases, equal to a modern fortune; yet "the practice of mummification was preserved in Egypt for upwards of three thousand years."‡ The arts, sciences, manufactures—nay, even many of the miscalled "discoveries" of modern times—appear to have been anticipated by the genius, the industry, and the enterprise of her people. Some of the most beautiful designs in our shawls, dresses, and other textile fabrics, and on our pottery—the very

* Gliddon's "*Otia Ægyptiaca*," pp. 8, 9.

† *Vide* the *Book of Job*, &c. ‡ Gliddon, *ut suprà*, p. 92.

character, figure, and applications of numerous articles of our toilet and domestic use—were common among the Egyptians prior to the age of Abraham. The wedding ring is of Egyptian origin, and, through the ancient Jews, has descended to modern times. There is strong reason for supposing that even the daguerreotype, photography, and the electric telegraph, were known to the Egyptian hierarchy; whilst a means of rapid transit, resembling the modern railway, was undoubtedly used, by the same body, in their long subterranean passages and galleries. Nor did the progress and peculiar taste of this strange people, so conspicuous in their lives, abandon them in death; for they deprived the sepulchre of the horrors of a modern charnel-house.

The earlier books of the Old Testament furnish us with occasional evidence of the wealth and grandeur of Egypt, and of the habits of her people, from about B.C. 1750 until after the death of Solomon (B.C. 975), a period of eight centuries.*

The date at which the warm bath was first known, and its progress, among the early Egyptians, are now matters of conjecture. From an incident related in the sacred text it has been inferred, by some persons, that neither public nor private baths existed in Egypt until after the birth of Moses, since we are told that "the daughter of Pharaoh, with her maidens, came down to the river side to wash herself" (properly, "lave her person," *i. e.* bathe);† but to draw such an inference from this passage appears absurd.

* See *Gen.* xxxvii.-l.; *Exod.* i.-xv.; 1 *Chron.* i.-x.; &c.

† *Exod.* ii. 5-10.

Such was Egypt under many successive dynasties and vicissitudes, extending over a period of upwards of two thousand years. At length her magnificence and refinement dwindled into voluptuousness, effeminacy, and weakness. The mantle of the builders of her colossal sepulchres and temples no longer descend upon the regal race of her degenerate rulers. The nation gradually lost its political and intellectual superiority; and was ultimately reduced by Augustus to the condition of a Roman province, B.C. 30.

Our national bard has beautifully described the luxury and splendour of the court of Cleopatra, with whom ended the dynasty of the Ptolemies, and the independence of Egypt:—

"The barge she sat in, like a burnish'd throne,
Burn'd on the water:—the poop was beaten gold;
Purple the sails, and so perfumèd, that
The winds were love-sick with them.
* * * * She did lie
In her pavilion (cloth of gold, of tissue),
O'erpicturing that Venus, where we see
The fancy outwork nature:—on each side her,
Stood pretty dimpled boys, like smiling Cupids,
With diverse-colour'd fans, whose wind did seem
To glow the delicate cheeks which they did cool,
And what they undid, did.
Her gentlewomen, like the Nereides,
So many mermaids, tended her i' the eyes,
And made their bends adornings:—at the helm
A seeming mermaid steers; the silken tackle
Swell with the touches of those flower-soft hands,
That yarely frame the office."*
* * * * *

The empires and monarchies of *Western Asia*, the neighbours of ancient Egypt, though, with the ex-

* "*Antony and Cleopatra*," act ii. sc. 2.

ception of Assyria, following her in the period of their development, were scarcely less distinguished than her for the state of refinement, magnificence, and luxury which they reached at certain periods of their history. In these particulars, Egypt, Assyria, Babylonia, Chaldea, Persia, Media, and Phœnicia resembled each other, and may therefore be classed together.

The *Assyrian empire* was founded by Nimrod, about the time that Egypt was founded by Menes; and it had ceased to exist long before the epoch at which authentic history commences.* Its duration was about fifteen centuries.

The splendour and voluptuousness of the ancient Assyrians are not only chronicled by the earliest

* In Scripture history, *Assyria* is represented to have sprung from Babylonia founded by Nimrod (*Gen.* x. 5–10). The Greek and Roman historians commonly employ the term Assyria as a general designation of the countries of Babylonia, Mesopotamia, Aturia, and Adiabene, and not unfrequently even include within its limits a part of Asia Minor. The Hebrew chronicles furnish us with no information with reference to the history of Assyria, from its foundation until the eighth century B.C. (2 *Chron.*; 2 *Kings*). The data furnished by the sacred historians and the ancient Greek writers do not agree. These discrepancies may be reconciled by assuming that on the dissolution of the original Assyrian empire, Media, Babylonia, and other nations that had formed part of it, resumed their previous separate and independent existence and titles; and that besides these, there continued to be an Assyrian state, which lasted until the capture of Ninus by the Medes, and the final incorporation of Assyria in the Median, and subsequently in the Persian monarchy (Herod. i. c. 95, 102, 106, 185). Chaldea, according to Ptolemy, formed the south-western portion of the Babylonian empire. Diodorus Siculus (ii. c. 7) attributes the foundation of the city of Babylon to Queen Semiramis.

profane historians, and alluded to in the Old Testament, but are also indubitably shown in the remains of her buried cities. The recent discoveries among the ruins of ancient Nineveh—the Ninus of the Greeks and Romans—have thrown a new light on this hitherto obscure portion of the history of our race. This city was built on the banks of the Tigris, by Asshur, one of the descendants of Shem, about the year B.C. 2250, according to biblical chronology.* This again carries us back to the ante-Abrahamic ages of the world—to a period immediately succeeding the building of the Tower of Babel, or one probably contemporaneous with that misadventure, and the consequent "confusion of tongues," narrated in the sacred text.†

The Assyrians rivalled, and even surpassed, the Egyptians in many of their leading characteristics—in magnificence, luxury, and personal display. The extreme beauty and costliness of the "Assyrian garments," as well as the elaborate nature of the toilet of her kings and nobles, distinguished them among all the other nations of the East. The Persians imitated them in these points; and the former of these characteristics ultimately descended even to the Romans.

The dresses worn by the Assyrian kings were dyed of the richest tints, and beautifully embroidered; and the designs upon them were of the most varied and tasteful description, taken from both the animal and vegetable world. "More than one necklace, of elegant form, was generally suspended round the neck.

* *Gen.* x. 10, 22. According to the Greek writers, Ninus was founded by a king of the same name.

† *Gen.* x. 8–10, and xi. 1–9.

The arms were encircled with armlets, and the wrists with bracelets, all equally remarkable for the taste and beauty of their design and workmanship. The clasps were in the shape of the heads of lions and other animals; and in the centre of the bracelets were stars and rosettes, which were probably inlaid with precious stones. Ear-rings of many kinds were worn."* The designs often resembled those employed in modern jewelry.

This luxuriance and richness of the dress and personal ornaments of the Assyrians were accompanied by a corresponding amount of attention to the cosmetic arts and the toilet. "They carefully and elaborately plaited their hair and their beards." "The hair was parted over the forehead, and fell from behind the ears on the shoulders, in a large bunch of ringlets. The beard was allowed to grow to its full length; and, descending low on the breast, was divided into two or three rows of curls. The moustache was carefully trimmed, and curled at the ends. The hair, as well as the beard, appears to have been dyed, as is still the custom in Persia; but it has been doubted whether the hair represented in the sculptures was natural or artificial."† The latter was probably, in many instances, the case, as their neighbours, the Egyptians, "were accustomed to wear large wigs, elaborately plaited and adorned, and even false beards were not unknown among them."‡ The eyebrows and eyelashes were dyed black; and a dark pigment, consisting chiefly of finely powdered antimony, was employed to blacken the extreme edges of the lids, and thus in-

* Layard's "*Nineveh*," ii. 322. † Ib. ii. 327. ‡ Ib.

crease the brilliancy of the eyes. The charms of the complexion were promoted by the use of skin cosmetics. The cheeks and lips had their hues brightened or modified as occasion might require; and the teeth received a like attention. Nor were cleanliness and hygiene forgotten—the luxuries of the bath being not only highly prized, but profusely provided for and indulged in.

A description of the toilet of the voluptuous Assyrians is given in the amusing story of Parsondes. On Nanarus upbraiding Parsondes for his ingratitude, he replied, "Am I not more manly, and more useful to the king than you are, who are shaved and have your eyes underlined with stibium,* and your face painted with white lead?" On which Nanarus, beckoning to a eunuch, said, "Lead off this fellow. Shave and rub with pumice-stone the whole of his body, excepting the head. Bathe him twice a day and anoint him. Underline his eyes, and plait his hair as women do. Let him learn to play on the harp, and to accompany it with his voice, that he may appear among the female musicians, with whom he shall pass his time, having a smooth skin and wearing the same garments as they do."† These orders, we are told, were carefully executed, and the rough Parsondes soon assumed the soft and effeminate appearance which he had derided in his tormentor.‡

These voluptuous and effeminate practices were common among the nobles and higher classes of the

* The ancient name of antimony.

† A practice common among the ancient Assyrians, in their degenerate days.

‡ "*Prodromus Hellenikes Bibliothekes*," Paris, 1805, p. 229; quoted by Mr. Layard.

Assyrian empire. Xenophon informs us that Astyages had his eyes and face painted, and wore false hair.* According to Athenæus, the gentle but luxurious Sardanapalus† assumed the dress and ornaments of a woman. His chin was shaved, and his skin, which was kept smooth with pumice-stone, was white as milk; and his eyes and eyebrows were painted black, in the manner above referred to.‡ This monarch, the last of a long line of sovereigns, whose only faults were his extreme love of the arts of peace and civilization, and his voluptuous habits and effeminacy, is said to have allowed his sceptre to pass from his grasp, "as he was endeavouring to finger the fine needle and nyse thread," surrounded by the gentler portion of his household.§

The "miserable ruin of Nineveh," the gorgeous capital of Assyria, and the seat of the government of Sardanapalus, was graphically and sublimely foretold by the prophet Nahum.‖ Its riches at the time of its fall, as stated by Athenæus, were immensely great, indeed, scarcely conceivable.¶

The Babylonians, Chaldeans, Medes, Persians, and Phœnicians,** as before noticed, for the most part resembled the Assyrians in the richness of the costume of their princes and nobles, as well as in the compli-

* "*Cyropædia*," lib. i. c. 3. † Byron's Sardanapalus.

‡ Athenæus, lib. xii.

§ Diodorus Siculus, ii. 24–27; Justin, i. 3; Herodotus, i. 95; &c. The date of this event is variously assigned by historians to the years 880, 717, and 606 B.C.

‖ *Nahum*, ii. iii.

¶ Ib. ii. 9; Layard's "*Nineveh*," ii. 417; Rollin's "*Histoire Ancienne*," &c.

** Including the inhabitants of Tyre, the celebrated commercial capital and port of Phœnicia.

cated character of their toilet. We are told that the Persians, at the time of Darius, were remarkable for the length and beauty of their hair, and that artificial head-dresses were in common use among them.* According to Herodotus, the Babylonians wore their hair long.† The extreme magnificence of this people, even in their later days, may be imagined from the circumstance that Cato, on receiving, as a legacy, a "Babylonian garment," sold it, because he conceived it was too costly for a Roman citizen to wear.‡ The descriptions given of ancient Babylon and its people appear, indeed, almost incredible. During the reign of Nebuchadnezzar this city was the envy and admiration of the whole eastern world. It contained everything which luxury and sensuality could conceive or riches procure. The greatness of this "golden city," its magnificence and vices, are frequently noticed by the sacred writers. Its desolation, like that of Nineveh, formed the subject of a special prophecy—"And Babylon, the glory of the kingdoms, the beauty of the Chaldees' excellency, shall be overthrown. It shall never be dwelt in from generation to generation, but owls shall lodge there, and the wild beasts of the islands shall cry in their desolate houses, and dragons in their pleasant palaces."§

* Xenophon, "*Cyrop.*" i. 3. † Herod. lib. i. c. 195.

‡ Plutarch. Pliny also notices the costliness and beauty of the textile fabrics and draperies of Babylon.

§ *Isa.* xiii. 19–22. Yalden has given a beautiful paraphrase of this chapter :—

"E'en Babylon, adorned with every grace,
The beauty of the universe,
Glory of nations, the Chaldeans' pride,"
&c., &c.

CHAPTER V.

HISTORICAL NOTICES CONTINUED:—GREECE, CARTHAGE, SICILY, ROME.

THE *States of Greece* early arrived at a considerable degree of advancement, though at a date long subsequent to that of some of the nations already noticed. The kingdom of Athens is supposed to have been founded by Cecrops, about the time of, or rather shortly after, the birth of Moses.* The people we call Greeks were not the original inhabitants of the country, but were Hellenic emigrants (Hellenes), and refugees from other nations, who obliged the native Pelasgic tribes to submit to their rule. Thus, society among them, even in its elements, embraced many of the usages and habits of their parent states, and of their neighbours; whilst numerous bodies of colonists from Egypt and from south-western Asia, subsequently introduced many of the arts and customs of their respective nations. As early as the time of David,† it is said that Cadmus introduced the leading letters of the alphabet from Phœnicia; and it was about this period that the importation of the luxuries and manners of the Eastern nations began more particularly to affect the habits of the Greeks. Literature and the fine arts soon came to be cultivated by them, and ultimately reached a high degree of excellence. Homer, whose poems are usually regarded as containing the oldest fragments of traditional Greek history,

* About B.C. 1500. Moses is stated to have been born B.C. 1571.

† About B.C. 1055.

flourished about the time of Solomon.* Herodotus, justly called the "father of history," and the oldest of the profane prose-writers, followed; and the few next succeeding centuries rapidly produced those men whose literary and artistic works still continue to be the admiration of the world. So far back as the reign of Athalia, king of Judea, Lycurgus had raised Lacedæmon to considerable eminence, and settled her laws and constitution as a limited monarchy.† About two centuries later, the government of Athens having changed from a monarchy to an oligarchy, Solon constructed that celebrated code of laws which forms the bases of those still existing in the more refined states of Europe. In Sparta, Thebes, and Macedon, civilization and refinement, luxury, ambition, and a love of conquest, were successively developed.

The Iliad and Odyssey of Homer, which treat of the celebrated siege of Troy or Ilium and the return of Ulysses to his native island (Ithaca), the works of Herodotus, containing a valuable description and history of Egypt, Assyria, Persia, and Greece, up to B.C. 480, and the histories of Thucydides and Xenophon, which carry us on a century later, furnish us with many details connected with the archæology of ancient Greece, and many of the nations by which she was surrounded. After this period‡ our acquaintance with these matters is chiefly derived from the works and compilations of Diodorus Siculus,§ Arrian, Quintus

* That is, about B.C. 1011. † About B.C. 884.

‡ About 380 to 400 B.C.

§ It is much to be regretted that a large portion of the works of this excellent writer is lost. This is the more remarkable, as he did not flourish until the age of Augustus.

Curtius, Polybius, Marcellinus, Athenæus, Livy, Pliny, Justin, and Plutarch, which carry us on to the time of the subjection of the states of Greece to Rome.*

From these authorities we learn, that although the ancient Grecians never reached the state of luxury and effeminacy of the nations previously noticed, they were not behind them in attention to hygiene and all the more elegant and useful matters connected with the arts of dress and the toilet. The imaginary food† and drink‡ of the gods, which was supposed to contribute to their immortality, and to possess the power of imparting youth, beauty, and vigour to the body, and of keeping the mind in a state of continued health and activity, were figurative allusions to the benign influence which diet and drink may be made to exercise on the human frame. Like many other fables in the beautiful mythology of the Greeks, this conveys a lesson, under the fascinating form of allegory, which, in a different garb, would have been less likely to be heeded by the people for whom it was intended. As early as the time of Hippocrates,§ we find that the "barbers" had acquired a position of considerable importance. Besides plying that portion of their trade which may be strictly called their own, they also performed several of the minor operations of surgery; as was the usage with many succeeding nations, until a comparatively recent period.

The Greeks, in the time of Homer, were acquainted with the use of warm baths, for mention is made of

* An event which happened B.C. 146.

† Ἀμβροσία, Gr.; *ambrosia*, Lat., Eng.; hence, ἀμβρόσιος, *ambrosius* (Lat.), ambrosial, immortal; sweet, delicious, antidotal.

‡ Νέκταρ, Gr.; *nectar*, Lat.; Eng., honey. § Born B.C. 460.

them in several passages of his immortal epics; and more particularly in those in which he depicts the delicious life led in the palace of Alcinous, and where he relates the reception given to Ulysses by Circe. The Lacedæmonians or Spartans were the first who adopted the custom, borrowed from the Asiatic nations, of appearing naked at the public games; anointing themselves with oil, and covering themselves with sand, prior to the contest, and then plunging into hot baths.* The Lacedæmonians were also the only people among the Greeks whose gymnasia and baths were common to both the sexes. With the Greeks, unlike the Romans, the gymnasia occupied almost the entire structure; the portion devoted to the bath being of very limited dimensions. It was not, however, until after the time of Hippocrates,† that the employment of baths in private families became general; for we find that the infrequency of their existence prevented this ancient physician, justly termed "the father of medicine," from recommending their use in many diseases which called for their adoption.

From Greece let us pass to *Carthage*, a colony of Phœnicia, founded on the coast of Africa, about the year B.C. 800. This colony inherited many of the habits and customs of its parent state. Like most maritime nations, it rapidly rose in importance; and it acquired enormous wealth from the gold-mines of Spain. Commerce brought riches, and refinement and luxury followed in their train. The history of the Punic wars, the civilization and enterprise of the Carthaginians, and the unfortunate fate of their city,‡

* Thucydides.

† See *note* (§), p. 33.

‡ Carthage, through the treachery of one of her citizens, was taken by storm, and destroyed by the Romans, B.C. 146.

form an interesting study for the inquirer and moralist.

The *Sicilians* early paid considerable attention to dress and the cosmetic arts; and among them the trade of a "barber" soon became a distinct occupation, and one of considerable importance. From Sicily, as noticed below, this trade was afterwards carried to *Rome*.*

The rude and warlike habits of the *Romans* during the first two centuries of their existence, engaged as they continually were in scenes of blood and conquest, allowed very little time for the cultivation of the arts of civilization and luxury. After the downfall of the monarchy, and during the purer days of the Republic† a nearly similar indifference to dress and personal decoration continued; but as the luxury and wealth of the patricians and citizens increased, they successively adopted the habits and customs of their more refined and voluptuous neighbours. According to Varro, it was not until the fifth century from the foundation of the city ‡ that these arts began to be cultivated and practised as a separate calling.

The first "barbers" were brought from Sicily to Rome, by one Ticinius Mena, B.C. 303.§ In the course of a few years they had so multiplied, that the city was full of them. Their shops (*tonstrinæ*), like those of many of the fashionable drapers, jewellers, and tobacconists,

* Varro.

† Tarquin, the last king of Rome, was deposed B.C. 505. From this time Rome continued a republic, until Augustus Cæsar assumed the purple, B.C. 23.

‡ Rome was built about B.C. 757.

§ This was 454 years after the foundation of the city. (Varro; Pliny, 7, 56.)

in London and Paris, and the barbers' shops of our small country towns and villages, soon became the common resort of loungers and idlers of every description, until at length they served to furnish proverbs expressive of notoriety.* There the gossiping and inquisitive portion of the community sought for fashionable news and information respecting affairs of state; there the reports of the night's broil and the last intrigue found ready tongues to disseminate them, with all their attendant slanders, to the remotest corner of the city; there the affluent and the indolent consumed their time in courtly chit-chat; and there, too, the less opulent and the industrial classes met for recreation, and discussed current politics, when the hours of toil and business were over. Even the poorer citizens, according to Horace, sought refuge from their ennui by making a round of the barbers' shops :—

"Mutat cœnacula, lectos,
Balnea, tonsores."

The barber himself furnished an excellent substitute for the modern newspaper. He was, indeed, a walking gazette or periodical, of which the last number was always recent, and ready spread for perusal —an ever busy reporter, who, guiltless of short-hand notes or letter-press, contented himself with those simpler media of receiving and conveying information—the tongue, eyes, and ears. The shop of the higher class of these tradesmen formed a good apology for the modern club-room; that of the humbler pro-

* *Vide* Horace, and other Roman writers.
† *Vide* Horace, Pliny, Varro, &c.

fessor, for the tavern or beer-house. Hence, the "tonstrinæ" constituted an important element in the social condition and progress of the Roman people.

The attention of the Roman barber* was first and principally directed to the hair, in which department of the toilet he is said to have excelled, to a degree that might justly excite the envy of the modern "artiste" in his line.† After the hair, the beard received the immediate exercise of his skill, and here he was equally at home, shaving it or trimming it with great expertness and taste. He next operated on the hands, and trimmed and polished the nails, at the same time removing any callosities that had formed on the palms or joints. Other like trifles, which are now commonly performed by each individual for himself, were also attended to by the Roman barber.‡

The taste of the Roman people, including even the poorer citizens, appears to have been as great in matters connected with the toilet as it was in sculpture, oratory, and theatricals. As much ridicule was excited by a person who was negligent in this respect as by one who had committed himself in some more important particular. The man whose hair was dressed or cut untastefully subjected himself to general remark, and his unfortunate valet became the object of opprobrium wherever he was alluded to. A "bungling barber" could scarcely ply his trade with profit in the

* Strictly, one who shaves and dresses the beard; from *barba* (Lat.), a *beard*.

† The distinction at present existing between *barbers* (shavers) and *hair-dressers*, *friseurs*, or *coiffeurs*, does not appear to have been then made.

‡ *Vide* Tibullus, i. 9, 11; Plautus, "*Aulul.*" ii. 4, 33, &c.

Roman capital, or in any of the larger provincial towns, and would have been continually subjected to personal insult, if not actual chastisement, from his customers.

The fashionable ladies of Rome carried artificial styles of dress and ornament to an excess which has no parallel in modern times. They spent large sums of money and a considerable portion of their time in the articles and operations of their toilet, and particularly in their baths, as hereafter noticed.* Lengthy descriptions of the details connected with them have been given by several ancient authors, which exhibit a degree of folly, vanity, and voluptuousness, scarcely compatible with the commonly-received opinion of the Roman character. Among the higher classes each department of the toilet had its particular operations. Each portion of the body, even each limb, separately commanded attention; and to every one of these duties was assigned a separate servant or slave. The capriciousness of the female taste and temper were, perhaps, never exhibited in a more unfavourable light than in the person of a Roman lady of distinction and fashion at her toilet.

The complicated toilet and the use of cosmetics was not confined exclusively to Roman ladies. During the more effeminate periods of the Empire, the court and patricians indulged in them to an extent approaching that of the eastern nations. The Emperor Elagabalus, at his first entry into the "Eternal City," appeared with his eyebrows blackened with antimony, and his face painted with an artificial red and white.†

* See pages 44-5 (*infrà*).

† Gibbon's "*Decline and Fall of the Roman Empire.*"

The addiction of the Romans, of all classes, to the luxury of the bath, commenced in the latter years of the Republic. During the Monarchy and the early period of the Republic, the Romans were accustomed, after a day employed in labour in the fields, to wash only the arms and legs; and only on every ninth day, when they came to the city to be present in the assemblies on state business, they bathed the entire body. At that period the Tiber, and its tributary streams, formed their only bathing-places. Public and private baths had not yet been established, and vapour and hot baths were only known to them by name.

The situation of the "seven-hilled city" presented great obstacles to the conveyance of water to its interior; and it was not until its wealth and engineering skill had considerably progressed, that the citizens or the authorities attempted to surmount the difficulty. It was about 441 years after the foundation of Rome that water was first brought into it from Tusculum, by means of an aqueduct constructed by the censor Appius Claudius. After this event, and consequent on its success, other aqueducts were formed, and baths or *thermæ*,* as yet characterized by the older Roman simplicity, were constructed in various parts of the city.† Towards the decline of the Republic, came the practice of attaching baths to the gymnasia, followed by the fashion among physicians of employing them in the treatment of disease. From this period these structures rapidly increased in number, importance, and embellishment, until, in the reign of Augustus,

* Properly, hot or warm baths, or a place containing them.

† *Vide* Seneca's description of the *thermæ* of Scipio Africanus.

the Romans began to give to them that completeness, extent, and magnificence, which is still observable in their ruins.

It was in the reign of Augustus that Mecænas first instituted a "*calida piscina*," or swimming-bath, supplied with warm water, of a character somewhat similar to the tepid swimming-baths at present existing in London and Paris.*

Public baths were now established by the liberality of the state, to promote the health and comfort of the citizens; and of such vastness and grandeur as to render them altogether the most remarkable structures of the Romans. "Their founders were princes who, in their anxiety to conciliate the goodwill of the people, endeavoured to surpass all that had been executed before their time."† Different authors reckon nearly eight hundred of these baths or "thermæ" in Rome, many of them of a vastness and magnificence which is utterly astonishing. The most celebrated were those of Agrippa, Antoninus, Caracalla, Diocletian, Domitian, Nero, and Titus. The exterior of these buildings, as well as their internal arrangements and decorations, were of the most costly, elegant, and elaborate description. Their pavements were mosaic; the ceilings vaulted, and richly gilded and painted; and the walls were incrusted with the rarest marbles. Precious vases, bronzes, columns, and statues, from the chisel of the greatest masters, contributed to enhance their beauty and attraction. In beholding the designs‡ of the bas-reliefs and

* Dion Cassius, lib. iv.

† M. Lagneau's "*Traité Complet des Bains.*"

‡ Those furnished in the *Plans* of Palladio are here alluded to.

pictures which adorned the walls and ceilings, "we are astonished at the perfection of the objects which they represent, and at the exquisite purity of taste which then prevailed in the arts. Much more than this: we find ourselves forced to acknowledge, that all the efforts of modern art, in the decoration of our palaces, museums, and churches, are, in general, but servile imitations of the wonders which the baths of Agrippa, Nero, Titus, &c., offered, near two thousand years ago, to the admiration of the Roman people."* The Farnesian bull and the famous Hercules found in one of the halls of the thermæ of Caracalla, and the Laocoon found in the baths of Titus, announce the multiplicity and beauty of the statues which once adorned these colossal structures.†

The ruins of the stupendous thermæ of ancient Rome remain as imperishable monuments of the magnificence and refined taste of her people, and of the liberality of her rulers and nobles during the period of the Empire. In this point, no modern nation has even approached Rome in her exalted excellence; and probably no ancient nation ever equalled her—certainly none ever excelled her.

The baths of Diocletian, we are told, were capable of accommodating nearly two thousand bathers. Besides the vast basins, it "contained three thousand recesses appropriated to the different baths."‡ But according to another authority, "supposing each cell (or recess) of Diocletian's baths large enough to contain six people, even at this moderate computation,

* M. Lagneau (*ut suprà*).

† *Vide* Eustace's "*Classical Tour*," vol. i. 226. ‡ M. Lagneau.

18,000 persons might be bathing there at the same time."* The same writer further asserts, from his own researches, that the baths of Antoninus Caracalla were capable of supplying 2,286,900 cubic feet of hot water. "Allowing, therefore, eight cubic feet of warm water as sufficient for one man to bathe in, and that water preserved at a bathing heat in the labrum for half an hour, there would be a sufficient quantity of water for three hours, or until five in the afternoon," for no less than six sets of bathers, "each numbering 18,000 persons, or 108,000 persons in all."

It is difficult to enumerate all the various uses to which the Roman baths, or thermæ, were devoted. Besides the vast basins and the thousands of cells or recesses, more particularly appropriated to the purposes of bathing, there were found there theatres, temples, amphitheatres, palaces, festive halls, vast open promenades planted with trees, schools frequented by youth, academies where learned persons assembled for discussion, halls where philosophers taught and lectured, odeums for poetical declamation and music, and libraries to which every one might freely resort. In short, provision was there made for every species of polite and manly exercise and amusement.

The most complete establishments contained numerous apartments devoted to the various processes of an elaborate system of bathing. The bather, after having undressed, was conducted into the *unctuarium*, or oil-chamber†—a heated room where his body was

* Cameron's "*Roman Baths*," &c.

† The "*elæothesium*" of the Greeks.

freely anointed with cheap, strong oils; afterwards, in an adjoining apartment, he was covered with fine sand or powder. He next repaired to the *sphæristerium*, an immense hall or rotunda, which was artificially heated, when not exposed to the afternoon's sun. Here he engaged in wrestling, or other gymnastic exercise, calculated to develop physical power. The various games were continued until the sound of a bell announced that the vapour and hot baths of the *caldarium* were ready. To these the crowd of bathers immediately proceeded; each person taking his seat on a marble bench, placed below the surface of the water, around immense basins or reservoirs, in which swimming might be indulged in when agreeable. Whilst here, the bather—or more usually an attendant slave—diligently scraped the skin with a species of knife made of ivory or bronze, termed a *strigilis*, by which all impurities were detached from the surface; after which he rubbed himself with his hands; and, having left the bath, was then thoroughly cleansed, from head to foot, by pails or vases of water, poured over him. He next repaired to the *tepidarium*, or tepid bath, and subsequently to the *frigidarium*, or cold bath; in each of which he remained for a short time, for the purpose of bracing the pores of the skin relaxed by so lengthened an exposure to moist heat, and to soften the transition from the intense heat of the "caldarium" to the open air. He was then carefully dried with cotton and linen cloths, and covered with a light shaggy mantle called *gausape*. Effeminate persons had the hairs of their body pulled out with tweezers. When the bather had become thoroughly dry and his nails were cut,

slaves came out of the *unctuarium* carrying with them little vases of alabaster, bronze, or terra-cotta, full of perfumed oils, which they slightly rubbed over every part of his body, even to the soles of the feet. After this he resumed his clothes. Those, however, who desired more especially to employ perfumes, repaired again to the *unctuarium*, either before or after dressing, to indulge their respective tastes.*

The palaces of the patricians, and the mansions of the opulent citizens, were usually provided with a variety of baths; and even the houses of freedmen contained them. These private baths, of course, differed materially from the public ones; but were nevertheless remarkable. In some cases they occupied only a single apartment, and in others a suite of them; whilst the modifications of their form, and the completeness and richness of their fittings and decorations, were as various as those of the fortunes and tastes of their possessors. During the age of Agrippa, and the emperors after Augustus, it was the fashion to exhibit an almost insane luxury and extravagance in their structure. "A person," even though a plebeian, "was held to be poor and sordid, whose baths did not shine with a profusion of precious materials—the marbles of Egypt, inlaid with those of Numidia; unless the walls were elaborately stuccoed in imitation of painting; unless the chambers were covered with glass, the basins with the rare Thasian stone, and the water conveyed through silver pipes." Those of the patricians and higher class of freedmen had "a pro-

* *Vide* Pliny, lib. i. *Epist.* 101; lib. ii. *Ep.* 41, &c.; Martial, lib. xiv. *Epig.* v. 51; Lagneau (*ut suprà*); &c.

fusion of statues, a number of columns supporting nothing, placed as ornaments merely on account of the expense, the water murmuring down steps, and the floors of rare and costly stones."* Ladies of distinction commonly had the floors of their baths paved or inlaid with silver;† and even the metal flues of the "hypocaustum" were gilded.‡

At first the public baths of Rome were only kept open between two and five in the afternoon; except for the sick, who were permitted to enter them at any time. Subsequently, the time was extended; Nero had them opened at noon; and Alexander Severus, from daybreak until dusk. The practice of the Romans had hitherto been chiefly to use the bath before taking their supper; but, from about this date, the love of bathing so rapidly gained upon them, that it became a passion, of which the gratification was one of the elements of their existence. They now frequently took the bath twice a day; and a large proportion of them may be said to have passed their lives at the baths. But we must not attribute this exclusively to their fondness for bathing. "The desire and hope of meeting friends, of discussing the topics of the day, and passing the time agreeably, were, doubtless, no less powerful motives."§

It is stated, and we believe correctly, that "one of the greatest largesses a Roman emperor could confer on his people, on an occasion of public rejoicing, was to decree gratuitous admission to the baths."‖

The baths of Rome, though intended for the use of

* Seneca, *Epist.* lxxxvi. † Pliny. ‡ Cameron (*ut suprà*).
§ Lagneau (*ut suprà*). ‖ Ib.

the poorer classes chiefly, were frequented indiscriminately by persons of all ranks, on account of the attractions and various conveniences which they contained. There the patricians and the wealthier citizens mingled with the poorest plebeians. Even the Emperor Hadrian is said to have frequently bathed there in company with a crowd of his subjects.* But though no distinction of rank existed in the Roman baths, various regulations, and the force of public opinion amounting to rules, tended to preserve decency and decorum in them. During the Republic, and the early portion of the Empire, the popular feeling of propriety precluded a father bathing with his son, or even with his son-in-law. Later, however, the corruption of manners made such progress that, in the reign of Domitian, "women and men bathed pell-mell together." This practice was afterwards prohibited by Hadrian, and by Marcus Aurelius; was again adopted by the people and tolerated by Heliogabalus; and was finally abolished by Alexander Severus.†

It was not only the "seven-hilled city" which contained public and private baths; the provincial towns of Italy had them also. They existed in all the Roman provinces and colonies. The public baths of Pompeii, discovered A.D. 1824, in a very perfect state, serve to show the extent and splendour of some of these, and to illustrate the statements of Vitruvius, and other ancient writers on the subject.‡ Even now, it is easy to perceive vestiges of Roman thermæ in every country which formed a portion of that empire. They

* Æl. Spartianus, "*Life of Caracalla.*" † Lagneau (*ut suprà*).

‡ Vide "*Pompeii,*" published by the Society for the Diffusion of Useful Knowledge.

have been found in several of the Roman villas discovered in England. The city of Bath was an ancient Roman station, founded on account of the thermal springs there. It is mentioned by Ptolemy under the name of "Aquæ Calidæ." The remains of the principal baths built over these springs, and evidently of great extent and beauty, were discovered A.D. 1755. More recently, the excavations at Wroxeter, near Shrewsbury, have laid open the ruins of the baths of the ancient Roman city of *Uriconium*, as well as other buildings in that once large and populous station. The ruins of these baths cover a space of ground four times as large as that occupied by the remains of the celebrated baths of Pompeii.

The greater number of these edifices, which, during the most illustrious period of the Empire, justly constituted the pride and delight of the polished Romans, were either destroyed, or allowed to sink into a state of decay and ruin, by the Vandalism of the barbarian hordes that overran Italy. Baths, which formed one of the essentials of everyday life of the effeminate and luxurious Romans, were held in little esteem by her warlike and unpolished invaders, who regarded them as merely useful for cleanliness. The new conquerors were satisfied with taking a simple bath, if any, as in the time of Scipio; and, henceforth, utility and cleanliness were the chief objects kept in view in the construction of the baths or thermæ which were subsequently erected in Italy and the other countries of Europe.

CHAPTER VI.

HISTORICAL NOTICES CONTINUED :—MIDDLE AGES.

THE dress and toilet of this period will be cursorily referred to further on, in speaking of modern nations. On the subject of bathing and cleanliness, we are informed that baths, of the character last above noticed, were much frequented during the whole of the *Middle Ages*,* and until the sixteenth century—the epoch at which the use of linen became general. "The barbarism of the Middle Ages, not being able to attain magnificence, confined itself to the convenience of the public baths, and other like establishments, which were erected in Europe. The idea was due to the Arabs, among whom the arts and sciences had found an asylum. The Crusades and commerce had opened up to Europeans the countries which flourished under the rule of this people, and the natural taste for imitation did the rest. The vapour and public baths were, for a long period, as much frequented in Europe, as they are at the present day in the Levant. People were attracted to them for the sake of health and cleanliness; but, above all, from the want of society felt by persons who saw little of each other, except in these places. Some took water-baths (warm baths), others vapour baths; while several came only to gossip, comfortably protected from the cold. For these last, the baths were what

* The period between the fall of the Roman empire and the revival of letters, extending from about A.D. 900 to A.D. 1500.

the 'stoves' of Germany, the 'restaminets' of Holland, and the 'cafés' of Paris, are to this day."* "It was only at the baths, at church, or in sickness, that women ever saw each other. The men also assembled at the baths, the barbers' shops, the wine-shops, and the market-places. Private baths were provided at the hotels; and persons asked to dinner were, at the same time, asked to bathe."† Another authority informs us, that "the seigneurs and great ladies took a bath daily prior to dining; and that the citizens took several a week." "Indeed, the use of vapour baths was formerly as general in France, even among the common people, as it is, and always has been, in Greece and Asia. They frequented them almost daily. St. Rigobert caused baths to be built for the canons of his church, and supplied the wood for heating them; and Pope Adrian recommended the clergy of each parish to go to bathe every Thursday, singing psalms the while."‡

At this period, as in the times of some of the Roman Emperors, the promiscuous assemblage of the two sexes at the same baths led to breaches of decency and decorum, and not infrequently to scenes of vice and immorality, which gave rise to numerous ordinances and statutes to restrain them. These were not, however, always effective, from not being rigidly enforced by the authorities, or strictly obeyed by the people.

* Grosley, "*Ephémérides Troyennes*," &c. France and Southern Europe are chiefly alluded to. *Troyes* was the "Augustobona" (Itinerarium Antonini), or "Augustobana" (Ptolemy), of the Romans.

† M. Marchangy's "*France in the Sixteenth Century.*"

‡ St. Foix's "*Historical Essays on Paris.*"

The increasing use of linen among all classes having much diminished the hygienic necessity of the bath, these establishments of the Middle Ages rapidly diminished in number, and, for the most part, sunk into neglect and ruin.*

* *Vide* St. Foix's "*Historical Essays on Paris*," Villier's "*Itinéraire Descriptif de la France*," &c.; also the following chapters.

CHAPTER VII.

HISTORICAL NOTICES CONTINUED:—MODERN NATIONS—ENGLAND.

THE histories of the existing nations of Western Europe show us that the social arts—and particularly cleanliness, dress, and the toilet—fluctuated with their civilization and refinement. The tide of Roman conquest, after pausing for a time in Gaul, extended itself to the shores of Britain. Here the victorious legions of Cæsar found a rude and semi-barbarous people, utterly unacquainted with the usages, arts, and luxuries of polished life. Those of the interior "sowed not corn," but "lived on milk and flesh." Their only clothing was the skins of animals; and a large portion of the body was left uncovered. "All (?) the Britons," according to Cæsar, stained themselves of a blue colour, with woad, "which gave them a more frightful appearance in battle." * Their hair was long and flowing, and covered the shoulders and the upper part of the back. Every part of the body was closely shaved, except the head, and the upper lip on which they cultivated the moustache. They are represented to have been a hardy race, regular and temperate in their habits,† and expert in war.‡ Their manners were

* Those engaged in military service, or liable to it, must here be intended.

† To this cause may be referred the extreme longevity of the ancient Britons. They were said to only *begin* to get old at one hundred and twenty years.

‡ Cæsar's "*Commentaries*," lib. v., &c. The first invasion of England, by the Romans under Julius Cæsar, occurred B.C. 54.

simple and unaffected; but their general character was cruel, fierce, and daring. Their government and religion were Druidical; and their whole lives were surrounded with the grossest ignorance, and the most terrible superstitions.* Their persons were, however, highly symmetrical and well developed; whilst their females are represented as possessing rare delicacy and beauty. The poet has availed himself of this fact in his description of Imogene :—

——— "Cytherea,
How bravely thou becom'st thy bed! fresh lily!
And whiter than the sheets! That I might touch!
But kiss; one kiss! Rubies unparagon'd,

---

* The Druids, however, were a comparatively learned and accomplished set of men, who were able to teach "many things concerning the stars and their motions, the magnitude of the earth, and the nature of things" (Cæsar). A Druid from the Hebrides, or Western Isles, visited Delos, in Greece, B.C. 600, where he was generally admired for "his knowledge, politeness, justice, and integrity. He went to Athens, clad in skins like a Scythian, with a bow in his hand, a quiver on his shoulders, a plaid wrapt round his body, a gilded belt encircling his loins, and trousers reaching from his waist to the ground. His address was easy, his conversation agreeable; he was active, prudent, discreet, and provident; diligent after knowledge, sociable and confiding. He spoke Greek with fluency and academical correctness" (Strabo). This accords ill with the gross impositions and superstitions which history informs us were practised by the Druid priesthood. The condition of the Britons at the period of the Roman invasion may have been much misrepresented by the Roman writers; but, with this drawback, the latter are doubtless correct in all their leading statements. (See "*Two Months in a London Hospital*," pp. 87-8.) We are told by Geoffrey of Monmouth, that the British islands were colonized by Brutus, a great-grandson of Æneas, B.C. 1100, which is nearly a century before the time of Solomon—an assertion not merely unsupported by the slightest data, but also highly improbable.

How dearly they'd do 't.—'Tis her breathing that
Perfumes the chamber :—The flame o' the taper
Bows towards her ; and would under-peep her lids,
To see the enclosed lights, now canopied
Under these windows :—white and azure, laced
With blue of heaven's own tinct." *

The personal charms of the celebrated but unfortunate Boadicea are stated to have been only equalled by her patriotism, and her masculine energy and daring.†

During the period the Britons were left to themselves by the absence of the Romans, those who dwelt in the parts nearest to Gaul appear to have made considerable progress in civilization ; and this progress became more rapid after the return of the Romans to this island, in the reign of Claudius. Thus it has been said, that though Cæsar found the inhabitants of Britain in a state of semi-barbarism, Agricola left them in possession of all the arts of civilization then known.‡ The change must have been

* Shakespeare, "*Cymbeline*," act i. sc. 2. Shakespeare has also represented the Britons in the time of Cymbeline (B.C. 24) as a people acquainted with the luxuries and refinements of polished life ; but this is, of course, mere poetical licence :—

" Her bedchamber was hanged
With tapestry of silk and silver ; a piece of work
So bravely done, so rich, that it did strive
In workmanship and value.—Her andirons
(I had forgot them) were two winking cupids
Of silver. . . . . Then if you can"
(*pulling out the bracelet*)
" Be pale ; I beg but leave to air this jewel : See !——
And now 'tis up again :—it must be married
To that, your diamond." (*Cymb.* i. 4.)

† Boadicea flourished A.D. 55–61. ‡ A.D. 78.

still greater by the time at which the Romans finally abandoned Britain—an event which occurred about the middle of the fifth century, or nearly 500 years after the first invasion by Julius Cæsar.

Although the Roman conquest does not appear to have led to such a high degree of cultivation of the intellect as in some other provinces, and Roman Britain produced no literary name, whilst Gaul, and especially Spain, can boast of several, yet great improvements—social, personal, and local—undoubtedly resulted from their dominion. The native population for the first time saw towns and cities, with buildings possessing considerable architectural beauty, arise among them, and in which they could acquire various gradations of privileges, in some cases closely approaching those enjoyed by Roman citizens. Thus, the Romanized inhabitants of Britain were, of necessity, gradually introduced to the usages and manners, as well as to the rudiments of the social arts and political science of their foreign masters.

It appears that the children, of both sexes, were not less remarkable for their prepossessing appearance than the adult females of ancient Britain. We are told that St. Gregory, before his elevation to the popedom,* was attracted by the great beauty of the English children which he saw exposed in the slave-market at Rome. Stopping to inquire the name of their province, and having received an answer, he exclaimed—"They would be, indeed, not *Angli*,† but *Angels*, were they Christians. We must

* Towards the latter part of the sixth century.

† Angles, or English.

endeavour to cause the praises of God to be sung in their country." * The consequence of this interview was the mission of St. Augustine and other monks to England, and the conversion of its inhabitants to Christianity.†

Under the Saxons, the Britons, whom we may now term English, at first made little progress in civilization and social refinement; or, at the most, only partially recovered the position from which they had receded after the departure of the Romans. The inroads of the Danes offered fresh impediments to their progress. Agriculture declined with the invasion of the Saxons; and was chiefly preserved through the dark ages, after the introduction of Christianity, by the intelligence of the heads of the religious establishments, who gradually possessed themselves of most of the land. During the reign of Alfred, however, the arts of peace and civilization again began to flourish.‡ That illustrious monarch exerted himself to raise his people from the low political and social position into which they had sunk. To him we are indebted for trial by jury. He established a well-regulated system of police throughout the kingdom, the effects of which were

* Hume.—The obsolete English coin, the *angel*, was so named in commemoration of this remark of Pope Gregory.

† Ethelbert, king of Kent, and his people, embraced Christianity A.D. 598. The people of the other kingdoms had all done the same by A.D. 686. (Bede.) Hence the words put into the mouth of Imogene (*Cymb.* iii. 4) by Shakespeare could not refer to the Christian Scriptures, except by extreme poetical licence, and a flagrant violation of historic truth.

‡ Alfred, usually termed *The Great*, was born A.D. 850, crowned A.D. 871, and died A.D. 901.

so manifest, that it is said "he had golden bracelets hung up near the highways, which no robber dared touch."

Nature had endowed him with admirable qualities both of body and mind; and these he carefully preserved by habits of extreme temperance and regularity in all things, and a proper attention to cleanliness, diet, exercise, and sleep. As the patron of learning, and the benefactor of his country, he has been justly and universally admired. His reign forms an important epoch in English history, and with him the monarchy of England—no longer a mere "bretwaldaship"—may be said to have commenced.

During the three centuries immediately succeeding the reign of Alfred, the progress of civilization was slow, but steady. Wealth increased, and habits of luxury and display were gradually adopted. The barbers had already become an important class of men; and they now suddenly acquired an unexpected position, from the religious zeal and superstitions which prevailed in continental Europe. During the eleventh and twelfth centuries, the practice of medicine was divided between the Jews and the clergy; and would probably have continued so for some time longer, but for a strong and growing feeling that it was incompatible with the proper exercise of sacred duties. The result of this opinion was, that in France, the Council of Tours prohibited the clergy performing any "bloody operations."* Thus, for a long period, the practice

* A.D. 1163.

of both surgery and medicine devolved chiefly on the barbers;* and, as will be presently seen, these tradesmen became the subject of several legislative enactments.

An opinion of the state of comparative luxury and magnificence which the nobles and dignitaries of England had reached at this period, may be derived from the biography of the notorious Thomas à Beckett. † This churchman, though mean in his dress and dirty in his person, kept up a very extensive and costly establishment, which was open to all persons of rank and fashion. "The apartments of his house were adorned with the richest furniture; gold and silver vessels glittered in all his rooms of state; his horses' bridles were of silver, and all his equipage exceedingly sumptuous. Earls and barons dined with him by invitation, and no cost was spared, either to purchase the greatest rarities, or to dress them deliciously. One dish of eels alone cost him one hundred shillings." ‡ On his celebrated mission to Paris, to demand the hand of the Princess Marguerite for Prince Henry, the grandeur of his equipage dazzled the spectators. His retinue consisted of above one thousand persons, including many of the nobility of England and the surrounding kingdoms. "He affected to surpass all the foreign world in magnificence, in ostentatious display of English wealth and luxury, and in making presents

* See page 33 (*antè*); also *Index*.

† This man was appointed by Henry II. to the highest office in the State, and ended a wayward life, by assassination, at Canterbury, A.D. 1170.

‡ Carte's "*General History of England*."

of all the plate, horses, furniture, vestments, and other ornaments of his public entry." *

The dress and toilet of persons of wealth and fashion assumed, from this date, a more costly and luxurious character; and the habits and manners of the people generally continued to progress in cleanliness and refinement. Ornaments of a costly and tasteful description soon came into general use among those who could afford to purchase them; and various cosmetic processes, to enhance the attractions of the person, were adopted by the belles and beaux of those days. The tendency to extravagance and display soon became so strong and general as to lead the Government to the promulgation or revival of various sumptuary laws and regulations, which would be ill received at the present time. Thus we find that, in the reign of Edward III.,† pearls, except for head-dresses, were strictly prohibited to any but the Royal family, and nobles possessing an income of upwards of one thousand pounds a year. Habits, embroidered with jewels and lined with expensive furs, were also only permitted to knights and ladies whose incomes exceeded "four hundred

* Carte's "*General History of England.*"—Notwithstanding this magnificence in her primate, the metropolis of England was in a very miserable state. Most of the houses were of an inferior class, and thatched with straw. There were very few good streets. *Cheapside* was a field; the *Strand*, a mere roadway to the village of Westminster; *Lambeth*, an undrained marsh; and *Southwark*, mere fields. The streets were all very filthy, without proper drainage, unlighted and unwatched by night; whilst the system of police, if any deserving the name existed, was of such a defective character that highway robberies frequently occurred, even by daylight.

† Extending from A.D. 1327 to A.D. 1377.

marks" yearly. The privileged females of this period seem, however, to have indulged lavishly in the prevalent passion for dress and ornament. A certain poet of the day, speaking of a woman richly clothed, says that "her robe was of a scarlet colour ingrain, and splendidly adorned with ribbons of red gold, interspersed with precious stones of great value. Her fingers were all embellished with rings of gold set with diamonds, rubies, and sapphires, and also with oriental stones or amulets, to prevent venomous infection." The rings and jewels of Marguerite of Anjou * are said to have been of great beauty and value. Foppery had, indeed, already obtained votaries among the higher ranks, and was imitated by those beneath them:—

> "A certain lord, neat, trimly dress'd,
> Fresh as a bridegroom; and his chin, new-reap'd,
> Shew'd like a stubble-land at harvest-home:—
> He was perfum'd like a milliner;
> And 'twixt his finger and his thumb he held
> A pouncet-box, which ever and anon
> He gave his nose. . . . He made me mad
> To see him shine so brisk, and smell so sweet,
> And talk so like a waiting gentlewoman." †

About this period many fashions prevailed in England, which, looked at with the utilitarian eye of the nineteenth century, appear remarkably absurd; but which, in reality, are not more so than some of those of a more recent date. Among others, perhaps the most ridiculous was the practice of

* Queen of Henry VI.; A.D. 1455. The tale of her being robbed of her jewels is told by De Moleville.

† First part "*Henry IV.*" act i. sc. 3.

wearing the beaks, or toes, of the shoes and boots of such a monstrous length, that it was necessary to tie them to the knees with laces or chains, to enable those who wore them to walk with safety. Much taste, both good and bad, was displayed in the materials and designs of these "toe-lifts." Laces of silk, or of silver and gold thread, and chains of solid silver and gilded silver, were commonly employed, according to the means and rank of the wearer. This absurd fashion continued in use until A.D. 1467, when it was prohibited, and a fine of twenty shillings, with the pain of cursing by the clergy, fixed as the penalty for the infringement of the statute.

Various other sumptuary laws existed or were established about this time, which would scarcely be tolerated at the present day; but none of them, though annoying, were either cruel or tyrannical. The reverse was, however, the case with the sister kingdom. We read, that the Irish were much attached to the national habit of wearing moustachios—the fashion then current throughout Europe, and for two centuries afterwards. This weakness their English masters determined to turn to their own advantage. In a Parliament held at Trim, by John Talbot, Earl of Shrewsbury, then Lord Lieutenant, it was enacted, that "every Irishman must keep his upper lip shaved," or else "be counted and used as an Irish enemy."* From this law, its advocates argued that two

* Statute of Henry VI., c. 25, A.D. 1447. This law was not repealed until the reign of Charles I., or until it had existed 200 years.

benefits accrued to the King—"His enemies were thinned out, and his followers provided for;" many of the descendants of the latter enjoying the confiscated properties to the present day. The effects of this statute became so alarming, that ultimately the people submitted to the revolutionary razor of the English, as they found it more convenient to resign the hirsute appendage to the upper lip than their lands and goods.

On the subject of the price of clothing, the rate of wages, and some of the sumptuary laws in England during the Middle Ages, we are told that a labourer in 1296 had to pay nine-pence a yard for the coarse russet in which he was clad, equal to the earnings of four or five days; and a woman's pay was always considerably less than a man's, while her clothing requirements were at least as great. In 1463, while the labourer's wages were but four-pence a day, his cloth cost two shillings per yard; so that it took six days' labour to purchase that quantity. Poor women at this period could earn only $2\frac{1}{2}d.$ per day. The enactment could therefore have been scarcely necessary which forbade them "to wear any kerchief whereof the plight ($1\frac{1}{4}$ yard) exceeded twelve-pence," or which decreed that her girdle should not be "garnished with silver." Even the soldiers, with all their opportunities of predatory seizure, during these ages, appear to have often been but half-clothed; for Barbour says of the Welshmen in Edward's army at Bannockburn:—

> "Where'er they yied might men them ken,
> For they well near all naked were."

It is not surprising, then, that flax-dressers, and

spinsters and websters, though they were, the majority of females had scant apparel, and that of the meanest kind; or that Chaucer, describing a female farmer of his day, after saying that—

"No dainty morsel passed through her throat,"

should add,

"Her diet was according to her coat." *

The magnificence, luxury, and ambition of the three great monarchs who governed Europe during the early portion of the sixteenth century,† render that period remarkable in English history. Our own Henry, though extravagant, cruel, capricious, and tyrannical, did much to humanize and refine the people. The meeting between him and Francis I., near Guisnes and Ardres, exhibited a degree of prodigality and splendour that has not been equalled in modern times. From the vast display, richness, and costliness of all the arrangements and objects connected with this interview, the spot on which it occurred has been characteristically called the "Field of the Cloth of Gold." ‡ The king, queen, ladies, lords, and knights, which graced this pageant, appeared in nothing but silks, velvets, cloth of gold, embroidery, and jewels of the most costly and recherché description, and with toilets of the most graceful and elaborate kind. Here—

"Men might say—
Till this time pomp was single; but now married

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* Vide "*England during the Middle Ages.*"

† *Viz.*, Henry VIII. of England, Francis I. of France, and Charles V. of Germany.

‡ *Vide* James's historical novel of that name.

To one above itself. Each following day
Became the next day's master, till the last
Made former wonders its.—To-day, the French,
All clinquant, all in gold, like heathen gods,
Shone down the English; and, to-morrow, they
Made Britain, India :—every man that stood,
Shew'd like a mine. Their dwarfish pages were
As cherubim, all gilt :—the madams, too,
Not used to toil, did almost sweat to bear
The pride upon them, that their very labour
Was to them as a painting. Now this mask
Was cried incomparable; yet the ensuing night
Made it a fool and beggar." *

The subsequent interview between Henry and Charles, at Bruges, though not accompanied with equal splendour to that with Francis, in many points was scarcely less remarkable. Nor must Cardinal Wolsey, who flourished during the reign of Henry VIII., be forgotten here. Possessing kingly wealth, and more than kingly splendour and influence, for a time he added lustre to the court, and ultimately excelled even his sovereign in magnificence and display. It is said that an inventory of the immense wealth of the Cardinal having fallen accidentally into the hands of Henry, excited the cupidity of the latter, and was the real, though concealed, cause of the former's disgrace. The history of Wolsey's splendour and sudden fall has been immortalized by Shakespeare. The account of his "goods" taken by order of the King exceeded the most extravagant anticipations. The walls of his palace were covered with cloth of gold and silver, and enriched with the costliest tapestries.

* Shakespeare, "*Henry VIII.*" act i. sc. 1.

He had a cupboard full of plate formed of pure gold; he had one thousand pieces of the finest Holland;* and all his furniture and other property was of an equally costly description. All these were confiscated by his Royal master.—

> "There! take an inventory of all I have,
> To the last penny; 'tis the king's. My robe,
> And my integrity to heaven, are all
> I now dare call my own." †

During the whole of this reign, the arts of dress and personal decoration received increased attention, and extended to classes of the people among whom, except in the metropolis and larger towns, they had not previously been current. The barbers still continued to increase in prosperity. By the 32 Henry VIII., c. 42, they were incorporated with the surgeons of London, and very important privileges were given them. These advantages they retained for above two centuries, or until the greater intelligence of the age again induced the interference of the Legislature.‡

* This was a most expensive article at that period. The reader will probably remember Falstaff's shirts:—

Falstaff. "Dowlas! filthy dowlas: I have given them away to bakers' wives, and they have made bolters of them."

Hostess. "Now, as I am a true woman, Holland of eight shillings an ell."

(First part "*Henry IV.*" act iii. sc. 3.)

† Shakespeare, "*Henry VIII.*"

‡ The barber's pole, a sign still retained by the fraternity of "shavers," has given rise to many speculations and ingenious absurdities. The fact is, that the "pole" was originally the distinguishing characteristic of a few only, being a mark of superior skill, and indicated, on the part of him who exhibited it, surgical as well as tonsorial ability. The white and coloured bands with which it is decorated were intended for symbols of the rollers, or bandages, used in bleeding, &c.

Agriculture and the other arts of peace and social life also revived, and made considerable progress. Bathing, however, for which quite a rage existed on the Continent, was comparatively little practised in England, and that chiefly by the higher classes.*

The flourishing state of England in the reign of Queen Elizabeth† was accompanied by corresponding progress and improvement in the social habits and manners of the people. The example and taste of the sovereign stamped a character of propriety on the court; and whilst exercising a wholesome restraint on grossness and licentiousness, produced a spirit of emulation which tended to refine the mind, and to direct the attention to the arts, usages, and luxuries of polished life. From the court this example descended to the higher classes, and from them it scattered its influence through every grade of society. The whole population seemed suddenly aroused, and joined in the onward march of refinement and civilization. Arts, literature, science, trade, commerce, and legislation, acquired new strength daily; the nation rose in political importance; and the whole people, rejecting the remnants of feudalism and barbarism which still clung to them, became in a comparatively short time wise, powerful, and happy. The prosperity of this reign had scarcely a parallel in our history until within the last quarter of a century; whilst the number and value of its poets and prose-writers—unfailing evidence of its taste and refinement—have led to its being justly regarded as the "Augustan age"

* See pages 48–50 (*antè*).

† Elizabeth began her reign A.D. 1558, and died, after reigning nearly forty-five years, at the advanced age of seventy.

of English literature. The various matters connected with health, cleanliness, dress, and the toilet, progressed in an equal degree to the other arts of life and civilization. The sanitary state of the metropolis was now, for the first time, promoted by public decrees,* and various foreign articles of comfort and luxury were introduced. In 1577, pocket watches were first imported from Germany;† and three years afterwards the use of glass coaches was introduced by the Earl of Arundel.

The personal accomplishments and fate of the beautiful but unfortunate Mary Stuart,‡ apart from other matters, will ever make the reign of Queen Elizabeth celebrated§ in English history. "Love, or even poetry, according to Brantone, were powerless to depict her (Mary) at" the "still progressive period of her life; to paint that beauty which consisted less in her form than in her fascinating grace; youth, heart, genius, passion, still shaded by the deep melancholy of a farewell; the tall and slender shape, the harmonious movement, the round and flexible throat, the oval face, the fire of her look, the grace of her lips, her Saxon fairness, the pale beauty of her hair, the light she shed around her wherever she went; the night, the void, the desert she left behind when no longer present; the attraction, resembling witchcraft, which unconsciously emanated from her, and which drew

* Amongst these was a proclamation forbidding the further enlargement of the *city of London*, and the building of any new houses within three miles of its gates.

† Exactly 100 years after their first manufacture at Nuremberg.

‡ Mary Queen of Scots.

§ Query ?—in this point—*notorious!*

towards her, as it were, a current of eyes, of desires, of hearts; the tone of her voice, which once heard resounded for ever in the ear of the listener; and that natural genius of soft eloquence and of dreamy poesy which distinguished this youthful Cleopatra of Scotland. The numberless portraits which poetry, painting, sculpture, and even stern prose have preserved of her, all breathe love as well as art; we feel that the artist trembles with emotion, like Ronsord, while painting."*

The fate of the Earl of Essex was also a remarkable incident of this reign, and affords one of the many instances of the important uses to which the most trifling articles of jewelry have been applied.†

Even the taste in jewelry, and in rings more particularly, underwent an important revolution during the time of Queen Elizabeth. Prior to her reign, rings of a very massive character were commonly worn; but now they were reduced to more reasonable dimensions, and their designs became more chaste and elegant. Wedding rings, hitherto esteemed chiefly for their weight, were now prized for their workmanship and mottoes. One of A.D. 1550, or prior to Elizabeth, is described as weighing "two angels and a ducat." The practice of engraving mottoes and the

* Lamartine's "*Mary Stuart.*"

† It is alleged that the queen gave this nobleman a ring in the days of his prosperity, which she desired him to send her in any emergency in which he might be placed, and that it should procure his safety and protection. This ring he accordingly sent her by the Countess of Nottingham, who, being a secret enemy of the earl, retained it in her possession; whilst Elizabeth, indignant at his obstinacy, permitted his execution. This event destroyed her peace of mind during the rest of her life, and she died a wretched death in consequence of it.

initials of the name of the wearer on rings, prevalent during the whole of the sixteenth century, continued more or less in fashion until the end of the eighteenth century; and wedding rings so decorated are sometimes still met with among the old-fashioned vulgar in the provinces. Wedding rings were also frequently adorned with precious stones, and sometimes modelled like a serpent; thus bearing little resemblance to the simple rounded hoop of gold that has been in fashion during the whole of the present century.

"Perfumes," we are told, "were never richer, more elaborate, more costly, or more delicate, than in the reign of Elizabeth."* Her Majesty's nasal organs are said to have been particularly fine; and nothing offended her more than an unpleasant smell. Perfumes and cosmetics of all kinds were not merely employed by the higher classes, but were in general use amongst all who could afford them. The cosmetics, and other small accessories to a lady's toilet, were kept in boxes strongly impregnated with some favourite odour, which were called *sweet coffers*. These latter were considered a necessary part of the furniture of the bed-chambers of the noble and wealthy; and their form and richness, like the bath of the Romans, offered a fair criterion of the taste and liberality of the owner. "The bottles of perfume connected with the common labours of the toilet were called *casting bottles*. The pomander, which originally was meant only as a preventive of infection, as a camphor-bag is now—but then become an article of fashionable luxury among people of rank—was a little ball of perfumed

* "*Lives of the Queens of England.*"

paste worn in the pocket, or hung round the neck. They soon became mediums for the most exquisite devices in jewelry, and were frequently offered as complimentary tokens, like the snuff-boxes of the present day. Many pomanders were presented to Queen Elizabeth as new-year's gifts, and among the list is the somewhat puzzling item of—'A farye girdle of pomander.' Perfumed gloves were also fashionable."* The same authority also tells us that Elizabeth had a cloak of Spanish perfumed leather, the value of which may be estimated by stating that "pieces of '*peau d'Espagne*' are now sold by the Bond-street perfumers of London at the rate of one shilling the square inch." Even her shoes were perfumed. The citizens soon followed the example of the court and the nobility, as is apparent from frequent allusions by the dramatic writers of the time, and numerous satirical observations by the authors of that day.†

It was also about the middle of the sixteenth century that the use of under-clothing made of linen became general amongst all, except the servile and poorer classes of the people; and towards the end of the reign of Queen Elizabeth it had extended to many even of them.

Towards the middle of the seventeenth century,

* Piesse's "*Art of Perfumery.*"

† In Anstey's "*New Bath Guide*," quoted by Mr. Piesse—Bath being then the focus of everything refined and fashionable—we find :—

"Bring, oh bring the essence pot !
Amber, musk, and bergamot,
Eau de chipre, eau de luce,
Sanspareil and citron juice ;"
&c. &c.

cotton, which had been cultivated, and woven into clothing, so early as the tenth century, by the Moors of Spain, began to be imported into England, in quantity, from the Levant. This material was chiefly employed to form the "weft," whilst the "warp" was made of linen (flax), as before; the mode of dressing and spinning then in use not giving sufficient strength to permit of the cotton being used for the whole of the fabric.* It, however, had the effect of reducing the price of linen, and extending its use, particularly for under-clothing, amongst the masses. From this resulted a marked improvement in personal cleanliness and health, and which was probably more widely diffused among the people than at any previous period subsequent to the departure of the Romans.

Passing over the reigns of James the First† and of the unfortunate Charles,‡ and the time of the Commonwealth, we come to the days of Charles the Second. This graceless king, who obtained the appellation of the "Merry Monarch," was characterized by his indolence, effeminacy, and insensate love of pleasure.

* See pages 75 and 79 (*infrà*).

† Miscalled the "British Solomon." His celebrity chiefly arose from his being a patron of religion, and a controversialist. He is said to have been rather above the middle stature, but to have lacked the dignity and demeanour consistent with royalty.

‡ The "Cavaliers," or royal party, wore their hair in long ringlets; whilst the republicans wore theirs cut absurdly close, and were hence called "Roundheads." The latter name was first applied, for a like reason, to the Puritans during the reign of Elizabeth; but towards the end of the reign of Charles, and during the time of the Commonwealth, was extended to the whole republican party.

No frivolities were too trifling to engage his attention; no licentiousness so debased as to incur his censure. "His reign retarded the progress of polite literature; and the immeasurable licentiousness indulged in, or rather applauded, at court, was more destructive to the fine arts than even the cant, nonsense, and fanaticism of the preceding period."* The morals of the people retrograded, and levity and irreligion gained ground throughout the entire community. The dress, toilet, and habits of all classes, as far as utility, health, and personal appearance were concerned, took a corresponding turn. False hair, false beards, and wigs, became general, and were worn of any colour the caprice of the individual dictated; the fancy as to colour sometimes changing even within a few hours. A great partiality existed for light hair; and hence hair-powder came also to be very frequently employed. The barbers, hair-dressers, perruquiers, and coiffeurs, as well as the milliners, were never in a more flourishing condition.† At length the further social degeneracy of the nation was arrested by the sudden demise of Charles; but not until he had occupied the throne for five-and-twenty years. His degraded conduct followed him even in death. His "body was indecently neglected; his funeral was mean; and there were apparent suspicions that he had been poisoned."‡

The early portion of the eighteenth century was an

* Hume. † *Vide* Pepys' "*Diary*."

‡ Bishop Burnet's "*History of his Own Times*."—It is here worthy of remark, that during this reign the plague raged in London (A.D. 1665), and carried off 68,596 persons within the limits of the bills of mortality; whilst the following year saw the "great fire of London," which lasted three days and nights, and

auspicious period for England. Under Queen Anne* the country became more prosperous than it had been at any time subsequent to that of Elizabeth. It had now reached a high degree of opulence and refinement, and the people enjoyed all the advantages which peace and prosperity could bestow. The queen herself was a paragon of excellence and virtue; and the influence of her court was felt throughout the entire population. Her countenance was pleasing, her voice melodious, and her beauty was enhanced by a most amiable disposition. During her reign the blood of no subject was shed for treason—a point which distinguishes it from that of almost all her predecessors.

This progressive state of society continued after the succession of the house of Hanover.† Intelligence and wealth, refinement, luxury, and prodigality, now rapidly increasing, produced a corresponding improvement in the health, dress, habits, and comforts of the whole population. All the useful and ornamental arts received a stimulus, and medicine more especially made rapid progress. Hitherto the small-pox, always common, had not infrequently decimated whole towns and villages, and had left its attacks visible in the disfigured visages of a large portion of the people. But now the system of inoculation was introduced by Lady Mary Wortley Montague;‡ and

burnt down 600 streets, 13,200 houses, 89 churches, and many of the great public buildings.

* Anne reigned from A.D. 1702 to 1714.

† George I. ascended the throne A.D. 1714.

‡ This talented lady and true benefactor of her country had her own son inoculated for the small-pox at Constantinople,

thus a milder form of the disease was propagated than that which occurred in the natural way, and one usually unaccompanied with danger or disfigurement. As consequences of this, the mortality from small-pox rapidly decreased, and the general appearance of the people began gradually to improve; notwithstanding that the prejudice and ignorance of many parents prevented them from insuring to their offspring the advantages derivable from this important discovery.

A few years after this date, the increased influence and scientific attainments of the medical practitioners of Europe, and the growing intelligence of the people, again led to the interference of the Legislature. The prosperity of the barbers had hitherto continued unabated; but they were now prohibited, by Act of Parliament,* from practising surgery in England. This Act, however, did not wholly deprive them of this portion of their trade, as they continued to bleed and draw teeth for a long time afterwards.

The practice of using hair-powder, and of tying the hair in a "queue," or tail, behind the head, which had been more or less fashionable since the latter part of the reign of Charles II., became almost universal during the reign of George II., and continued so until near the end of the eighteenth century. The "queue," in particular, was common to all grades of society. It was even adopted in the army and navy, and the commonest sailor would as soon have lost his

A.D. 1721; and shortly afterwards, on her return to England, submitted her daughter to the same operation.

* 18 Geo. II. c. 15, A.D. 1745.

allowance of grog as his "pigtail." The consumption of hair-powder by the soldiers of George II. was, indeed, enormous. It was calculated that the military force of England and the colonies, of all arms, exceeded 250,000 men, and that each man consumed fully a pound of flour per week, which would give a gross quantity of 6,500 tons per annum—a weight that would produce 3,059,353 quartern loaves, or sufficient for nearly 50,000 persons for a twelvemonth. Powder was also employed by ladies both for their own hair and false hair. Happily for the health of the community, and the personal appearance of its members, the establishment of the hair-powder duty at this time * amounted almost to a prohibition of the dirty habit among the masses, and led to its gradual decline and ultimate extinction amongst all classes, except certain male servants of the nobility, and for the wigs of lawyers, judges, and a few other official personages. The old "queue" and hair-powder are, however, still occasionally seen in the person of some aged veteran, or some wealthy and eccentric octogenarian, who adheres to the usages of his boyhood; as also in portraits of individuals who flourished prior to the present century.

The itinerant barber of the eighteenth century, and *antè*, with his boiling water, soap-bowl to fit the chin, and powder-box, pomatum, and puffs, was quite a "character" in his way. He was a busy newsmonger, a gratuitous scandal-bearer, and was generally full of anecdote, "wise saws and modern instances." The

* A tax was laid on persons using hair-powder, A.D. 1795, which yielded £20,000 per annum.

barber's shop, too, at this period, when education was neglected, and newspapers rare, formed, as in the time of the Romans,* a common resort for loungers and politicians of every description. The latest news and the most trifling rumour were sure to be met with there. But, like the street boot-black† of the same period, the barbers and the barbers' shops gradually lost their chief attractions and characteristics with the growing advance of intelligence, and the diffusion of newspapers among the people. The improved condition and refinement of the middle and lower classes at this period led to greater taste and attention in relation to dress, cleanliness, and the toilet; and hence, as a matter of convenience and economy, particularly after the decline in the use of powder, individuals began very generally to attend to their own beards and hair, instead of calling in the assistance of a second person to do that which was better and more cheaply effected by themselves. Thus, the trade of the common barber and hair-dresser rapidly dwindled, and had early in the present century settled down, in England, into nearly the position which it occupies at the present day. Both the barber and the boot-black of olden times, now belong to extinct classes of men.

The long reign of George III.‡ is, perhaps, more distinguished than that of any of his predecessors for the steady advance of intelligence, and the arts of

* See pages 35–7.

† Now revived in the improved form of the boy shoe-blacks of the streets of our larger towns.

‡ Commenced A.D. 1760; ended A.D. 1820; but the few latter years of this reign embrace the regency of the Prince, afterwards George IV.

polished life, among all classes of the people. It was in the early part of this reign that the inventions of Arkwright first enabled our manufacturers to produce cheap and durable fabrics (calicoes), composed wholly of cotton, admirably adapted for body-linen and underclothing; and which, when dyed or "printed," furnished an equally suitable material for the outer dress of a large portion of our female population.* Muslins, both plain and printed, made in a similar manner, and of the same material, were also produced soon afterwards. The inventions of Arkwright were followed by that of the power-loom, by Dr. Cartwright, and the comparative perfection of the steam-engine by Mr. Watt. From these, the success and extension of the cotton manufacture were rapid and complete, and it soon became superior in value and importance to even those of wool, iron, and leather. There was soon scarcely an individual in our vast community who did not, or at least could not, possess sufficient body-linen, of this material, for health, and personal comfort and cleanliness; and scarcely a female, however poor and humble, who could not appear neatly dressed. The labouring portion of our population was thus, in this respect, placed in as good a position as the middle and even the upper classes of the preceding ages.

The introduction, by Dr. Jenner, of vaccination, as a preventive of small-pox, which forms an important epoch in the medical and hygienic history of this

* Arkwright's *first* patent was obtained in 1764. Hargreave's ingenious "spinning-jenny" was invented in 1767; but its deficiencies were not supplied, nor its object fully carried out, until the subsequent invention, by Arkwright, of the "spinning-frame."

country, also happened in this reign.* By vaccination, the horrors and mortality inflicted by the small-pox, which had been greatly lessened by the introduction of "inoculation," were gradually almost wholly removed, by which the health and personal appearance of the rising generation were still further improved. Henceforth only the most vulgar, ignorant, and bigoted, failed to have their children vaccinated.

During the latter portion of the eighteenth century, and that portion of the nineteenth which ended with the regency, the nation, notwithstanding the long war, continued to progress in social and intellectual refinement; and the dress, toilet, and health of the whole population improved in an equal degree. During the regency, and the reign of George IV.,† wealth and luxury increased enormously; and the mutations of fashion became more numerous and frequent, and extended over a larger bulk of the population, than at any former period. The same may be said of the short reign of William IV.;‡ and, in an extended sense, may also be applied to the nation during the whole time since.

Some of the fashions which were introduced, or revived at different times, during the present century, prior to the accession of Queen Victoria, were, however, scarcely less absurd and unnatural than any of those adopted in preceding reigns. Of these, among *men*, may be mentioned the style of dressing the hair so as to stand up high above the forehead, in what was technically called a "lion's top;" or of wearing

* A.D. 1798.

† George IV. ascended the throne A.D. 1820; died 1830.

‡ William IV. ascended the throne 1830; died 1837.

it in an immense bunch of projecting ringlets, or a huge entangled mass, on each side of the head.* In dress, too, there was the unhealthy practice of wearing tight belts, or stays, to contract the waist; followed, at a somewhat later period, by trousers which were made so ridiculously large below the knee, that nothing but the use of rigid padding enabled them to be worn with comfort in walking, particularly in windy weather. Amongst *females*, there were the huge puffs and towering head-dresses; dresses with unnaturally short waists, that reached but little below the armpits; skirts, at one time long and scanty, at another "buy-a-broom-like," that scarcely concealed the knees; enormous sleeves, expanded with pasteboard, resembling pear-shaped balloons, of which the tiny arm of the wearer merely occupied an almost infinitesimal portion; and lastly, bonnets with such expanded and lofty fronts, that they might be more aptly compared to the movable top or canopy of a bath-chair or a barouche, than to the miniature articles which now pass under the name.†

With the accession of Queen Victoria ‡ commenced a new era in our history, remarkable beyond all others for the rapid progress of the nation in all that can render it great, happy, and refined. Under this beloved sovereign, and excellent

* This latter was much caricatured and jocosely sneered at by our Parisian neighbours. An Englishman, they said, might be known in any part of the world by his employing his fingers to comb out or expand his side-locks, whenever he removed his hat.

† It is quite amusing to look over the pictorial illustrations of the "Magazines of the Fashions" of the times referred to. They might now easily pass for caricatures.

‡ A.D. 1837.

and amiable lady, the education, and the hygienic and social condition of the whole people, have advanced to a degree which undoubtedly has no parallel in modern Europe, and which was never even approached in ancient times. The influence of fashion and its mutations, though now more dominant and widely diffused than ever, is nevertheless directed with greater taste, and greater attention to health, propriety, and usefulness. Following the example of the court, the dress of our females has assumed a chasteness and gracefulness which leaves little to be desired; whilst in that of the ruder sex, elegance is equally combined with utility. "We are inclined to think," says a recent writer on this subject, "that the female attire at the present day is, upon the whole, in as favourable a state as the most vehement advocates for what is called 'nature and simplicity' could desire. It is a costume in which they can dress quickly, walk nimbly, eat plentifully, stoop easily, loll gracefully, and, in short, perform all the duties of life without let or hindrance. The head is left to its natural size—the skin to its native purity—the waist at its proper region—the heels at their real level. The dress is calculated to bring out the natural beauties of the person, as each of them has, as far as we see, fair play."* There

* "*Quarterly Review*."—Perhaps the reader may instance, as drawbacks to these remarks, the comparatively recent excessive use of "crinoline"—a fashion of exotic growth, which, in absurdity and dimensions, at one time threatened to surpass the "hoops" and "furbelows" of the reigns of the first three Georges; the excessively long, full, graceful, but inconvenient skirts; and the elegant but minute and unhealthy coverings of the back part of the head, misnamed "bonnets," and used as a substitute for them.

is now no excuse for inelegance in dress, nature and simplicity being the rule of fashion.

But there are other points in connection with dress which render this age a remarkable one. A peasant may exercise as much taste in it as a peeress. The perfection and enormous power of our machinery, and the consequent immense productiveness of our looms, have so reduced the price of all the ordinary materials of dress, as to place them within the reach of almost every individual in the country. The increased health, comfort, and enjoyment thus bestowed on all classes, and more particularly on the lower orders, are incalculable. Indeed, it is impossible to estimate the great advantages derived by the bulk of the people from this source. The wife of a labouring man may now purchase a dress of cotton, muslin, or woollen, richly printed with a beautiful pattern, and in brilliant and permanent colours, for a few shillings. "Neatness and even gaiety of dress are within the reach of all. A country wake in the nineteenth century may display as much finery as a drawing-room of the seventeenth; and the peasant's cottage may at this day, with good management, have as handsome furniture for beds, windows, and tables, as the house

Among men, the trousers introduced among the ultra-fashionable a few years since, having double-sack bodies and peg-top legs, will also, probably, be referred to; being not only ungraceful, but also inconvenient and absurd. Happily, at this date (Christmas, 1864), these points in dress have either entirely disappeared, or have been so far tempered down, that the objections to them are in a great measure removed. Excessive crinolines have become vulgar; and the huge peg-top trousers, distended by steel, cane, buckram, or whalebone, have been superseded by more seemly and useful garments.

of a substantial tradesman" eighty or ninety "years ago." *

Nor must the progress of medicine, surgery, and hygiene, during the last quarter of a century, be forgotten here. The vaccination of infants has been rendered compulsory by statute; and public medical officers have been appointed, in every district, to perform the operation gratuitously for those who choose to avail themselves of it. The "drainage of towns," the "removal of nuisances," and the "supply of pure water," have also formed subjects of special legislation and local exertion; whilst the "window tax," which formerly placed impediments in the way of the due lighting and ventilation of our houses, has now been for some years repealed. Proprietary baths, too, have greatly multiplied throughout the whole kingdom; whilst in London several swimming baths of gigantic dimensions, and supplied with a constant stream of tepid water, have also been established. Besides these, "public baths and wash-houses," at which the poor of both sexes can enjoy the luxury of bathing in all weathers, and the women of the humbler classes can wash the linen of their families at a mere nominal charge, have been opened in the metropolis, and in our chief provincial towns. In this way, science, legislation, and private enterprise, have done much to promote the health, comfort, and security of the people.

This brings us to a point in our history at which the condition, dress, and usages of our population, and the state of the trades and arts connected with our subject, must be familiar to the reader.

* Baines's "*History of the Cotton Manufacture.*"

CHAPTER VIII.

MODERN NATIONS, CONTINUED—FRANCE, GERMANY, ITALY, THE EAST, TURKEY, PERSIA, RUSSIA, CHINA.

IF we cross the Channel and visit our *French neighbours*, the first things, in connection with our subject, which attract the notice of the observer, are probably the less frequent use of the razor among the men,* and the greater taste and "coquettishness" exhibited in the dress, and particularly the head-dress, of the females, than in England. In Paris, the centre of fashion of modern Europe, and indeed of nearly the whole civilized world, this is more especially noticeable; and the same exists, though in a less marked degree, in all the provinces. The prevalence of bathing in France, during the middle ages, has been already noticed.† But though the public baths then existing subsequently fell into a state of neglect and decay, the taste for bathing never wholly left the people, and at the present day exists to a very much greater extent than in either Germany or England. Baths are now common in all the towns. In Paris, there is scarcely a street of any importance which does not contain several of them; whilst the new establishments springing up every day, in

* Although beards of moderate size have again become fashionable in England, and are common among all classes in our larger cities and towns, this remark is true as regards the mass of our population.

† See pages 48–50.

spite of the number and proximity of rivals, appear to increase and prosper. Public baths, and swimming baths of vast extent, have also been opened of late years, to meet the necessities and promote the health of all classes of the French metropolis.

In France, the trades connected with the cosmetic arts and the toilet are in a very flourishing condition; and those who carry them on usually exhibit a degree of taste and intelligence which is highly creditable to them, and which is scarcely to be met with in other countries. In all the larger towns, and in Paris more especially, these trades are subdivided into several branches, or departments, by which a higher degree of proficiency is attained in each than is commonly met with among the barbers and hairdressers of England. Thus, there are the "barbiers," "friseurs," "coiffeurs," "perruquiers," "parfumeurs," &c. Nor must the "coiffeuse" and "modiste" be forgotten; for they are, par excellence, the tire-women and milliners of the whole civilized world.

In *Germany* and *Holland*, the barbers still continue to ply both the lancet and the razor; but here they are divided into two classes, the "barbiers" and the "friseurs"—the latter being a distinct and superior set of men. Bathing is little practised in these countries, and there is less taste exhibited in dress and the toilet, and less attention paid to personal cleanliness and hygiene than in either France or England.

Italy deserves a passing notice in connection with our subject, chiefly on account of the extreme symmetry of form and beauty of a large portion of

her inhabitants. Her genial climate, and the abstemious habits and slight use of animal food among the large bulk of her population, independent of descent, have probably much to do with this; and among her females, the almost entire non-use of stays, corsets, or other articles for compressing and distorting the figure, is undoubtedly a favourable and additional circumstance tending in the same direction. In their appreciation of the bath, the Italians rank between the French and the Levantines.

A singular circumstance, and one deserving notice here, is that, though Italy is a land of flowers and perfumes, perfumery is very little patronised by its people. The odour of musk, lavender, or patchouli, would be regarded as absolutely offensive in the drawing-room, or in the boudoir or opera-box of an Italian lady.

The toilet and costume of Italian females is marked by care and elegance. That of the inferior classes, though very simple and natural, is often exceedingly graceful. The hair of the Venetian lady is elaborately arranged and parted, and is usually combed off her brow. Her head-dress is a species of turban. The robe, which, though high-bodied, leaves the neck exposed, is confined at the waist with a narrow zone. The sleeves are of the simplest description. The hand, which is not concealed by the drapery, is generally gloveless; the arms are bare considerably above the elbow; and a bracelet encircles the right wrist. The feet are quite hidden from sight. Indoors they are covered by handsome easy slippers, or, on formal occasions, by light shoes of elegant workmanship; out of doors, when

traversing the narrow streets and dirty alleys of the city, "zilve," or pattens, are worn. In the fifteenth and sixteenth centuries, these "zilve" were worn so monstrously high, that ladies in the streets were obliged to save themselves from tumbling by leaning on the shoulders of their lacqueys.*

Cicisbeism,† a practice almost peculiar to Italy, and so revolting to our own rigid views of propriety, the reader has probably already read of.

Among the nations of *the East*, the predilection for the luxuries of the bath, the elaborate nature of the toilet, the practice of shampooing, of dyeing the nails and the beard, underlining the eyebrows, and other like usages, which have descended to them from antiquity, have been so frequently described by travellers, and are so well known, as to require only a mere passing notice. Many particulars connected with the subject will be found below, and in other parts of this work, to which the reader is referred.‡ I may here however observe that, although the passion for bathing is very prevalent in the Levant, Turkey, Persia, &c., yet the large bulk of their inhabitants, owing to poverty, or local or other circumstances, are debarred from its indulgence—a circumstance the more pernicious from their peculiar habits, their little attention to personal cleanliness, and their scanty use or infrequent change of body-linen. Indeed, amongst the extremely poor, and still more among the pariahs of their population, the use

* Pietro Casola's "*Journey to Jerusalem*," A.D. 1498; "*Tour in Italy*," &c.

† From *cicisbeo*, a *cavalier servente*, or the professed gallant or dangler of a married female.

‡ See *Index*.

of under-linen is unknown. This is undoubtedly one of the causes of the plague, and other contagious diseases, being so prevalent and so fatal in the East.

The bath as used by Orientals, in its peculiar and complicated operations, bears a considerable resemblance to that of ancient Rome, and a still nearer one to that of the western Asiatic nations of antiquity :—

In *Persia*, the bather, having undressed himself in the outer room, fastens a piece of cloth or linen loosely around his waist, and is then conducted by the attendant into the hall of the bath. Here he extends himself on a large white sheet spread on the floor, and the attendant brings from the adjacent cistern a succession of small pails of hot water, which he continues to pour over the bather until he is well drenched and heated. The attendant then takes his employer's head upon his knees, and rubs into the moustache and beard, with considerable energy, a paste or pomade made of the leaves of the "henna" or "alkanna plant,"* which in a few minutes dyes them a bright red. Again he showers a torrent of warm water on his patient; and, putting on a flesh-glove of soft but rough hair, rubs smartly, first the limbs, and then the body, for fifteen minutes or even half an hour. A third application of heated water from the pail prepares the bather for the operation of the pumice-stone. This is applied to the soles of the feet, and to other parts where there may be callous or thickened skin, and is often followed by rubbing a paste of powdered pumice over the surface of the whole body

* *Lawsonia spinosa*, Linn.—This paste is also used generally by Asiatic females to stain the nails, tips of the fingers, and soles of the feet, of a red or orange hue.

(except the face) with the hand or a wad of soft rag. The attendant next washes the "henna" from the face, and replaces it by another paste called "rang," composed of the leaves of the indigo-plant, which changes the tint left by the "henna" to a natural dark one. To this succeeds the "shampooing,"* by which a violent and refreshing glow is produced over the whole frame. The prostrate body of the bather is now well rubbed all over with a preparation of soap contained in a bag, until it is one mass of lather, which is then washed off with warm water. The bather is next led to the cistern or reservoir of warm water, into which he plunges or is plunged, and in which he passes some five or six minutes. Lastly, on emerging from this bath, he is hastily dabbed dry with soft towels, and a large dry sheet being thrown over him, he escapes back to the dressing-room, to resume his clothes.†

In *Turkey*, the bath, in all its essential particulars, resembles that of Persia, to which is generally added exposure to heated vapour.

The "Turkish bath," as introduced of late years into Western Europe, consists of a warm or rather hot bath, or of a vapour bath, or both, followed by "shampooing," and lastly, by a few minutes' immersion in pure warm-water.‡

"Shampooing," above referred to, is a practice common throughout the East, having for its object the increase or restoration of the tone and vigour of body, or the mitigation of pain. It is applied either in the bath or immediately after quitting it; generally

* See below. † Sir R. Ker Porter, and other travellers.

‡ Such baths are now established in Brighton, London, Paris, &c., and are very restorative and healthful.

the latter. It consists in pressing, pinching, pulling, and kneading the flesh alternately; stretching and relaxing the joints, and laboriously rubbing and brushing the skin, so as to produce a powerful glow over the whole frame, the body being all the time in a prostrate position. This is commonly followed by the application of pumice-stone or powdered pumice; and, lastly, by a warm bath. It is "most singular. You are laid out at full length, rubbed with a hair-brush, scrubbed, buffetted, and kicked; but it is all very refreshing."* An experienced shampooer causes almost every joint in the body to crack.

The toilet of the Turkish as well as of the Persian ladies of rank is of a very complicated kind, in which the use of cosmetics abounds. The skin is treated with costly lotions, pomades, and powders, to render it soft and smooth, to cover defects, and to brighten the complexion; the eyebrows are darkened, and formed into graceful curves; the edges of the eyelids are tinted of a black colour with kohol or surma;† rare washes, oils, and unguents, are applied to the hair, to brighten or to darken it, and to give it gloss and luxuriance; the hue and freshness of the lips are heightened; and the teeth carefully attended to, and even dyed; the nails are also frequently dyed. These operations are performed by numerous attendant slaves. In this way the toilet requisites and cosmetics of a sultana, or of a favourite of the seraglio or the harem, often alone costs as much per annum as would suffice for the whole establishment of an ordinary European lady.

* Sir A. Burnes.

† Black sulphuret of antimony reduced to an impalpable powder.

The Turkish ladies agree with the Italians in their non-use and abhorrence of stays or corsets. An unnaturally small or pinched-in waist is a deformity which they despise. Indeed, an oval waist of natural dimensions and a tendency to embonpoint are regarded generally in Turkey and the East as two of the leading elements of a graceful and beautiful figure in woman. The choicest slaves brought from Circassia and Georgia are those that, with fine features, excel in these points.

The rich black and dark-brown beards so commonly met with in Constantinople, and in other large cities of Turkey, are nearly all artificially dyed.*

The baths of *Russia* are "sweating-baths," not of a moderate warmth, but of a very high temperature, which, to a person not habituated to them, commonly brings on a real, though a gentle and almost voluptuous swoon. Those used by the common people generally consist of wooden houses, situated, if possible, close to a running stream. In the lower part of the bath-room is a large vaulted oven, which, when heated, makes the paving-stones lying on it red-hot; and adjoining the oven is a large kettle, fixed in the masonry, for the purpose of holding boiling water. Around the walls are arranged three or four rows of benches, one above another; and, when the door is closed, the only apertures for light and ventilation are those through which the excess of vapour escapes. The cold water that is required is let in by small channels. The heat in the bath-room is at first about 30° to 32° Réaumur (99½° to 104° Fahr.), but is

* The process will be explained further on. See *Index*.

gradually increased by projecting water on the glowing stones until it rises to 40° (122° Fahr.), or even to 44° Réaumur (131° Fahr.). The bathers lie quite naked on the benches, whilst to promote perspiration, and to more completely open the pores of the skin, they are first rubbed, and then gently flagellated with leafy branches of birch-twigs. After remaining for some time in the bath, the bathers leave the sweating-benches, wash themselves in warm or cold water, and, lastly, plunge over head in a cistern of water; but many persons immediately on leaving the bath-room throw themselves into the adjoining river, or roll themselves in the snow, even during a frost of −10° Réaumur (9½° Fahr.), or lower.

In the houses of the wealthy, and in the palaces of the nobles, the baths are constructed in a similar manner to those just noticed, but more expensively and luxuriously. In the poorer districts, on the other hand, particularly those in which wood is scarce, the baths of the common people not infrequently consist of wretched caverns, or excavations, close to the bank of some river or stream.

In nearly all parts of Western Russia, these "sweating-baths" are in high repute, and much patronised by all classes.*

A still wider flight carries us to *China* and its people. The Chinese, though popularly regarded by Europeans as barbarians or semi-barbarians, simply because they differ from ourselves, are indeed a race among which all the ordinary arts of social life and civilization, as they now exist there, have been known

* See Tooke's "*Russia*," &c.

for probably three thousand years. There are few of my readers who have not heard of "China-musk," and of some other perfumes and toilet articles which, like tea, we import from China; but few of them may know that in the streets of Pekin, the vast capital of China, and in those of its other large cities and towns, "barbers" abound and ply their trade there. Those of the ordinary class go about ringing bells to get customers, furnished with the implements of their trade—a stool, basin, towel, kettle, and fire. They run to any person who calls them, place their stool in the street, shave the head, cleanse the ears, adjust the eyebrows, and brush the dress, for which their fee is little more than the value of a halfpenny. There are others also, of a better class, who only attend to customers at the private residences of these last, or at their own shops, and whose fees are rather higher. The common tailors likewise ply their trade in the streets, but others work at the houses of their customers; whilst the master-tailors, as in Europe, carry on business only at their shops or the bazaar.

The trade of the perfumer is also common in China.*

* For some of the national absurdities of the Chinese, see the next chapter.

CHAPTER IX.

MODERN NATIONS CONTINUED:—SEMI-CIVILIZED NATIONS—SAVAGE TRIBES—CONCLUSION.

IN the infancy of society, and with rude, unlettered people, a love of gaudy display and the use of meretricious ornaments is constantly exhibited; and the cosmetic arts are, in general, as sedulously cultivated, though in a ruder form, as among civilized and refined nations. The particular nature of these efforts depends almost entirely on the local position and mode of life of those who adopt them. As already noticed, among agricultural and pastoral nations, and those who live by the chase, they are generally of a simpler and more congenial character than among predatory and warlike tribes. Savages, properly so called, have always delighted in painting and staining their bodies, and in changing the forms of particular portions of it, to bring it nearer to their ideas of beauty and perfection; or, in some cases, to impart an aspect more terrible in war.* For the latter purposes, they have taken advantage of the comparative softness and flexibility of the bones in infancy, which admit of their being considerably modified in shape by long-continued pressure. In this way, the form and development of the head, forehead, nose, and feet, are often materially altered. The ear, too, from its cartila-

* See pages 8–9 (*ante*).

ginous nature, admits of considerable modification; and hence some rude tribes stretch it to an enormous length.

The diversity of the taste of savages and semi-barbarous races, in the above particulars, has always been very great, and still continues so. Thus the *ancient Scythians* regarded a high, conical-shaped "head," or one of a sugar-loaf form, as a mark of distinction and nobility. The *ancient Portuguese* conceived a remarkably long head to be the most beautiful. The *Germans* preferred a short head; the *Turks*, a round head; whilst the natives of some of the *West-Indian Islands* thought a square head to be the very acme of perfection. Savages and uncivilized people have also variously modified the "forehead," to adapt it to their particular tastes and prejudices. Thus the *Mexicans* preferred little foreheads; the *Spaniards*, high foreheads; the *Russians*, broad foreheads; whilst the *Italians* regarded very prominent foreheads as possessing the greatest beauty. Among many of the tribes of *Africa*, a very receding or sloping forehead has always been the form most esteemed. These modifications, or rather distortions, are produced by the dangerous and unnatural practice of compressing the parts during infancy, by means of strong bands of cloth, or boards; the effect being, in general, further heightened by the mode of dressing the hair.

The artificial distortions of the "nose" have been, and still are, equally numerous and remarkable. Among the *Chinese*,* a short nose is considered the most beautiful; the *Peruvians* preferred a large nose; the *Persians*, a hawk's-bill nose; the *Tartars*,

* See pages 90-1 (*ante*).

Caffres, and some of the *American tribes*, esteem a flat nose; whilst others give a decided preference to the snub-nose and hooked nose. These varieties are also produced by pressure during infancy and childhood.

The *Chinese* and *Mantchou Tartars*, even at the present day, regard an unnaturally "small foot" as one of the essentials of personal beauty. They are hence led to retard the growth of the feet, by tightly bandaging them during infancy and early life. This cruel practice is carried to such an extent with the female portion of their population, as to utterly unfit the feet for effective locomotion in after life.*

Nor do these rude fancies and practices of uncivilized life stop here. Far from it; for some savages endeavour, as they think, to increase their personal charms in a still more revolting manner. There were, and I believe still are, certain tribes of *Indians*, and of *South-Sea Islanders*, who slit the "nose" down the whole length of it, and stick bones and trinkets in the aperture by way of ornaments. Other savage tribes cut and burn letters and fanciful devices in the flesh of the forehead; whilst many uncivilized races, particularly of intertropical and hot climates, adopt the practice of "*tattooing*," or producing figures on the face, and other parts of the body, by rubbing dyes, or powdered gunpowder, into small punctures made in the skin.†

The "ears," too, are frequently pierced with holes

* Vide pages 90–1 (*antè*); also *Index*.

† Formerly, the sailors of our Royal Navy commonly amused themselves by "tattooing" the initials of their names, together with an anchor, or some other trifling device, on the breast, or one of the arms; and even at the present day the practice is not wholly extinct.

of different sizes, to which rings, bones, and trinkets of various kinds, are suspended. Of a similar nature was the custom, said formerly to have been general among the females of *Hindostan*, and not yet wholly extinct, of having holes bored in the flaps of the ears when young, which they daily stretched larger by the insertion of a graduated series of rings made for the purpose, until they reached the size of a small saucer. The holes were then kept distended by large rings which exactly fitted them; and these were often surrounded with several smaller rings, suspended in like manner to holes of a proportionate size.

The *American Indians* stain their skin with "chica;"* and many of the savages of *Africa*, and elsewhere, smear their bodies with red earth, mixed up with oil or grease to render it adhesive. The first of these are fond of ear-rings and nose trinkets; as also of showy feathers to decorate the head. The ruder portion of the *Polynesians* also indulge in similar propensities; but there are others of them somewhat more civilized and fashionable, who addict themselves chiefly to outré modes of dressing the hair.

Various other methods of adorning the person, and altering the conformation of different parts of the body, have been adopted, and are still practised among savage tribes and semi-civilized races, in various parts of the world. Some of these, in a less revolting degree, have even come into usage in civilized communities, or have descended, unaltered but

* The red colouring-matter deposited by a decoction of the leaves of *Bignonia chica*, in cooling. It is freely soluble in very strong spirit, oils, fats, and alkaline lyes; and slightly so in boiling water.

in degree, from olden times. Of this class, perhaps the most absurd and the most prejudicial to health and beauty, is the custom of encircling the tender forms of young infants with tight, unyielding bands; and the waists of those approaching maturity with belts and stays.*

A predilection for bathing is exhibited by all savage and semi-civilized people who have the means of gratifying it; and the ability to swim with ease and freedom appears almost natural to them, and is common to both sexes. In the *South-Sea Islands*, the mother takes her infant, when only a few weeks old, to the neighbouring stream or ocean-creek, and placing it in the water, watches with intense delight the efforts of its tiny limbs, as it plashes and struggles for mastery over the waves, and only extends a helping hand when confusion or exhaustion seizes on her little charge. Nor are artificial baths—even vapour baths—wholly unknown to savage tribes. That of the *American Indians* closely resembles the Russian bath. It is usually formed near the bank of a river, and consists of either a rude excavation, or a sort of oven made of mud and sticks, having a circular aperture for entrance, of about two feet wide at the top. The bathers descend by this hole, taking with them a number of heated stones and jugs of water; and, after seating themselves round the room, sprinkle the water on the stones until the place is filled with vapour of a temperature sufficiently high for their purpose. In the *Rocky Mountains*, several acquaintances usually take these baths together; "indeed, it is so essentially a social amusement, that to decline going in to bathe

* See *Index*.

with a friend, is one of the highest indignities that can be offered to him." On the frontiers, these baths are usually made only sufficiently large to accommodate one person. On leaving the bath the Indians generally plunge into the neighbouring stream, and sometimes return again and subject themselves to a second perspiration. These baths are employed both for pleasure and health, and are esteemed for all kinds of diseases.*

Thus we may perceive that, in all ages of the world, and among nations and people in every grade of life and civilization, and under every condition arising from geographical position and climate, the toilet and cosmetic arts, dress, fashions, and hygiène, have, in correspondent forms and degrees, occupied the attention of mankind, and exerted their influence over them. Indeed, their origin was coeval with that of the sins of our race, and their existence may be traced back to the expulsion of our first parents from Eden. Their fuller development was a natural consequence of the peculiar constitution of our being, and the peculiar desires and tendencies which association in communities and nations would create.

At the present day, the state of society in the more polished nations of Europe, and in America,† is such, that a proper attention to the points and subjects here referred to has become a part of the personal and social duties of every individual, and, in reference to hygiène, of the civil duties of every government and

* See the "*Travels*" of Lewis & Clarke, and others.

† That is, in the United States chiefly.

every municipal body. Happily the practice of these arts, and the customs and fashions now prevailing, are directed by a sense of greater taste, propriety, and usefulness, than, perhaps, at any previous period of the world's history. It is certain, that at no former time were the treasures of medical experience and scientific research applied in an equal degree to the improvement of the arts and habits of social life—to those matters so commonly neglected—ourselves, our towns, our homes. Fortunately for England, she stands in the foremost rank in wealth, refinement, and freedom. Her humblest peasant may avail himself of the advantages which her wealth and valour have purchased—of comforts and luxuries sufficient for the health and rational enjoyment of both body and mind, which her enterprise and refinement have introduced; and more, he can enjoy that manly exercise of conscience, of civil and religious liberty, which her constitution bestows on all her citizens. England, in these points, has taken the lead in modern Europe. Many of the nations on which we mentally gaze in the dim vista of the past, may dazzle us with the magnificence and wealth of their cities, the gorgeousness of their courts, the stupendous character of their buildings, the treasures of their palaces, the boldness of their exploits, or the vastness of their empire; but England has a territory probably much more extensive, a population collectively more numerous, a climate as diversified and genial, whilst in all the arts of life, and peace, and civilization, of refinement and rational enjoyment—in all that truly constitutes a free and great people, she stands alone—she is England still!

Well might the bard of the "Tamar" have exclaimed—

"England, with all thy faults, I love thee."*

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* Carrington's "*Banks of the Tamar.*"—Even foreigners *sometimes* eulogize England and the English :—"England is undeniably the Queen of Islands, the empire and arsenal of Neptune ; with this, she is the Peru of Europe, the kingdom of Bacchus, the school of Epicurus, the academy of Venus, the land of Mars, the residence of Minerva, the stay of Holland, the scourge of France, the purgatory of oppositionists, and the paradise of free men. In short, the English are a people who want for nothing that can conduce to happiness excepting wisdom in the art of enjoying it."—*Count Oxenstiern.*

CHAPTER X.

BEAUTY: ITS CONSTITUENTS AND SOURCES—HYPOTHESES AND OPINIONS—PERSONAL BEAUTY—IDEAL BEAUTY—GRECIAN ART AND SCULPTURES, ETC.

"A thing of beauty is a joy for ever."
(KEATS.)

WHAT is beauty?—what are its constituents?—on what does it depend?—are questions which have been often asked, and which have been very differently answered; but out of the vast number of hypotheses on the subject which, from time to time, have been submitted to the world, there has not resulted any undoubted or universally accepted theory. Of the definitions and views, thus furnished, a few only deserve particular notice; some being too loose and unprecise to stand the test of a critical examination; and others, though apparently correct in certain applications, yet failing to explain the sources of beauty in the infinite variety of objects, both living and inanimate, by which we are surrounded.

According to Burke, the constituents of beauty are chiefly smallness, smoothness, delicacy, and other qualities capable of exciting a sense of tenderness and affection, or some other passion the most nearly resembling these, whilst we are yet altogether

unaffected by the physical passion of which the object is the beauty of women ;* but were this the case, then bulk, ruggedness, boldness of outline, and the like, could never be beautiful.

Some writers endeavour to trace the sources of beauty to certain lines when constituting external form, particularly to curved lines in their various conformations. Thus, Hogarth regarded the wave-like or serpentine line as essential to the higher class of beauty.† That these views are too limited to be correct, even were they right in principle, and that their supporters have mistaken the frequent concomitants of beauty for its primary constituents or elements, will appear evident when it is remembered that the lines which bound the surfaces of objects, and which constitute their form, are infinitely varied, and are often opposite in character, even in those which are equally beautiful. "If there were any original and independent beauty in any particular form, the preference of this form would be early and decidedly marked both in the language of children and the opinions of mankind."‡ But no such preference is shown. On the contrary, the direction of the taste appears to be almost entirely dependent on age and cultivation.

According to St. Austin, "unity is the universal form of beauty." Malespina makes the sources of beauty to reside in "unity, multiplicity, and propriety;" De Crousaz, in "variety, unity, regularity,

* "*Inquiry into the Origin of our Ideas of the Sublime and Beautiful.*"

† "*Analysis of Beauty.*"

‡ Alison's "*Essays on the Nature and Principles of Taste.*"

order, and proportion;" Sulzer and Winckelmann, chiefly in "unity and multiplicity;" Hutcheson, in "uniformity in variety;" Wieland, in "the unity of a pleasing variety;" and the Italian Schools of Painting, in "variety in unity." These opinions, regarded as definitions, are undoubtedly as partial and defective as the former ones; their authors having mistaken the common attributes of beauty for its causes or constituents.

Other writers argue that "colour, perfect symmetry, absolute fitness, expression, and mental association, either collectively or separately," constitute beauty.

Immanuel Kant,* one of the most profound thinkers of modern Germany, conceives that beauty is "irrespective of either utility or design," and "pleases simply by the correspondence of the object and the sense."

Alison declares that "the qualities of matter are only beautiful when they are the expressions of qualities capable of exciting mental emotions." Here it may be remarked, that though colour, symmetry, fitness, expression, association of ideas, &c., either singly or united, are capable of exciting human love and admiration, yet all these may and do exist without beauty. They resemble "the talisman concealed in the hair of a hideous slave, which made her an object of passion to an accomplished prince; and which, when removed, caused him to turn away in disgust from the woman he had worshipped. Even so does love fly with the qualities that inspired it. But if, instead of deformity, beauty should remain

* Founder of the *Kantian* or *Critical System of Philosophy.*

—would love or passion linger after expression had changed, after bloom had fled, after fitness was lost, after associations were destroyed? Assuredly not. In this case love would be replaced by admiration; the taste would worship instead of the heart; whilst the affections would fly away in search of a new object on which to lavish their devotion."

Beauty must depend on something absolutely independent of the qualities above referred to; since, although they may modify, or even enhance its charms, it can exist in its entirety without them.

Winckelmann and Haydon, "after floundering from obscurity to obscurity," remain apparently satisfied with telling us "*where* beauty is," instead of "*what* it is." The former, in reference to personal beauty (and the same may be applied to all organized beings), supposes it to reside in the youthful form, "in which everything is, and is yet to come—in which everything appears, and yet does not appear;" and in which "the conformation is, as it were, suspended between youth and maturity." He does not, however, deny the existence of beauty in other periods of life; though he holds, that this is the period of its highest development, and the farther the being or object is removed from this point, whether in approach or declension, the fainter the rays of beauty become.

Haydon, the other writer just referred to, declares that "beauty resides *only* in the female form;" and that when seen elsewhere in any individual of the whole animate world, "it is in exact proportion to the resemblance of the form of that individual to the form of woman."

To the hypotheses of Winckelmann it has been

objected, that in the works of the ancients most remarkable for their beauty — particularly in the Venus, the second daughter of Niobe—the palm is clearly seen to belong to maturity. But it may be impugned on wider grounds. "Even supposing beauty," strictly so called, "to be confined to the human form, it belongs to all ages and states—even to declining years—even to death itself. In the latter, it perhaps reaches its acmé, and the 'rapture of repose' we (often) see in the coffin before the commencement of decay, is more lovely than the brightest flush of youth." Nor is beauty confined to the human form. It is a "universal principle, which pervades all nature; and the dogma which assigns it to a particular period of human life, must be tested by its application to every other object and condition which exhibits the phenomena of youth and decay," or of freshness, vivacity, or perfection. So of Haydon's opinion, which assigns beauty only to the female form, which is equally partial and unphilosophical; since many beings and objects possessing great beauty are incapable of being compared to the lovely form of woman.

Dr. Knox has recently promulgated the hypothesis, that "all the beauteous and perfect external forms" of living beings, and of man more particularly—the "decorated exterior (only), which nature intended man to see, concealing from him the machinery lying beneath the surface—owes its beauty to many circumstances, but chiefly, and as a *sine quâ non*, to the cellulo-adipose elastic layer interposed between the integument and the aponeurotic sheaths and muscles." In other words, that — beauty mainly depends on

the concealment of the internal structures of the human frame, by the substance or tissues which lie between them and the skin, which forms the surface of the body, and which, from its very nature, assumes a graceful or flowing outline, opposed to harshness or angularity. This hypothesis, he says, "is based on transcendental anatomy, and on an analysis of human feelings and instincts. Apply it to the living model, and test its truth; apply it to modern sculpture; above all, to the antique, from a profound study of whose sculptured forms I first drew the materials of this work."* Here it will be seen that the author has mistaken the substance or tissues, which, from mere position and relation to the underlying structures, assume the forms of beauty, for the peculiar quality or elements of which it consists. As well may it be said, that a model or statue "owes" its beauty to the shapeless clay or marble out of which it is formed, because these substances have been chosen by the modellist or sculptor as the materials on which to exert his genius and labour. But though wrong in this point, which forms the groundwork of his theory, Dr. Knox is right in assuming, that the less obtrusive the muscles, sinews, and bones appear, as in youth, either in the living model or the statue, the nearer the object approaches the ideal beauty of the ancients. Tranquillity and repose were the great objects aimed at by the Grecian sculptors.

Further on Dr. Knox remarks, "The absolutely beautiful I place in the full-grown woman only—in

* Dr. J. Fau's "*Anatomy of the External Forms of Man*," translated and edited by Dr. Robert Knox.

that figure whose fully developed proportions satisfy the most fastidious taste for form; whose expression no language can describe, yet is understood by all; in whom the emblems of ever-blooming youth—that youth so cherished, so loved, so adored—still remain combining all possible attractions." This agrees with the opinion of Haydon, though it is more limited in range.

Another opinion entertained by some persons is, that beauty consists in elegance, grace, lightness of construction, ease of attitude or position, and the like; but these, like unity, symmetry, colour, expression, and other qualities already noticed, though often found associated with beauty and enhancing its excellence, do not constitute it; for it may, and very frequently does, exist without them. These no more constitute beauty, or form an essential component part of it, than the aureola that surrounds a luminary does of the body with which it appears to be associated. If you detach from a thing, either mechanically or chemically, any one of its component parts, you either destroy its character, or leave it imperfect. This is true both in art and nature; and to attempt to gainsay the fact, would border on absurdity. "The masterpieces of the ancients—the exponents to all mankind of the idea of beauty—are generally in discoloured marble, sometimes in bronze—where then is colour as a component part. If expression were detached from them, is it not obvious that this would change merely the moral character, without affecting, in the smallest degree, the physical beauty? What remains is neither marble nor bronze:" it is, according to the writer quoted, "proportion." If so, *proportion*

is beauty. If an exquisitely formed living model "were, by some caprice of nature, to appear of a green colour, it would still be beautiful to the eye of taste, however abhorrent to the natural instincts."*

A like objection may be raised to the definition given by the author of the present volume in one of his former works, in which beauty is stated to be "that assemblage of properties, in persons or things, which not only pleases the senses, but delights the mind." On this, it may be observed, that the properties or qualities alluded to are described only by their effects, and, for want of limitation, may be either few or infinitely numerous and varied.

The hypotheses and opinions of many other writers, as Addison, Akenside, Ancillon, Blair, Coleridge, Hazlitt, Hume, Kaimes, Locke, Reynolds, Dugald Stewart, &c., might be added to those already noticed; but some of them would lead to needless repetition, whilst others would only serve to throw the subject into further difficulty, and render "confusion worse confounded." Yet these were men of both research and genius. After their failure, who can hazard an opinion without hesitation and feelings of humility? It has been suggested that the causes of this failure may be traced to the want of sufficiently elevated and comprehensive views of nature and art, and to the vicious enthusiasm, real or pretended, of connoisseurship. It is probable, however, that the sources of error may also be referred to the limited field of each individual's observations, and more particularly to the absence of that rigid analysis of data which is essential to sound logical results.

* "*Edin. Journal.*"

After this, the reader will naturally expect my own answer to the question "What is beauty?" This, with all due deference to the great authorities already noticed, I shall endeavour to give by referring to the work of a recent author, whose theory seems to be founded on a universal law of nature, and to have been prompted by the teachings of that remote antiquity when art was in her prime.

Before noticing the theory to which I have just alluded, I may mention, in connection with the subject, that the sculptors of ancient Egypt reduced proportion within such definite rules, that the parts of a single statue might be correctly executed by different artists. The Greeks learned of the Egyptians; and the school of Pythagoras—who had travelled and studied in Egypt—taught, that the foundation of proportion, both in sculpture and architecture, was geometry. The Greeks visited Egypt in their search after beauty, and from her they received those lessons which led to their subsequent pre-eminence in its god-like delineations. "It was thither their students went, before the age of Pericles, to be initiated in sculpture;" although sculpture, "with the Egyptians, depended entirely upon proportion, for their genius did not lead them to attach any importance to grace and embellishment." Pythagoras even applied geometry to the explanation of things cognizable by the senses. We are told that the laws of melody (or musical proportion) were studied then, and afterwards, simultaneously with the laws of mathematical proportion; and that the age of Pericles was not remarkable for its sculpture only, but was likewise the golden age of music. "It was Pericles himself who built the Odeon, and

instituted the contests at the Panathenian festivals." Pamphilus, the master of Apelles, and the first painter who was skilled in all the sciences, held the opinion, that without a knowledge of geometry and arithmetic, no artist could ever arrive at perfection.*

The opinions advanced by Dr. Knox, that "art preceded all theory," and that "the beautiful was discovered and chiselled by those who were ignorant of geometry, of the doctrine of harmonic proportions, and of anatomy," and that "the sculptor, from the mere observation of living forms, was led on by inspiration to the scheme of nature," has been ably answered by Mr. Hay. This author remarks, "That the inspirations of genius, combined with a careful study of nature, were essential elements in the production of the great works which have been handed down to us, no one will deny; but these elements have existed in all ages, whilst the

* *Pliny*, xxxv. 10, 36.—Flaxman endeavours to explain the terms used by Pamphilus, as referring to the rules of proportion and motion. He remarks: "How geometry and arithmetic were applied to the study of the human figure, Vitruvius informs us from the writings of Greek artists, perhaps from those of Pamphilus himself:—'A man,' says he, 'may be so placed with his arms and legs extended, that his navel being made the centre, a circle can be drawn round touching the extremities of his fingers and toes. In like manner, a man standing upright with his arms extended, is enclosed in a square, the extreme extent of his arms being equal to his height.'" In another place, also, Flaxman remarks, that "it is impossible to see the numerous figures springing, jumping, dancing, and falling in the Herculaneum paintings on the painted vases, and the antique basso-relievos, without being assured that the painters and sculptors must have employed geometrical figures to determine the degrees of curvature in the body, and the angular or rectilinear extent of the limbs, and to fix the centre of gravity."

ideal head belongs exclusively to the Greeks of the periods of Pythagoras and Plato. Is it not, therefore, reasonable to suppose that, besides genius and the study of nature, another element was employed in the production of this excellence, and that this element arose from the precise arithmetical (? geometrical) doctrines taught in the schools of these philosophers?" But whatever the precise nature of the doctrines or principles were under which the ancient sculptor reached the acmé of his art, it is certain that with the decline of sculpture in Greece, these principles fell gradually into neglect, and were subsequently lost. For though several writers have expressed a suspicion, and more than one a belief, in the existence of some hidden analogies or law of the kind, as was done by Newton,* and by Müller,† yet no one before the author of the theory I am about to introduce to the reader, has, as far as I know, restored to us a knowledge of these principles in a systematic form, or satisfactorily determined the great problem on what beauty absolutely depends.

The theory of Mr. Hay, the author just referred to, is that beauty consists in proportion—geometrical proportion—the laws of which he traces to the laws of harmonic ratio. The vibrations of the monochord furnish the basis of his theory; and from these he draws upon the quadrant of a circle a series of corresponding angles. With the series of triangles thus obtained, he combines a circle and an ellipse, the proportions of which are derived from the triangles themselves. By applying the divisions of the mono-

* "*Letter to Sir John Harrington.*"

† "*Ancient Art and its Remains.*"

chord which produce the common chord (*i. e.* the 1st, 3rd, and 5th of the musical scale), to the quadrant, he obtains the three angles which alone are necessary to impart proportion to the head of ideal beauty. By continuing the division of the quadrant to ten angles, and arranging these upon any given straight line equal to the full length of the figure, the true proportions of the whole body are obtained. In this manner we are immediately furnished with infallible rules of composition, which not merely apply to a single figure, but are susceptible of infinite variation.*

On similar principles Mr. Hay explains the existence of beauty in all objects, whether in nature or art;† and has even applied the harmonic theory to colour and painting.‡ As the three fundamental notes of music, when sounded consecutively, produce the "common chord," the foundation of all harmony in musical composition, so it is asserted, that in "form," the circle, triangle, and square, being the three simple or primitive parts, give rise, in mathematical proportion, to all the varieties of beauty that delight the taste. In "colour," the three primitive colours—blue, red, yellow—are, in like manner, said to form the triad from which arises all harmony in painting.

The fundamental principles or quality, on which the beauty of all material objects depends, is then geometrical or harmonic proportion, as developed in form;

* Vide "*The Science of Proportion, as represented in Ancient Greek Art.*" By D. R. Hay.

† Vide "*The Natural Principles and Analogies of Form.*"

‡ Vide "*Laws of Harmonious Colouring.*"

and without this no object, animate or inanimate, nor anything, whether natural or artificial, even scenery itself, can be beautiful.

The apparent difficulty of applying any general rule to particular forms has furnished the opponents of this theory with an argument which is, however, more plausible than rational. Müller remarks that "the principles which the ancients followed in regard to proportion (*symmetria numeris*) —and we know this was a main object of artistic study—are naturally diffiult to discern and determine, on account of the manifold modifications introduced by the application of them to different ages, sexes, and characters."* To this a reviewer of Mr. Hay's theory has justly replied, that the "effect of Mr. Hay's discovery (theory) is precisely to obviate this difficulty. The governing angle which produces a perfectly-formed woman is more acute than that which produces a perfectly-formed man; the governing angle of a Hercules is more obtuse than that of an Apollo; but in both figures the proportion educed from these angles is fixed and inviolable. He (Mr. Hay) merely presents a vantage-ground to genius for its flight; and where his science ends, high art begins."† Mr. Hay himself is particularly explicit on this point. He says, "I beg the reader to keep in mind, that I confine myself to such variety as belongs to the permanent form of the anatomical structure, knowing that to impart the variety which results from the actions of the muscles, and gives sentiment and expression to the countenance in obedience to mental impulses, requires the highest efforts

* "*Ancient Art and its Remains.*" † "*Edin. Journal.*"

of genius, and consequently belongs to a branch of art beyond the scope of a treatise, the sole object of which is to point out the primary laws of geometrical harmony from which the countenance derives the beauty of its proportions."*

The acmé of this beauty, according to Mr. Hay, is the ideal beauty of the ancient Greek sculptor, and is the point to which the efforts of nature are directed; and were it not so, the identity of its proportions with the science and harmonics of acoustics would be a delusion. It is the true "natural beauty," and that to which mankind will advance with the progress of knowledge and civilization. "In regard to this original perfection in the form and proportions of the human head and countenance—for such I conceive it to be—innumerable causes have operated, and do still continue to operate, on the one hand, in degrading it; and, on the other, in counteracting this degradation; and to these operations may be attributed that endless variety of countenance by which nations, classes, and individuals are distinguished. Among such causes the effects of climate, and, still more, the degree of civilization" (or its opposite, barbarism) "under which a nation is trained, seem to be the most effective."†

This theory of beauty, as well as the changes of the human countenance, last referred to, is illustrated in Mr. Hay's work by numerous diagrams, and in a series of plates, exhibiting the process by which the anatomical structure gradually and geometrically

* "*Science of Proportion as represented in Works of Ancient Greek Art.*" † Ibid.

changes, from the perfect development of beauty exhibited in the Greek masterpieces, down to the most degraded specimens of ordinary nature found in savage life.

The great merit of Mr. Hay's theory consists in "the geometrical expression of the analogies" above referred to, "in the numerical values, so to speak, of the relations that exist between the harmonic scale and form, colour, and proportion. He assumes to have brought to light the hidden truth, to have stripped it of its vagueness and mystery, and to have presented it with a scientific exactness and simplicity which, if it be once fairly recognised and established, must exercise a prodigious influence in every department of art, and bring the hitherto unattainable idealism of Greek beauty within the reach of modern genius." By this theory the sources of beauty, both in nature and art, and even in architecture, are satisfactorily explained. The harmonic relations of form constituting beauty, together with the ancillary qualities of colour, fitness, expression, and mental association, are thus without limitation; and consequently the forms and variety of beauty are Protean and infinite.

The sources of beauty just indicated pervade the whole visible creation—the entire universe; but are more particularly visible in the animal kingdom, and pre-eminently so in the human species. The proportion which is beauty, and the absolute fitness which accompanies it, are nowhere exhibited in so remarkable a degree as in the various perfections of form which constitute "personal beauty." Figure, contour, health, are the great desiderata which alone are capa-

ble of conferring it on all mankind. The most beautiful—the physically perfect of our race—are those in which a high degree of bodily health and mental vigour exist together, and, consequently, those in which these qualities are most perceptible. Hence it is that any material variation from the standard of "form" which nature, in her wisdom, has adopted insensibly produces those associations in the mind which are connected with deformity or ugliness. On the same principles, ill-health, when visible in the features, leanness, obesity, and the like, are incompatible with the notions of personal beauty derived from observation and experience. The mental faculties, with wonderful facility, the result of cultivation, almost instantly distinguish these differences; and, in most cases, the operations of association and comparison are so rapid as scarcely to permit of conscious recognition.

It will be seen from what has been already stated, that "personal beauty," and, indeed, all material beauty, though dependent on "proportion," is inseparable from "form," without which it can exist neither in reality nor in the mind. Beauty, grace, elegance, expression, and all similar qualities, are, in this respect, attributes of form under certain manifestations. The latter of these qualities, though frequently associated with the first, are in reality extrinsic and accidental. So is colour, although appropriate and pleasing hues undoubtedly enhance the charms of that which is otherwise beautiful. In such cases the addition or increment depends on the same principles or laws of proportion as those of beauty of form. This is shown in the beauty and truthfulness of chalk, pencil, and ink drawings, and in statues of

bronze and of colourless marble, in which form alone can be displayed. Beauty of form, and consequently beauty of person, is therefore irrespective of the colour of the skin or the country of the individual. If the opposite were the case, there could be no standard of personal beauty, because the taste shown for particular colours and shades of them varies with climate and the particular race of men. But whilst this is the case with respect to colour and even expression, there are certain characteristics of beauty amongst all civilized and polished nations that possess a sameness and identity under every circumstance which, but for the existence of some fixed and universal law, would be likely to affect them. On examination these characteristics are clearly traceable to "form," as the material element in which the proportion constituting beauty is developed; and thus it is shown that in the form or contour of the living figure alone resides every variety and modification of personal beauty.

As "form" may be said to be the parent of beauty, or that in which abstract beauty can alone reside, so "colour" may be called its handmaid. Colour when in harmony with form, or when conformable to nature and existing associations, is capable of enhancing the charms even of the highest perfection of which form is susceptible. The graces of contour and proportion, the wavy outline, the dimpled cheek, the figure of which every part melts, as it were, into a perfect whole, become still more fascinating when clothed in their natural hues. The colour of objects, if not the very first quality which arrests the attention, is the one which does so synchronically with form, and is generally that one

which is most pleasing to the senses; and when compatible with their designs and uses, and when the work of nature herself, or in accordance with her examples, the impressions it conveys to the mind are commonly permanent. So far colour is an adjunct of beauty; but when unnaturally or inharmoniously applied, its effects are correspondently injurious. The white rose is not less beautiful than its florid companion, because their forms are the same; but if either were absolutely deprived of colour, blackness would remain, and one of the charms of the flower would be lost.*

The most exalted personal beauty, then, combines in one individual all the various perfections of "form"—which are immutable—with elegance, grace, expression, and colour—which are adjunctive and changeable; but this is ideal or transcendental † beauty, more or less combined with the sensuous element.‡

The hues peculiar to the human skin are limited in number. The apparently great diversity observed in this respect—exclusive of the African races—is occa-

* White is here regarded as a colour. Philosophically considered, it is a true compound colour, formed by the union of the primary colours of the spectrum. Black, on the contrary, is, strictly speaking, not a colour: since no colour, either simple or compound, is reflected to the eye from a black surface.

† Kant.

‡ There are strong reasons for presuming that the Greeks frequently coloured their statues after nature; and that the pencil of an Apelles followed the chisel of a Phidias. Euphranor the Isthmian, and pupil of Aristides, and Asclepiodorus the Athenian, with several others scarcely less celebrated, were both sculptors and painters. The reader will probably recollect the "tinted Venus" of the *International Exhibition* of 1862.

sioned chiefly by a difference of shade or intensity, or by the addition of a colour, which, though differing from that of the fairer Europeans, merely modifies, without destroying, the flesh-tints peculiar to their skin. Thus beauty, depending as it does on proportion and form, is not confined to any country or any complexion, but is common, in different degrees, to the whole human race, subject to the conditions previously enunciated. The beauty of English females is the pride of every lover of his country; but the olive complexion of the inhabitants of southern Europe does not, in itself, render them either more or less beautiful. Byron dilates with fervour on the subject of Spanish beauty :—

"Match me, ye climes! which poets love to laud—
Match me, ye harems of the land where now
I strike my strain, far distant, to applaud
Beauties which even a cynic must avow—
Match me those houries, whom ye scarce allow
To taste the gale, lest love should ride the wind,
With *Spain's dark-glancing daughters*—deign to know,
There your wise prophet's paradise we find,
His *black-eyed maids of heaven*, angelically kind."*

And again—

——— "How much
Hath Phœbus woo'd in vain to spoil her cheek,
Which glows much smoother from this amorous clutch!
Who round the pole for paler dames would seek?—
How poor their forms appear!—How languid, wan, and weak!"†

Under the brown skin of the Gipsies who haunt the green lanes and downs of the southern and western counties of England, will often be found

* "*Childe Harold.*" † Ibid.

admirable examples of unpolished beauty. This strange people are believed to be of Indian origin; and in Hindostan, where the hue of the skin is darker still, beauty and grace of a very high order is not uncommon. The Bajaderes, or dancing girls and semi-priestesses of India,* who at one time officiate at the shrine of Schiva and Vishnu, and at another minister to the festivities and pleasure of oriental grandees, may some of them claim, on account of the gracefulness, beauty, and fascination of their persons and carriage, a place by the side of the paler natives of more temperate climates. Among the Indians of the New World, great personal beauty is also often exhibited. The copper colour of the skin in this race is certainly not one which, in the eyes of a European, presents anything agreeable; yet I have seen American-Indian females who might be truly called beautiful, and specimens of masculine form that might rank with any found among the "pale faces" of Europe. The inhabitant of the wigwam, in her teens, frequently possesses very pleasing features, delicately moulded; and though the hue of the rose may not give lustre to her skin, the tint of vermilion may be seen struggling for mastery on her cheek, and adorning her lips with the liveliness and attractions of perfect health. Her hair, too, is generally soft, dark, shining, and luxuriant, and is usually worn in that half-négligée style which is sometimes particularly captivating. Examples of a similar description might be also adduced from other nations, were their multiplication necessary.

* A company of *Bajaderes* performed at the Adelphi Theatre, London, during the autumn of 1838.

"Expression," another quality already alluded to as associated with personal beauty, is the representation of the various passions of the mind in the features;* and has justly been called the "spiritual part of beauty." Handsome features "are admitted to be correctly chiselled, and plain features to be irregular, if not grotesque; but the character of both is changed by expression." "An inanimate object gives us more or less pleasure, according to the state of mind in which we view it; but, strictly speaking, it has in itself only *one* expression, *one* form, and *one* degree of beauty; while in a human being, in whom spirit dominates over matter, the physical part takes its character almost exclusively from the mind within."

This connection between external and internal, or mental, beauty, is constantly shown by the impressions we receive from the human features and figure, as influenced and altered by the mind. Experience tells us that habitual "bad temper" gives the effect of ugliness to the loveliest features; whilst habitual "good temper" renders the plainest features agreeable and attractive. The latter causes the features to assume new forms and curves of beauty, however humble they may be when in a state of repose. And these, as a recent authority remarks, "are the qualities of the features themselves, and do not depend—as is the case of those of an inanimate object, when a change takes place in the impressions we receive from it—upon the mood of the mind of the observer." This connection may be further illustrated by supposing a face of absolute perfection in contour, yet

* Reynolds.

destitute of one ray of intelligence—the face of an idiot. Here horror would be excited instead of admiration. So also of the deprivation of moral beauty," which "has a similar effect to that of intellectual beauty; and in less extreme cases than those of utter fatuity or depravity, whilst fully admitting the physical advantages that may be possessed by the features, the pleasure we derive from them is in exact proportion to that more ethereal loveliness perceived by the mind, like all its other ideas, through impressions made upon the senses." Hence the inexhaustible modifications which physical beauty may receive from expression, or the soul which gives it life; whilst each of these modifications, in the impressions which it conveys, varies in character and degree with the taste, mental culture, and moral condition, of those before whom it is exhibited.

The power of intellect, sentiment, and passion, in illumining and modifying the features, must be familiar to every observer. It is this which distinguishes "personal beauty" from all other classes of the beautiful, and which gives it that endless variety of expression, and endows it with those spiritual attractions, which are its peculiar attributes. When the face is animated and glowing with the emotions and operations of the mind—when the eyes are instinct with noble feelings, and the lips curl with the approving smile—when the language of the tongue is accompanied with a corresponding modulation of the features—when ideality becomes almost corporeal—then it is that the influence of the mind over matter and the utmost fascinations of beauty come into play, its latent powers roused into energy,

and its inexplicable spells thrown around the soul. The expressions of internal beauty may be figuratively regarded as mental cosmetics, capable of adorning physical beauty with the richest and most enchanting tints, and even raising mediocrity to excellence. But though depending upon the mind, the expressions essentially consist of temporary modifications of the features arising from change of "form," to which colour is generally, but not necessarily, superadded; and they may, consequently, be imparted to the marble statue, where form alone is the medium of exhibiting the constituents of beauty. The opinion previously expressed as to the sources of beauty are not, therefore, controverted by, or incompatible with, these admissions.

The several component parts of the human body are separately susceptible of beauty; but it is only when the whole, or the chief of them, possess a certain degree of excellence, and the remainder are not incongruous, that personal beauty of a high order is developed. Without proportion of parts beauty cannot exist; because the undue preponderance of any one, or more, of these parts, is incompatible with the existence of a perfect whole. The mind as readily perceives incongruity, as beauty; and though the former may often be rendered tolerable, and even charming, by expression, or by moral excellence, its existence is immediately recognized and becomes disagreeable, whenever these subside, or are altogether absent. The absence of symmetry or proportion is insensibly associated in the mind with unfitness of design, and unfitness with irregularity or deformity.

The human race, as a species, may be said to be

scarcely free from some peculiarity or defect; yet instances are common in which extreme beauty of features is associated with an ill-formed person, and a faultless figure with an irregular or an ordinary face. In these cases the effect on the observer usually depends on the dominant quality which, from its superior impression on the mind, leads the others to be either wholly neglected or only slightly noticed. Man came from the hand of his Maker a model of physical beauty and perfection, and would undoubtedly have continued so, had not his own vices and weakness engendered habits and surrounded him with circumstances continually at war with his well-being; to which may be added the effects of climate, violence, and in many cases a degraded social position,—all of which are operative in the same direction. Hence the development of personal beauty may be said to be perpetually interfered with, and restrained within limits more contracted than those prescribed by nature or designed by Providence. For this reason absolute personal beauty—ideal beauty—probably does not and has not existed since the Fall, except in the works of the sculptor or painter; but approaches to it are still not uncommon in our race. There are writers, however, who entertain the opinion that nature uniformly works upwards, unless disturbed in her course by repelling circumstances; and who hold that there are finer women in the England of to-day than those who graced the court of Charles II., and that Byron's Maid of Athens, described with "so much unction" by the poet and certain travellers, would have had altars erected to her in the days of Pericles.

Of the defects just alluded to the most frequent

and apparent are those of "form." How commonly the disproportion or irregularity of a single feature spoils an otherwise beautiful face! how often the features or the head are disproportioned to the body, the limbs to the trunk, and the hands and feet to the whole stature! These are faults of construction or proportion, and can scarcely be regarded as deformities, except in their more exaggerated forms. In ordinary cases the effect is negative—beauty is absent, but its place is not necessarily supplied by ugliness or deformity. As in music the charms of harmony are increased by the occasional introductions of discords, so the appreciation of material beauty, which depends on the same laws, becomes more exalted by occasional comparison with something antagonistic to it.

The ideas connected with personal beauty are said to vary in different nations. It will, however, be found, as previously hinted, among all those who have attained any considerable degree of civilization and refinement, and among many who are even in a comparatively rude state, that the taste, as far as form and proportion are concerned, and even expression, is nearly the same. Making allowances for the influence of climate, habits, and intellectual cultivation, and other similar modifying circumstances, there is, probably, little or no essential difference. This is true of modern Europe, and the civilized nations of the American continent, and applies with nearly equal force to the oriental nations, and, indeed, to the whole civilized world. Nor has time, extending from the age of Pericles to the nineteenth century, altered this taste in anything but its intensity. The

Niobe, the Venus di Medici, the Apollo Belvedere, still excite admiration in every beholder. The characteristic expression of the features of different nations,* as well as the endless varieties of which they are comprised, and which constitutes the distinguishing mark of individuality and personal identity, although chiefly dependent on form, are confined within such narrow limits as not to change the taste and feelings which appear common to the race. The delicacy of the fine, flowing, and geometrical lines, forming the contour of the body, and particularly of the face, is such that the smallest variations of them are perceptible. The features thus admit of infinite variety, and individual confusion is provided against, and this without endangering the beauty or primary characteristic of the race or species, yet with greater licence and effect as to distinctiveness, than in any other part of the animal kingdom.

The difference between extreme beauty and plainness, or even ugliness, frequently depends upon trifling variations of form, assisted by expression, which would be scarcely perceptible in inanimate objects. Yet this wonderful variety, and these trifling variations, under the influence of life and intelligence, are almost equally capable of exhibiting the various dispositions, emotions, and passions that are common to the human mind, as they are the distinctions of person.

The human head alone is sufficient to show that

* The Caucasian race, or variety of mankind—that to which we belong, which is distinguished by the beauty of the oval which forms the face and head, and which embraces all the more civilized nations—is the one here chiefly alluded to.

the ideas of personal beauty are similar among all civilized and polished nations. The exquisite taste and beauty of the Greek sculptures is devotedly struggled after by the modern artist; the same form or development of the face, head, and forehead, is equally esteemed the characteristic of beauty in Italy, England, and America.

The human head, after the face, admits of a greater variety of form within the limits of certain angles and nearly identical proportion than, perhaps, any other part of the body. And here, as in every other instance, it is this proportion, assisted by expression, fitness, and mental association, which endows the lifeless marble with the charms of beauty. Physiology, and, indeed, common experience, show us that a well-organized mind cannot exist without a beautiful and well-developed head. From the senseless idiot to the philanthropist and philosopher, from the negro to the intellectual European, the head presents all the various gradations from deformity to beauty.*

The effect which beauty exercises on the mind, particularly when associated with expression, and illumined with moral excellence and intelligence—those holy lights which burn within — is almost wonderful. Its influence is as extensive as our race. Nor is this influence peculiar to the human species;—it extends in a diminished degree to the whole animal world. It is probable that fully one-half of the friendships and affections of life are attributable to beauty. The nobler and more spiritual passions, and aspirations, and pleasures, of the human soul,

* Vide Coombe's "*Phrenology*," "*Constitution of Man*," &c.

and even intellect and moral worth, are unfolded and promoted by its presence. A mere notice of the influence of personal beauty alone, on individuals and on society, in all ages of the world, would embrace the whole history of the human race. It has, perhaps, owing to the lawless passions and vices of mankind, been productive of more contention than has been caused by ambition, and more misery than has been occasioned by avarice and gold. But, if such have been some of its effects, owing to the sensuous element of man's nature, in the other scale of the balance we have the divine influence of universal beauty over poetry, sculpture, painting, and eloquence, over manners, thought, intellect, and, indeed, everything, every art, faculty, and action of social life and civilization, which by an elevating, inspiring, and guiding principle, can be raised from rudeness, languor, mediocrity, or incipiency, to a state of progress, refinement, and dignity. It has given us the most magnificent and deific statues, the most splendid and truthful paintings, and the most enchanting and heart-stirring poetry. It has strewn the departments of oratory and the pages of literature with their most gorgeous and pleasing flowers. It has given an impetus and an improved expression to all the polite arts ; and it has imparted charms to the products of many of the least attractive branches of human industry. In truth, the chief object in the fine arts is the creation of beauty, or the copying of its models; and among these, personal beauty offers the most refined and inexhaustible, and most profitable, theatre for the study and exertions of the artist.

The contem t which is often affected for personal beauty is not only irrational, but in no slight degree impious. It has been correctly remarked, that such beauty is of a higher kind than that of a star or a flower, on which even the most stolid, and the most religious, think it decorous to bestow their admiration; and when sanctified and sublimed by the presence of moral excellence, and radiant with intelligence, it is, undoubtedly, the most admirable of all the works of the beneficent and all-wise Creator. The pleasure which it affords the rational mind is entirely dependent on this happy mixture of internal or spiritual beauty, with external or material beauty; and without this blending of the two, perceived by the mind through the medium of the senses, the ethereal loveliness inseparable from the higher grades of personal beauty cannot exist. The human features, however perfectly moulded or chiselled, if absolutely destitute of intelligence, excite aversion or horror, instead of admiration. The soulless, yet living face, can never be gazed on without this feeling, even by the most impassible of our species. Expression is here absent, and this negative quality, owing to the association of ideas, for the time, is the dominant one presented to the mind; and hence beauty of form or outline is in part neglected by it.

The effect of beauty is uniformly to elevate the mind; and it is only when it is associated with the sensuous passions of the observer, owing to debased moral feelings, that it can possibly have an opposite tendency. We must not, however, forget the old, though vulgar proverb, that "beauty is but skin deep." The mind may live in a reverie of ideal beauty for ever, it may dote

upon its objects, and even raise them to the altar of its worship. But it is far otherwise with mere personal beauty as it exists in the living subject. The eye soon becomes accustomed to what it looks upon, be it plain or fair. But the spiritual expression, the sweet smile, the amiable temper, the soothing tone of the gentle voice, the cheerful disposition, the readiness to forget and to forego when some trifling stumbling-block presents itself in the road of life—ah! what can compensate for the want of these?—what else can adjust the balance between the material and the spiritual?—what else can link two souls in a life-enduring constancy of friendship and affection, and lead them to look with confidence for a reunion beyond the tomb, and the enjoyment of the beatitude of eternity together? If we would ensure the permanence of mutual friendship and affection, we must seek it in the depths of the heart, where moral beauty is dominant over intellectual beauty, and where both of these, during converse or communion, light up the features, whether plain or beautiful, with the holy and enchanting expression of intelligence, sympathy, and virtue. This happy union of mind and moral excellence, when associated with material beauty, not merely compels admiration, but exerts a power almost amounting to fascination. It is the most precious work of God; it is that condition in which humanity the most approaches the divine.

Upon these principles a recent author has endeavoured to explain certain "varieties in love," which are usually treated, at least by the grave, as irrational or ridiculous. "The love of a child," he remarks, "has no reference to form or feature. It selects

its object by means of an instinct which penetrates beyond the surface, and finds no difficulty in doting upon age, ugliness, and disease. The youth, as he grows up, gradually forsakes the idol of his infancy; and the young man, whose natural perceptions are entirely obliterated in the school of the world, attaches himself franticly to mere physical beauty. In the course of years—perhaps not till many years—a change ensues. He finds that he has been worshipping a phantom, grasping at a shadow—that his love was a mere delusion, and his happiness or misery nothing more than a feverish dream. Then comes the triumph of mind over matter. Then do the plainest features become luminous with love in the eyes of the *rusé* man of the world. But judging no more by the unerring instincts of childhood, he is frequently deceived; and, on such occasions, he feels a pang far more terrible than that with which he had started from the golden visions of youth. But all is at length past—instinct obliterated, the lessons of experience forgotten; and the old man returns, with imbecile energy, to the illusions of early life, to dote once more upon physical beauty."*

The perception of beauty is not instinctive or intuitive. It is developed only with certain faculties and sentiments of the mind; and it increases in proportion to their enlargement and cultivation. It depends on the joint operations of the judgment and the imagination. "The (mere) impression which an object makes on the senses is insufficient to give rise to the sentiment of the beautiful. The impression on the senses

* "*Edin. Journal.*"

is but the occasion on which the taste declares that the idea which it impressed on the sensible object, and which that object expresses, is the idea of beauty."* The sentiment of beauty is, therefore, the result of ratiocination; and consequently its perception is improved by experience and tuition.

The opinion that the perception of beauty is dependent on the existence of a particular sense, and not on association, judgment, and taste, will not bear a close examination.† If such were the case, it would be difficult to explain the fact, that "amid the inexhaustible variety of sensations which different minds experience from the beautiful, there nevertheless reigns a certain unanimity in men's judgments with respect to it, which cannot have any other source than the identity of reason in the human species."‡ The degree of cognition of beauty exhibited by mankind under different circumstances, is thus readily accounted for. Exercise, observation, example, education—in short, whatever expands the mind and elevates the taste—increase the facility with which we perceive the beautiful.

Akenside, taking a poet's view of the question, exclaims—

> ——— "This nor gems, nor stores of gold,
> Nor purple state, nor culture can bestow;
> But God alone, when first His active hand
> Imprints the sacred bias on the soul."§

But it must not be forgotten that the same writer,

* Ancillon, "*Mélanges Littéraires.*"

† Hutcheson, Blair, Kaimes, Beattie, Hume, and some other writers, entertain this opinion.

‡ Gwilt.

§ "*Pleasures of Imagination.*"

in another passage, admits the power of cultivation in creating and improving the taste :—

——— "The attentive mind,
By this harmonious action on her powers,
Becomes herself harmonious." *

The appreciation of beauty, and the pleasurable impressions which it produces on the mind, are also dependent on circumstances similar to those just referred to. Among different persons the faculty of perceiving the beautiful may be exhibited in an almost equal degree, but the mental gratification which follows this perception will vary both in intensity and duration. The ability to perceive is not always accompanied with an organization of mind capable of experiencing a high degree of enjoyment, or one of the same character. In the language of phrenology, it may be said to be proportionate to the development of the cranial organs of Ideality and Comparison, particularly the first, assisted, perhaps, by some of the other higher faculties and sentiments proper to man. Yet the perception of beauty can never be wholly unaccompanied with pleasure; for the condition of mind essential to a lively perception of the beautiful, is also that capable of receiving the highest amount of intellectual gratification. It is the relative degree of pleasure excited by the beautiful in different minds, that occasions the wonderful diversity of sensations with which its perception is accompanied.

In many cases both the perception and appreciation of beauty may appear intuitive; but they are then, in reality, the result of experience or cultivation, and

* "*Pleasures of Imagination.*"

the exercise of the memory. If the contrary were the case, there would be one universal standard of beauty common to childhood, and to uncivilized as well as polished life. That this is not so, is clearly shown by children preferring gaudiness to beauty, and by savages distorting their bodies in opposition to the perfection of form bestowed on them by the Creator.

Personal beauty, in all its delicate gradations, offers a more extensive field for the exercise and gratification of taste than all the other departments of nature; but the resulting variety and diversity belong, as previously noticed, more to the modifying influence of expression in the individual possessing it, and the quality of the mind of the observer, than to its permanent form.

Ideal beauty — the beauty of the beauty-loving Greeks — so commonly supposed to be the result of a special inspiration of genius which had nothing to do with the existing laws of nature, is now admitted to be a real existence, in which the perfections exhibited by nature in a whole species are concentrated by the master-hand of the sculptor, or the artist, in a *single* figure, or a *single* composition. It is beauty deified, in which art surpasses nature; and in which genius, revelling, as it were, with a kind of intoxication, among the scattered perfections of natural beauty, composes out of nature's own materials an imaginary being peculiarly its own. Such are the sculptures of the Grecian deities—those "statues which enchant the world."

The lives of the Greeks were associated with the beautiful, and their taste was matured by constant tuition and

experience. "Here," says Winckelmann, "where a temperature prevails which is balanced between winter and summer, nature chose her central point; and the nigher she approaches it, the more genial and joyous does she become, and the more general is her influence in producing conformations full of spirit and wit, and features strongly marked and rich in promise." * In such a climate as that of Greece, under the favourable circumstances of government and social life, man undoubtedly acquires his fullest physical development, and physical beauty attains its richest character; and in such a climate the powers of depiction and imagination would be correspondent to and influenced by the beautiful objects of surrounding nature, and the glorious materials the artist had to work with. But too much importance has been attached to this idea, since the circumstances it embraces could only be secondary causes in the promotion of Grecian excellence. Climate does not in other countries generate genius and taste. The inhabitants of the plain of Quito, where "reigns eternal spring," are not distinguished in the fine arts, or even by a high degree of civilization, although wealth and education are both at their command. The same applies to many other regions equally favoured by nature as classic Greece. Spain, for instance, with all the beauties of climate, scenery, and person, never reached a position of the highest excellence in the fine arts, and is now médiocre in all that relates to them; whilst several nations placed in unfavourable circumstances in these respects, excel, or have excelled, not only in sculpture

* *"History of Ancient Art among the Greeks."*

and painting, but in all that relates to taste and intellect.

It must also be remembered that the palmy period of Grecian sculpture, "if we begin with Phidias, did not last for more than fifty years; and that the painting of the early Greeks, exemplified in the works of Apollodorus, Zeuxis, and Apelles, of which not a fragment has been preserved, exists only in the traditionary praises of Lucian, Pliny, and Ausonius." Modern Greece, the very country that produced Phidias, Praxiteles, and Apelles, has been lost to art for above a thousand years. The perfection to which sculpture, painting, and architecture were carried by the ancient Greeks, must, therefore, be referred to other circumstances than climate and surrounding scenery. These, I think, may be found in their knowledge of the laws of beauty,* which they learned from the Egyptians, and which they applied with that mental energy and exquisite taste for which they were so remarkable. It was their genius, as a people, to refine and spiritualize whatever occupied their attention; and their sculptures, like all their other works, were the emanations of this genius. They sought the most beautiful of their species as models for imitation; but even from these, like true Eclectics, they culled only individual perfections, and uniting them in one subject, according to the immutable principles of proportion which constitute beauty, produced their masterpieces. In their hands art was exalted almost above nature, and the critic, enamoured with their beauty, hesitates between regarding their surpassing excellence in sculpture, poetry, and eloquence, as the

* See *pages* 108-112.

result of understanding and cultivation, or of inspiration alone. The most laborious efforts of their chisel were invisible in the finished statue, which, like the fabled production of Prometheus, became instinct with expression and beauty.

Even the mythology of the Greeks was based on a series of beautiful conceptions, both corporeal and ideal. The enigmas of their polytheism, when unravelled, develop real mines of beauty—sometimes of sublimity. It was the knowledge of the influence which the beautiful exercises over the passions and affections of mankind that led them to make corporeal beauty the chief groundwork of their religious system. Look at the fabled daughter of Jupiter and Dione, the Grecian Ἀφροδίτη, the goddess of beauty and love. The dream of her existence, which filled the eyes of her worshippers with rapture and devotion, was one, among many others, which might be cited in illustration of our subject. The fiction of her rising from the foam of the sea, her charms, her passion, her abode in the islands of Cyprus and Cythera, are all equally beautiful.

So also of the Ἄρτεμις of Grecian and the Diana of Latin mythology—the "great Diana of the Ephesians," whose worship, at one period, extended over all Asia, and a large portion of the remainder of the civilized world. This goddess, though represented as scarcely equal to Venus in beauty, had the merit of chastity and virtue, and the nobler duty of presiding over the chace and the health of her votaries.

The three sister goddesses, the Graces—Euphrosyne, Aglaia, and Thalia—described so exquisitely in the Iliad and the Odyssey, as well as the nine Muses, the

protectresses respectively of the polite and liberal arts, are also happy efforts of luxurious fancy and finished taste, and are represented as possessing the highest charms of personal beauty.

The Nymphs, too—those lovely beings who are fabled to have peopled the varied regions of the earth and water, and who gave poetry and life to the fountains and streams, the woods and groves, the sea, the mountains—were all depicted to be as beautiful as the polished mind of the accomplished Grecian could imagine.* The charming Aigle, the most lovely of the Naiads, has been noticed by Virgil;† whilst amongst the Nereids, Amphitrite, Dido, Galatea, Thetis, and some others, are described as possessing the most godlike attractions of form and beauty.‡

Nor is the quality of beauty confined to their female divinities by the Greeks. The group of "Niobe and her Children," in the Tribune at Florence,§ has attracted the admiration and employed the descriptive powers of many of the greatest geniuses and connoisseurs of the past and present day. The story from which this allegory is taken has been related by Ovid.‖ The fate of the unfortunate Pleiad, another masterpiece, is perhaps the most sublime fiction ever invented by man, or seized on and materialized by the sculptor.

* The Nymphs (*νυμφαι*) of the fountains, rivers, brooks, &c., were called *Naiads;* those of the woods and groves, *Dryads;* of the sea, *Nereids;* of the mountains, *Oreads;* of the trees, *Hamadryads;* &c. See Ovid, *Eleg.* iii. 64; Virgil, *Georgics*, b. iv.; &c.

† *Eclog.* 6.

‡ Propertius.

§ Considered by Winckelmann to be from the chisel of Praxiteles.

‖ *Metaph.* vi. 146.

The genius of Grecian art and literature was not exhausted on the gentler sex: her artists and poets have left us the most magnificent representations of manly beauty. Apollo or Phœbus, celebrated in Homeric verse as the god of archery, prophecy, music, and medicine, and by later poets also as the god of day, occupied the same exalted position, with respect to masculine charms, which his half-sister, Venus, did in those appropriate to female deity. The statues and temples erected to his honour were of the most costly and beautiful description. His amours and exploits were the favourite themes of ancient poetry and sculpture. That with the nymph Daphne is well known. He is represented by the sculptor as a being in the pride of youth, beauty, and strength, with luxuriant curling locks, and bearing a bow or lyre. The statue known as the "Apollo Belvedere," found towards the end of the fifteenth century in the ruins of Antium, and now in the Vatican at Rome, has been acknowledged to be the *chef-d'œuvre* of the sculpture of ancient Greece, and hence of the whole world. It is of this that Byron writes:—

——— "View the Lord of the unerring bow,
The God of life, and poesy, and light—
The sun in human limbs array'd, and brow
All radiant from his triumph in the fight.
The shaft has just been shot—the arrow bright
With an immortal's vengeance :—in his eye
And nostrils beautiful disdain, and might,
And majesty, flash their full lightnings by,
Developing in that one glance the—deity.

But in his delicate form—a dream of love,
Shaped by some solitary nymph, whose breast
Long'd for a deathless lover from above,
And madden'd in that vision—are express'd

All that ideal beauty ever bless'd
The mind within its most unearthly mood,
When each conception was a heavenly guest—
A ray of immortality—and stood,
Starlike, around, until they gather'd to a God." *

Winckelmann, an enthusiastic lover of the ideals of the Greek sculptors, thus describes one of these objects of his ardent passion:—"I could wish here," says he, "to describe beauty the like of which can hardly have had human origin. It is a winged genius in the villa Borghese, of the size of a well-made youth. If the imagination, filled with the single beauties everywhere displayed in nature, and occupied in the contemplation of that beauty which flows from God, and leads to God, were to shape, during sleep, the vision of an angel whose countenance was brightened by the divine effulgence, and whose form was seemingly an effluence from the source of the highest harmony—in such a form let the reader set before himself this lovely image. It might truly be said, that nature, with God's approval, had fashioned it after the beauty of the angels."†

Dr. Oken, and some other writers, have declared that the "facial angle" of the Greek sculptors is unnatural; but this objection has been, I think, satisfactorily answered, and, indeed, settled, by Mr. Hay, in his works referred to elsewhere.‡ The latter regards this ideal beauty as the point of perfection from which man fell at some remote period, and the point to which all the efforts of nature are directed to restore him. This ideal beauty is, therefore, true

* "*Childe Harolde.*" † "*History of Ancient Grecian Art.*"

‡ See *pages* 111, 113, &c.

natural beauty, and that to which mankind will still advance with advancing knowledge and civilization.*

The preceding remarks have reference chiefly to beauty of "form," or that description of beauty which produces impressions on the mind through the sense of vision, or, in the blind, through the sense of touch. But the other perfections of nature and art capable of affording pleasure through the same sense, or through the other senses, appear to depend, as hinted elsewhere, on the same immutable and universal laws. Geometrical and harmonic proportion, associated, as it always is, with absolute fitness in the individual or object possessing it, or in the effect produced, according to the new theory, is the source of beauty common to all the senses. In music and acoustics, proportion undoubtedly is beauty; and this assisted by the association of ideas, and by experience and cultivation, gives rise to the endless diversity of the gratification which the mind receives through the ear. Variety and multiplicity may increase the charms of sound, but only whilst they are in accordance with this law; in the same manner as colour may those of beauty of form. Were the contrary the case, the simple melody and the complex harmony could not be equally beautiful. So also of colours, according to Mr. Hay, when associated together, or placed in juxtaposition, in which the impression of beauty is conveyed to the mind irrespective of the consideration of "form." Even pleasure received though the senses of smell and taste may, and probably does, depend on the same causes; although from the less dignified field of opera-

* See *pages* 113, 122-3, &c.

tion of these senses, and their blending the perception of the object with the consciousness of the subject perceived, they appear, at first sight, to depend on instinct rather than on experience and cultivation.

That the impressions and ideas of pleasure, or the beautiful, received through the inferior senses, as well as those received through the eye, are the result of tuition and experience, there can be little doubt. The infant derives its ideas of beautiful sounds from the gentle lullaby of its nurse, and the softened tones of those who caress it; its preference for sweet, and other bland tastes, comes from the nature of its food during the period of lactation; and its perception of pleasing odours corresponds to the degree of cleanliness and ventilation with which it is surrounded. That the perception and appreciation of beautiful or pleasing sounds, tastes, and scents, are not instinctive or intuitive, any more than of beauty of form, is strongly shown by the effect which habit and cultivation produce on these faculties. The Highlander prefers the music of the squeaking bagpipe to the grandest diapason of the organ; spices, tobacco, spirits, and similar substances, are productive of pleasure to the adult, whilst to children they are absolutely disgusting. By habit only are the most agreeable perfumes appreciated; and in like manner, from long contact, even nauseous and unwholesome odours frequently cease to be disagreeable. It is the same eye of the mind which recognises the beautiful under every form and condition in which it is developed, the sources of beauty being apparently the same in principle in all of them. The relative power of perceiving and appreciating beauty, whether in the fine arts or literature, and of imitating and

creating it, depends essentially on the constitution of the mind of the individual. It is the preponderance of those higher faculties and sentiments before referred to, that gives direction to the taste; and it is the concentration of the energies on the subjects or pursuits thus rendered agreeable, and their ardent cultivation, that produce the poet, the sculptor, the painter, and the philosopher.*

Before closing this chapter, let us again refer to the value—the importance—the divine influence of beauty in a world—a universe—where all is beautiful. A recent writer on the subject has asked, "What is the *use* of beauty? Is it intended merely to amuse the fancy for a time, and then pall, fade, and be forgotten? In a system where nothing else is lost, where all is fitness and coherence, and where each part, however minute, seems as necessary to the whole as a single link is to the continuity of a chain, is *this* quality alone without definite meaning or permanent purpose?"—and he answers the question by observing,

* It is here worthy of notice, that many persons possessing the most refined taste, and a high degree of creative power in certain classes or departments of the beautiful, exhibit little mental energy, and often scarcely reach mediocrity in other matters. This is frequently the case with artists and musicians. The devotion to one particular study leads them to neglect, and often to treat with contempt, everything not immediately connected with it. Handel, immortal as a musician, was otherwise undistinguished, and in many points médiocre. "His thoughts were nearly all absorbed by his art." Even the beauty and accomplishments of the famous Signora Vittoria could not draw him from them. Raphael, the greatest of modern painters, though amiable, and beloved by his friends and acquaintances, displayed little mental excellence beyond his favourite art. Few artists are Michael Angelos. The miscalled "universal genius" seldom rises above mediocrity.

that "analogy is against the supposition; and we must either set down beauty as an unmeaning superfluity in the scheme of the creation, or else assign it an importance commensurate with the space it occupies in our thoughts." Every rational man will do the latter.

"Then let us not, like thoughtless fools, despise
The things of earth which are the things of beauty.
* * * * *
All beauty here hath but one aim and mission,—
To guide our spirits to that heavenly portal,
Which, to the earth-chained spirit, is a vision
Of beauty all unchanging, all immortal." *

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* Burrington's "*Revelations of the Beautiful.*"

CHAPTER XI.

PROMOTION AND PRESERVATION OF THE PERSONAL APPEARANCE AND BEAUTY—COMMON ERRORS—INFLUENCE OF HEALTH, ETC.

> "Creating from themselves, all beauties are
> Creators of the beautiful."
>
> (E. H. BURRINGTON.)

> "Health must be there, or beauty cannot be :
> The sunken, languid eye, the pallid cheek,
> The lax and purple lip, but move the mind
> To pity—not to love."
>
> (ANON.)

MUCH labour is frequently employed, and much expense incurred, to improve and preserve the personal appearance, and to endow it with new charms, or to increase those which it already possesses. Unfortunately, however, although much thought and ingenuity are often expended, or rather wasted, on the subject, the peculiar conditions, physiological, hygienic, and social, on which their excellence and permanence depend, are either only slightly regarded, or partially acted on, when known, and more frequently neglected altogether. With some persons, immediate effect, at whatever sacrifice, and irrespective of consequences, is deemed of more importance than either health or personal cleanliness, or appropriate modes of dressing; and in few, indeed very few, instances is anything beyond the "mere outside effect of the passing hour" for a moment regarded. Hence it is,

that, in scarcely any other portion of the daily routine of life do persons more egregiously err than in the means they adopt to carry out their wishes in this respect. In general, not a single thought is devoted to the vital functions of the body, or to the structure and offices of the parts to which they devote their most laborious efforts; yet, on a due attention to these points, both health and the personal appearance—even beauty itself—depend. "Are the means I employ natural, or do they assist nature?—are they the most efficient and rational?—are they harmless or injurious?—are questions that are seldom self-asked in the privacy of the boudoir, dressing-room, or bed-chamber. And why is this so? A reply could be easily given, and I have no doubt many of my readers can furnish one. Habit and example, and thoughtlessness and indolence, and not infrequently ignorance and vanity, are the powers which generally occasion the various conceits, practices, and negligence just alluded to.

Although there is not a single subject on which people generally exhibit, in private, more anxiety than on their toilet, or one in which they are more deeply interested than their personal appearance, there is, perhaps, none on which they take so little trouble to obtain correct information. The fashionable belle and the anxious beau alike adopt the suggestions of some ignorant "maid" or "valet," and submit themselves to the operations and cosmetic treatment which they choose to inflict, with a degree of resignation and satisfaction, if not of delight, which under any other circumstances would be truly enviable. Others, as well as those just noticed, scan with eager

eyes the advertising columns of the morning papers in search of some expensive and often injurious nostrum, which its vendor boldly proclaims possesses the power of imparting beauty and renewing the bloom of youth and health upon the faded cheek, or of conferring the luxuriance and rich tints of Circassia or Georgia on hair which dissipation or the hand of time has rendered scanty or streaked with gray. The thoughts of such parties are entirely confined to the passing moment, the next soirée, the next ball, the next promenade, or the next opera; and, as observed by a recent eminent author, their vision beyond these events becomes entirely dimmed. But the errors in these matters arising from indolence, thoughtlessness, and indifference to consequences—the desire to save time, trouble, and expense, are greater than those already mentioned, and are probably more numerous than all the others put together. Hence it is that every fashionable ball or party, every opera-night, and every concert, adds to the number of the hapless victims of consumption or some other fell disease, and tinges the pallid cheek with the hectic flush, or the sallowness, that marks their incipient stages.

With some persons—perhaps I might say with most persons—the duties of the toilet are of a very simple character, being limited to mere acts of cleanliness, and the use of the ordinary hair and skin cosmetics. Others go further, but it is all in the same direction; their thoughts not extending to those numerous and more important matters without which a pleasing personal appearance, much less beauty, cannot long exist. Among unpolished and

ignorant people this is more especially the case. As civilization and refinement, and education advance, this attention, or rather misapplication of the attention, lessens. This is particularly the case where the art and science of medicine, and physiology, have made much progress. In England and on the Continent, during the last half-century, the members of the medical faculty have continually directed public attention to improprieties of dress and the toilet; and happily with such success, that much of the grossness in these particulars that distinguished former periods has gradually died out and passed away. Many articles of dress, and practices which were once thought useful or beneficial, or at the most harmless, have thus been exposed, and their use either abandoned or rendered less injurious by the removal of their objectionable features. The present century is proverbially one of progress, and, perhaps, in no one point is it more distinguished, than in the improvement which it has produced in the social manners, dress, and toilet of the people.

It has been mentioned in a previous chapter, that in the infancy of society and in savage life, immediate effect is the only object desired or thought of. Consequences "are not regarded, from not being investigated and known. Pigments are adopted, bandages and compression used to various parts of the body, without the slightest hesitation, or reference to their ultimate effects. And when consequences were observed, they were generally put down to any cause but the right one, and arguments were not wanting to lessen the apparent evils," or to palliate their continuance. This "palpable incongruity between

reason and action is certainly surprising; it is surprising that such should ever have existed, but it is still more surprising that such usage, even in a modified form, should have been transferred from barbarism to civilization." Their existence, in any shape, in countries in which civilization and refinement have made the greatest progress, must depend on individual vanity and ignorance, and not be chargeable to the general community.

In every stage of society, in all ages of the world, "the labours of the husbandman have been directed toward the improvement and permanent welfare of his crops" and live-stock, "and not to mere present appearance, hasty development, or gaudy growth. He regards them in every aspect, and under every circumstance, of climate, season, soil, and the previous and present condition of each class he nurses or cultivates. Without this he knows, that his crops," or the produce of his labours, will be "defective and unprofitable. Interest leads him to this course. The blessing of increased fertility" and prolificness, "and a more abundant harvest, are his reward. Is it not wonderful, then, that when the interests of their own bodies are concerned, when the health and personal appearance are at stake, not only for a period, but probably for life, that" rational beings "should be so careless of themselves, and so indifferent of the future, when they exercise so much care over the humbler objects of creation?"*

The habits of life of many persons are justly said to be utterly opposed to the permanent enjoyment of

* Green's "*Lectures.*"

health, and utterly subversive of the conditions essential to the existence and permanence of personal beauty, or even a pleasing appearance. With others, the dress is such as to prove equally prejudicial; and with an equally large number the system and means employed in the daily operations of the toilet are not less objectionable.

The apparent neglect and indifference, just alluded to, is correctly stated, by a recent high authority, to be "not occasioned by any direct or intentional dis regard of the importance of the subject—not that persons care little whether they be right or wrong:—on the contrary, it arises simply from the general apathy and contempt with which it is the habit of most persons to treat any examination into the nature and principles of matters connected with daily life; any mixture of science with matters falsely supposed to be necessarily trite and unworthy of serious consideration. Some persons will evince much pleasure in attending a popular scientific lecture on some subject probably too abstruse for them to understand; but to devote a few minutes to the chemistry of their homes" and every-day life, or to the structure and functions of their own bodies, or the physiology of their own existence, "would excite in them a smile." We are apt "to associate the familiar with the trite and vulgar; and to be vulgar would outrage the feelings of the veriest fop or belle in existence. But if familiarity be capable of producing the vulgar and the trivial, then life, health, beauty, even intellect itself, must indeed be both."*

* Dr. Caldwell.

Such facts and arguments as these are indubitable. From infancy to age—from poverty to wealth—health, cleanliness, personal comfort, and a pleasing appearance, are, and must ever continue, the first matters of consideration. The welfare of the infant, the child, the youth, the adult, are, in different degrees, dependent on them. They are also necessary to the aged, and perhaps even more so; not merely for their own well-being, but on account of those younger than themselves around them. By rigid attention to them, and by a judicious occupation of the mind on pleasing subjects, instead of letting it fall back upon itself, much of the vigour and agreeableness of youth may be retained to a late period of life.

In the personal and social duties just referred to, there is no royal road to pursue—no real secrets to learn. We have only to divest ourselves of the bias which custom or habit, or example, has impressed on us, and to follow the natural instincts of our nature, as directed by science, experience, and reason. There are certain matters necessary to life, and essential to our well-being, such as air, food, sleep, exercise, retention and excretion, the passions, &c., which, from not actually forming a part of the living body, were called, by the older physicians, the "non-naturals." Attention to these is as essential to the preservation of the health as it is to life; and through the health, of the personal appearance and comfort of the individual. These are matters, indeed, which are not merely essential auxiliaries of the qualities and endowments referred to, but are actually the very foundation on which not only they, but even the enjoyment of life, depends. Look, for instance, at the influence which

temperance, exercise, regular habits, and cleanliness, exert on the health and personal charms. Let us go into fashionable life, as affording strong examples of the neglect or disregard of all of these except the last one, and that in a quarter where we might reasonably, from the rank and education of the parties, the least expect to find it. Temperance includes moderation at table, and in all the enjoyments which the world calls pleasure; and regular habits include the recurrence of the appropriate meals at proper intervals, and the avoidance of late hours. These are things which are, unfortunately, utterly disregarded among the better classes of society, and more particularly in fashionable life.

Let us follow a youthful beauty of rank and fashion from the time of rising in the morning until her artificial day is ended, during what is called the "season." In a state of languor and nervous feverishness, and with a feeble appetite, the results of the late hours and excitement of the preceding night, she enters the breakfast-room at the early (!) hour of nine, or, more generally, ten or later. Her breakfast probably consists of strong coffee with cream, hot rolls (!) and butter, and perhaps, occasionally, a small portion of grilled fowl, all of which, except the coffee, she has scarcely sufficient energy to take. Then a long exhausting fast not infrequently succeeds, ending in dinner at six or seven in the afternoon or evening, the day, up to this hour, being miscalled morning in fashionable life. At dinner she sates her appetite, rendered keen by long privation, with highly-seasoned soups, fish covered with melted butter and exciting sauces, meat roasted, boiled, fried, stewed, game,

pies, puddings, tarts, preserves, followed by the grapes, oranges, indigestible almonds and filberts, ice-creams, and other fruits and delicacies that form the dessert; the whole being diluted and blended, and finally "washed down" not merely with water from the crystal fount, but with wine, generally more or less adulterated, or poisoned by trade-admixtures miscalled improvements. Then comes the evening's amusements — the soirée, the ball, the opera, the theatre, the late supper—exposure, thinly clad, to rapid transitions of temperature and draughts, in passing from the heated room or building to the carriage, and the journey in the carriage home, at which she arrives during the early hours of the morning, and sometimes not until the sun has risen, and the healthy peasant girl has commenced her work for the day. Then comes the operation of being unrobed and unjewelled by her "maid," before she can retire to bed—a bed into which she sinks almost helpless and exhausted, and from which she rises feverish and unrefreshed. Is it any wonder that such a mode of living should, ere long, derange the stomach, and, by creating bilious disorders, gradually tinge the skin with a wan or sallow hue? Is it any wonder that such long fasts, such injudicious feeding, such exhausting habits, such late hours, such exposure, the conversion of night into day and day into night, and the want of sufficient rest and sound sleep, should soon become visible in the features, and make the looking-glass of the fashionable belle a monitor—alas! an unheeded monitor, of her gradually waning charms and health?

Under such habits as those just described, it is

no wonder that the firm yet delicate texture of the skin gives place to flabby softness, and those delicate portions on which personal beauty depends yield to scraggy leanness or ungraceful, shapeless fat. The once fair skin assumes a sickly paleness and an uninviting rigidity, or a coarse and bloated redness, according to the particular constitution of the victim, but which, in their incipient forms, the vain deluded creature regards as the mere maturation of her health and beauty. To repair their ravages, the aid of a court dressmaker and the cosmetic artist is called in. There is padding to give shape or plumpness where there is none; corsets and belts to reduce, by compression, the exuberant mass of flesh; and washes, powders, and paints, to rectify the dingy, pallid, or coarse complexion. But all is useless; high living, late hours, immoderation, and dissipation have done the work, and female loveliness is lost for ever, unless the pursuit of pleasure be at once abandoned, and moderation and regular and natural habits be returned to. Though a lady be as fair as Hebe, as graceful and chaste as Diana, and as beautiful and fascinating as Venus herself, she would soon lose her loveliness and charms by indulgences and habits such as these. Were it not for the greater cleanliness of the upper classes, the frequent use of the bath, and their being better clothed than their less fortunate brethren, the consequences of their violations of the natural laws would fall on them even more heavily than they now do.

Descending from the higher classes to the lower, and passing over the middle classes as more natural and rational in their social habits than either those above

or below them, let us mark the effects of improper food, defective ventilation, and want of cleanliness amongst them. These evils exhibit themselves in the unhealthy features, the broken health, the frequent cases of consumption, fevers, and skin diseases, and other ailments affecting the health and personal appearance, so commonly met with. It is only the active nature of their occupations, and the pecuniary inability of most of them to indulge in excesses, either in eating or drinking, that prevent these things being still more common than they already are.

The immediate and intimate relations of health to the personal appearance cannot be too often pointed out, and should be thoroughly understood and acted on in the every-day affairs of life.

Health is soundness of body, with the due performance by its several parts of all their natural functions, both separately and in unity. This is "bodily" or "physical health." A like perfect exercise of the functions of the mind constitutes "mental health." The union of the two is necessary to the development of beauty, and to the existence of true corporeal and mental enjoyment. Unsoundness of the body, or the disorganization of any of its functions, generally produces a corresponding effect upon the mind, in some portion or other of its manifestations and uses; and when the mind is seriously diseased, the bodily health frequently, indeed generally, degenerates. The exceptions chiefly include those rare and vast developments of the mind commonly called "genius," though even these are generally accompanied with a delicate state of health, and sometimes with disease; and those striking exhibitions of bodily health and

vigour, where "reason seems to have given up half its dominion to instinct and muscular strength." In each case there is exaggeration of the one, and defect of the other. Perfect health exists only when the functions of both body and mind are properly exercised, and duly balanced to each other.

Disease, either "physical" or "mental," is the reverse of health. Any unsoundness, any disarrangement, organic or functional, involves its presence. The existence of disease, or even of any defect of health approaching it, is soon developed in the features, and is therefore injurious to the personal appearance, and is incompatible with the existence, or, at all events, the permanency, of personal beauty.

The subject of "health" and "disease," in a strictly medical point of view, does not come within the object of the present treatises. I shall, therefore, merely allude to it here, in its social and personal bearings. The "promotion of health," and the "alleviation of the visible effects of disease," with these limitations, form, however, legitimate objects of general attention.

On the promotion and preservation of the health, chiefly depend the improvement of the personal appearance, and the maturation and maintenance of personal beauty. The delicate nature of the formation and functions of the human body is such, that propriety and regularity of dress, living, and the like, are of more importance than is generally supposed, or than some members of the medical profession are ready to admit. It is, however, a demonstrable fact, that, apart from the vicissitudes of climate and season, and mere accidental circumstances against which human foresight is unable to guard, the neglect of these matters is alone

sufficient to account for fully one-half of the maladies and sufferings which "flesh is heir to." The body must be properly nourished and its heat maintained by appropriate food,—it must be properly clothed to meet the vicissitudes of climate, situation, weather, and individual constitution,—it must be freely exposed to the influence of light, air, warmth, and the like, and—it must be kept clean, and enjoy regularity and sufficiency of exercise, sleep, and all the habits necessary to mere animal as well as polished life, for the full exercise of its numerous delicate functions, and the possession of perfect health. Without these matters are attended to, the health will fail, and no efforts of dressing, no toilet however complicated and laborious, no subtle cosmetics, will be capable of preserving the personal charms from certain and rapid decay.

The true criteria of the existence of health, and the "barometer" by which its energy may be estimated, are presented to man, by nature, in the personal appearance, freedom and ability of muscular motion, and the possession of an unclouded mind. In like manner the approach and inroads of disease, and even a state of delicate or indifferent health, are negatively perceptible by the diminution or absence of these qualities, and of the ordinary expression of the features.

A certain sign of disease, or disordered health, is to be found in the derangement of the pulse. It is known from observation and experience, that the pulsations of the arteries depend on the alternating action of the heart, and are correspondent, if not actually synchronal, to it. Any deviation from the

natural standard in the heart's action therefore affects the frequency and particular character of these pulsations, which thus furnish a ready index to the state of the circulation, and through it to the condition of the body. The *pulse* at the wrist,* from the convenience of its situation, is that generally selected for examination. By simply counting the number of its beats per minute, and observing the particular manner in which they are given, a very good general idea may be formed of the state of the system at the time, even by the uninitiated; and thus the presence or approach of disease may be detected.†

In health, the "pulse" of the adult varies from 60 to 80 beats per minute, unless it be excited or depressed by the influence of mental emotions. The average in the *adult male* is 72. If its rate is below 65, debility or a lax state of the system is indicated; and if it is habitually above 75, some exciting or disturbing cause may be suspected. In *females* the pulse is usually lower than in males, 65 to 66 beats per minute being about the average; but in those of a feeble or lax habit it is not infrequently as low as 60. In *infancy* and *childhood* the pulse is much quicker than in the adult. During the "first twelvemonth" it ranges from 105 to 125 beats per minute; during the "second year," from 90 to 110; during the "third year," from 85 to 100; whence its rate gradually lessens until the "sixth" or "seventh" year, when its average is 70 to 75, at about which it keeps for some years after. Towards puberty it usually

* The pulsation at the wrist is that of the radial artery.

† For such an examination to be useful, regard must be had to the usual habit of the individual when in health.

quickens, and becomes excitable; after which it gradually settles down into the rate peculiar to the constitution or habit of the individual.

The pulse is instantly affected by mental emotions. Those of a violent and exciting kind frequently send it up to 130, or even 145 beats per minute; whilst those of a depressing nature will sink it to 50, and, in extreme cases, render it for a short time scarcely perceptible. Both of these extremes frequently kill,—the first, by loading the vessels, particularly those of the brain, with blood; the other, by so retarding the circulation of the arterial blood, that there is an insufficient supply of it for the purposes of life. In some fevers the pulse reaches even 140 beats per minute. It also commonly varies a little during the day, being influenced by digestion, exercise, labour, sleep, rest, &c.*

The blessings of health have been universally appreciated by mankind, and in the highest degree by those nations, ancient and modern, most distinguished for their civilization and refinement. Among the polished nations of antiquity the "principle of health" was deified, and was made an object of adoration and sacrifice. The "Hygeia"† of the classical Greeks occupied a very notable place in their mythology, and in the most beautiful fictions of their poetry. Under

* Besides the "frequency" of the pulse, and its "regularity," surgeons observe the peculiar impression it produces on the applied finger. To these they apply the terms, *hard*, *soft*, *wiry*, *full*, *feeble*, &c.

† Hygeia was said to be the wife or daughter of Æsculapius, who was the son of Apollo and the nymph Coronis, and the god of surgery and medicine.

different names, her worship was general among all the ancient eastern nations. Her statues, which were numerous and of the most chaste description, represent her with a large serpent curled round her body, and drinking out of a cup which she holds in her hand, symbolical of her being the fountain of life and health.

CHAPTER XII.

CLOTHING—DRESS—JEWELRY.

BEFORE entering on the subject of toilet-duties and cosmetic treatment, it will probably be useful to the reader for me to say a few words on clothing and dress.

By the judicious selection and use of appropriate clothing, the personal appearance and charms are promoted through the medium of the general health; whilst, under the guidance of taste and example, many articles of dress may be rendered capable of directly adorning or giving grace to the exterior of that material form that conceals the immortal spirit on which human intellect and beauty depend.

For clothing to be both protective and promotive of health, the materials of which it is composed, and its quantity and arrangement, must be appropriate to the age, constitution, and habits of the individual, and to the season and climate. Without all these are attended to, we lose many of the benefits which it should confer, and frequently inflict on ourselves inconveniences and injuries of a more or less serious character.

The raw materials which form our clothing, though presented to us by the art of the weaver, the felter, the tanner, the currier, the dyer, and others, in an almost endless variety of forms, textures, and colours, are in reality few in number. Each of these, however,

possesses peculiar distinctive properties, which give it an advantage in appropriate applications.

It is shown by the experiments of Count Rumford, and by those of other competent authorities since, that the power of conducting and of radiating heat possessed by the different materials used for clothing, varies considerably. *Wool* is found to be the worst conductor and the best radiator of heat among them. These properties render fabrics composed of it peculiarly suitable for clothing in cold, damp, and changeable climates. But wool possesses other, and even greater, advantages for under-clothing, depending on its peculiar texture. In the form of *flannel*,* for instance, it acts on the skin, by a species of gentle friction and electric excitation, as a genial stimulant, promoting the circulation of the blood through the arteries that pervade it, and thus powerfully assists in maintaining the surface of the body at a proper and equable temperature, at the same time that it keeps the pores of the skin clean and in a state favourable to healthy perspiration. It has also the advantage of absorbing the perspiration as emitted, and of simultaneously allowing its watery portion to pass off into the air, so that it does not become wet, like cotton and linen fabrics do under the same circumstances. From this valuable property of flannel, persons who wear it next the skin seldom take cold from exposure and changes of temperature, even though perspiring profusely. The reverse is the case when either calico or linen is worn, the effects being generally serious, and not infrequently even fatal.

* The same applies to serge, and to most of the forms of netted under-clothing made of wool.

In a changeable and moist climate, like that of these realms, every person should wear a flannel or woollen robe next the skin, or, at all events, a waistcoat of flannel, extending from the bottom of the neck to a point beneath the loins; and this should be continued all the year round. The practice of discontinuing the use of flannel as soon as the warm weather sets in is highly reprehensible; for flannel is, if possible, even more needed in summer than in winter, because persons perspire more freely at that season, and being less protected by their other clothing, are more liable to suffer from sudden changes of temperature, draughts, damp, &c. To females, children, the delicate of both sexes, and all those who perspire freely or are much exposed, the use of flannel next the skin, and of worsted or woollen stockings, is indispensable to their health and safety. The prevalence of rheumatism, and the enormous mortality among children, youth, and females more particularly, from pulmonary consumption and other breath diseases, and complaints peculiar to the gentler sex, depend, to a very great extent, on the neglect of these precautions.*

Cotton, in the form of calico, long-cloth, shirtings, &c., now constitutes the material of which the chief portion of the under-clothing of the great mass of

* The objections which are often raised against the use of flannel and woollens for under-clothing, are founded on vulgar prejudices or ignorance, or are mere bravado. With highly sensitive skins, flannel and other woollens sometimes, though very rarely, occasion slight irritation, and hence prove unpleasant to the wearer. In such cases, they may be worn immediately outside a thin robe of cotton or linen. Erasmus Wilson thinks this method "is preferable in warm weather."—("*Healthy Skin.*")

our population is made. It is greatly inferior to wool in all the points already mentioned as characterizing the latter. It lacks the luxurious softness and freshness to the touch of linen; whilst, with extremely delicate skins, the twisted and jagged nature of its fibres occasionally proves a source of irritation.* "Prints" or figured calicoes, muslins, and other like fabrics of cotton, of which the qualities are well known, form the prevailing materials of women's outer garments all over the world.

Linen is a textile fabric composed of the prepared fibres of the bark of the "common flax," a plant which from time immemorial has been cultivated for this purpose. It is remarkable for the smoothness and softness of its texture, and has been always highly esteemed in warm and temperate climates as an elegant and agreeable material of clothing to be worn next the skin. Its fibres are better conductors of heat, more porous, and more attractive and retentive of moisture than those of cotton; and hence, for general use as body-linen and bed-linen, it is inferior to calico in such a climate as that of England. From the whiteness and smoothness of its surface, it forms an elegant and appropriate material for outer garments in hot climates.†

Silk is remarkable for the roundness of its fibres, the softness of its texture, the agreeable sensation of freshness which it conveys to the skin, and the absence

* The common opinion in favour of old linen and flax-lint for dressing wounds is not founded on vulgar prejudice, but on experience, and has science and reason on its side.

† Vide "*Cooley's Cyclopædia*," 3rd ed., pp. 696–8. Also, *Note* (*) antè.

of any attractive or retentive power for damp or moisture; and, as an article of clothing, as far as these points are concerned, it is greatly superior to either linen or cotton. But with all these advantages, silk, when worn next the body, has its defects. "On the slightest friction it disturbs the electricity of the skin, and thus becomes a source of irritation. Sometimes, it is true, this irritation is advantageous, as causing a determination of blood to the surface; but when this action is not required, it is disagreeable, and quite equal, in a sensitive constitution, to producing an eruption on the skin. I have seen eruptions occasioned in this manner, and, when they have not occurred, so much itching and irritation as to call for the abandonment of the garment."* As the material of the outer dress of ladies it is, however, unexceptionable; and, whether for warmth or protective power, must be regarded, weight for weight, as superior to even fine woollens.

Felt, formerly so generally used for hats, and of late years, to some extent, for over-shoes, from being formed of hair and wool artificially matted together by the process called "felting," resembles woollen cloth in its hygienic qualities.

Leather—that wonderful substance which, under its numerous forms, has an aptitude possessed by no other single material of supplying our necessities and luxuries, and furnishing conveniences—may be regarded as a species of natural felt, of a texture, more or less, closer and firmer than that artificially produced. It is a bad conductor of heat; and, as a protective covering in suitable applications, is un-

* Erasmus Wilson.

doubtedly superior to any other substance used as clothing.*

The softer kinds of leather were formerly very generally worn as body-clothing, and are still sometimes so employed. Notwithstanding its warmth and protective power, the practice of wearing it next the skin is objectionable on many grounds, among which cleanliness is not the least important.† Its special and proper use as clothing is for gloves, and for boots and shoes. As a material for the latter, it stands unequalled in usefulness and durability; and the adage "there is nothing like leather" is here shown, by the experience of ages and the universal consent of mankind, to be true.

India-rubber, *gutta-percha*, and all similar substances, as well as all textile and other fabrics rendered waterproof or prepared with them, are objectionable on many grounds. These materials undoubtedly possess the advantage of being waterproof; but here their merits as clothing end. They are impervious to air, and to the vapours and perspiration given off by the body; and thus the parts surrounded by them, or against which they rest, become enclosed in an atmosphere of deleterious air and vapour, and soaked in moisture which would otherwise escape. They are, further, highly susceptible of electric excitation on the

* For an admirable exposition of the value and almost numberless applications of leather, and the vast importance and extent of the leather trade, the reader is referred to Dr. Campbell's "*Political State of Great Britain.*"

† A piece of chamois leather, or of soft buckskin or doeskin, worn over the chest and between the shoulders, is an excellent protection to these parts, particularly in the delicate; and is unobjectionable, provided it be washed or renewed sufficiently often.

slightest friction; which, with their insulating power, disturbs the natural electrical condition of the body, and particularly its natural relation with the air and the earth. The effects of articles of clothing made of these materials on the health, when constantly or frequently worn, and through it on the personal appearance, may hence be readily inferred.*

It may be further remarked that, besides the distinctive nature of the raw materials used as clothing, the peculiar texture and the respective weights, thickness, &c., of the fabrics into which they are wrought, must also be taken into consideration. All these points are important.

Clothing to be conducive to health must not only be sufficient and of appropriate materials, but it must be soft and fit easy, so as to permit the full and unrestrained development and motions of the body; and, above all, pressure on the abdomen, chest, neck, and head must be carefully avoided. This is particularly necessary in infancy, and is almost equally so in childhood; and, with some slight modifications, in every age of life. Females, owing to the delicate structure of their bodies and their usually inactive habits, are more susceptible of

* Let any one who doubts these statements, walk or ride briskly for a few miles in an over-coat waterproofed with india-rubber, or wear a pair of india-rubber goloshes, during a similar walk, and then examine the state of his linen or stockings, and the inner surface of the articles referred to. Or let him wear the same garments for hours daily, and then mark the results. Irrespective of faintness, exhaustion and debility, I have known many cases of rheumatism, bronchitis, asthma, and consumption, that were clearly traceable to the above cause; the last particularly among females who have worn overshoes daily, for a long period.

injury than the other sex from errors in dressing, and should, therefore, be more careful to avoid them. Stiff and tight bandages, stiff and "tight stays, tight boots and shoes, back-boards, braces, and stocks—those inhuman inventions of a barbarous age—limit and distort the natural movements of the body, and sympathetically cramp the healthy operations of the mind. Such restraints are supposed to give elegance of carriage and perfection of form; whilst, in fact, they only produce stiffness and deformity. The contracted waist, constrained movements, and helpless limbs, which result from tight lacing, are no more consistent with grace than the hectic bloom on the transparent skin of consumption with real beauty." *

A few words may now be said on individual portions of our clothing or articles of dress:—

First, then, of the *linen*, respecting which particular care should be taken that it be thoroughly dry, or well aired before being put on. Damp linen is always injurious, and is often an insidious and fertile cause of diseases which not infrequently sap the health, and ultimately prove fatal. Under predisposing circumstances, particularly with the delicate, serious consequences often rapidly follow its use. The healthy and robust may, no doubt, in many cases, wear it with impunity, but not the delicate. Where it is impossible to avoid its use, the best way to obviate its usual ill effects is to keep constantly in motion for some time after putting it on, or to take some gentle stimulant; and, above all, to avoid remaining near the fire, or in a warm room or a draught of cold air.†

* Dr. Caldwell.

† Sleeping in damp sheets is particularly dangerous. I have

The modern *hat* has received as much praise at the hands of its admirers as it has suffered detraction from those that object to it. By the first it is regarded as great a triumph in dress as the steam-engine is in mechanics. However this may be, its excellence and usefulness must be admitted, and that it is pre-eminently characteristic of the advanced state of the arts connected with dress and personal decoration in the western states of Europe. That it will bear an advantageous comparison with any other head-dress known will readily be admitted. Neither the turban of the Asiatics nor the head-gear of the modern Greek, the bonnet of the Highlander, nor the multiform caps of the northern Europeans, can at all approach it in comfort, convenience, and general utility. Over the former two it has the advantage of being much less costly; and, over the whole, of being more conducive to health and personal beauty. Its form, it is said, admirably qualifies it for protecting the head from injury. The vacant space between the hair and its crown, together with its power of ventilation, lessens the effect of external heat and cold, whilst its brim affords an agreeable protection to the eyes from sunshine, and to the face and neck from rain.* But, if such be the merits of a "good hat," it must be acknowledged that an inferior one has very

known several cases of serious, and even fatal, illness follow it. Damp linen may be detected by an hygrometer, or by simply placing a cold, dry, and well-polished tumbler, for about a minute, between the sheets after the bed has been warmed. It should remain unsullied by vapour.

* *Vide* a learned and eloquent article on the *modern hat*, in the *Quarterly Review*. The amiable and accomplished author of *Otia Ægyptiaca* was also an enthusiastic admirer of it.

serious defects. The latter being stiff and unyielding, and deficient in porosity or ventilating power, is often productive of very unpleasant consequences when worn for several hours together, and still more serious ones when worn, as is often the case, continuously day by day. Nervous headaches, giddiness, defective sight, premature gray hair, and even baldness, are frequently produced in this way. The cheap silk hats, now so generally worn, are more injurious in this respect than the common felt ones, from their greater hardness, stiffness, and inelasticity.* The same objections lie against the use of rough, tight, or stiff *caps* and *bonnets*, and all other kinds of head-dress and articles used to dress the hair that occasion pressure on the head, and keep it unnaturally close and warm.†

Proceeding downwards, the *collar*, *cravat*, and *neck-cloth* may claim a passing notice. Here softness, looseness, and entire freedom from pressure and restraint are absolutely essential to the continued enjoyment of health. This is evident from the internal anatomy of the neck and throat—the carotid

* This arises from their being formed of calico, canvass, or chip bodies, stiffened and rendered impermeable with shell-lac. For an excellent *exposé* of the ill effects of wearing inferior silk-hats, *vide* the *Chemist*, for 1844–5.

† The humbler portion of the inhabitants of Lower Canada, and of other parts of North America, where the winter is long and severe, are remarkable for having, as it were, a bald ring round the head, a defect occasioned by the pressure of the rough, coarse, woollen caps which they are in the habit of wearing all day. A similar action may be noticed on the heads of many ladies, especially near the sides and partings, arising from the pressure of the bonnet, combs, hair-pins, &c., and also from keeping the hair tightly strained.

arteries,* which supply the brain and head with blood, being situate one on each side the neck-bone, or cervical vertebræ; whilst the jugular veins,† which carry back this blood to the heart, descend by the side of the throat. Pressure on these vessels interferes with the cerebral circulation, and either overloads the brain with blood, or impedes its supply. The common consequences are flushing of the face,‡ headache, giddiness, and drowsiness, with deranged cerebral action; and in extreme cases, apoplexy, and even death.§

Corsets, stays, and *belts,* always more or less injurious to the wearer, are highly so when either stiff or tight, as they interfere with the free motion of the body, and compress the chest and abdomen, impeding the development and healthy functions of their viscera—the heart, lungs, stomach, liver, and bowels. Hence they are fertile sources of diseases of the organs

* Pressure on the carotid arteries rapidly induces insensibility; hence their name, from καρόω, I render torpid, or put to sleep.

† From *jugulum* (L.), the throat, because of their situation. Pressure on these veins produces congestion of the brain.

‡ In the "good old times" (?), now happily long past, it is stated that it was no uncommon practice with generals, when their men were suffering from want of provisions, to order them to wear their collars "as tight as could be borne," in order to drive the blood into the face, and thus disguise their famishing condition. Even one of the kings of England is said to have degraded himself by issuing this cruel and dangerous order to his troops.

§ One of the practical sages of these practical times informs us, that a man who is only ordinarily particular with his neck-cloth or cravat, in forty years wastes upon its knot four thousand hours, or nearly one year and eight months, reckoning eight working hours to the day. He vehemently panegyrizes the loose neck-gear now fashionable.

of respiration, of dyspepsia, bowel complaints, and a whole host of nervous and sympathetic affections. It is utterly impossible that these articles of dress can be worn of the usual form and fashion without proving injurious to the health; they should therefore be abandoned altogether. They neither improve the figure nor promote the personal charms, nor do they possess a single advantage to justify their adoption or continuance. The most beautiful, fascinating, and healthy women in the world, are those who are innocent of their use. Perfect grace, ease, and comfort, are incompatible with it. An easy-fitting waistcoat or bodice of flannel or serge, of equal warmth, should replace these fashionable articles of discomfort and disease. Such a substitution would prevent, or cure, or lessen the severity of fully one half of the maladies that now afflict the female sex, and would relieve our bills of mortality of that great excess of records of "young and gentle beings" that sink into premature graves from the mere gratification of their prejudice and vanity.*

* I have heard ladies defend the use of stays by saying, "Oh! I should *die* without them,—they are such a *support;* and then they are so *warm*. Besides, what a figure I should look without them!" This is very pretty, and apparently plausible to those that utter it; but it really is absurd. I have personally known very many instances in which the corset has been replaced by an outer flannel waistcoat or bodice, with a vast improvement to the health, figure, and general beauty, and to the perfect satisfaction of the wearer. Frail, indeed, and unfit for earth must be the being who needs such artificial support! Does man, who takes the most violent exercise and performs the most arduous labour, either wear or need stays? Then why should woman? But if the obstinate indulgence of prejudice or vanity, if delicate health or self-sacrifice be "bliss, 'tis folly to be wise." Again, it may be remarked, that the respi-

Of the remaining portion of the dress, until we reach the feet, little need be said. The *trousers* should be of an easy fit, so as not to press on any part of the person. They should sit lightly on the hips, and be preferably supported by elastic *suspenders* or *braces*, the buttons being so distributed as to throw the strain as equally as possible over the whole circle of the waistband, which should not be tight. The *straps* at their bottoms (if any be employed) should be elastic; and the trousers and straps should be mutually arranged so as not to offer any sensible strain on the legs during either walking or sitting.*

The same remarks apply to the *bands* of ladies' skirts, which, to be healthful, must be loose and easy; whilst the garment should sit lightly on and around the hips, without dragging on them. Heavy skirts and petticoats should be either secured to the bodice, or be supported by light shoulder-straps, so that their weight may be thrown on the shoulders, and the necessity of tight bands round the waist, or over the hips, removed.

The *coverings* of the *legs* and *feet* deserve much more attention, in reference to the health, than is usually paid them, since, from the less vigorous circulation of the blood in the lower extremities than in the other parts of the body, they are much more susceptible to the ill effects of changes of temperature and

ratory movements in man are both pectoral and abdominal; in the stay-wearing woman, almost wholly abdominal, and very slightly cervical. Is this natural? (*Vide* pp. 167, &c.; also *Index*.)

* The practice, once so general, of wearing the trousers tightly strapped down, was a fertile source of strain and distress to the knee-joints in the young and delicate.

of damp. Hence the *stockings* or *socks* should be of such a kind as will absorb the perspiration, and preserve the feet comfortably warm. Those of worsted or woollen, as indicated elsewhere, are the best for all seasons of the year. Soft, thick, and porous cotton stockings, though much inferior to the last, may be useful in hot weather; but those of thread and of silk, or of mixtures of them, are highly objectionable, as being incapable of absorbing and carrying off the perspiration and keeping the feet warm.

Boots, shoes, and *slippers* should be of a form, particularly in the twist of the sole, corresponding to that of the feet. They should be of easy fit, and should possess a comfortable degree of softness and flexibility, both in their upper parts and soles, so that they may not impede muscular action, or give rise to the formation of corns or bunions. Boots and shoes for out-door wear should be of a kind adapted to protect the feet from injury, and to keep them thoroughly dry, but with sufficient porosity or power of ventilation to permit the free escape of the perspiration.* Their exterior surface should also be smooth and brightly polished, by which they will be cooler in warm weather and warmer in cold weather, and more comfortable in each, than when the reverse is the case.†

Tight and uncomfortable boots and shoes render the gait awkward, feeble, and unsteady, and affect the whole carriage of the body.

* The neglect of this last precaution is a common cause of tender feet.

† This arises from smooth and polished surfaces reflecting heat, and having less powers of radiation than dull or rough ones. Dirty, dusty, and unpolished boots are rough as well as dull.

The use of *gloves*, now universal among all classes of society except the most vulgar, is recommended by the example of all nations from the most remote antiquity to the present time. The rude Tartar wears them to protect his hands from the severity of his inclement climate, and the refined European employs them as an emblem of refinement and luxury, as well as of utility. Gloves protect the hands from the effects of cold, wind, and sunshine, and thus preserve their beauty and sensibility. These objects are best effected by easy-fitting gloves, made of materials appropriate to the season, and adapted to preserve the hands at a comfortable or natural temperature. Tight gloves are objectionable, as, from checking the free circulation of the blood, they tend to render the hands cold in winter and swollen in summer. The choice of gloves, as mere articles of ornament, must of course depend wholly on the taste of the wearer, and the prevailing fashion of the times.*

Of the remaining outer portion of the dress it may be remarked, that the *dress*, *robe*, *gown*, and *frock* of females, and the *coat* and *waistcoat* of men, like the rest of the apparel, should be of easy fit, and should be made of materials suited to the climate and the season of the year. The use of top-coats, cloaks,

* In the Middle Ages gloves were a costly article of dress, often highly decorated with embroidery, and richly adorned with precious stones. In the ages of chivalry it was usual for knights and soldiers who had gained the favour of a lady to wear her glove in his helmet; and the throwing of a glove was the usual mode of challenging to duel, or single combat. This practice prevailed so early as A.D. 1245. (*Vide* the "*Penny Cyclopædia*," Brande's "*Dictionary*," Matthew Paris's "*History*," &c. In the last much amusing information on this subject will be found.)

thick and heavy shawls, articles of fur, and the like, must necessarily depend on the constitution and habits of the individual, and the vicissitudes of climate and the weather. The practice of appearing out of doors thinly or insufficiently clad during cold or intemperate weather, because "it is old-fashioned or formal to wear an over-coat, cloak, or heavy shawl," is a monstrous piece of absurdity and vanity, which frequently brings its own punishment in ruined health, and even premature death.

I may here also caution the reader against exposure to cold or draughts after having thrown off their out-door apparel when heated by exercise, the body being then in a state which is peculiarly susceptible to exterior influences.*

From the subject of clothing in its relations to health, let us pass to those which it immediately bears to the personal appearance. "The beauty of dress," observes Dr. Gregory, "consists in not being conspicuous; in neither distorting nor yet concealing the human form with unnatural additions." To be ornamental it must be appropriate to the figure, height, features, and complexion of the wearer. It must be simple, elegant, and becoming, as a whole, and in all its details, without being too expensive for the wearer, or so fashionable or so antiquated as to attract notice. Individual taste, and the imitation of those who are deemed most *recherché* in these matters, will generally prove sufficient guides, provided attention be at the

* Some few years since, when huge fur boas for the neck were fashionable among ladies, sore throats, bronchitis, &c. were very prevalent from this cause.

same time given to the points of appropriateness just referred to.

In favour of dressing tastefully and becomingly, it may be remarked that the mental and moral qualities of the individual are often judged by the exterior, and apparently with some degree of justice; for no sensible and refined individual will ever be found attired in a manner unbecoming his or her circumstances or person. First impressions are generally permanent; and surely it is desirable that they should be favourable ones.

With regard to the prevailing fashions, or the peculiar style or pattern of the leading articles of dress, it may be observed that, although constrained in some degree to adopt them, it is wise to avoid those which are disfiguring or unsuitable, as a sufficient variety prevails to admit of choosing only such as become the individual. Thus, speaking of ladies, a short, stout person should avoid wearing a dress flounced or frilled to the waist, or even to any considerable height, as also a high, distended skirt, which might be tolerable in one of her taller sisters. In like manner, a long waist is equally incongruous on a tall person, and a very small hat or bonnet to one who has a full and prominent face; nor should a woman of small stature wear large patterns; nor one very tall a long scanty cloak, or a depending scarf; nor a bad walker, flounces; nor one with a short throat or neck, feathers; nor one with high shoulders, a shawl. From "the highest to the lowest," however, "there is not a single style of beauty with which the plain straw hat is not upon the best understanding. It refines the homeliest and composes the wildest; it gives the

coquettish young lady a little dash of demureness, and the demure one a slight touch of coquetry; it makes the blooming beauty look fresher and more delicate, and the pale one more interesting; it makes the plain woman look, at all events, a lady, and the lady more lady-like still."* The same may be said of the millinery-bonnets, now so generally worn, when they are of a size, pattern, and colour appropriate to the features and complexion of the wearer.

On the *choice of colours in dress* much might be said. Taste is required in arranging a bouquet, in order that the colours may blend harmoniously, or be in pleasing contrast. It is the same in laying out a garden, in selecting and placing furniture, in hanging pictures, and even in arranging a shop-window; and the same taste is required in regard to dress, if we value its effect on the personal appearance. It is, therefore, wise before purchasing articles of dress, or the materials or trimmings for them, to consider what colours are suitable to the complexion, and what style of pattern is most adapted to the size and figure of the person for whom they are intended; and, having arrived at a decision, to resist any persuasion to purchase or wear any other, merely because persons say it is "fashionable," or "becoming," or assure one that it is a "bargain." This, in respect to colour, is particularly necessary with those articles that surround the face and neck.

It may be laid down as a general rule that the dominant colour, or tints, of all the articles of dress that come within the range of the eye of the observer,

* Lola Montes' "*Lectures.*"

when directed towards the face, should be in pleasing contrast or harmony, and such as blend and harmonize with the complexion without interfering with its purity; or such as improve it by throwing some agreeable tint into it of which it is naturally deficient. Taste, whether natural or acquired by experience from the past successes and failures of ourselves or of others of like complexion and features, will usually be found sufficient to direct the reader in this respect, provided sufficient thought be given to the subject before making the selection. Thus, for example, a brunette should not wear a bonnet nor attire herself in silks of a grave or sombre hue, nor should a blonde with little carnation in her cheeks sully her fairness with rich and very deep colours. In like manner a pale complexion appears much more so when placed in contiguity with pale blue or purple, violet, lilac, or puce; and, if there be a dash of sallowness in it, assumes a sickly, a cadaverous, or even a leaden hue. Black, unless loaded with heavy trimmings round the face, appears more or less to suit all complexions, except the very pale, the very ruddy, the tawny, and the copper-coloured. In many cases it causes a coarse, dark, opaque complexion, to appear comparatively fair and agreeable.

These effects of different colours on the complexion, and on each other, depend on the compound nature and properties of light, and on certain natural affections of the eye, which it is well that every one should be acquainted with, from their general application in the arts of dress and ornamentation. If we look for some time, particularly with one eye, on a bright-coloured object, as a wafer or a small piece of silk

placed on a piece of white paper, and subsequently turn the same eye to another part of the paper, a similarly-shaped spot or mark will be seen, but the colour will vary, though it will be always the same under like circumstances. Thus, if the original colour be red, the imaginary or accidental one will be green; if black, it will be white; the imaginary colour being always "complementary" of that first gazed on. If, instead of the surface on which the eye is subsequently turned being white, it be of any other light colour, then the imaginary colour will not be complementary of the first one, but a mixture of the surface-colour and the complementary one.* This is precisely what occurs, under the same circumstances, to a greater or less degree, when the eye rests on the dress or on the human features and the colours surrounding it. By an attention to these points, the colours best

* In *optics*, "accidental colours" are those which depend on affections of the eye, in distinction from those which belong to the light itself, or to any quality of the luminous object. "Complementary colours" are those which, by blending with another, or others, produce the perception of whiteness. White light consists of red, yellow, and blue light, combined in definite proportions; and all the infinite varieties of colours, and shades of colour, are produced by the admixture of this red, yellow, and blue light in certain proportions. If we intercept one or more of these coloured rays of a beam of light, those which meet the eye will consist of the remaining coloured rays of the spectrum. So of surfaces, of which only the rays reflected to the eyes form the colour, the other rays being absorbed and lost. Thus, by the interception or absorption of the red rays of white light, and the transmission or reflection of the remaining yellow and blue rays, a perception of green light, or a green colour, is produced; by intercepting the blue rays, the remaining red and yellow produce an orange, and so on of other cases; so that red and green, blue and orange, &c., are said to be complementary to, or the complementary colours of, each other.

adapted to the complexion of any individual can be easily determined, on scientific principles, before making a selection, a purchase, or a present.

But there are other points in relation to dress besides those connected with health, pattern, colour, and the like, which deserve consideration. To be appropriate and becoming, the dress must be suitable to the social position and to the age of the wearer. It raises a smile to see a vulgar woman dressed in the elegant apparel of a polished lady; that which would adorn the one merely tends to display the defects of the other. So of those advanced in life, who appear to forget that for every age there is an appropriate style of costume. Necks which have ceased to look fair and full, when left open, as in youth, convey an unpleasant impression to the beholder, which no richness of dress, and no elegance of manners, are sufficient to remove. The use of a slight frill or collar, or of a silk or gauze handkerchief, tastefully arranged, would obviate the difficulty.

It has been remarked by a recent author on Dress, that "a woman can never be dressed too little, nor a girl too much;" and this appears to be correct within reasonable limits. A gentlewoman needs not to be reminded that she ought at all times to be attired in a neat and becoming manner. An elegant simplicity of dress and toilet, with unaffected manners, demands respect, and is always admired by persons of real worth and taste. Indeed, it is as much an evidence of a refined mind, as its neglect is of vulgarity and ill-breeding. Above all things, it must be remembered that the beauty and whiteness of the linen of both sexes, and thorough attention to cleanli-

ness, are among the chief and most palpable distinctions between persons of refinement and rank and the common herd of mankind. No richness of the other portions of the apparel, and no amount of care bestowed on the adornment of the person, can possibly compensate for negligence in these points.

On the subject of *jewelry* little need be said here. When of simple or elegant design, and tastefully employed, without any attempt at display, and when of a kind appropriate to the rank or position of the wearer, articles of jewelry undoubtedly tend to relieve the sameness of the dress, and to set off the personal charms; but when the reverse is the case, they have a contrary effect. What is there more absurd or offensive than to see a coarse, vulgar person, wearing heavy gold chains, and huge trinkets set with gems, real or factitious? The very association raises impressions in the mind of the observer unfavourable to the wearer; doubts spring up as to their genuineness, and he unconsciously associates them with the workshops of Birmingham and Sheffield, instead of with the golden sands of Peru and the mines of Golconda. It is, therefore, apart from mere effect, judicious for all persons of humble means to be abstemious in the use of jewelry. Whatever articles of the class they wear, let them be genuine; and if they be neat and unpretending, they will then be always becoming and ornamental. If their means preclude the purchase of heavy or valuable articles, let them content themselves with smaller and less expensive ones; and if the latter be beyond their means, let them eschew the use of jewelry altogether. In this way they will escape the charge of silly pride and foppery, and their good

sense, and even their honesty, will escape being questioned. It must be remembered that though a lady of rank or wealth, when full-dressed, may wear an abundance of jewelry, it is appropriate to her costume, and to her position in society; and their arrangement, however laboured, is such as evinces no desire for display. On other occasions her use of jewelry is limited. Before being dressed for dinner, only a few simple articles of the kind are worn, and these chiefly confined to slight gold trinkets, or those in which opaque stones only are introduced. Ornaments of a costlier kind, with brilliant stones or gems, are never worn by her in the morning, and only assumed when dressing for dinner, or for the drawing-room, an evening party, the ball, or opera.

The selection of jewels for the head and neck should be guided, as to colour, by the same principles as those already indicated in speaking of dress. Diamonds are adapted to almost all complexions. Pearls are nearly the same; they particularly set off the dark-haired brunette, but lose much of their effect when the complexion is pale, sallow, or coarse, and the hair light or flaxen. Turquoise, and other stones of like colour, and the pink coral now so fashionable, particularly become the healthy blonde; but where the skin is pale or slightly sallow, the former should be avoided. Ornaments in frosted silver well suit the brunette, and particularly set off dark hair. Those in aluminium seldom long prove advantageous.

The remarks in the last few pages, though more especially referring to females, are equally applicable to males, as far as their costume, &c., admit of it.

CHAPTER XIII.

CLEANLINESS—ABLUTION—BATHING—BATHS, &c.

CLEANLINESS is a subject of such importance to our well-being, that little need be said in its favour, were it not that many persons who loudly declaim about it, are negligent of it themselves. That it is essential to the health, comfort, and personal appearance of the individual, is so generally admitted, that even those who do not practise it, are compelled, by their feelings of decency and propriety, to speak in its praise.

In favour of *personal cleanliness* it is impossible to speak too highly, or to say too much. It enhances every charm, and creates new ones peculiar to itself. It invigorates all the numerous functions of the body, and of the mind. It is capable of rendering the most ordinary agreeable, and even the sick and the deformed companionable. Beauty itself without its talismanic influence ceases to attract, or soon palls and satiates the senses it so lately ravished. It is a mark of politeness and good breeding, and is capable of inspiring the most refined sentiments, affections, and passions. Without it man is unfitted for social intercourse, and his presence in company would prove a manifest cause of offence. It has been justly observed that, "the different nations of the world are as much distinguished by their cleanliness, as by

their arts and sciences. The more they are advanced in civilization and refinement, the more they consult this part of politeness." No one perfectly clean in his person can be absolutely disagreeable; whilst no amount of personal charms in features, figure, or complexion, can render an individual companionable without it.

Addison regarded cleanliness as the foster-mother of affection, and as the most enduring of all the auxiliaries of personal beauty.

"Beauty commonly produces love; but cleanliness preserves it. Age itself is not unamiable whilst it is preserved clean and unsullied; like a piece of metal constantly kept smooth and bright, we look on it with more pleasure than on a new vessel that is cankered with rust."* But cleanliness is not only agreeable to others, and one of our social duties, it is pleasurable and serviceable to ourselves. Irrespective of its influence on the health and personal charms, its practice has been declared, by one of our recent and highest authorities, to be incompatible with many of the vices that prove destructive to both the body and the mind. "Through the prevalence of custom the most vicious habits lose their horror by being made familiar to us. On the contrary, those who live in the neighbourhood of good examples, fly from the first appearance of what is shocking or vicious, and thus pure and unsullied thoughts are naturally suggested to the mind by those objects which perpetually surround us, when they are beautiful and elegant in their kind."*

* The "*Spectator*."

In its relations to health, personal cleanliness is of the very highest importance. During life, the skin is continually subjected to abrasion, and continually undergoing the processes of reproduction and decay, by which the cuticle or scarf-skin, its exterior portion, is being constantly thrown off, as effete and useless matter, in the shape of very minute scales or dust. This, mingling with the oily, saline, and aqueous matter of the perspiration, and the waste particles of the dress, dust, &c., acquires sufficient adhesiveness to attach itself to the surface of the body, and to the clothing. In this way, unless the accumulation be daily removed by friction and washing, the channels of the perspiration become choked, and the functions of the skin, as a respiratory organ, interfered with, or even partially suspended. At the same time the clothing, and particularly the body linen, becomes loaded and contaminated with the exuviæ of the skin, the solid portion of the perspiration, and the ordinary exhalations from the body, and unless frequently renewed, is rendered unwholesome and unfit for use. The hair, too, becomes loaded with scurf and dust, and the pores of the skin under it choked with the exuviæ, &c., before referred to, by which the hair-bulbs "are strangled, as it were, in the performance of their natural functions." The teeth "accumulate organic particles in their interstices, and their enamel becomes encrusted with the minute (microscopic) skeletons of animalculæ that populate the mucous secretions of the mouth." All these are prejudicial to health, personal beauty, and refined enjoyment, and may be removed by the simple acts of cleanliness which

should be practised by all, and to which I shall hereafter refer.*

The ill consequences of uncleanliness, and particularly of a dirty skin—a skin loaded and obstructed with adhering refuse matter discarded by itself—are numerous and serious. Such matter forms a favourable medium for the absorption, and the transmission to the internal portions of the body, of noxious effluvia, vapours and gases, miasmata, and the aërial germs of infectious and contagious diseases. It is said that "the greater part of (contagious) poisons are conveyed to us through the external surface of our bodies; and it is fully proved that poison already communicated has been by cleanliness removed, before it could actually produce any bad effects. I here allude, in particular, to frequent washing, bathing, rinsing the mouth, combing and brushing the hair, and often changing the linen, clothing, and bedding.†

Such are the immediate effects of neglected ablution of the skin, and the neglect of other acts of personal cleanliness; the further consequences are of an equally serious character. The blood being deprived of one of its sources of oxygen, and of one of the outlets of its carbon and saline matter, becomes deteriorated, the functions of nutrition imperfect, and the temperature of the body lessened. The matters that should be thrown out of the system through the skin are retained, and have to be eliminated by other organs. The lungs, the kidneys, the liver, the bowels, are each, in their turn, overtasked to perform the func-

* *Vide* the following chapters; also the *Index*.

† Hufeland.

tions of another organ. At length they suffer from exhaustion, the health is disturbed, and incipient disease follows. The predisposition exists, and only waits for an exciting cause to give it full development. The period of incubation may be short or long —weeks, months, even years—according to the age and constitutional vigour of the person; but the evil day comes at last, and skin-diseases, nervous affections, diarrhœa, liver-complaints, consumption, dropsy, visceral obesity, or some other serious disease of the vital organs, ensue, destroying the last remnants of beauty, and rendering life uncomfortable, if not a burthen.*

A lady of vast discernment and of equal experience in these matters—herself as lovely and fascinating as she was accomplished and unfortunate — whose name is doubtlessly familiar to many of my readers, in addressing her sister that formed her audience, observed: "An important, and, I might say, the principal receipt which I shall give you for the promotion and preservation of your beauty is cleanliness, thorough cleanliness in the most extended sense of the word. It is an indispensable thing. It maintains the skin in its softness, the complexion in its lustre and natural hue, the limbs in their pliancy, the whole frame in its vigour and fairest light, the mind in its purity, and the spirits in the buoyancy of youth irrespective of age and condition. The frequent use of tepid water to the person, and particularly of the tepid bath, is not less grateful to the senses than it is salutary to health and beauty. It is

* Vide "*Cooley's Cyclopædia*," 4th ed., p. 3.

by such ablutions that accidental corporeal impurities are thrown off, cutaneous eruptions removed, and, while the surface of the body is preserved in its original purity and brightness, many threatening and beauty-destroying disorders are prevented."*

Washing or purification with water forms part of many of the ceremonials of the older religions of the world. Among the ancient Jews, ablutions were performed by both the priests and the people; and, with some modifications, they are still practised by this strange people at the present day. The ceremony of "purification" by means of water is frequently referred to in the Old Testament. Among the Mohammedans, ablutions form part of their devotions, and are enforced in the Koran. It is generally thought, that these ceremonies were originally instituted, among the Jews, with the view of promoting the sanitary condition of the people, and that Mohammed followed the example of the Jewish lawgiver.†

What further considerations and what further inducements than those just given need be offered to enforce the necessity of personal cleanliness? And, when it is added, that no dirty or neglected skin can long continue healthy, and ceasing to be healthy

* Lola Montes' "*Lectures.*"

† The Jews appear to suffer less from pestilential diseases than their neighbours; and, in many cases, they escape them altogether. It is stated that the Jews' locality at Hamburg was scarcely visited by cholera when it raged in that city; and that not a single Jew in Houndsditch (London) fell a victim to this disease during either of its visitations here. May not this immunity be accounted for in the above way, and also from the excellent quality of their animal food, which, after being killed by the priest, is carefully examined by him before distribution?

must also cease to be beautiful and pleasing, the argument in favour of the daily ablution of the whole surface of the body, or of as large a portion of it as possible, with pure water, will surely be complete.

However important and beneficial the free and frequent use of water for personal ablution may be, the effects arising from the immersion of the body in it, as in the practice of *bathing*, are far more extensive and complete. What the one does usefully, but not completely, the other accomplishes readily, satisfactorily, and perfectly. There is no absolute succedaneum for the entire bath. Its physiological effects are peculiar to itself, and of the utmost importance in hygiene, pathology, and medicine. Nor is the action of judicious bathing in the promotion of personal comfort and happiness, and personal beauty, less remarkable. Intellectual and moral vigour are also gradually, but materially influenced and promoted by its beneficial action on the system; for mind and conscience, being linked to matter in the "house we live in," become perturbed, or lethargic, in almost exact accordance with the fluctuations of our physical health. The soul and mind cabined within the confines of a dirty skin can no more exercise their godlike prerogatives of highest reason and activity, than the prisoner in a felon's cell can exercise his limbs with the vigour and agility of a free man. Healthy imagination thus becomes dormant or extinguished, and conscience itself obtunded or degraded into vice.

The comparative neglect of bathing in these realms continually furnishes a subject of comment to natives of the continent who visit or reside among us. This neglect is an enigma as difficult to solve as the fabled

riddles of the Sphinx. We are always talking about health, and continually professing to be seeking it; but the practical applications of the principles which we advocate, and the doctrines which we teach, are, unfortunately, the exceptions, and not the rule. The phlegmatic Englishman, unlike his lively French neighbour, is at heart indifferent and careless in this matter—he would, in too many cases, rather spend his spare coin, be they pence or silver, in pernicious luxury, or in intemperate indulgence, than in the healthy recreation of the bath.

On the Continent *maisons des bains** are almost as numerous as the chemists' and druggists' shops are in this country. Yet "the French need the former less than we do, because they live more temperately, and are less ground down to think and work; and because they perform general personal ablution with as much zeal as though it were a religious duty." "The *Messieurs* are wise enough to discover that life is not rendered one jot sweeter by passing sixteen hours a-day behind the desk or counter, to the exclusion of all recreation, except recreation be to count the gains of such excitement, or to indulge the hope of amassing a sufficiency to do the 'comfortable and important' at the close of a wearied life, when and which the infirmities of age forbid us to enjoy." "A Frenchman lives, works, and enjoys himself to the last. Prince Talleyrand died in armour; his life was a bouquet from which all but the sweetest flowers were excluded." "Advise an Englishman to take a bath; the answer is, he 'cannot spare the time, and hates the bother of uncravatting.' The

* Bathing-houses.

waste of the one, and the trouble of the other, add not to his income, whatever they may do to his health. The roast-beef, the brandied wines, and the London-brewed, are his stomach's deities; the minor godships being blue-pills and black-draughts. The latter are indispensable attendants upon the former, to temper down Mr. Bull, lest he become a giant in noses and carbuncles. A Frenchman knows no ill but what pleasure denies. He rarely has dyspepsia, gout, rheumatism, or fevers. Half his life is spent in Elysium—half ours in purgatory. Indigestion, headaches, nervousness, restless nights—the 'blues' when awake, and the 'terribles' when asleep—fall to the lot of the mind-absorbed and grossly-fed Londoner; whilst our lively Parisian, with his light meal and still more lightsome body, finds trouble only in broken limbs, or in positive starvation." *

The preceding recommendation of bathing applies chiefly to the *warm-bath* and the *tepid-bath*, which are alike adapted to the delicate and the robust, and to every condition of climate and season. *Cold-bathing*, in this climate, is only suited to the most healthy and vigorous, and can only be safely practised during the warmer months of the year; and in a mass of water that has been for some hours exposed to the rays of the sun, and sufficiently large to permit of the heat of the body being maintained by swimming or other active exercise. The *shower-bath* is an exception to these remarks, and is a convenient and invigorating substitute for other forms of bathing. The *plunge-bath* is also a partial exception; but it

* Dr. Culverwell, "*Baths and Bathing.*"

should be carefully avoided by those who are predisposed to heart-disease or brain-disease, or to congestion of any of the great viscera. I have known several fatal cases of apoplexy caused by it. *Sea-bathing*, from its stimulating and invigorating action on the skin and the whole nervous system, is not only most agreeable, but highly salutary, when indulged in at the proper season. It has also the important advantage over bathing in fresh water, that persons seldom take cold from it.

Sea-bathing, "on account of its stimulative and penetrating power, may be placed at the head of those means which regard the care of the skin; and it certainly supplies one of the first wants of the present generation, by opening the pores, and thereby re-invigorating the whole nervous system." "Besides its great power in cases of disease, it may be employed by those who are perfectly well, as the means most agreeable to nature for strengthening the body and preserving the health." * As an agent for promoting and preserving the softness and delicacy of the healthy skin, and the bright hues of the complexion, it is, however, inferior to the warm bath and the tepid bath.

For ordinary bathing to produce its best effects, the water should be soft and pure, and a little good soap sparingly but regularly employed whenever the state of the skin requires it. Hard water tends to make the skin rough and coarse, and is not so cleansing as pure, soft, natural water.

After leaving the ordinary bath, a tepid, or even a

* Hufeland.

cold shower-bath, may be taken with advantage. By employing distilled water for the latter, either alone or combined with a little rose-water (eau de rose), or orange-flower water, the luxury and effectiveness of the bath is increased. The addition of three or four ounces of glycerine to this water further improves it, and causes it to impart to the skin a delicacy, and a delightful sensation of softness, obtainable by no other means.*

The opinion that the warm bath is relaxing, which we sometimes hear expressed by those who are practically unacquainted with its use, is erroneous. It is only so when persons remain in it too long, or take it too often. As a rule, fifteen to twenty minutes is a sufficiently long space of time to indulge in it; and the best part of the day is either immediately before retiring to rest, or before dressing in the morning; preferably the first, as a night of refreshing sleep is almost sure to follow it. Neither this nor any other bath should be taken on a full stomach, nor soon after a meal. It is better to allow a couple of hours to elapse before doing so. Nor are those who indulge in a warm bath more liable to take cold than others. On the contrary, they are less so, unless they wilfully expose themselves, insufficiently clad (particularly about the neck and chest), to draughts of cold air.

The warm bath and the tepid bath are adapted to every age of life. The first is particularly congenial to the young, the delicate, and those declining

* The quantity of water thus employed need not exceed two or three quarts, if judiciously managed. Where expense is an object, the body may be sponged with a single quart, or less, placed in a basin, instead of using the bath.

in years. By means of it these last can often not only retard the effects of time upon them and prolong their lives, but preserve to themselves the faculties and personal feelings and enjoyments of their former years to a ripe old age. The late Duke of Wellington, after leading the trying life of a soldier and a man of the world until about the middle age, adopted the practice of taking a warm bath daily, and thus preserved his faculties, and surprising vigour, until the period of his death, an event which happened from an accidental surfeit, rather than from decay by age. In like manner the late Viscount Combermere, who recently died at the extreme age of ninety-six, is said to have preserved his faculties, and wonderful vigour for his years, to within a very short period prior to his decease.

It may be useful to the reader to know the ranges of the temperature of water appropriate to the respective baths. These are given in the following table :—

	Temperature Fahrenheit.	
Name.	Range.	Common average.
Cold bath	33° to 75°	50° to 55°
Temperate bath...	75 „ 82	78 „ 80
Tepid bath.....	82 „ 90	85 „ 86
Warm bath	90 „ 98	93 „ 94
Hot bath	98 „ 112	105 „ 106 *

The preceding remarks have reference to personal cleanliness, but it may be also observed here, that *domestic* or *household cleanliness* is scarcely less important.

* On the whole subject of bathing and baths (ordinary and medicated), including their construction, uses, effects, &c., *vide* the author's "*Cyclopædia*," 4th ed., pp. 275-285.

Without it the air within our homes would be perpetually vitiated, and the blessings of light and ventilation, and of salubrity of situation, rendered abortive.

Of *public cleanliness* it has been said that it does the same for our streets and our highways that the others do for our persons and dwellings. Without it the purity of the air of our cities and towns would be impaired and rendered insalubrious, and, in many cases, actually noxious and pestilential.

All these forms of cleanliness are essential to the health, happiness, and well-being of man living in civilized communities.

Another subject to which I will briefly allude, before closing this chapter, is *exercise*—exercise in the open air, in situations exposed to refreshing breezes and the genial sunlight. Without this all other efforts to preserve the body in vigorous health fail. It is a natural tonic and cosmetic, and is essential to give the glow of health to the otherwise pallid cheek, and to keep it there.

After personal cleanliness, and "after this moderation in the indulgence of pleasure which I have recommended," observed Lola Montes at one of her lectures, "the next specific for the preservation of beauty which I shall give you, is that of gentle daily *exercise* in the open air. Nature teaches us, in the gambols and sportiveness of the lower animals, that bodily exercise is necessary for the growth, vigour, and symmetry of the frame; whilst the too studious scholar and the indolent man of luxury exhibit in themselves the pernicious consequences of the want of it. Many a rich lady would give thousands of dollars for the full rounded-arm and the peach bloom on the

cheek of her kitchen-maid. Well! might she not have had both by the same amount of exercise and the same simple and natural mode of living?"

The poet tells us, that—

> "Health is the vital principle of bliss,
> And exercise of health."

CHAPTER XIV.

THE SKIN: ITS BEAUTY, USES, CONSTRUCTION, MANAGEMENT, &c.

EVERY person knows what the *skin* is, its external appearance, and its general properties; but there are many of my readers who may not be aware of its peculiar and wonderful construction, its compound character, and its manifold uses. It not merely acts as an organ of sense, and a protection to the surface of the body, but it clothes it, as it were, in a garment of the most delicate texture, and of the most surpassing loveliness. In perfect health it is gifted with exquisite sensibility, and while it possesses the softness of velvet, and exhibits the delicate hues of the lily, the carnation, and the rose, it is nevertheless gifted with extraordinary strength and power of resisting external injury, and is not only capable of repairing, but of actually renewing itself. "Though unprotected with hair, wool, or fur, or with feathers, or scales, as with the brute creation, the human skin is furnished with innumerable nerves, which endow it with extreme susceptibility to all the various vicissitudes of climate and of weather, and prompt the mind to provide suitable materials, in the shape of clothing, to shield it under all the circumstances in which it can be placed. The horse, the dog, the lion, cannot change its hair, or the bear its fur, even though it be transported to a climate the reverse of

that in which it was born; it must alike wear the robe of Nova Zembla under the scorching sun of Africa, or that of the tropics on the frozen plains of Siberia; and it will dwindle from this change, and probably perish; but man can suit his clothing to the latitude, and rove from clime to clime with comparative impunity.* His intelligence enables him to shield his skin from all the 'skyey influences' with proper raiment,†" and his taste leads him so to select and prepare this raiment as to serve both for the protection and adornment of his person.

The skin, though apparently a single membrane, is composed of three distinct layers or membranes, each of which has special duties to perform. The exterior of these, or that one which immediately meets the eye, is called the *cuticle*,‡ *epidermis*,§ or *scarf-skin*.‖ It is of uneven thickness, in some parts being extremely thin and delicate, and in others, particularly those exposed to friction, thicker and harder; in this respect being accommodated to the nature of the part it covers. It is an albuminous tissue, and in its general physical and chemical properties, for the most part, resembles the nails, and the quills of birds, from which it differs chiefly in degree of induration. It is destitute of feeling, and of absorbent power; and thus fulfils its duty as a

* Many animals do change their coats, to a certain extent, with changes and alternations of climate and season; but this change is limited and gradual.

† Green's "*Lectures*."

‡ From *cutis* (L.), the skin.

§ From επι, upon; and δερμα, the skin. The word is often anglicised by contraction into *epiderm*.

‖ So called, from its covering the whole body.

protective covering of the body in a more effective manner than it otherwise would do.* Throughout its whole surface it is thickly pervaded with minute pores, to permit the escape of the perspiration and other exhalations from the body. Its reparation and renewal are carried on at its under surface; whilst its damaged, worn-out, and useless portions, are thrown off in the form of whitish dust, or minute flakes or scales.†

Immediately under the cuticle, and resting on the cutis, is the *rete mucosum* or *mucous network*. It is a thin layer of soft, pulpy matter, of a fibrous character and reticular form, and appears to be the seat of the colour of the skin, with the hue of which it always coincides. It may be temporarily blanched by the action of weak solutions of chlorine, chloride of lime, and other bleachers.

Beneath the *rete mucosum*, and forming the third, last in succession inwards, and principal tegumentary covering of the body, is the *cutis*,‡ *derma*,§ or *true skin*.‖ It is a highly sensitive, vascular, gelatinous texture, of a very complex structure. It is of a

* The absorbent power of the skin, when the cuticle is perfect, arises from the substance absorbed penetrating, or being forced by friction, through the pores of the last, and then taken up by the absorbents of the true skin below. If the cuticle possessed absorbent power, contact with every noxious substance would endanger life.

† Scurf is an exaggerated instance of this desquamation of the cuticle. (*Vide* the next chapter.)

‡ Lat., the *skin*, or true skin.

§ Gr., *δερμα*, the skin, or true skin; often anglicised by contraction into *derm*.

‖ It is also called the *cutis vera* (L.), *corium* (L.), the skin, or true skin.

whitish colour and fibrous, and appears to be made up of an irregular species of network. Closer examination shows it to be composed of condensed cellular tissue, and to be very thickly supplied with absorbent and excretory vessels, and with arteries, veins, and nerves. It is here that the minute capillaries of the arteries spread themselves out, and, by means of the ducts of the sudorific glands or follicles, exhale the peculiar secretion which we call perspiration;* here the so-called roots of the hair terminate, and find nourishment; and here all the other functions of the skin are performed. It is this portion of the tegumentary covering of the body that gives the

* The importance of the perspiratory functions of the skin, as observed elsewhere, cannot be over estimated; nor can too much care be taken to keep them in a state of healthy integrity. Their use is to preserve the softness and sensibility of the skin, to maintain the temperature of the body at a uniform standard, and to remove from the system a number of compounds noxious to life. Regular and healthy perspiration, more particularly that usual form of it termed "insensible perspiration" is not merely in the highest degree conducive to health, but absolutely necessary to its very existence. Obstructed or suspended perspiration is one of the most common causes of catarrhs (colds), bronchitis, coughs, fevers, diarrhœa, &c.

The sudorific glands and the perspiratory pores pervade every portion of the skin, and are exceedingly numerous. The entire length of these pores, in the skin of a man of ordinary stature and bulk, is estimated at 1,750,000 inches, or nearly 28 miles. On the palm of the hand the orifices of these pores are faintly perceptible to the naked eye in hot weather, and are distinctly so, with a lens of small magnifying power.

The perspiration contains about one per cent. of solid animal and saline matter; the latter consisting chiefly of lactic acid and salts of soda and ammonia; the rest being water with variable quantities of carbonic acid, nitrogen, &c.

relative thickness to the whole skin; and it is the one which, when the scarf-skin and hair are removed, is converted into leather by the processes of tanning and tawing.

Such is the general structure of the human skin, "so complicated and yet so perfect, so delicate and yet so useful." As a protective natural covering of the body, "in conjunction with the animal senses, instincts, and appetites, and, above all, with an intelligent free-will," it "surpasses that of any other animal. It is absolute perfection. It combines within itself the powers of an organ of sense, of excretion, secretion, respiration, and nutrition. The integrity of its functions is not only highly conducive to health, but is absolutely essential to its perfect enjoyment, to both corporeal and mental vigour, and to beauty." Surely the preservation and promotion of this excellence, and the removal or alleviation of the effects of disease and accident that impair it, deserve our serious attention.

In health, the *management* of the *skin* is extremely simple, and consists chiefly in habitual cleanliness and daily personal ablution, as noticed in the preceding chapter. To preserve the softness of its texture, and the delicacy of its hues, it is also necessary to protect it, as much as possible, from external influences and all external accidents capable of injuriously affecting it. Exposure to the extremes of heat and cold, sudden and extreme changes of temperature, and the vicissitudes of weather and climate, tend to destroy its natural sensibility, to thicken and harden it, to render it coarse and rough, and, by causing the obstruction and rupture of its capillary arteries, to impart to it a

streaky, ruddy, weather-beaten appearance. Drying winds, whether hot or cold—the east and north-east, for instance, in this climate — also prove injurious, by carrying off the moisture which is essential to its suppleness and proper action; and this, in extreme cases, to a degree sufficient to destroy its vitality, and even to produce chaps or fissures in it. On the other hand, continual exposure to a moist atmosphere, or humidity or aqueous vapour in any form, tends to relax it, to reduce its tone and hue, and to render it injuriously susceptible to the temperature of the surrounding air, as well as to changes of it. Light and shade also affect the skin, but in opposite ways. Constant exposure to diffused daylight, and to the sunlight, when not too vivid, for some little time daily, is favourable to the health and beauty of the skin, and improves the hue of the complexion; but the direct rays of the sun, particularly the summer-sunshine, when long continued, thicken and darken it, and sometimes, in persons peculiarly susceptible, even blister it, or cause the hardened cuticle to exfoliate. An insufficient exposure to light, on the contrary, causes the skin to assume a pale and sickly hue, and to become lax and unhealthy.*

To obviate the ill effect of the exposure and external influences just alluded to, the dry skin, after ablution or bathing, may be slightly anointed with some mild simple oil, as that of the olive or the sweet-almond, as in the last operation of the ancient Roman bath,† friction being at the same time employed, and the

* *Vide* pages 155–6 (*antè*) ; also pp. 203–4 (*infrà*).

† *Vide* page 44 (*antè*).

whole surface subsequently gently wiped with a napkin or towel. Modern chemistry has, however, furnished us with glycerene, a substance which may be used instead of oil, and has the advantage of being more cleanly, effective, and congenial to the skin. By diluting this article with five or six times its bulk of pure water we have a wash or lotion which is not only capable of imparting delicacy, suppleness, and an agreeable sensation to the skin, but also of preserving it, to a very great extent, from the effects of heat and cold, drying winds, fervid sunshine, &c., as well as, by its permanently softening power, preventing its induration from friction or pressure, and the formation of callosities on it. For this purpose the skin need only be thoroughly moistened with it, the excess of moisture being subsequently removed by means of a soft towel.*

The importance of the due exposure of the body to daylight or sunlight, just referred to, cannot be too strongly insisted on. Light and warmth are powerful agents in the economy of our being. The former especially is an operative agent on which health, vigour, and even beauty itself depend. Withdraw the light of the sun, with its actinic or chemical rays, from the organic world, and all its various beings and objects would languish and gradually lose those charms which are now their characteristics. In its absence, the carnation-tint leaves the cheek of beauty, the cherry-hue of the lips changes to a leaden-purple, the eyes become glassy and expressionless, and the

* On the further uses of this substance, and preparations of it, *vide* the following chapters ; also the *Index.*

complexion assumes an unnatural, cadaverous appearance that speaks of sickness, night, and death. So powerful is daylight, so necessary to our well-being, that even its partial exclusion, or its insufficient admission to our apartments, soon tells its tale in the feeble health, the liability to the attacks of disease, and the pallid features—vacant and sunken, or flabby, pendent, and uninviting—of their inmates. Even the aspect of the rooms in which we pass most of our time, and the number or extent of their windows, is perceptible, by the trained eye, in the complexion and features of those that occupy them. So in the vegetable world—the bright and endlessly varied hues of flowers, and their sweet perfumes—even their very production—depend on sunlight. In obscure light plants grow lanky and become pale and feeble, they seldom produce flowers, and uniformly fail to ripen their seeds. In even partial darkness the green hue of their foliage gradually pales and disappears, and new growths, when they occur, are blanched or colourless.*

* It is here also worthy of remark, that those persons who spend most of their time in apartments with an aspect ranging from the north-west to the north-east, and to which the direct rays of the sun thus never penetrate, are generally of pale complexion, with a languid expression of the features, and enjoy less vigorous health than those otherwise circumstanced. This is particularly the case with artists, whose studios are usually chosen with a northern aspect, for the sake of the equable and diffused daylight thus secured. Fevers, and pestilential diseases generally, are always more frequent and severe among the inhabitants of such apartments than among those exposed for hours daily to the light of the sun. The actinic, or chemical rays of sunlight, are absolutely necessary to the enjoyment of vigorous health, and the possession of beauty. The diffused light from a northern sky is deficient in these rays.

The best method of keeping the skin *clean* and *healthy*, by ablution and baths, has been already generally alluded to, but here some further details may be given. The use of these, and the *washing* of the *skin* that forms part of the daily duties of the toilet, appear to be very simple matters, but writers on the subject differ in opinion as to the methods to be followed to render them perfect cleansers of the skin. Some of these regard the use of soap-and-water applied in the form of lather, with the hands, and afterwards thoroughly removed from the skin by copious affusions, rinsing or sluicing with water, or immersion in it, as the best method. This is probably the case when the skin is not materially dirty, or its pores or surface obstructed or loaded with the residual solid matter of the perspiration, or its own unctuous exudation and exuviæ. To remove these completely and readily something more than simple friction with the smooth hand is generally required. In such cases the use of a piece of flannel or serge, doubled and spread across the hand, or of a mitten or glove without divisions for the fingers, and of the same material, will be found most ready and effective. Friction with this, first with soap, and afterwards with water to rinse the soap off, will be found to cleanse the skin more thoroughly and quickly than any other method, and, by removing the worn-out portion of its surface, to impart to it a healthful glow and hue that is most refreshing and agreeable. This effect will be increased by wiping and rubbing the surface thoroughly dry with a coarse and moderately rough, but not a stiff towel, instead of with the fine, smooth diapers, which are now so commonly employed. At the bath, the flesh-brush,

usually provided there, will supersede the necessity of using the flannel.

It frequently happens that, owing to the locality or nature of one's residence, incessant occupation, deficient means, or other circumstances, baths, or even entire personal ablution, cannot be indulged in or only so occasionally. In such cases recourse may be had to *dry friction*, which may be carried to any extent short of actual irritation. This will be found not only capable of cleansing the skin, but advantageous, from exciting the cutaneous circulation, and invigorating the whole system, as well as the skin. The instrument usually employed for the purpose is the *flesh-brush*, of which there are several varieties; but those which have the bristles set on a leather back, are usually thought to be the most effective and the best. The *flesh-glove* or *flesh-rubber* of hair is a useful and very convenient modification of the common flesh-brush. Of these, that known as the "Indian kheesah" or "mitten" is superior to all others. For the back, which cannot be easily operated on with the hand, a flat band or belt of hair is employed. In the absence of flesh-brush, glove, and belt, a coarse towel wound round the hand, or even a stocking with the hand thrust into it, may be employed.

Apart from mere cleanliness, of which it is a ready and important means, the "benefits of friction, which consists of motion and heat, whether or not the same be raised by rubbing the body with a coarse cloth or with the flesh-brush, has advantages inconceivable and scarcely credible, by which the obstruction of the pores and the cutaneous glandules are opened, their stagnat-

ing juices broken up, dissolved, and rendered fit to be carried off in perspiration, in the room of which new juice will succeed with new vigour to the body; and longevity, as that great naturalist, my Lord Verulam, well observes, is in this way most certainly promoted."*

The daily vigorous use of the flesh-brush, or the flesh-glove, for those parts of the body covered with the clothing, independent of therapeutic action peculiar to itself, is probably the most healthful, effective, and ready substitute for the entire bath that can be employed under many of the circumstances by which we are frequently surrounded. Occasional personal ablution, or the use of the sponge-bath, after it, greatly increases its good effects.

* Daniel Turner.—That *longevity* is promoted by friction, there can be little doubt. The declining energy and decay from age appear to arise, or are at all events accompanied with and accelerated by, the gradually decreasing energy of the circulation, particularly in the minute vessels of the surface of the body, and in the extremities. Friction rouses and accelerates the circulation, and restores energy to these parts. It was recommended by a certain eminent physician of a past day as a panacea for premature decay, and all diseases depending on it, and as a powerful promotive of longevity.

When simple friction with the flesh-brush or flesh-glove, or even with the hand, is properly performed, and continued for some time, or frequently repeated, its influence in restoring tone and colour to the lax and pallid skin, "in reducing swelled glands, and swellings of the joints, as well as in relieving rheumatism and other pains, is very great." When performed by a second person, with equally lengthened and slow movements, by producing a continued repetition of an agreeable impression on the nervous system, it acts both as an anodyne and hypnotic. In this respect, "its influence is more powerful when aided by a monotonous but slow tune, which, although it operates on a distinct sense, yet by combination renders the friction more soporific" (Dr. R. E. Griffith).

To promote the *beauty* of the *skin*, the assistance of art is frequently had recourse to, and this not always in the most judicious manner. All that is necessary for this purpose, under ordinary circumstances, may be said to consist in the restoration or promotion of the general health and vigour of the body, and the functions of the skin in particular, as previously indicated. Beyond this we should proceed with caution, and should exercise care both in the adoption of general means, and the selection of special methods and applications to effect the objects desired.

The external applications that are commonly employed for improving the texture, clearness, and hue of the complexion, and of enhancing or preserving its varied charms, are the "cosmetics" referred to in the introductory chapter of this work, and will be fully treated on in a subsequent one.* Many of them, when judiciously selected and employed, are perfectly safe in use; but others are the reverse; and it may be said of nearly all of them, except simple soap-and-water, that they are seldom required, and that their habitual use is seldom unobjectionable when the general health is good, and the skin is in a perfectly healthy state.

Having noticed the general management of the skin in a state of health, a few remarks on it when diseased, or when its beauty is impaired by the effects of disease, medical treatment, accidents, or failing health, may prove interesting to the reader.

Diseases of the skin are very numerous and varied

* *Vide* Chapter XVII.; and for references to individual cosmetics, the *Index*.

in their character, and all of them more or less impair its beauty, whilst most of them disfigure it, and not a few render it loathsome, and their victims unfit for the social circle and society. It is, however, chiefly of those of a mild character, and of the milder forms of others, in which medical aid is seldom sought, and of the prevention and removal of their ill effects on the personal appearance, that I shall chiefly refer to here.

The small *black spots* and *marks* frequently observed on the skin in hot weather, particularly on the face, generally arise from the accumulation of the indurated solid matter of the perspiration in its pores. When they assume the form of small pimples (*acne punctata*), and often when otherwise, they may be removed by strong pressure between the fingers, or between the nails of the opposite fingers, followed by the use of hot soap-and-water. The subsequent daily application of a weak solution of bichloride of mercury, as in the form commonly known as Gowland's lotion, or of sulphate of zinc, will completely remove the swelling, and generally prevent their re-formation.*

Boils—"furunculi" of medical writers, and the "black-heads" of the vulgar—are well known inflammatory tumours of a superficial and more or less temporary character, which usually terminate by suppuration. They generally attack the healthy and robust during youth and early manhood, and seldom trouble persons who have reached the middle age of life. Though very annoying, and in their latter stages often painful, they are not dangerous. Their treatment is very simple. When first they begin to form,

* The formulæ for the *lotions* mentioned are given in a subsequent chapter. Vide *Index*.

they may sometimes be dispersed by friction with the fingers, lowering the diet, avoiding stimulating drinks, and by the use of mild aperients. When they exhibit persistency by gradual enlargement and increasing pain, it is advisable to promote their suppuration by the constant application of poultices of bread and linseed-meal; or when this is inconvenient, by the use of warm, stimulating embrocations, or covering them with some stimulating plaster. When the tumour is sufficiently mature, the matter should be evacuated by gentle pressure; or, when the urgency of the case demands it, the head of the tumour may be carefully opened with a lancet, or the point of a very sharp penknife, or a needle. In either case the wound should be dressed, twice a day, with a little simple ointment spread on a piece of lint or soft rag, and retained in its place by means of a bandage or a piece of adhesive plaster or strapping; observing, at each renewal of the dressing, to press out any matter present in the tumour, and to thoroughly cleanse its surface by gently wiping or washing it. The pain and inflammation generally subside on the first discharge of the matter, and in a few days the wound heals. The diet may be full and liberal until the maturation of the tumour and the discharge of the matter, after which it should be reduced, and the bowels kept gently open for a few days by the use of some mild aperient.*

When there is a predisposition to the formation of boils, excess in either eating or drinking should be

* For references as to the medicines, &c., mentioned, vide *Index*.

particularly avoided, and care should be taken that the bowels act regularly once a day. Tonics, as bark, quinine, or steel, may be had recourse to with advantage; as also the frequent use of the warm or tepid bath, or preferably, of sea-bathing, to keep the pores of the skin open. Occasional doses of the Abernethy-medicines will also often prevent their recurrence. A course of sarsaparilla may likewise be taken with advantage.*

Unnatural *blueness* of the *skin*—the "cyanosis" of pathologists—is said to arise from malformation of the heart, and then is irremediable. The blueness or slate-colour produced by the long-continued administration of the salts of silver may, however, be generally lessened, and occasionally removed, by the long use of iodide of potassium both internally and in the form of baths.† Nitric acid employed in the same way is sometimes serviceable;‡ as are also chlorinated baths and lotions.§

Permanent *discolorations* of the *skin*, not of the preceding kind, are generally lessened, and frequently removed, by the daily and long-continued use of a glycerinated solution of bichloride of mercury or

* Ibid.

† 2 to 5 grains of the iodide, twice a day, either made into a pill with a little powdered gum arabic and conserve of roses, or simply dissolved in water; for the bath of ordinary size, warm, 3 to 5 drachms. The same bath may be used three or four times, by simply adding 1 drachm of the iodide on each fresh occasion.

‡ Internally, 15 to 20 drops of dilute nitric acid (P.L.), twice a day, in a glass of water. For the bath, half an ounce of the concentrated acid to each gallon of water.

§ 4 to 8 ounces of chloride of lime to a bath of ordinary size, the water being only tepid or slightly warm.

Gowland's lotion. Others yield to a weak lotion of chloride of lime, employed in the same way. Those of a very obstinate character may be treated with occasional blisters, or in the way noticed under "moulds" (*infrà*). The *marks* of *gunpowder*, particularly when produced by "tattooing" or rubbing it into small punctures made in the skin, are generally very durable, and removed with great difficulty. They often continue for life.*

Dandriff is an exfoliation of the skin which differs from common scurfiness, chiefly in occurring in reddish patches. In its exaggerated forms, when the patches are irregular, and the cuticle is thrown off in large scales, accompanied with much irritation, it forms the "pityriasis" of pathologists, and the "branny tetter" of the vulgar. Its treatment consists in extreme cleanliness, the frequent use of warm soap-and-water, and attention to the diet, as noticed below under "eruptions." The itching and irritation may also be allayed, or greatly lessened, in the manner there indicated.†

Eruptions are too well known to require any lengthy description here. They are usually classified by writers on the subject into—*animalcular eruptions*, or those due to the presence of animalcula (minute acari) in the scarf-skin, which occasion much irritation, and of which the itch‡ furnishes a well-marked example;—*papular eruptions* or dry pimples;—*pustular eruptions* or mattery pimples, of which some forms are popularly known as crusted tetters;—*scaly*

* *Vide* page 94 (*antè*); also (*infrà*). † *Vide* "Scurf" (*infrà*).

‡ *Vide* page 216 (*infrà*).

eruptions or dry tetters; and—*vesicular eruptions* or watery pimples or vesicles.

The *treatment* of all of the above, except the first, in simple cases, where there is not much constitutional disarrangement, consists mainly in attention to the general principles of health—cleanliness, exercise, food, ventilation, and clothing. Occasional doses of mild saline aperients (Epsom-salts, cream of tartar, or phosphate of soda, or of sulphur combined with cream of tartar), should be taken, and warm or tepid bathing, preferably in sea-water, or ablution in warm soap-and-water, frequently had recourse to. Stimulants of all kinds should be avoided, and the red meats, ripe fruits, and the anti-scorbutic vegetables, should form a considerable portion of the diet. Lemonade, made by squeezing the juice of a lemon into a half-pint tumblerful of water, and sweetening it with a little sugar, should be frequently and liberally taken, as one of the best beverages in such cases. To relieve the itching and irritation (except in the pustular, crusted, and vesicular varieties), brisk friction with a flesh-brush, or a flesh-glove, may be employed. The parts should also be wetted with an appropriate lotion, after each friction or bath, or the use of soap-and-water.*

* These lotions may consist of half a teaspoonful of salt of tartar, or of the juice of a large lemon, or a wine-glassful of strong vinegar, to about three-quarters of a pint of pure water, 1 or 2 ounces of glycerine being in each case added. In the absence of glycerine, decoction of bran, or butter-milk, may be used. In the pustular and crusted varieties, 2 or 3 ounces of rectified spirit, or 5 or 6 ounces of good rum may be added, a like quantity of the water being omitted. (For a list of formulæ, see *Index.*)

When the habit of body is full and inflammatory, the diet should be lowered, and a depletive treatment adopted; when it is the reverse, the diet should be liberal, and, if necessary, a course of tonic medicine, as bark, quinine, steel, should be taken. Cod-liver oil also proves highly beneficial in all cases.

In all the scaly eruptions iodide of potassium internally, and iodurettted or sulphuretted lotions or baths, are invaluable. In many of them of a malignant and obstinate character, as *lepra*, *psoriasis*, *lupus*, &c., small doses of solution of arsenite of potassa (liquor arsenicalis),* or of Donovan's solution (solutio arsenici et hydrargyri iodidi),† prove highly serviceable. The last is probably the most active and certain remedy in such cases known. In the forms of psoriasis, popularly called *bakers' itch*, *grocers' itch*, and *washerwomen's itch*, the application of ointment of nitrate of mercury (unguentum hydrargyri nitratis), diluted with ten or twelve times its weight of lard, has been highly recommended. A course of sarsaparilla is also in most cases advantageous.

Vigorous daily exercise, so as to produce natural perspiration, is an active curative agent in all skin-diseases. Indeed, the best means of removing all the forms of obstinate eruptions and the predisposition to them, is to endeavour to restore the general health of the body in the manner which the existing circumstances may indicate. In trivial cases, where the space

* The *dose* is 3 to 5 drops, gradually and cautiously increased to 8 or 10, twice a day, after a meal.

† *Dose*, 10 to 20 drops, twice a day, as the last. Both these preparations are better used only under medical advice. (Vide *Index*.)

affected is not extensive, the daily application of a weak solution of bichloride of mercury, or of sulphate of zinc, to which a little glycerine has been added, will be found effective both for the removal of all the ordinary eruptions, and the prevention of their recurrence.

The means adopted for the removal of the visible effects of eruptions on the skin may be the same as those noticed *(infrà)* under small-pox.

The small, hard, distinct pimples—"acne," or acne simplex" of medical writers—that occur on the forehead, and occasionally on the temples and chin, generally yield to stimulating lotions consisting of equal parts of strong spirit or vinegar, and water, or to weak lotions of sulphate of zinc, or of bichloride of mercury, assisted by occasional doses of cooling laxatives, as the salines, or a mixture of sulphur and cream of tartar.*

Freckles, or the round or oval-shaped yellowish or brownish-yellow spots, resembling stains, common on the face and the backs of the hands of persons with a fair and delicate skin who are much exposed to the direct rays of the sun in hot weather, are of little importance in themselves, and have nothing to do with the general health. Ladies who desire to remove them may have recourse to the frequent application of dilute spirit, or lemon-juice, or a lotion formed by adding acetic, hydrochloric, nitric, or sulphuric acid, or liquor of potassa, to water, until it is just strong enough to slightly prick the tongue. One part of good Jamaica

* The *acne punctata* of pathologists is noticed at page 209 *(antè)*, under "black spots."

rum to two parts of lemon-juice or weak vinegar, is a good form of lotion for the purpose. Gowland's lotion, referred to elsewhere, is also an effective application. The effect of all these lotions is increased by the addition of a little glycerine.

The preceding are also occasionally called "common freckles," "summer-freckles," and "sun-freckles." In some cases they are very persistent, and resist all attempts to remove them while the exposure that produces them is continued. Their appearance may be prevented by greater use of the veil, parasol, or sun-shade, or avoidance of exposure to the sun during the heat of the day.*

Another variety, popularly known as *cold freckles*, occurs at all seasons of the year, and usually depends on disordered health or some disturbance of the natural functions of the skin. Here the only external application that proves useful is the solution of bichloride of mercury (P. L.) and glycerine, or Gowland's lotions.†

The *Itch*—"psora" and "scabies" of medical authors, the "gale" of the French — already referred to,‡ in its common form, is an eruption of minute vesicles, generally containing animalcula (acari), and of which the principal seats are between the fingers, bend of the wrist, &c. It is accompanied by intense itching of the parts affected, which is only aggravated by scratching. The usual treatment is with sulphur-ointment (simple or compound), well rubbed in once or twice a day, a spoonful (more or

* For references to the preparations named, and various cosmetic applications to remove freckles, see *Index*.

† Ibid. ‡ *Vide* page 212.

less) of flowers of sulphur, mixed with treacle or milk, being taken at the same time, night and morning. Where the external use of sulphur is objectionable, on account of its smell, a sulphuretted bath or lotion, or one of chloride of lime, may be used instead. In all cases extreme cleanliness, with the free use of soap-and-water, is a *sine quâ non* in the treatment.*

The small soft discolorations and excrescences of the skin, popularly called *moles*, may be removed by touching them every second or third day with strong acetic or nitric acid, or with lunar caustic. If covered with hair, they should be shaved first. When this fails, they may be easily and safely removed by a very simple surgical operation. When they are large and form the *nævi* (proper)—the "mother-marks" of the vulgar—one or other of the plans noticed under "small-pox" (*infrà*) may be adopted.

Extreme *paleness* of the *skin*, when not symptomatic of any primary disease, generally arises from debility, or from the languid circulation of the blood at the surface of the body; often also from insufficient or improper

* The itch is highly contagious, and is readily communicable by slight contact with the infested person, or with his clothes, or articles handled by him. Uncleanliness, low living, bad air, the use of certain kinds of food, and a bad habit of body, are the predisposing causes. The long continued use of oatmeal-porridge as a principal article of food, and a deficiency of good wheaten bread and meat, is said to be the reason why the itch is so common among the lower orders of the Scotch, and in our workhouses. If a sufficiency of oatmeal, either in the form of bread or porridge, be taken to maintain the consumer in health, it is the dearest food of all the cereal grains. Hence it has been often asked, why is it so great a favourite with the poor-law commissioners? It contributes to fill our workhouses and gaols with cases of itch and scurvy. (For references to formulæ, vide *Index*.)

food, want of out-door exercise, and the like. The main treatment is evident. Warm baths, friction, and stimulating lotions and cosmetics may be here employed, together with a course of some mild chalybeate (as the lactate, protophosphate, or ammonia-citrate of iron), and hypophosphite of soda.*

The paleness of albinos, known as "albinoism," depends on the partial absence or morbid condition of the rete mucosum, and is incurable.

Roughness and *coarseness* of the *skin*, when not depending on any particular disease, may be removed, or greatly lessened, by daily friction with mild unguents or oil, or by moistening the part, night and morning, with a weak solution of bichloride of mercury containing a little glycerine.†

Rashes and *redness* of the *skin*, of a common character, often arise from very trifling causes, among which indigestion, suppressed perspiration, irritation, and the like, are the most frequent. *Nettle-rash* or *urticaria*, so called from the appearance and tingling sensation resembling those caused by the sting of nettles, in some habits of body, is very apt to follow the use of indigestible and unwholesome food. It is usually of short duration and recurrent. The treatment consists in the administration of mild saline aperients, and, in severe cases, of an emetic, particularly where the stomach is still loaded with indigestible matter. These should be followed by the copious use of lemonade made from the fresh-expressed juice. The patient should be lightly but warmly clothed during the attack, and exposure to cold, or to draughts

* For reference to formulæ, vide *Index*. † Ibid.

of cold air, should be carefully avoided. The further treatment may be similar to that noticed under eruptions. To prevent the recurrence of the attack the objectionable articles of food, and any other known exciting causes, must be avoided. *Red rash, red blotch,* or *fiery spot,* a common consequence of disordered health, a sudden fit of dyspepsia, and, in females, of tight lacing, and *rose-rash, false measles,* or *roseola,* having commonly a similar origin to the preceding, for the most part require the same treatment.

Scurf—"furfur," or "furfura"—is a formation depending on the natural and healthy exfoliation of the skin on every part of the body on which hair or down grows, but most extensive and observable on the scalp, on account of the abundance and darker colour of the hair there. Scurfiness, or excessive scurfiness, is the result of morbid action, and may be treated by the frequent use of the flesh-brush or hair-brush, ablution with soap and water, and the use of mild, stimulating, astringent, or detergent lotions.*

Scurvy—"scorbutus" of medical writers—is a disease which, even in its incipient and early stages, when its presence is often unsuspected, is most injurious to the skin and the complexion. It usually commences with unnatural sallowness, debility, and low spirits. As it proceeds, the gums become sore, spongy, and apt to bleed on the slightest pressure or friction; the teeth loosen, and the breath acquires a fœtid odour; the legs swell, eruptions appear on different parts of the body, and at length the patient sinks under general emaciation, diarrhœa, and hæ-

* See "Dandriff," page 212 (*antè*); also the following chapter on the "Hair."

morrhages. Its chief cause is improper food, or rather the absence or insufficient supply of fresh meat and vegetables in the diet; to which cold, humidity, want of exercise and fresh air, may be added as secondary ones. Hence its frequent fatal visitations formerly on ship-board, and its still occasional occurrence in ill-victualled ships during long voyages. The treatment mainly consists in adopting a liberal diet of fresh animal food and green vegetables, with ripe fruit and an ample allowance of good mild ale or beer, or lemonade made from the fresh-expressed juice, as beverages. Effervescing draughts formed with bicarbonate of potash (not soda) are also very efficacious. In serious cases, tonics, as quinine and steel, should also be administered.*

Small-pox—"variola" of the medical profession—is a malignant, contagious disease, which, happily

* An insufficient supply of fresh meat, and particularly the absence of fresh vegetables, especially potatoes, in the diet, are undoubtedly the chief causes of the almost innumerable mild cases of scurvy now so common. Potatoes are rich in potassa and phosphates—substances absolutely necessary to the health of the muscular and other tissues—though they possess little other flesh-forming matter. The substitution, a few years since, of rice—an article deficient in these substances—for potatoes, in the dietary of our workhouses and gaols, was productive of the most serious consequences. In one case that came under the author's notice—that of a large union workhouse—nine or ten deaths from scurvy and closely allied diseases occurred within a single fortnight after this change was made; and the health of the remaining inmates, many of whom had fallen ill, was only restored by returning to the use of potatoes. The poor constantly reject rice when they can obtain potatoes, a preference which evidently depends on something more than mere whim or taste. (*Vide* "Eruptions," p. 212, 5; also Note (*), p. 217, *antè*).

for society, owing to the general practice of vaccination, is now comparatively seldom met with, although, at no very remote date, it was very common and fatal in these realms.* Its medical treatment, owing to the severity and danger of the disease, does not properly fall within the province of the present work. The prevention and removal of its ill effects on the personal appearance will, therefore, be alone spoken of here.

To prevent the permanent disfiguration of the skin by the pustules of small-pox, called "pitting" or "pock-marks," various plans are adopted, the chief and most certain of which have for their object the exclusion of the light and air. The application, on the third day, of a mask formed of calico or thick muslin,† freely covered with mercurial ointment, and having holes cut in it for the nostrils, eyes, and mouth, will, in general, fully effect this object.‡ It may be renewed every other day, or daily, if necessary; an operation which is best performed by candlelight; and its use should be continued until the symptoms of the disease disappear. Another plan, highly spoken of, is to completely coat the entire face with gold-leaf. The application of gold-beater's-skin,§ in a similar manner, is also an effective method, particularly if its

* Smallpox is not, however, a rare disease; since, in this metropolis alone, about one thousand persons die annually of it. The "lives of six to eight hundred" of these persons "might be saved by an (efficient) Act of the legislature." (*Medical Times.*)

† That of a yellow or a black colour is preferable, so long as the dye is such as not to rub off.

‡ Dr. Stewardson.

§ For the best method of applying this article, see a subsequent chapter.

slightly moistened surface be afterwards dusted over with some dark powder, as lamp-black, or black-lead, to render it opaque.* The excess of powder that refuses to adhere, after dabbing it with a soft wad of cotton-wool, may be blown off with the breath or a pair of bellows. The puncture of the pustules as soon as they are mature has also been recommended to prevent "pitting;" a plan which may be adopted either by itself, or conjointly with one of those already mentioned. These methods should be supported by keeping the patient comfortably cool, on a mattrass,† in a cool and well-ventilated apartment into which little light is admitted, antiseptic cooling drinks being at the same time freely taken.

The removal of "pock-marks," particularly old ones, is a matter of greater difficulty and time than their prevention. In common cases the continued use of a tepid glycerinated iodurettted lotion twice a day, or daily gentle friction with warm oils slightly iodurettted, will produce a manifest improvement, and ultimately wholly or in part remove them. The long continued daily use of glycerinated solution of bichloride of mercury (P. L.), or of Gowland's lotion, will also frequently do the same, and will invariably lessen them. Warm sea-water baths are likewise useful, and may be taken at the same time.

When more immediate effects are desired, a more active line of treatment must be adopted, and with *corresponding caution*. For this purpose the surface of the skin may be painted once a week, by means of a small

* Or one of these articles may be mixed up with a little lard or butter, to make it adhere, and then smeared over the surface.

† Lying in a hot, soft bed, is very prejudicial.

soft brush, with tincture of iodine (simple or compound), the ioduretted lotion being used daily, as before, during the intervals;* or it may be wetted once a week, or oftener, according to the effect produced, with acetic acid sufficiently strong to cause rubefaction and subsequent slight desquamation of the cuticle,† the bichloride-lotion being used once or twice daily, at the same time. Instead of acetic acid, a solution of nitrate of silver ‡ is sometimes employed, at intervals of twelve or fifteen days; but owing to the temporary blackening of the cuticle, which it produces, it can only be used when persons can seclude themselves for a few days after each application.§

As the application of the tincture of iodine, acetic acid, and nitrate-solution, to very delicate skins is sometimes liable to set up considerable

* *Vide* Note (§), *infrà*.

† That known as Beaufoy's acetic acid (sp. gr. about 1·044), possesses these qualities; but until experience has been obtained in its use, it should be employed only when somewhat diluted with water.

‡ The strength may be half a drachm of the *nitrate* to a fluid ounce of pure water, gradually increased in strength to one drachm to the ounce; the latter being at all times a proper strength when it is to be applied to only a small extent of surface.

§ Organic substances wetted with solution of nitrate of silver, turn black on exposure to light. In the case of the cuticle, the blackened surface peels off in a few days, leaving the skin under it of increased delicacy, and of its natural colour. If the cautions in the text, and the preceding notes, be disregarded by the reader, he will have only himself to blame. The treatment named is perfectly safe—indeed, harmless—when properly and carefully followed. Other methods there are which are more rapid and certain, but being dangerous in non-professional hands, I have purposely omitted them.

irritation, it is advisable to use them only of half-strength the first time, and to apply them only to a small portion of the surface at once; by which experience as to their effects will be obtained, and from which their future strength may be regulated. They should never be applied to a large surface at any one time. A good way is to try them the day before their use on the soft fleshy inner side of the fore-arm, by way of experiment. Great care must also be taken to avoid the eyes, lips, &c., in using them. Desquamation of the altered cuticle maybe facilitated by the free use of warm water.*

Wrinkles and *looseness* of the *skin* depend chiefly on the attenuation of the cutis or true skin, and the reduction in the bulk of the underlying surfacial portions of the body. They cannot be regarded as a disease of the skin; but are the result of long-continued bad health, anxiety and study, and of general emaciation and old age. Cleanliness, nutritious food, vigorous out-door exercise, agreeable occupation of the mind, and an equable and happy temper, retard their formation. Whatever tends to promote the general health, and to increase the bulk of the body, and particularly the deposition of fat in the cellular tissues, also tends to remove them, and to increase the smoothness and beauty of the skin. The free and

* As small-pox is still not an infrequent disease, the interest in the subject of the prevention and removal of its permanent effects on the skin continues unabated, as may be seen by the frequent inquiries about it in the popular periodicals of the day. When we recollect how many beautiful faces are disfigured by small-pox, and how many gentle and deserving beings have had their prospects in life thus blasted, it is surely important to be able to rob this fell disease of more than half its sting. (*Vide* Note (*), page 221, *ante*).

frequent use of warm soap-and-water, followed by the daily use of mild, stimulating, cosmetic lotions or fomentations, or friction with warm oil of a like character, and cod-liver oil internally, is all that art can do for the purpose.

Among *injuries* and *disfigurements* of the skin from wounds, medical treatment, accidents, and the like, may be mentioned—

Abrasions, or superficial injuries of the skin arising from the partial removal of the cuticle by friction, in most cases merely require to be protected from dirt and further injury, in any convenient manner. A piece of lint or soft rag, or of common sticking-plaster or strapping, or goldbeater's skin, is suitable for this purpose. When the surface is extensive, or irritable, the lint may be advantageously spread with a little spermaceti-ointment or cold-cream before applying it. In all cases any adhering dirt, sand, or gravel, should be first removed by the affusion of warm or tepid water, or by means of a soft sponge and water. The marks left by them usually disappear in a short time, of themselves. When this is not the case, they may be treated in the manner noticed under "scars."

The *marks* left by *blisters*, *irritating ointments* and *lotions*, *&c.*, may also be treated like scars, or the marks left by eruptions, as pointed out elsewhere.

Bruises or *contusions*, unless serious, do not require special attention, and usually disappear in a few days, of themselves. In popular language, the former name is applied chiefly to cases in which there is extravasation of blood, owing to the rupture of the minute vessels of the skin, with consequent discoloration. The treatment, if any be adopted, may consist

in fomenting the part with warm water, or in friction with a little opodeldoc or soap-liniment, or hartshorn-and-oil. If there be much inflammation, the part may be freely bathed with a lotion of weak goulard-water, or with vinegar-and-water. In severe cases, leeches or the cupping-glass may be applied.

The treatment of *burns* and *scalds* essentially consists in protecting the part from the air and light. When the injury is superficial and slight, a little creasote may be applied, and the part then covered with a dressing of yellow basilicon (resin-cerate), or other simple ointment; or with a bandage rendered air-tight by means of thick solution of gum or starch, or white of egg. Goldbeater's skin, India-rubber court-plaster or sticking-plaster, and collodion, are admirably adapted for the purpose; the last being preferable whenever it is at hand.* When the part is very hot and painful, a large poultice of linseed-meal, to which a liberal portion of lard has been added, and on the surface of which a few drops of creasote have been spread, is a suitable application. It should not be changed sooner than the following day. Cooling lotions may also be applied to the surrounding parts. If the injury be a scald, the vesicle or bladder should be snipped with a pair of scissors, or freely pierced with a needle, and the water which it contains gently

* Collodion is a solution of gun-cotton (pyroxiline) in ether to which a small portion of alcohol has been added. It is only necessary to drop it on the wound or surface, previously wiped clean. It instantly spreads and solidifies into a solid, adhesive, and highly protective skin or film. It is also highly useful in abrasions, cuts, raw wounds produced by violence, &c. The flesh-coloured, medicated collodion of the Cutaneous Hospital (see *Index*), is preferable to the simple article for this purpose.

squeezed out, before applying any of the preceding dressings. Plunging the part into very cold water *immediately* after receiving an injury of this kind, and keeping it immersed for some time, will not only relieve the pain, but frequently prevent the necessity of any further application to it. In all ordinary cases of a serious character, cooling laxatives should be administered, and the diet should be rather low until the inflammatory symptoms subside. The marks left by burns are always more or less permanent, but they may be often reduced or rendered less conspicuous by the treatment mentioned under scars, &c.

Cuts and *incised wounds*, as well as others of a like character, after being freed from blood and dirt by means of a piece of lint or soft rag, or better, when large, by the affusion of water, or with a soft sponge and water, should have their sides drawn close together, and retained in their places, by means of a piece, or small pieces, of strapping or adhesive plaster. This dressing should not be meddled with for a couple of days, by which time the wound will usually have healed by the 'first intention.'* When the wound is large, or when the nature of the part renders adhesive plaster insufficient, the usual plan is to sew it up, for which purpose the assistance of a surgeon must be sought. In more serious cases, to prevent the accession of inflammatory symptoms, the part should be kept constantly covered with a cold-water dressing.† A little creasote dropped on

* That is rapidly, without supervenient inflammation or suppuration.

† That is, lint or soft rag, several times doubled, wetted with cold water, and laid on the part.

the wound, previously freed from blood, or a small piece of lint or soft rag wetted with this liquid and then bound over it, will generally stop local bleeding of this kind, when not extensive. A film of collodion is also very effective.* Friar's balsam (compound tincture of benzoin), quick-drying varnish, copperas-water, black ink, &c., are also popular styptics applied in the same way. A piece of matico-leaf (soldier's herb), pressed on the spot with the finger, is very effective in stopping the bleeding of small cuts, leech-bites, &c.† A little of the fur plucked from a black beaver-hat, and used in the same way, is a remedy often resorted to by persons who cut themselves in shaving.‡

Excoriations, in popular language, are those cases of soreness produced by chafing under the arms, behind the ears, between the thighs, and in the wrinkles and folds of the skin generally. They occur chiefly in infancy, and in stout persons with a delicate skin, who perspire excessively. Extreme cleanliness, and carefully wiping the parts dry after washing, with the subsequent use of a little violet-powder or finely powdered starch, or French chalk scraped or grated very fine, dusted over the parts once or twice a day, will generally remove them and prevent their recurrence.

Frost-bites should be treated by long-continued and patient friction with the hands or a piece of flannel, care being taken to avoid the fire, or even a heated

* Vide *Note* (*), p. 226 (*antè*).

† Vide "*Prov. Med. & Surg. Journ.*," June, 1842.

‡ For the removal of the marks left by cuts, &c., vide *Scars* (*infrà*); also the *Face* and *Beard* (further on).

apartment, until the healthy circulation of the parts be fully restored. Disfigurations left by them may be treated in the same way as those from burns, &c.

The *scar* ('cicatrix') left by wounds and ulcers is generally more or less permanent, but becomes slighter by age, by increased development of the surfacial muscles, and particularly by the deposit of fat in the cellular tissue. When the tone of the part is thoroughly re-established, but not before, the daily use of warm soap-and-water, or warm bathing (preferably in sea-water), followed by gentle friction with warm olive or almond oil, either simple or very slightly ioduretted, will tend to reduce the disfigurement. Glycerinated lotion of bichloride of mercury may often be advantageously substituted for the oil.*

Galls, or thickened and indurated places in the skin produced by friction and pressure, may be removed in the same way as corns, &c.†

The discoloration, roughness, exfoliation, or occasional blistering of the skin, popularly called *sun-bites* or *sun-strokes* (of the skin), may be removed by rest and seclusion, and the daily application of a little cold-cream or salad or almond oil. Their prevention has been already noticed.‡

* For references to the formulæ referred to, vide *Index*.

† See the *Feet*, in a subsequent chapter; also page 173 (*antè*).

‡ *Vide* pp. 202–3, 215–6, &c. (*antè*).

CHAPTER XV.

THE HAIR: ITS ESTIMATION, STRUCTURE, GROWTH, MANAGEMENT, ETC.

THE hair is not only invaluable as a protective covering of the head, but it gives a finish and imparts unequalled grace to the features which it surrounds. Sculptors and painters have bestowed on its representation their highest skill and care, and its description and praises have been sung in the sweetest lays by the poets of all ages. Whether in flowing ringlets, chaste and simple bands, or graceful braids artistically disposed, it is equally charming, and clothes with fascination even the simplest forms of beauty:—

> "O wondrous, wondrous, is her hair!
> A braided wealth of golden brown,
> That drops on neck, and temples bare." *

If there be one point more than another in which the tastes of mankind appear to agree, it is that rich, luxuriant, flowing hair, is not merely beautiful in itself, but an important—nay, an essential auxiliary to the highest development of the personal charms. Among all the refined nations of antiquity, as in all time since, the care, arrangement, and decoration of the hair, formed a prominent, and generally the

* "*Emerald Wreath.*"

leading portion of their toilet. The ancient Egyptians and Assyrians, and other Eastern nations, bestowed on it the most elaborate attention.* The ancient Jews, like their modern descendants, were proverbial for the luxuriance and richness of their hair, and the care which they devoted to it.† Glossy, flowing, black hair is represented to have been the 'glory' of the ancient Jewess, and in her person to have exhibited charms of the most imposing character; whilst the chasteness of its arrangement was only equalled by its almost magic beauty. Nor was this luxuriance, and this attention to the hair, confined to the gentler sex; for among the pagan Orientals the hair and beard of the males were not less sedulously attended to. Among the males of Judah and Israel, long flowing ringlets appear to have been regarded as highly desirable and attractive. The reputed beauty and the prodigious length and weight of the hair of Absalom, the son of David, as recorded in the sacred text, would be sufficient to startle the most enthusiastic modern dandy that cultivates the crinal ornament of his person.‡ Solomon the wise, another son of David, conceived the beauty of the hair sufficiently dignified to express figuratively the graces of the church.§

* *Vide* Chapter IV. (*antè*). † *Vide* Chapter III. (*antè*).

‡ *Vide* 2 *Sam.* xiv. 25–6; also 2 *Sam.* xviii. 9, referred to at page 17 (*antè*). It is not too much to assume, that the weight given in the first of these is an error of the copyists employed by Ezra, during their transcription of the collected fragments of the previously scattered books.

§ *Solomon's Song*, vi. 5.—The goats of Palestine, alluded to by Solomon, are proverbial for the softness and beauty of their coats. It is the hair of a similar species of goat that forms the substance of

Long, luxuriant hair was as much esteemed by many of the ancient European nations as by the Asiatics, although their attentions to it were of a ruder and less elaborate character. This was particularly the case with the northern nations, and with some of those of western Europe. The cultivation and regard of the hair was a passion in Gaul,* and cutting and cropping it were employed as punishments. The ancient royal family of France, as a particular mark of distinction and privilege of the kings and the princes of the blood, had to wear "long hair artfully dressed and curled." The clerical tonsure is said to be of apostolic institution.† At a later date Pope Anicetus forbade the clergy to wear long hair.‡

In modern times, the high estimation in which a beautiful head of hair is held, is probably as great as at any former period of the world's history. It is still regarded as an important ingredient in manly beauty, and as one of the very essentials of feminine loveliness and fascination. All persons are proud of it—all covet it—all admire it. Indeed, it may be truly said, that all persons, except the most indolent, vulgar, and degraded, are more or less sedulous in their endeavours, in private, to improve their hair; and by tasteful arrangement to set it off to the best advantage.

The interest taken in the hair at the present day is shown by the enormous sums which are annually

the renowned shawls of Cashmere, some of which have fetched 500 to 600 guineas, and even more, in Europe.

* Hence arose the appellation "*Gallia comata*."

† Isidorus Hispalensis, Gibbon, &c. ‡ A.D. 755.

spent in western Europe, and in America, in articles of the toilet connected with it, and in hair-cosmetics. The hair appears to be the all-absorbing subject of the toilet in the minds of the fastidious Englishman and the polished Frenchman;* so much so, indeed, as to often lead to negligence in the performance of many of its other important details—a sufficient proof of the personal interest with which the hair is regarded. In France the hair, even more than in England, is an especial object of attention. From the number of persons there connected with the toilet and cosmetic arts and dress, and particularly with the hair, an unsophisticated stranger might almost be led to suppose it to be a nation of barbers, friseurs, perfumers, tailors, milliners, &c.†

The hair, though devoid of sensibility, and unsusceptible of expression under the influence of the will and the ordinary mental feelings, like the mobile portions of the face, and though it may be popularly regarded rather in the light of a parasitic growth than

* The former has been bantered by the latter on his propensity, every time he pulls off his hat, to either stroke down his hair with his hand, or to comb it into his favourite style with his fingers; a similar weakness to that which prompts him to vigorously poke the fire in every room which he enters. Some foreigners declare that they can recognize Mr. John Bull anywhere by these little national escapades. Some years since, before international exhibitions, steam-boats, and railways, had mutually familiarized the two nations with each other's manners, a French comedian, in playing the part of an Englishman, would have thought his representation of the character imperfect, had he not exhibited the hair-foible before his audience. This use of the fingers, or of the poker, is never seen in the well-bred English gentleman. They are now characteristic of snobs only. (*Vide* pp. 77, 78.)

† *Vide* page 83 (*antè*).

as an essential portion of the body, it is capable of being affected by the stronger emotions and passions, and even of aiding their expression in the features. Who is there that, at some period or other of his life, if only in childhood, in a moment of sudden terror or horror, has not experienced the sensation popularly described as "the hair standing on end"? or who is there that, at some time or other, has not witnessed the partial erection of the hair in children or females under like violent emotions, or seen the representation of it in sculptures or paintings?* Those passions, so aptly styled by Gray "the vultures of the mind," frequently affect, with wonderful rapidity, the health of both the body and the mind, which wreck the hair soon sympathizes with and shares. Instances are recorded in which violent grief, in a few weeks, has blanched the hair and anticipated the effects of age; and others, in which intense terror or horror has effected the same with even greater celerity, the change having occurred in a few days, or even in a few hours.† Byron alludes to these facts in his "Prisoner of Chillon":—

"My hair is gray, but not with years,
Nor came it white
In a single night,
As men's have done from sudden fears."‡

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* Both the sensation, and the erection referred to, actually belong to or depend on the skin, from which the hair springs.

† A case of this kind actually occurred within the author's knowledge some years since. It arose from the violent emotions caused by sudden loss of his ship, and subsequent exposure, the victim being the captain.

‡ "Ludovico Sforza, and others. The same is asserted of Marie Antoinette's, the wife of Louis XVI., though not in quite so short

The hair, too, often indirectly becomes, in other ways, a rude exponent of perturbations of the mind. In moments of intense thought, hesitation, and perplexity, where does the hand unconsciously wander to, and the busy fingers find occupation? And in grief —woman's grief—what is so common?—

"A wreck of fair and glossy curls, and trailing
Raggedly down. Hast thou not seen hair so?
Thou mayst behold it in a woman wailing
In grief unutterable. In heavy woe
The fingers rush amid the banded hair,
Slipping the smooth and comely ringlets there,
As if confusion were affliction's order.
Read thou how Constance let her tresses fall
Around her throbbing temples, like a border,
At her poor Arthur's fate. And women all
Are Constances in this, that, with strong passion,
They crush the beauty which of old they cherish'd;
For sorrow hath no sympathy with fashion,
And outward grace decays when inward joy hath perish'd." *

The *formation* and *physical structure* of the *hair* is very complicated and beautiful. On careful and minute inspection, it is seen to consist of elongated horny filaments, or tubes, which derive their elasticity and flexibility from their attenuated form. It is secreted and formed by certain minute conical-shaped glands called the 'hair-bulbs,' and certain vessels called the 'hair-capsules,' both of which are lodged in the network of the cutis or true-skin. The rudimentary hairs are elaborated in the first in a semi-fluid state, and assume the form of a fluted pith, which is

a period. Grief is said to have the same effect; to such, and not to fear, its change in her is to be attributed." (*Note* to the "*Prisoner of Chillon.*")

* E. H. Burrington, "*Revelations of the Beautiful*," p. 217.

then invested by the capsules with a semi-transparent horny sheath, giving a tubular and twofold structure to the hair. As these rudimentary hairs develop themselves and harden, they push themselves gradually through certain pores or passages in the skin, called the 'hair-tubes,' or 'hair-canals,' and appear at the surface in the form of true hair, of which the texture becomes harder the further it extends from the skin. These tubes are lined with a thin layer of cuticle, which adheres to the base of the newly-formed hair next the bulb, forming the white sheath or ring observed round the base of a forcibly-plucked hair, which is popularly, but incorrectly, regarded as its root. They are also placed obliquely, and not perpendicularly, in the skin, by which the 'set' or direction of the hairs on the surface of the head is determined. It is the form which these canals assume in their course outwards that gives some of its external characters to the hair. In Europeans these tubes are generally straight, or only slightly curvilinear; the exceptions being in those who have wavy or curly hair, in whom these canals are more or less serpentine or spiral. In the African races they are rather intricate and contorted; and hence the crisp, grisly nature of the hair of the Negro. It may be further remarked, that the sheath or tube that forms the visible portion of the hair is not cylindrical, as it appears to the unaided eye. Under a magnifier of small power it is seen to be jagged like the teeth of a saw, owing to being formed, as it were, of a succession of inverted cones, so arranged as to fit into and receive each other, the serrations inclining inward from the root upward.*

* This jagged formation of the surface of hairs is shown by

The hairs being thus formed and protruded through the skin, continue to grow until they acquire the length peculiar to the species of the individual, by incessant additions to their lower extremity within the skin; and they are continually repaired and kept in a state of vitality by the fluids that pervade the pith or centre portion. Nor is this all. Nature has provided suitable glands around the base of the hairs to secrete oily matter, for the purpose of keeping the skin soft and easily permeable, and the hair itself soft, flexible, and glossy. In a state of perfect health this supply never fails, and is always sufficient for the purposes for which it is intended.

The *chemical constitution* of the *hair* was first made known by Mr. Hatchett, who showed it to consist chiefly of indurated albumen, together with a little gelatine, or matter that yields it.* Soft and very flexible hair is said to contain the most gelatine. Subsequently, Vauquelin discovered that hair contains two different kinds of oily matter—the one white and bland, common to all hair; the other, coloured, and on which, in part, the particular colour of the hair depends. He also found small and variable quantities of mineral substances in hair. In light-coloured hair he found magnesia; and in black and dark hair, iron

rubbing a hair gently between the thumb and fore-finger, when it will be found that it will gradually progress through the fingers from the point to its so-called root, until it escapes from the grasp. Itinerant conjurers have long availed themselves of this last fact in their tricks. In coarse hair, the serrations are proportionately deeper than in fine hair. In the coarse bristles of the hog, and in the spines of the hedgehog and walrus, they may be more or less clearly discerned by the naked eye, if held in a bright light.

* "*Philosophical Transactions*" for 1800.

and sulphur. It is the presence of these last that mainly gives to dark hair its colour. Fur, wool, bristles, and spines, in their chemical nature, structure, and mode of formation, resemble hair; as also, to a very great extent, do the feathers of birds.

The *biography* or *life-history* of a *hair* resembles that of the microcosm of which it forms a part. Human hair is perennial; and unless its connection with the skin be severed by violence, the effects of disease, or the premature decay of the hair-bulbs from any of the numerous causes liable to affect them, it preserves much of its vigour and integrity to a late period of life. In most animals the hair is deciduous, and is cast annually; but not in man.*

In infancy and early childhood the hair is generally pale, soft, thin, and very flexible. As the age increases, it gradually becomes more abundant, darker, coarser, and stiffer. In healthy youth and early maturity it reaches its prime, or state of greatest luxuriance and beauty; and thus it continues for some years, in a nearly stationary condition. Then it usually gradually, very gradually, becomes thinner and weaker, and slowly loses is glossiness and some of its colour. Next, owing to the decreasing vigour of the circulation of the scalp, and its attenuation consequent on the progress of life, the hair commences falling off from the crown of the head, and soon afterward from the partings, which widen and become more conspicuous. The comb and brush may now be perceived to remove a greater number of weak

* The annual 'moult' of birds is similar. The deer sheds both its horns and coat. The tail and mane of the horse, and other animals of the equine genus, is perennial, like the hair of man.

hairs than heretofore, the place of which is not filled up by fresh ones, as formerly. This state may continue for some years, or even until a late period of life, the hair merely gradually getting weaker and sparser, and the crown more extensively bald; but usually more marked changes occur. About, or soon after the middle age, and sometimes even before it, gray hairs begin to appear. At first they are few in number, and far apart; but time soon multiplies them, and in a few years they become sufficiently numerous to affect the general hue of the hair.* The crown of the head, by this time, is probably wholly denuded of hair, and that on the other parts, where it still remains, is rapidly growing thinner and weaker, until little is left, and this only on the lower portion of the sides and back of the head. By the process of decay this is, ere long, blanched to a silvery white, and almost general baldness ensues—the usual accompaniment of old age.

The hair, however, does not always maintain its integrity, and slowly sink into a state of decay, by gradual changes in the manner just mentioned. On the contrary, a number of influences, avoidable and unavoidable, are constantly at work to deteriorate the one, and to hasten the others. Among these may be mentioned uncleanliness, mismanagement, the use of improper cosmetics, impaired health, disease,†

* It may be here remarked, that when the hair rapidly gets gray before the middle age, the health of the party being at the same time good, it often does not otherwise deteriorate, but continues strong and vigorous for many years, and not infrequently until a late period of life.

† Debility, emaciation, affections of the organs of digestion (particularly habitual dyspepsia), and of the circulatory and nervous

anxiety, watchfulness, irregular habits, intemperance, excessive indulgence of the passions, exposure to the weather, and to the vicissitudes and extremes of climate, want of fresh air and exercise, keeping the head unhealthily hot and close, excessive or suppressed respiration, undue pressure, accidents, and the like, from one or more of which, the cases of premature grayness and baldness, now so common, in general arise. Indeed, it may be observed, that whatever proves injurious to the skin also proves injurious to the hair-bulbs imbedded in it, and consequently to the hair itself.

It may be laid down as a law, to which there are no exceptions, that the vigour, luxuriance, and beauty of the hair, uniformly correspond to the state of health of the scalp from which it grows. Whilst the scalp is soft and thick, and the blood circulates with healthy vigour through its vessels, as is the case in youth and the early years of maturity, the hair-glands and capsules have ample space to exist and to work in, and ample materials in the shape of healthy arterial blood, out of which to elaborate their secretions. It is during this state that the hair reaches its highest degree of luxuriance and beauty; and it maintains these as long as the health and vigour of the scalp continue. As soon as the vigour of the circulation in the scalp begins to decline, whether from age, disease, or other causes, it suffers gradual attenuation. The functions of the air-bulbs are thus more or less

systems, and fevers, are among those which appear most injurious to the hair. Ringworm, and some other skin-diseases, destroy the vitality of the hair-bulbs, and hence cause baldness on the parts affected by them.

impeded, and as the attenuation proceeds, they are ultimately arrested altogether. The former produces weak, thin hair; the last, baldness. The smoothness, thinness, and partial transparency of the bald scalp of the aged has probably been observed by the reader.

The *management* of the *hair*, under the ordinary conditions of life and health, like that of the skin, is extremely simple, and should be either based on principles derived from the physiological facts already presented to the reader, or of a nature that will not interfere with the healthy functions of the hair-producing organs. The chief of these, and, indeed, the essential ones, involve the necessity of keeping both the hair and the skin of the head perfectly clean, and the former arranged in the direction in which it naturally lies, subject only to such little deviations as may be necessary to adapt it to the position in which it is usually worn; and this arrangement and position should be constantly followed on each occasion of dressing it.

To proceed to details, let us commence the subject with the duties of the toilet on rising in the morning. The personal ablutions having been performed, the hair will probably next engage the attention. If the immediate object, before leaving our chamber, or appearing at the breakfast-table, be merely to restore it from the disorder into which it has got during the night—its more careful treatment and arrangement being deferred to a later period of the day—a slight use of the comb and brush will probably be found sufficient for the purpose. If, however, this early toilet be the principal one, or the only complete one of the day—as it usually is with the majority of man-

kind—something more will be necessary. The question then arises, "How should we proceed to effect the object in view in the most satisfactory manner?" This may be answered in the following way; one or other of the two methods mentioned being adopted, each of which has advantages peculiar to itself, and, in appropriate cases and circumstances, is thus preferable to the other.

The hair, after a preliminary application of the coarser end of the dressing-comb, should be gently and assiduously brushed straight, or downwards in all directions round the head, until it be rendered quite smooth and apparently free from scurf, the brush being used in the manner hereafter explained.* The motion of the hand may now be gradually changed until it assumes a direction upward and across the head, or one contrary to that in which the brush was previously used. This direction of the brush should be continued for a short time. It has the advantage of not exerting any strain on the hair of the crown and of the partings, and of removing all the scurf that escaped the first brushing. A similar gradual change in the motion of the hand to the direction in which the brush was first used, will restore the hair to its former position, and again smoothly and equally distribute it around the head from the crown downwards (*a*). Now is the time to apply oil or pomade, if any be used; but this will be unnecessary if the scalp be thoroughly healthy

* If the hair be very long, or entangled or matted together, the preliminary use of the comb may be dispensed with; as, in this case, it may be more readily reduced to order with the brush alone, and this with much less strain upon the hair of the partings and crown.

and the hair luxuriant, as in this case the natural supply of oily matter, secreted by the oil-glands at its base, will be amply sufficient to keep it soft and glossy. Presuming this supply to be deficient, or that, for other reasons, the party desires to use some oil or grease, he had better proceed as follows:—Having placed a little of the pomade or oil* in the palm of the left hand, he should spread it equally over the inner surface of the two hands by rubbing them together. The hands being now applied to the hair, the oily matter on them may be equally diffused over its surface by wiping them on it, and by gentle friction; after which its further equal distribution may be effected by the hair-brush.† If curling-tongs or crisping-irons (objectionable things, by the bye) be used by the party, this will be the proper time for doing so. The hair may now be parted and adjusted with the comb (the coarser end being first used), then again well brushed to give it smoothness and set, and lastly receive any final adjustment to bring it into the usual position and style adopted by the wearer. In the case of long hair in curls or ringlets, or in any other state which it may be undesirable to displace or disarrange by the inverted motion of the brush, the portion of the hair so circumstanced may be firmly grasped in the left hand,

* Two or three, or, at the most, four drops of oil, or a corresponding quantity of pomatum, according to the abundance of the hair, is amply sufficient for the purpose, when either of these are used daily; and this quantity cannot be exceeded without inconvenience in regard to cleanliness, and without proving more or less injurious to the healthy scalp.

† The object in this case is to diffuse the oil over the whole surface of the hair, without touching the skin of the head, or at most, as little as possible. (Vide *infrà*.)

and protected by it, whilst the brush is applied with the right, by which its inversion and disarrangement will be prevented. If curl-papers or papillotes be employed, it will, perhaps, be better to give the hair a thorough brushing in the way described before using them.* The oftener the comb and brush are subsequently used in the day, the better it will be for the luxuriance, smoothness, and set of the hair. This mode of treating the hair is the one that should be preferred when it is desired that it should present an easy, flowing appearance, and be gracefully affected by the motions of the head and body.

The other method referred to is equally simple, and of very general application, and it is particularly adapted to the use of ladies and others who wear their hair in artificial styles, and in positions which it cannot easily be made to assume and retain by the common mode of dressing it. Let us start from the point (*a*) in the former description. The hair-brush having been freed from loose hair with the comb, and from scurf, by passing it smartly two or three times across the side of the extended hand—or, what is better, a fresh clean brush, kept for the purpose, being taken—it should be slightly dipped into water, or into rosemary-water or rosemary-tea, or any other simple liquid,† and, the excess of water having been shaken

* Natural curliness or waviness of the hair is not affected by brushing, but rather increased by it. Nor does washing or wetting the hair destroy it. It is only necessary to subsequently place the locks loosely in a favourable position, with the fingers or comb, for them to resume either form immediately.

† The water in which one has just washed is commonly used for the purpose. Being slightly soapy, it imparts more gloss and stiffness to the hair than simple water, but is fitted rather for

out of it, applied to the hair, which should be brushed with it, until the latter is slightly moistened all over. In this state the hair should be parted and adjusted with the comb in the usual position or style of dressing it. A small piece of soft flannel that has been dipped in water or any other simple liquid, and then squeezed out, or the moistened brush, if now passed over its surface, will impart further smoothness and gloss to it, if it be thought desirable; after which it may be finally re-adjusted with the comb, if necessary. In a few minutes it will become dry. The hair may be thus dressed in any style but curls or ringlets, and put into any position, however artificial, and which it will retain during the day as perfectly as if it were fixed with bandoline, unless it be disturbed or ruffled by actual violence. Should this happen, the moistened flannel or brush will again restore it. Or the hair may be treated by the previous method, at will, provided its set and adjustment be not interfered with. The latter should only be done when it is again washed or moistened.

Such are the outlines of two modes of dressing the hair which recommend themselves, not merely on account of their simplicity and effectiveness, but also from their being compatible with the healthy functions of the scalp, and, indeed, promotive of them. Their minor details may be varied to suit individual tastes and cases. The elaborate and highly artificial styles of dressing and adjusting ladies' hair, often in the most unnatural positions, with pins, combs, pads, &c. &c.—

occasional than daily use. Soft water is undoubtedly the best. Some persons use suds, or very soapy water, which is objectionable on many grounds.

all more or less injurious—do not fall within the range of the present work. Their adoption depends on personal taste, and must be left to the skill and experience of the lady's-maid or the hair-dresser.

The day being ended brings us to the time of retiring to rest, and the oft-debated subject of "nightcap or no nightcap." It is better to wear one, as, without this be done, the hair is apt to get disordered during the night, and it is often difficult to subsequently restore it from the unnatural position and entangled state it may have assumed and been kept in for some hours. The proper plan is to brush and adjust the hair before assuming the nightcap, and to be careful not to disarrange it in putting the latter on. Should displacement happen, the disarranged portions should be at once re-adjusted with the fingers. The cap itself should be made of some light material, and of easy fit —the lighter the better; the object in persons with abundance of hair wearing a nightcap being merely to prevent the displacement of the hair in bed, and not warmth. Combs, hair-pins, and the like, and any strain on the hair, or pressure on the head, should be removed before putting it on. Braids, plaits, puffs, &c., that distort the natural set of the hair, or press upon the head, should also be unplaited or loosened.

Besides this daily attention to the hair, something else is necessary to ensure its cleanliness and beauty, and the perfect health of the skin of the head from which it springs. For this purpose the head should be occasionally well washed with soap-and-water,* an

* The head is most conveniently washed with a piece of coarse, soft flannel; particularly at the partings, where it generally is dirtiest.

abundance of water being used, and great care being subsequently taken to thoroughly rinse out the whole of the soap with the same water in which the head has been washed.* The water may be either tepid or cold, according to the feelings or habit of the person; and if the head or hair be very scurfy or dirty, or hard water be used, a few grains of soda (not potash or pearlash) may be advantageously added to the water. This will increase its detersive qualities. After the hair has been washed, which should be done quickly though thoroughly, it should be freed as much as possible from the water by pressure with the hands, and then wiped with a soft thick towel, which should be done with care, to avoid entangling it.† After laying it straight, first with the coarse end of the dressing-comb and then with the finer portion, it may be finally dressed and adjusted by either of the methods previously noticed.‡

In ordinary cases this act of cleanliness should be performed once in every week; but if the head be much exposed to dust and dirt, or is very scurfy, or the party perspires very freely, it should be performed semi-weekly, or even oftener.§

* The rinsing is most readily effected by holding the head over the tub, pan, or basin, and 'sluicing' the water over it.

† The best mode of wiping long hair, to prevent entangling it, is to move the towel or napkin in a direction from the roots towards the ends of the hairs, continually forming fresh partings, until the whole is sufficiently dry. Wiping it backward and forward, or in any other way suddenly reversing the motion of the hand, is sure to cause entanglement, whether the hair be very long or not.

‡ *Vide* Note (*), page 244 (*antè*).

§ The popular dread of 'catching cold' from washing or wetting the head is groundless. A healthy child or adult does not suffer from it in this way, even in cold weather, provided ex-

The extreme length of ladies' hair will sometimes render the process of washing it very troublesome and inconvenient; in such cases the patient and assiduous use of a clean, good hair-brush, followed by washing the partings and the crown of the head with soap-and-water, may be substituted.

The occasional washing of the head is absolutely necessary to preserve the health of the scalp, and the luxuriance and beauty of the hair, when much oil, pomatum, or other greasy substance is used in dressing it; and this for reasons that are given below.*

And here something may be said on the choice and use of certain toilet articles employed to dress the hair, since on these greatly depend their efficiency and the advantages, or disadvantages, to be derived from them.

The *dressing-comb* should have its teeth equally divided into two sets—the one, rather large and open, for loosening and disentangling the hair, for bringing it into partial order, and for finally adjusting it when it is desired to impart to it the appearance of small, divided locks; the other, with smaller and finer, but not very fine teeth, to be used after the coarser end, and in the final adjustment along with the brush. Care should be taken that the material of which the comb is formed, and the shape of the teeth, particularly at their points and edges, be such as to adapt the instrument to pass easily through the hair, with-

posure to draughts be avoided. The liability to thus take cold lies chiefly in a nervous dread of it. Wetting the hair with rum, brandy, or eau de Cologne, after it has been cut or washed, increases the liability to 'take cold,' unless the head be lightly covered to prevent the effects of the rapid evaporation of these fluids that at once commences.

* *Vide* page 253 (*infrà*).

out requiring an effort to cause it to do so, and without scratching the skin of the head.* Care should also be taken to handle it lightly, so as not to cause any drag on the roots of the hair, especially of those of the crown and adjacent to the partings. Fine small-toothed combs, though sometimes useful for removing scurf, and for the hair of children, are, on this account, objectionable.

The *hair-brush*, too, requires care to be exercised in its selection and use, and this even more so than the comb. Very rough, coarse, scratching brushes, carelessly used, are a fertile source of injury to the hair and the skin of the head. Their action, particularly the strain or drag which they occasion, falls most severely on the exposed portions of the crown of the head and the partings, which can the least bear it. It is hence that these parts, even when the hair is otherwise luxuriant, gradually become more and more thinly covered, until the last get wide and unsightly, and the former prematurely bald. No scalp and no hair, however healthy and vigorous, can long stand, without injury, the irritation and strain to which they are thus subjected. These ill effects are the soonest perceptible in persons with very long hair. Thus females are more liable to suffer than males, the effects being also accelerated, in their case, by the use of side-combs, hair-pins, and the like.† A good hair-brush should be formed of mode-

* The best materials for combs are tortoise-shell, vulcanite, silver, and aluminium. In purchasing a tortoise-shell comb, one should be selected that is not made up of pieces artfully welded or cemented together, as in this case it is very apt to break on being slightly bent or strained, or by a fall. Good, sound tortoise-shell, is very flexible and durable.

† *Vide* page 169 (*antè*).

rately long and fine, and rather stiff, unbleached, and undyed hair; and the points of the hair, at its surface, should present such slight differences of elevation that they will readily penetrate to the skin, on which they should exert genial friction, without feeling unpleasantly rough, scratchy, or irritating. In use, it should not be struck down hard and roughly on the head, and dragged downwards with haste and violence; on the contrary, it should be applied gently, and the motion of the hand during its use should be lively, but equally gentle. The common practice, too, of over-brushing the crown and partings, and neglecting the other parts of the head, should be avoided as being fraught with ill consequences. Those parts which are the most thickly covered with hair need the most brushing.*

In applying either the brush or comb to the hair, when disordered or entangled, its effectiveness is increased, and the strain on the hair lessened, by holding it with the points of the hair, or the teeth, much inclined towards the roots of the hair, and only gradually erecting it as the impediments to its action are removed. When the hair is matted, or much

* Hair-brushes rapidly get dirty, and hence should be frequently cleaned. Loose hair may be removed by the coarse part of the comb, and loose scurf by rubbing and beating them. This should be done every time they are used. They may be further cleaned by rubbing them well with a coarse towel. To do this completely, they should be washed in warm soap-and-water, to which a little soda, or carbonate of ammonia, may be added; after which they should be rinsed in clean water, rubbed on a towel, and left to dry. A final rinsing in a little weak alum-water, from which they should be merely shaken (and not wiped), will increase the stiffness of the hair.

entangled, the application of a little oil, before using the comb and brush, will be found useful.*

Something may now be said on the *adjustment* or *arrangement* of the *hair* adopted in dressing it. It has been already mentioned that this should be, as far as possible, in conformity with the natural set of the hair, and that any marked deviations from it are injurious. "In the arrangement of the hairs on the surface of the body, it might be inferred that little existed to excite attention; but this is not the fact, if we are to judge by the careful investigations to which the subject has given rise." From these we learn, that "the set of the hair, from the root to the point, is governed by a law as precise as that which regulates any of the other secondary vital functions. Thus, on the head, the hair radiates from a single point, the crown, to every part of the circumference, making a gentle sweep behind, towards the left, and in front, to the right. The direction of this sweep is naturally indicated on the heads of children, and is that in which the hair is turned."† The same occurs on the face, and on other parts of the body. It is evident, therefore, that in making our toilet, this natural arrangement of the hair should be interfered with as little as possible. Combing it, banding it, or braiding it, in an opposite direction to that which it naturally assumes, cannot prove otherwise than prejudicial to its healthy growth and beauty, and if long persevered in, particularly in conjunction with any strain on the roots, leads to its premature and often rapid decay.

* *Vide* "matted hair" (*infrà*).

† Erasmus Wilson, "*Healthy Skin.*"

The practice, now so common among ladies, of turning the hair from the forehead and temples toward the back of the head, and keeping it tightly secured in that position, as in the 'Eugénie,' and other like styles, is hence highly objectionable.

The ill consequences of strains on the hair, and pressure on the head, have been already several times alluded to, but cannot be too often pointed out.*

The *cutting* of the *hair* is another point connected with its management which is generally very little understood; yet there is not merely artistic skill required to do this becomingly and beneficially, but also the application of principles founded on a knowledge of the growth and structure of the hair. As a rule, hair-cutters and hair-dressers are ignorant of these principles, and conduct their operations in a very careless way, immediate effect in reference to the personal appearance being the only object which they aim at. Thus, according to the common practice, the strong luxuriant hairs of the lower portions of the head get unduly shortened, whilst the weaker, and probably the decaying hairs of the crown and around the partings, are left of extreme length, and often not cropped at all. Now, if there be anything serviceable in strengthening weak and decaying hairs, it is frequent cutting, and being kept moderately short. But such hairs grow feebly, and are of inferior length to their vigorous neighbours, which thus, in general, overtop and conceal them, and shield them from the scissors of the hair-cutter, who, indeed, neither thinks of them, nor takes the trouble of looking for them.

* For *references*, vide *Index*.

But it is on attention to these weak and impoverished hairs, that the whole art of beneficial hair-cutting depends. To do this, some trouble, and more time and skill, are required than are usually devoted to the operation; and for which, of course, those who benefit by them must expect to pay.*

Besides the *mismanagement* or improper treatment of the *hair*, by arranging it in unnatural positions, subjecting it to strains, and the head to pressure, and the like, already referred to, two or three other objectionable practices may be mentioned. Among these the principal, and the most general, is that of deluging the hair with oily or greasy substances. This is not only unnatural and dirty, but evinces an amount of either bad taste and vulgarity, or of laziness and slovenliness in the duties of the toilet, which is actually discreditable. Look at the hair of any person who indulges in this dirty habit! What feelings does the sight occasion? Certainly none of an agreeable kind, or that are complimentary to the party gazed on. Look at his or her hat or bonnet, the collar of his coat, his nightcap, the pillow on which he rests his head, or anything else that his head touches? Do they not strike us with disgust? It has been truly said that "heads of such persons form excellent dust-traps." Luxuriant hair growing on a healthy scalp needs no such extrinsic additions to give it gloss and set; thorough

* The system of hair-cutting referred to, has been strongly recommended by Erasmus Wilson, and other high authorities. A Mr. Williams, of Cheltenham, has made this plan the basis of his system of hair-cutting, and, according to the above-named author, with the happiest results; but few however, if any, of his craft, "have energy enough to follow his excellent example."

cleanliness, and the frequent and judicious use of the comb and hair-brush, are all that is necessary for the purpose; and even when the hair is ill supplied with the natural oily secretion at its base—a defect that generally arises from the long-continued use of oil or grease—a small, very small quantity of either of these articles will be found amply sufficient, provided it be properly diffused over and through the hair with the brush.*

And what are the immediate effects and the results of even the free, not to say the excessive use of oil, pomatum, grease, hair-cream, or other greasy article, under whatever name and pretensions it may be vended? The first of these is to coat the hair, and the skin of the scalp in which the hair grows, with a film of greasy matter, which excludes the genial action of the air from both of them, and which relaxes the texture of the last, chokes up its perspiratory pores, and deranges its natural functions. Nor is this all! The oil or grease thus used soon grows rancid, if it be not already so before its application; and then it acts as a corrosive irritant, inducing excessive scurfiness, and, at length, actual disease of the scalp. During vigorous health, the luxuriant hair of youth, and of the earlier years of maturity, will bear much mismanagement, and even ill-usage, without exhibiting immediate deterioration; but the evil day approaches, and comes at last unexpectedly. The results may be anticipated. The hair becomes gradually weaker, loses its colour and tractability, and falls into a state of premature decay. As soon as this decline of the hair is perceived, its infatuated owner usually treats it to increased doses of

* *Vide* page 243 (*ante*).

oil or pomade, or resorts to the use of the advertised nostrum of some hair-quack; but all is in vain. Its decidence is certain to continue under such treatment; the hair-bulbs wither, and gray hair and baldness arrive before their natural time.*

Medical writers have frequently pointed out the ill effects of the free or excessive use of oily or greasy articles for the hair; but their warnings appear to be unheeded by the mass of mankind. Erasmus Wilson, one of the most eminent aud practical of these writers, objects to their use altogether.† There are, however, exceptions to every rule, and some of these exceptions are noticed elsewhere in this volume. The ill effects referred to chiefly occur from their being used when not required, and in excess, and are aggravated by the neglect of thorough cleanliness.

It may be here remarked that liquid oleaginous substances appear to be more congenial to the hair and scalp than solid ones,‡ though each is alike injurious when unnecessarily used or in excess. Among the former the bland oils—as those of behen, the

* These remarks apply to almost every greasy or oily article, whether simply vended as such, or under the disguise of the high-sounding names of creams, generants, pomades, pomatums, bears' grease, or vegetable or animal this, that, or the other. They are nearly all formed of the coarsest fats and oils, often rancid and acrid, variously coloured and scented—gross impostures nicely put up in pots and bottles showily labelled, to deceive the purchaser. But even when the ingredients are originally bland and harmless, it generally happens that, owing to the long time they are exposed to the air and light in the shop of the maker and retailer, they become rancid before they reach the dressing-case or the toilet-table. The exceptions are few.

† Vide "*Healthy Skin.*"

‡ This is why pomatums or pomades are inferior to oils.

olive, and the almond—hold the first place; among the latter, the softer fat of the ox* and the calf, clarified beef-marrow, veal-suet, and recent hog's-lard, are to be preferred. The addition of wax to oils or fats, to give them greater consistence, renders them more "clogging," and thus, also, more objectionable.† Other common instances of the mismanagement of the hair are afforded in the use of cosmetics to increase its glossiness, to change its natural colour, to fix it in unnatural positions, and the like; none of which are beneficial to the hair, or even harmless; whilst many of the articles so employed are highly injurious in themselves, and are generally rendered more so by the clumsy and reckless manner in which they are employed. But I shall allude to this again below.

The preceding modes of managing the hair are all that is required whilst it is in a healthy and luxuriant state, and they are also adapted to preserve it so, and to retard its decay when this has commenced, provided they be supported by due attention to the general health, regular habits, and careful avoidance of such articles of head-dress, and such use of them, as are prejudicial to the hair.‡ Few persons, however, who pay much attention to their hair are satisfied with this simple treatment; and hence the use by them of a variety of cosmetic processes and preparations for one or other of the objects just mentioned. In noticing

* The rich fat of the tag-end of the rump appears to be superior to that of any other part, as a hair cosmetic.

† Thus it is that "hard pomatum," as it is called, is an absolute absurdity and hair-poison. The only way in which it can be safely used, is under the form of "*Cosmetique*," merely to lay or set the hair.

‡ *Vide* Chapters XI. and XII. (*antè*).

these, I shall at present confine myself to those only that are safe and more or less useful when judiciously employed, reserving the notice of others, with cautions respecting them, and the formulæ for the various articles that I shall speak of, for the *chapter* on "Cosmetics."

To *improve* the *growth* and *luxuriance* of the *hair*, when languid or defective, the only natural and perfectly safe method that can be adopted is to promote the healthy action of the skin of the scalp by increasing the vigour of the circulation of the blood through its minute vessels. For this purpose nothing is so simple and effective as gentle excitation of the skin by frequent continued friction with the hair-brush, which has the convenience of ease of application and inexpensiveness. The same object may be further promoted by the application of any simple cosmetic wash, or other preparation, that will gently excite and stimulate the skin, or exercise a tonic action on it, without clogging its pores. Strong rosemary-water or rosemary-tea, and a weak solution of the essential oil of either rosemary or garden-thyme, are popular articles of this kind.* They may be rendered more stimulating by the addition of a little ammonia, or a little spirit,† or both of them. The skin of the head

* The popular idea is that rosemary (*rosmarinus officinalis*, Linn.) promotes the glossiness and curl of the hair, and that thyme (*thymum vulgare*, Linn.) promotes its growth and strength. The truth is, that they both act as gentle stimulants on the skin and hair-bulbs. The oil of thyme is the dark-coloured *oil of origanum* of the shops.

† Spirit of wine ; but good rum is the popular favourite for this purpose.

should be moistened with them on each occasion of dressing the hair, and their diffusion and action promoted by the use of a clean hair-brush. Aromatized water, to which a very little tincture or vinegar of cantharides (preferably the former) has been added, may also be used in the same way, and is in high repute for the purpose. When the skin is pale, lax, and wrinkled, astringent washes may be used. Strong black-tea is a convenient and excellent application of this kind. When the skin and hair are dry, and the latter also stiff and untractable, a little glycerine is an appropriate addition to each of the preceding washes or lotions. The occasional use of a little bland oil strongly scented with oil of rosemary or of origanum, or with both of them, or with oil of mace, or very slightly tinctured with cantharides, is also generally very serviceable when there is poorness and dryness of the hair. When the hair is unnaturally greasy and lax, a defect that seldom occurs, the use of the astringent washes just referred to, or of a little simple oil slightly scented with the essential oil of bitter almonds, will tend to remove or to lessen it.*

All the articles named above promote the glossiness and waviness of the hair, and are also among the simplest, safest, and best applications that can be employed when the hair is weak and begins to fall off.

To *impart* some degree of *curliness* or *waviness* to the *hair* when it is naturally straight, and to render it more *retentive* of the *curl* imparted to it by papers, or by other modes of dressing it, various methods are

* For references to the formulæ for the preparations alluded to here, and elsewhere, vide *Index*.

often adopted, and different cosmetics employed. The first object appears to be promoted by keeping the hair, for a time, in a state intermediate between perfect dryness and humidity, from which different parts of its structure being unequally affected, in this respect, will acquire different degrees of relaxation and rigidity, and thus have a tendency to assume a wavy or slightly curly form, provided the hair be left loose enough to allow it. For this purpose nothing is better than washing the hair with soap-and-water to which a few grains of salt of tartar (carbonate of potash) have been added; or it may be slightly moistened with any of the hair-washes mentioned in the last paragraph, in each half-pint of which a few grains (say 10 to 12) of the carbonate, or a teaspoonful of glycerine, has been dissolved. The moistened hair, after the application of the brush, should be finally loosely adjusted, as desired, with the dressing-comb. The effect occurs as the hair dries. When oils are preferred to hair-washes, those strongly scented with oil of rosemary, to which a few drops of oil of thyme or origanum * may be added, appear to be the most useful.†

A *crisped*, or a kind of *wavy corrugated appearance*, of some permanency, is sometimes given to living human hair by a modification of the process applied by the pelt-mongers and felt-manufacturers to certain furs, and called "sécretage" by the French. The hair is moistened for rather more than one-half its length with the sécretage liquid, care being taken

* *Vide* Note (*), page 257 (*antè*).

† The cause of the natural curl of the hair is explained at page 236 (*antè*).

that neither the liquid, nor the hair, until it has been subsequently washed, touches the skin. The operation is conducted before a fire, or in a current of warm air, so that the hair may dry as quickly as possible. The moistened hair is loosely adjusted into the desired positions, or into one favourable for its contraction, or, when partly dry, it is "put up" in greased curl-papers. In a few hours, or sooner, the hair is washed with tepid water (without soap), dried, and slightly oiled. On being now gently combed and brushed, it generally shrinks up into small crisped or wavy locks; and it will generally retain this property for two or three weeks, or even much longer. This process is highly objectionable, as, owing to the corrosive nature of the acid-liquid employed in it, it cannot be otherwise than injurious to the hair, and, as a consequence, must hasten its decay. It should, therefore, be avoided by every one; and it is only noticed here, that its true character may be known.*

To cause the *hair* to *retain* the *position* given to it in dressing it, various methods and cosmetics are commonly employed. When the arrangement is a natural one, and the hair healthy and tractable, the free use of the hair-brush will usually be sufficient for the purpose. When this is insufficient, the application of a few drops of oil, or, better still, moistening the hair with a little simple water, will effect the

* I have seen this process tried on vigorous hair with perfect success, and without any apparent *immediate* ill effects; but I have also seen it, in some cases, produce very unpleasant consequences; and, indeed, it can never be regarded as safe. I would strongly advise every one to shun it, however highly it may be recommended by interested parties.

object satisfactorily. In very elaborate and unnatural styles of dressing the hair, and to cause it to remain in curl or to retain its position during dancing or violent exercise, bandoline, fixateur, and cosmetique or hard pomatum, are the articles commonly employed in fashionable life. Mild ale or porter has a similar effect, and is often substituted for the preceding expensive cosmetics in humble life. The frequent use of any of these articles is objectionable, as they clog up the pores of the skin, and shield both it and the hair from the genial action of the atmosphere, which is essential to their healthy vigour. They should hence be subsequently removed by carefully washing the head with a little soap and tepid water. Their use may be tolerated in dressing for the ball-room, but on no other occasion. Simple water, skilfully employed, as noticed elsewhere, is the best and safest fixateur, and, under ordinary circumstances, is amply sufficient for the purpose.*

The practice of artificially *changing* the *colour* of the *hair*, and particularly of *dyeing* it, has descended to us from remote antiquity; and though not so common in western Europe as formerly, is still far from infrequent at the present day.† This might be inferred from the multitude of nostrums for the purpose continually advertised in the newspapers, and from the number of persons who announce themselves as practising the art, even though the keen and experienced eye did not frequently detect instances of it, as it now does, in the hair and beards of those we see around us. The recent

* *Vide* page 245 (*antè*); for other references, see *Index*.

† *Vide* Chapters III., IV., *et seq.*

rage after light auburn and reddish hair, in fashionable life, has, unfortunately, greatly muliplied these instances. The consideration of the subject, however, in its ethical relations, does not come within the province of the present work, and I shall confine myself to pointing out how the colour of the hair may be changed in the safest and most satisfactory manner.

To change the colour of the hair, various methods and preparations are employed. The principal of these are intended to darken it; but, sometimes, the contrary is aimed at. Whichever object is desired, it is necessary that the article or preparation employed to carry it out, be not of a caustic or irritant nature capable of injuriously affecting the delicate skin to which it is to be applied, or that it may be liable to come into contact with, as is the case with many of the nostrums vended for the purpose. Some of the substances that necessarily enter into the composition of hair-stains and hair-dyes, or that are used in connection with them, possess these objectionable properties in a high degree, and can, therefore, only be safely employed in a state of proper dilution and combination. If any doubt exists respecting such an article, it is a wise precaution to regard it with suspicion, and to test its qualities before applying it for the first time. This may be done by placing some of it on the soft skin of the inner side of the wrist or fore-arm, and allowing it to remain there as long, and under the same conditions, as it is ordered to be left in contact with the hair or skin of the head or face. In this way, the injury or loss of the hair, sores, and other serious consequences, that too often follow

the use of advertised and ill-prepared hair-dyes, may be generally avoided.

The methods adopted to darken the colour of the hair should be, theoretically, as much as possible, in aid or in imitation of the process employed by nature herself; but as this cannot be very closely carried out in practice, particularly when rapid results are desired, the judicious operator either avails himself of the known chemical constitution of the hair, or adopts some independent plan of acting on it, that little, or the least, interferes with its healthy functions and condition. It is known that coloured hair contains sulphur and traces of iron, and that dark hair, and black hair more particularly, contain the largest proportions of this metal These substances are secreted in combination with oil, by the hair-bulbs, and permeate the whole structure of the hair as long as its colour and vitality last. Healthy light-coloured hair contains sulphur, with only a trace of iron, if any; in gray hair, even when otherwise vigorous, only traces of sulphur exist, and no iron; whilst in the white hair of senility, not even a trace of sulphur can be generally found. Iron and sulphur, then, may be regarded as the principal and essential, if not the only materials, on which the colour of the hair depends. The loss of colour which the hair suffers during gradual decay, appears to arise from an insufficient supply of these materials, that of the iron being the first to fail.

Availing ourselves of the preceding facts, we may safely and rationally attempt to darken the colour of the hair by conveying to the hair-bulbs, by means of the absorbent power of the skin, one or the other, or both of the mineral substances just mentioned, as the

case may be. To carry out this plan with any probability of success, it will be necessary that the substances referred to be employed in a form adapted to permeate and to be absorbed by the sensitive skin, and to be appropriated by the hair-glands; and that, further, they be in a form and state of dilution incapable of injuriously affecting the minute and delicate structures with which they will come in contact. It is on the same principle that we are able to stain the bones of young animals by the administration of madder with their food. The process is slow in both instances, but it is usually slower with the hair than with the bones. Bismuth, lead, copper, and two or three other metals, are each capable of darkening the hair by displacing the iron, or, rather, acting as a substitute for it, and are thus employed in some of the fashionable hair-dyes; but their use is objectionable, as they act as poisons when absorbed into the general system, and, therefore, cannot be otherwise than injurious when applied for some length of time, or frequently, to the skin and hair. Iron, on the contrary, is known to exercise a genial tonic action on the various tissues; it is an essential constituent of the blood, and is present, in minute quantities, in almost every part of the body.

To *gradually darken* the shade of the *hair*, on these principles, provided its normal sulphur be still secreted by the hair-bulbs, and be still present in its structure, it will, therefore, generally be sufficient to occasionally employ a weak solution of any of the milder salts of iron* as a hair-wash. The menstruum may be water, to which

* As the sulphate, acetate, lactate, or protiodide. The addition of a very little glycerine is useful, and indeed necessary, when the last salt is employed.

a little spirit, and a few drops of oil of rosemary, to increase its stimulating qualities, have been added. In applying it, the head being first washed clean, care should be taken to thoroughly moisten the whole surface of the hair and the skin of the head with the wash; and its absorption and action should be promoted by the free use of a clean hair-brush. Wine is the favourite solvent for the iron in fashionable life; ale and beer are also sometimes so employed. Most of the fashionable ferruginous hair-washes also contain a few grains of acetate of copper or distilled verdigris, the objections to which have been already pointed out.

The daily use of oil, or pomatum, with which a few grains of carbonate of lead, lead-plaster, or trisnitrate of bismuth, have been blended by heat and careful trituration, has generally a like effect on the hair to ferruginous solutions; so also has a leaden comb, but its action is very uncertain. None of these last are, however, safe for long-continued use. Atrophy of the scalp, baldness, and even local paralysis, have sometimes, though rarely, been caused by them.

When the normal sulphur of the hair is absent, or deficient, the preceding substances fail to darken the hair. In this case the desired effect may often be produced by also moistening the head (say) twice a week, with water to which a little sulphuret of potassium, or hydrosulphuret of ammonia, has been added.

When it is desired to *dye* or *darken* the *hair* more rapidly, as in a few hours, or even a few minutes, plumbite of lime, plumbite of potassa, or nitrate or ammonio-nitrate of silver, is usually employed. The first is commonly produced by the admixture of quick-lime

with oxide of lead (litharge), carbonate of lead, or acetate of lead. These ingredients should be in appropriate proportions; but very generally the reverse is the case in those of the shops. It may be laid down as a rule, that when the lime is in greater proportion than about two to one of the oxide, and to the corresponding equivalents of the other substances mentioned, or when the lime has not been prepared in a proper manner, the compound is not safe, and very likely to prove injurious to the skin and hair-bulbs, and, perhaps, to act as a depilatory. The effects of these lead-dyes arise partly in the way previously described, and partly by direct chemical action between the sulphur of the hair and the lead which they contain, sulphuret of lead being formed in the surfacial portion of the hair. It is on the last that their more immediate effect depends. If there be no sulphur in the hair, they will not darken it. After the necessary period of contact, they should be gently but thoroughly removed from the hair and skin by rubbing them off with the fingers, and by the use of the hair-brush, the head being then washed clean with tepid water. Should the tint imparted by them not be deep enough, or be too fiery, it may be darkened and turned on the brown or black by moistening the hair the next day with a very weak solution of sulphuret of potassium or of hydrosulphuret of ammonia.

None of the compounds of lead stain the skin, an advantage which has led to a preference being given to them by many persons who are clumsy manipulators, and to the more extensive use of them than of other hair-dyes.

The salts of silver above referred to are more rapid

in their action as hair-dyes than those containing lead. It is only necessary to wash the hair quite clean and free from grease, then to moisten it with a weak solution of one of them; and, lastly, to expose it to the light, to effect the object in view. Sunlight will fully darken it in a few minutes; but in diffused daylight it will take two or three hours, or longer, to acquire its deepest shade. To avoid this delay and inconvenience, the common practice is, a few minutes after applying the silver solution, to moisten or wet the hair with a weak solution of sulphuret of potassium, or of hydrosulphuret of ammonia. The effect is immediate, and the full depth of shade which a silver-solution of the strength employed is capable of imparting, is at once produced. A few minutes later and the hair and skin may be rinsed with tepid water, gently wiped dry, and the hair finally adjusted with the comb. The ease of its application, its rapid action, and the satisfactory nature of the effect produced, all tend to render a solution of nitrate of silver the favourite hair-dye of those who have sufficient skill and steadiness of hand to use it properly.

It will be useful here to inform the inexperienced reader, that all solutions and compounds which contain nitrate of silver, stain the skin as well as the hair, if they be allowed to touch it. These stains may be removed, when quite recent, by rubbing them with a piece of rag or sponge wetted with a weak solution of sulphuret of potassium,* of hydrosulphuret of ammonia,† or of iodide of potassium; but as this is attended with some trouble and

* † That which has been already used to strike the colour will do for this purpose.

inconvenience, the best way is to avoid the necessity of having recourse to it. The hair-dressers commonly adopt the plan of smearing hard pomatum or cosmetique over the skin immediately surrounding the hair to be operated upon, in order to protect it from the dye. By very skilful manipulation, and the observance of due precautions, the hair may be thoroughly moistened with the silver-solution, without touching the adjacent skin; but this can only be done, when the hair of the head is under treatment, by a second party.

Pyrogallic acid, the juice of walnuts, and some other substances and preparations hereafter noticed as hair-dyes, also stain the skin, though less intensely and permanently than the salts of silver.

In reference to the tone and shades of colour given by the substances commonly employed to dye the hair, it may be useful to state, that the shades given by preparations of *iron* and *bismuth* range from dark brown to black; those given by the *salts of silver*, from a fine natural chestnut to deep brown and black, all of which are rich and unexceptionable; those given by *pyrogallic acid*, rich browns of various shades; as are also those imparted by *walnut-juice*, though less rich and warm. The shades given by *lead* vary from reddish brown and auburn to black; and when pale or when the dye has been badly applied or compounded, are generally of a sandy reddish hue, often far from agreeable. However, this tendency of the lead-dyes has recently led to their extensive use to impart that peculiar tint to the light hair of ladies and children which is now so fashionable. Other substances, hereafter referred to, are, however, preferable, as imparting a more pleasing hue.

The reddish tint produced by lead, as already hinted, may be generally darkened into a brown, more or less rich, by subsequently moistening the hair with a weak solution of either sulphuret of potassium or of hydrosulphuret of ammonia.

Light hair may be turned on the yellow, red, golden brown, or reddish brown, in the way indicated in a subsequent chapter.*

The depth of colour, and the particular shade of it, in relation to the features and the complexion, are other matters which require the exercise of taste and judgment in interfering with the natural colour of the hair. It may be taken as a general rule, that the natural colour of the hair, as of the eyes, during the earlier years of maturity, is that most appropriate to the individual; and that any material alteration of it, without at the same time altering the complexion, will be a change for the worse. Imagine the disagreeable effect that would result from changing the colour of the pale hair of a blue-eyed blonde to a dark brown or black; or that surrounding thin but delicately-moulded features, in a similar manner. Sickliness, and even ghastliness, would replace the appearance of health in the face of the one, whilst an unnatural sharpness and wildness, and coarse expression, would invest the features of the other. In such cases, and, indeed, in all cases, the only real improvement, if any can be made, will be simply brightening, or slightly, very slightly, darkening the shade of the natural tint of the hair, and imparting similarity of shade to any locks that may vary from the colour of

* For references to the articles and formulæ mentioned above, and elsewhere, vide *Index*.

the rest, as is frequently the case with the beard. In after-life, when small tufts of gray or faded hairs appear among the darker ones, and often materially affect the personal appearance, this is commonly and rationally done. The faded or defective hair should, in all cases, be brought up to the tone or shade of the rest, before the whole is interfered with; as, unless this be done, final uniformity of colour—the chief object aimed at—cannot be produced.

The new growths of hair that occur after the application of hair-dyes being of the original colour, it will, of course, be necessary to occasionally treat them with the dye to preserve the uniformity of the tint of the whole hair. In general it will be found sufficient to do this once every two or three weeks in warm weather, and about once a month in cold weather, the exact time depending on the rate at which the hair grows.

The *hair*, or portions of it, particularly that of the face, is sometimes *temporarily darkened* by what may be called "painting" it. This is done by smearing a black or coloured stick of hard pomatum or cosmetique over it until the desired colour is given to it, and then slightly diffusing the colour over the surface with the brush. The practice is a dirty and unnatural one, as the colour is partially removed by everything it touches, and the moustache or beard is converted by it into a trap to catch the dust. It is only to be tolerated when occasionally used by the fastidious to conceal a few straggling gray or faded hairs. Its use, like that of false moustaches and whiskers, once so common, is now chiefly confined to fashionable fops, and to the "swells" and "gents" of low life.

The *hair* is sometimes rendered *paler* by artificial

means, and, though very rarely, partially blanched or decoloured. It will, however, be sufficient merely to allude to the subject here; as neither can be done without serious damage to it, and the latter cannot be effected without considerable risk and danger. Blanching the hair has occasionally been adopted by criminals with the intention of destroying the evidence of their personal identity.*

The use of hair-powder—once so general in these realms, but now happily almost unknown except among the male servants of the nobility, and for the wigs of lawyers and certain official personages—may also be alluded to here, as another mode of disguising the natural colour of the hair. In its application, the hair is first rubbed with pomatum or fat, and the powder then dusted over it.

The *hair* is subject to various *deviations* from the *healthy standard*, all of which, as already hinted, depend immediately on the state of the scalp from which it springs, and indirectly on various causes, of which the principal have been enumerated in a former part of this volume.† Among them the following may claim a special notice:—

The gradual *impoverishment* and *decay* of the *hair*—shown by its becoming finer and thinner, with greater or less loss of its brightness and colour, and a larger quantity than usual being removed on each application

* A remarkable case of this kind fell under the author's notice some few years since. It was in the person of one of a gang who had effected one of the most important and notorious acts of sacrilege recorded in modern times. The attempt to destroy the means of identification was only partially successful.

† *Vide* pp. 239, 240 (*ante*).

of the comb and brush—whether premature or the result of advancing life, is most likely to be arrested, or retarded, by attention to the general health and habits, and careful avoidance of any article of head-dress or other matter which is known to be prejudicial to the hair. The special treatment may consist in daily, or as frequently as possible, washing the head in cold water, gentle continued friction with the hair-brush, and the use of stimulating applications of a similar kind to those noticed at pages 257-8 (*antè*), but of rather greater strength, so as to produce a slight but sensible excitation of the skin of the scalp. Habitually disordered stomach, bowels, or nerves, and particularly biliousness and dyspepsia, frequently affect the hair in this way, and should be met by medical treatment, of which antacids, and tonics, as quinine and iron, should generally form a part. When either of these last two affections is present, an occasional dose of the "Abernethy medicines" noticed elsewhere, with due attention to the other matters referred to, will often effect more than any mere topical treatment. Gray hair, in its early stages, may also be treated in a similar manner.*

Baldness, or destitution or loss of the hair, more especially of that of the crown and fore-part of the head, whether actual or impending, may next be noticed. Gray hair and baldness depending on old age are natural consequences of man's infirmity, and must be regarded as evidence of failing vigour, rather than in the light of a disease. Premature loss of hair may be produced by various causes, some of which have been

* For references to the formulæ, &c., mentioned above, vide *Index*.

already noticed. It is common after severe fevers, and after erysipelas and other serious inflammatory affections of the scalp; and it is frequently caused by external pressure, friction, or violence, want of the necessary exposure of the head to the air, and by such other local actions and conditions which, when long continued, interrupt the normal functions of the skin. Persons with a consumptive, scorbutic, scrofulous, or syphilitic taint, or of a general bad habit of body, are apt to lose their hair early. In these cases the loss probably arises from debility or paralysis of the vessels of the skin, and the consequent insufficient action and nutrition of the hair-bulbs. When it occurs in persons of or under the middle age, and apparently enjoying good health, it may be often traced to the pernicious practice of constantly wearing a hard non-ventilating hat,* or to disordered stomach or liver, habitual smoking or hard drinking, irregular habits, late hours, or the like. Excessive anxiety or grief, and intense study and thoughtfulness, also tend to promote the early decay and loss of the hair. The natural baldness of the aged, and frequently the premature baldness of earlier years, particularly in the studious and grief-worn, arises from the reduced energy of the circulation in the vessels of the scalp, and its consequent gradual attenuation, until it becomes too thin to afford sufficient space for the performance of the functions of the hair-bulbs and their associated organs, and too scantily supplied with blood for their due nutrition and support. In such cases it will be found that, owing to this attenuation, the scalp covers a larger portion of

* *Vide* pp. 168–9 (*antè*).

the skull than it previously did when vigorous; and that its sides have somewhat receded from the top of the head, so that the roots of the remaining hairs descend lower on the forehead, temples, and the sides and back of the neck, than formerly. This may be perceived by applying the open hand to the part, and then gently closing the fingers, when the scalp will be drawn into its original position, and will then appear loose and wrinkled over the upper portion of the head thus operated on; and this in a manner very different to what occurs when the top of the head is covered, or well covered, with hair.*

Since the introduction of waterproof clothing and silk-hats,† and the very general use of tobacco by the juvenile and scarcely mature portion of our population, early baldness has become so common, that it now ceases to attract notice. These articles act as prejudiciously on the hair, as white bread and alum do on the teeth.‡

When the hair suffers a marked deterioration in quality, and ceases to grow, or grows languidly, and falls off in large quantities without being replaced by new growths, particularly if, at the same time, the usual healthy formation of scurf ceases, and the scalp looks pale, and exhibits a perceptible loss or diminution of its natural warmth, sensibility, softness, and plumpness, or, in other words, shows the usual signs of gradual attenuation, the approach of baldness may be suspected. It is now that remedial treatment has the best chance of success, and, if promptly and skilfully

* *Vide* the author's "*Cyclopædia*," 4th ed., pp. 252-3.

† *Vide* pp. 165-6, 168-9 (*antè*).

‡ *Vide* the author's "*Cycl.*," pp. 120, 253, 355, &c.

adopted, will generally arrest or greatly retard the progress of decay, and not infrequently restore the hair to its pristine condition. The treatment should be of the nature last above mentioned,* but every thing must be carried further, and every preparation employed, to be serviceable, should be considerably stronger than in the previous case. The frictions with the hair-brush should be more frequent and longer continued, and the daily ablutions in cold water more rigorously performed, or, what is better, replaced by a cold shower-bath taken on rising in the morning. When greasy preparations are used, it is advisable to wash the head with soap-and-water once a day. During this treatment the hair should be kept rather short by frequent cutting; and if no manifest improvement occurs in the course of three or four weeks, the head, or at least the upper portion of it, may be shaved once or twice a week, and a wig, or a scalp, worn for a time. The effect of keeping the hair short, or closely cropped or shaved, is to stimulate the hair-bulbs, and to cause them to spend on the stumps, and on the formation of new hair, the whole of the hair-producing and nutritive matter which would otherwise, for the most part, be taken up by the length of hair removed. Hence the remaining hair generally grows thicker, stiffer, and stronger, the oftener the razor or the scissors are employed, and new growths arise; and this frequently when all other means of restoring the hair fail. Besides this, friction and medicaments can be more conveniently applied to the skin when naked, than when covered with hair.

* *Vide* page 272 (*antè*).

The strength of the external applications for daily use, whether wash or lotion, oil or pomade, should be sufficient to produce a pleasant glow of warmth, and slight, very slight, rubefaction of the skin of the scalp, which should be promoted by gentle friction. Without this occurs, and continues with little abatement during the interval between their application, they do no good whatever. A proof of their favourable action is afforded by the scalp feeling warm to the hand when placed in contact with it.

When there is actual baldness, the same treatment should be followed; but if the portion of the skin implicated be extensive, friction with the hand, a piece of flannel, or a coarse towel, will be preferable to that with the hair-brush.

The favourite compounds for external use in baldness, and, perhaps, the most convenient and best, are such as owe their stimulating quality to cantharides or Spanish flies, or to their active principle, cantharidine. This application of these drugs has received the sanction of the highest medical authorities, both in Europe and America, including even Dupuytren himself. The leading professional hair-restorers now rely almost exclusively on cantharides, and all the more celebrated advertised nostrums for restoring the hair contain it as their active ingredient.

Oils and pomades very strongly impregnated with the essential oils of garden-thyme (origanum) and rosemary, and lotions or liniments containing ammonia with a like addition of these essential oils, probably come next in the frequency of their use as popular restoratives of the hair in actual and incipient baldness.

Among active remedies for baldness, of less common use, may be mentioned mild streaming electricity, warm, stimulating fomentations and fumigations, croton-oil, iodurettted and phosphuretted oils and lotions, &c.

It will be thus seen that the principle generally adopted, by both the professional man and the quack, in the treatment of loss of the hair and baldness, is essentially that of stimulation or excitation of the scalp. The celebrated Rev. John Wesley acted on it in his recommendation to rub the part morning and evening with a raw onion, until it becomes red, and then to apply a little honey ;* as do also the proprietors of Rowland's "Macassar Oil," when they order the head to be rubbed with a towel or hair-brush, until somewhat red, each time before applying their nostrum. This is certainly good advice, as independent of the stimulus thus given to the skin and the circulation, the surface of the scalp is rendered more absorbent, and more sensitive to the action of medicaments.

As a mechanical aid in furtherance of other treatment, the use of a night-cap so contrived as to contract and lift, as it were, the relaxed scalp into its former dimensions and position, without injurious pressure on the head, may also be employed.

The reader may now again be cautioned against placing any reliance on external applications, unless he assists their action by due attention to diet, exercise, ventilation, regular habits, and such other matters as tend to promote the general health and vigour of the body. He should also assist the action

* Vide "*Primitive Physic.*"

of external remedies by the use of appropriate internal medicine. A course of tonic medicine, as quinine, or any of the milder chalybeates, preferably the first, or a combination of the two, is often most serviceable in restoring the hair, and is compatible with any other treatment. A course of hypophosphite of soda * is generally still more useful. We are told that, during its exhibition, the hair, even of consumptive patients, commonly grows again and improves in quality, and the beard reappears.†

The baldness of senility, and that arising from the destruction, or permanent injury, or disorganization of the hair-bulbs, admits of no cure, notwithstanding the daily assurances of advertising impostors to the contrary. This kind of baldness is indicated by the scalp not being at all warmed and reddened by gentle, continued friction, or by stimulating applications followed by friction. When this is observed, the case is hopeless, and it would be absolute folly to attempt to restore the hair.

Gray hairs, when occurring singly, and when few in number, or thinly scattered, may be removed with the tweezers, if their presence be objectionable; or they may be lifted from among the surrounding hair and moistened with a solution of nitrate of silver of sufficient strength to restore them to their former hue. The straggling gray hairs that frequently show themselves over the fore-part of the temples, and in the beard, are commonly and conveniently so treated.‡

* The dose may be 5 to 10 grains, twice or thrice a day, soon after a meal, dissolved in water or milk.

† Dr. J. F. Churchill.

‡ The occurrence of a few gray hairs is not always a sign of

Morbid *dryness* and *intractability* of the *hair* commonly arise from a defective action of the oil-glands. In some cases this defective action is occasioned by excessive perspiration; in others, by the previous long and profuse use of crude or rancid oily or greasy substances; and, occasionally, by the action of strong soap or alkalies, which have been employed in washing the head, and not subsequently thoroughly removed by rinsing. The inconvenience may generally be obviated by the free use of the hair-brush, a stimulating wash containing a little glycerine, or a few drops of oil strongly scented with some stimulating aromatic, being also applied daily.

Matting or *felting* of the *hair* depends on its peculiar serrated structure, already explained.* It frequently arises with long hair, when not daily combed, during sickness. The best mode of restoring the hair to order, in these cases, is to well oil it, and then to endeavour to free it from its state of combination by the patient use of the coarser end of the dressing-comb, beginning at the ends of the hairs. No force should be used, as the scalp is usually particularly liable to injury at such a time, and the hairs forcibly removed are frequently not replaced by fresh ones. To avoid this matting or entanglement, ladies, immediately prior to their accouchment, frequently have their long hair formed into loose soft plaits or braids, to the extent of about one-half of its length.

declining health, or of age, as is noticed at page 239. I have observed them in the heads of even robust children. In such cases, they often arise from blows on the head, pressure and strain on the hair, and local affections of the scalp that affect the hair-bulbs.

* *Vide* page 236 (*antè*).

These braids may be easily removed and formed again, at any time; or the hair may be combed and brushed without disturbing them.

Scurfiness of the hair, when of an ordinary and trifling character, is not a disease, but results from want of cleanliness, and particularly from the non-use, or insufficient use, of the hair-brush. *Scurf*—"furfur," "furfura"—is a natural and healthy formation, and, within certain limits, is most abundantly produced when the hair grows most rapidly. "It may be kept from accumulating," but "it cannot be prevented." "This will show how futile any attempt must be which shall have for its object to prevent the formation of scurf. It may be removed, and should be removed, every day, with the hair-brush; but prevention is impossible, inasmuch as it is opposed to a law of nature."* *Excessive scurfiness* is usually symptomatic of an unhealthy state of the skin of the scalp, and should be treated accordingly. The daily use of any mild, stimulating detergent or astringent wash, will generally remove, or greatly lessen, the annoyance. For this purpose nothing is better than strongly-scented rosemary-water to which some spirit and a little tincture of cantharides, or a few drops of liquor of ammonia, or both, have been added. It should be applied with a small, soft piece of sponge. Strong black-tea is also a good wash for excessive scurfiness. If oil be preferred, it should be very strongly scented with oil of rosemary, thyme, or mace.†

Superfluous hairs may be removed either by the

* Erasmus Wilson, "*Healthy Skin.*"

† *Vide* pp. 255-9 (*antè*).

application of the tweezers, or by depilatories.* When the former are used, a few hairs only must be pulled out, one at a time, daily, to avoid excessive irritation. The latter, according to their mode of action, are distinguished into mechanical depilatories and chemical depilatories. To the first belong highly adhesive plasters, which, on their forcible removal, bring away the hairs with them. A mixture of equal parts of pitch and common resin, spread on leather, is of this class. The chemical depilatories usually consist of, or contain as their active ingredients, the caustic earths (lime or baryta) and alkalies, or their sulphurets. Their action is upon the hair-bulbs and hair-capsules, the vitality of which they either wholly or partially destroy, at the same time that they dissolve off the hairs. Their successful use requires some skill and care, as, owing to their high causticity, they are liable to seriously affect the skin, and, sometimes, to produce inconvenient sores which permanently mark it. Fortunately there is no real occasion for employing such compounds, and "why they are ever used," is a question which vanity and fashion may be left to answer. Fortunately, also, the pain that accompanies their unskilful use and excessive action, acts as a sort of monitor to lead to their removal from the part before their worst effects are produced. The only safe way to use them is to apply them to merely a very small space at a time. The addition of starch is commonly made to render the paste more adhesive and manageable.

* From *de* (Lat.), from, denoting separation or removal; and *pilus* (L.), hair.

Almost all the fashionable advertised depilatories contain orpiment or yellow sulphuret of arsenic—a highly poisonous and dangerous substance—from a false idea that it increases the activity of the compound. All such nostrums should be avoided. Yet, strange as it may appear, orpiment is, and always has been, a favourite article in these compounds. Lime or orpiment, and nearly always both of them, have, indeed, formed the leading ingredients in fashionable depilatories, both in ancient and modern times.

To *clean* the *partings* of the *hair*, when dirty, nothing is better than soap-and-water applied with a small piece of flannel or sponge. The cosmetic washes sold for the purpose by the perfumers, under various high-sounding names, usually consist of water holding in solution a small quantity of salt of tartar, or of carbonate of ammonia, variously scented and coloured. A little borax dissolved in rosemary-water, forms a good wash of this kind. They should all be lastly removed from the partings with clean water and the sponge or towel.*

* For references to the formulæ for the preparations, &c., mentioned in the preceding chapter, as well as cautions and directions respecting them, vide *Index*.

CHAPTER XVI.

THE HEAD, FACE, TRUNK, LIMBS, ETC., AND THEIR SUBDIVISIONS, SEPARATELY CONSIDERED.

THE *human head* differs from that of all other animals in its comparative roundness, the fuller development and greater elevation of the forehead, its largeness in proportion to the size of the body, and the small proportion which the parts allotted to the senses, and subservient to the preparation of the food, bear to its whole structure. Its beauty and excellence have been frequently vividly described by technical and scientific writers. "Poised at the top of the majestic column of the human form, and borne aloft, like a living capital, the head stands as the corporeal representative of that which perceives and wills; the disposition of the senses therein as the media of intelligence, and of the organs of speech as the interpreters of thought,—all" tend to "impress us with the conviction that it was designed" to be the immediate seat of the spiritual and intellectual principle of "a being contradistinguished from, and vastly elevated above, all other animals."*

The *shape* and *size* of the *head* immediately depend on the skull or bony case which contains the brain; but the particular development of the skull itself, and, therefore, of the head also, depends on the brain, to

* Green's "*Lectures.*"

the shape and size of which it accommodates itself in every period of our existence. The shape of the head is hence constantly varying. Until the meridian of life this change is one of increase and development; but after that period it gradually takes a contrary direction. Intellectual activity and elevated thought are favourable to the former; whilst mental sloth and sensuality arrest or modify them, frequently replacing the lines of beauty with those which distinguish degradation of mind and vice. The ardent devotion of the mind in any particular direction, and even a change in our pursuits, gradually more or less modify the conformation of the brain, and, consequently, also the shape of the head.

Phrenologists tell us that the shape of the head, as indicative of that of the enclosed brain, affords a means of determining, by mere inspection, the mental development and moral character of the individual. The intellectual and perceptive faculties are located, by these authorities, in the anterior portion of the brain covered by the forehead; the sentiments and emotions, in the middle and upper regions of the skull; and the animal propensities, in the lower and posterior portion and the cerebellum. The truth of this division has been generally acknowledged. Phrenologists, however, go still further, and, dividing the head longitudinally, map out each side of it into about forty localities, and regarding each faculty, sentiment, and propensity, as of a duplex character, assign to each a separate place of habitation in a correspondent pair. In this way a compound constitution is given to the brain, which its anatomical structure does not appear to support; but whether such

minute divisions are justified by reason and experience, it is not necessary for me to consider here.*

The large capacity of the skull or brain-case in man, and particularly of its anterior portion, forms the distinguishing characteristic and beauty of the human head. In the same ratio as the forehead recedes, and the jaws protrude, intellectual development diminishes, and, beyond a certain limit, beauty and reason disappear. The proportion which the skull or brain-case bears to the jaws may be most easily and accurately determined by means of the "facial angle" devised by the "ingenious Camper."† In this way we find that the facial angle of the European exceeds that of the Negro; and that it is greater in the intellectual man than in his less endowed brethren. The Greek sculptors, in order to mark the highest attributes of intellect in the statues of their deities, raised this angle to an ideal standard of excellence which has never been reached in the human form.‡ But here it may be remarked, that it is not merely on the full development of the forehead that the highest degrees of beauty and excellence in the human head depend—the several parts, including those which we possess in common with other animals, must be duly

* Dr. Wigan has written a valuable work on "*The Duality of the Mind*," apart from phrenology. Some psychological facts bearing on the subject will be found in the author's "*Two Months in a London Hospital.*"

† Camper's "facial angle" is the angle which a line, drawn from the most prominent part of the forehead to the sockets of the upper incisors or front teeth, forms with a second line which describes the ground-plane of the cranium, passing through the external meatus of the ears to the lower edge of the nose.

‡ *Vide* Chapter X. (*antè*).

balanced and proportioned to each other. Without this, the intellect and moral feelings lose much of their value, since the activity, energy, and decision of character, necessary for their direction and useful application, will be either wholly absent or defective.

The *natural development* and *shape* of the *head* should never be interfered with. Attempts to modify them in infancy and childhood, by pressure and mechanical means, are now wholly confined to savage tribes.* Beyond promoting the development of the brain, by the cultivation of the nobler sentiments and affections of our nature, and the gradual expansion of the intellect, nothing should be attempted. The practice, common among ignorant nurses and mothers, of pressing together the unossified sutures or soft edges of the bones of the skull, for the purpose of "closing them," as they call it, has long been condemned by the medical faculty, as not merely useless for the object it is intended to effect, but as a fertile source of fits, idiotcy, hydrocephalus (water-on-the-brain), and other dangerous and often fatal cerebral affections resulting from pressure and violence.

The *management* of the *head* in all its relations to the toilet and personal appearance has been already noticed in the chapters on dress, and the skin and hair. The apparent form of the head may often be greatly modified by the mode of dressing the hair, when the latter is abundant, as mentioned elsewhere.

The *human face*, like the head of which it forms a part, is distinguished from that of all other animals by the small portion of it which is occupied by the

* *Vide* Chapter IX. (*antè*).

jaws, compared to that occupied by the forehead and the organs of sight. It is also distinguished by "its nakedness, the delicacy of its surface, the beauty of its contour, and the numerous tints which it is capable of exhibiting. More than all—it is marked by the variety of its expressions, and the faithfulness with which it is capable of revealing the emotions of the mind." "It were useless to expatiate on the almost infinite charms and fascinations of the human face. A perfect face would render its possessor beautiful, even though the rest of the body were destitute of excellence." The charms and influence of beauty, as developed in the features, have been so often "said and sung," and are so universally admitted by mankind, that it would be a work of supererogation to enlarge on the subject.

The *beauty* of the *face* depends chiefly on all its several features being pleasingly moulded and in "perfect keeping" with each other, as noticed in a former portion of this volume. Without this proportion between the individual features, the most delicate complexion, the brightest eyes, the softest cheeks, the finely-moulded mouth, and the ruddiest lips, may fail to charm, and, by contrast, may even disfigure where they should adorn. It is this excellence of proportion that constitutes one of the chief elements of personal beauty.*

The *preservation* and *promotion* of the *beauty* of the *complexion* have been already generally referred to,† and further details on the subject will be found in the following chapter on "Cosmetics." The influence

* *Vide* Chapter X. † *Vide* Chapters XI., XIII., XIV.

which a tasteful and appropriate arrangement of the hair is capable of exercising on the expression of the features has also been noticed.* It is, however, a matter that must chiefly depend on the taste of the individual, and his (or her) ideas of what is becoming and graceful.

The individual features or portions of the face may claim a passing notice :—

The possession of an elevated and prominent *forehead* is correctly regarded as one of the distinguishing features of the human race. Its erectness and extent are characteristic of reason and high intellectual powers, and its development is exactly proportionate to the intelligence of the species and of the individual. A lofty, ample forehead is the attribute of the enlightened European ; a receding forehead, that of the Negro. Beyond a certain limit reason disappears, and idiotcy commences. The absence of a true forehead is one of the characteristics of the brute creation. Its excellence is an important ingredient in personal beauty, and is absolutely necessary to the possession of a superior mind.†

In olden times, divination by the lines, &c., of the forehead was a favourite species of foretelling future events, legible only to the eyes of the seer. It is said, that the discovery of a peculiar furrow, a wavy line, or a fortunate or unfortunate spot or discoloration in the forehead, has often made the heart leap with

* *Vide* Chapter XV.

† *Vide* Baly's "*Müller's Physiologie*," Green's "*Lectures*," &c. ; also page 284, and Chapter X. (*antè*).

joy, or suddenly depressed it with the weight of impending calamity.* With more plausibility the modern phrenologist professes to be able to read the intellectual character of the individual in the conformation of the forehead.†

The *forehead* is occasionally affected with *eruptions*, among which the small, hard, distinct pimples, called "acne," deserve particular notice. They are regarded by the medical faculty as always symptomatic of a debilitated, and frequently of a ruined constitution, and are generally observed in the forehead of those who have prematurely rushed into enjoyment and excess, or who indulge in secret vice. "Like the brand of Cain," observes a recent eminent writer, "they may be said to be placed upon the brow as the mark of the victim who has violated the natural laws." Their treatment is noticed at page 215 (*antè*). When numerous, or persistent, they can only be permanently removed by avoiding the habits which have occasioned them, and by restoring the general health.

The forehead is more subject to be marked with *wrinkles* than the other portions of the face. They are the common result of emaciation and decay; and are hence also the usual accompaniments of declining life. Their treatment, when they are premature, as far as this is possible, has been already noticed.‡

* Divination by the forehead was called "metoposcopy." The once famous Cardanus wrote a treatise of this art, in which he stated that the lines, spots, and moles of the forehead are pregnant with important meanings, and under the dominion of their respective planets. (*Vide* Brande's "*Dict.*" and the larger *Encyclopædias* on the subject.)

† *Vide* page 284 (*antè*).

‡ *Vide* page 224 (*antè*).

Persons who are moderately stout or fat, and at the same time healthy, are little subject to wrinkles. Indeed, it is proverbial, that such persons have generally the sleekest skins.

The *toilet* of the *forehead* is limited chiefly to the arrangement of the hair. The possessor of a beautiful forehead is seldom disposed to conceal any portion of it, or to modify its apparent form by such means. The practice of wearing the hair over portions of the forehead naturally bare is prejudicial to the health of the head, and to the vigour of the mind. The contrary practice of throwing or fixing the hair in unnatural positions, backward from the forehead, is equally objectionable, for reasons already noticed.* The defects of an ill-formed forehead may, in general, be rendered less apparent, and often wholly obscured, by an appropriate arrangement of the hair about it—a matter in which the taste of the individual, and the example of others, will be the best guides.

The *eyes*, of all the features, stand pre-eminent for their beauty and ever-varying powers of expression, and for being the organs of the most exalted, delicate, and useful of the senses. It is they alone, that "reveal the external forms of beauty to the mind, and enable it to perceive them, even at a distance, with the lightning speed of light. It is they alone that clothe the whole creation with the magic charms of colour, and fix on every object the identity of figure. It is the eyes alone," or chiefly, that reveal the emo-

* *Vide* pp. 251–2.

tions of the mind to others, and that clothe the features with the language of the soul. "Melting with pity, or glowing with hope, or redolent with love, benevolence, desire, or emulation, they impart to the countenance those vital fascinations which are the peculiar attributes" of man. "And when the mind is subdued by fear, anxiety, or shame, or overwhelmed with sorrow or despair, the eyes, like faithful chroniclers, still tell the truthful story of the mental disquietude. And hatred, anger, envy, pride, and jealousy, ambition, avarice, discontent, and all the varied passions" and emotions that "torment, excite, or depress the human soul, and find a resting place in the human breast," obtain expression in the eyes. "At one moment the instruments of receiving and imparting pleasure, at another the willing or passive instruments of pain, their influence and changes are as varied and boundless as the empire of thought itself." "Through their silent expressions the mind reveals its workings to the external world in signs more rapid and as palpable as those uttered by the tongue." It is "the eyes alone that stamp the face with the outward symbol of animation and vitality," and which endue it with the visible "sanctity of reason." The eye is, indeed, the chief and most 'speaking' feature of the face, and the one on whose excellence, more than any other, its beauty depends.*

The beauty and expression of the human eye have furnished themes for both poets and prose-writers in all ages. Sculptors and painters have bestowed their highest skill and most laborious efforts on its delinea-

* *Vide* Green's "*Lectures*," Müller's "*Physiologie*," Brande's "*Dictionary*," &c., &c.

tion, and anatomists and physiologists have investigated and described its wonderful structure and functions with a degree of zeal and eloquence perhaps greater than that devoted to any other organ. Physiognomists tell us, that the peculiar form, size, and expression of the eyes, afford reliable indications of the disposition and the mental character of the individual; whilst the phrenologist assumes, among other things connected with these organs and the parts adjacent to them, that prominent eyes indicate the presence of the organ of language, and that their possessor will never be at a loss to express his thoughts in words.

Theories have been based on even the particular "colour of the eyes." Thus, it is said, that *dark blue eyes* are found chiefly in persons of delicate, refined, or effeminate mental character; *light blue eyes*, and more particularly *gray eyes*, in the hardy and active; *hazel eyes* in the masculine, vigorous, and profound; *black eyes* in those whose energy is of a desultory or remittent character, and who exhibit fickleness in pursuits and affection; *greenish eyes*, it is asserted, have the same general meaning as gray eyes, with the addition of selfishness, or a sinistrous disposition. These statements, however, though based on some general truths, and supported by popular opinion, are liable to so many exceptions as to be unreliable, and valueless, in their individual applications.*

Shakespeare is said to have had hazel eyes; Swift, blue eyes; Milton, Scott, and Byron, gray eyes. Wellington and Napoleon are also said to have had gray eyes.

* An excellent article on the 'Theory of the Eyes' appeared some time since in the "*Quarterly Review*."

Much poetry, too, and high-art skill have been expended on the *tears*, and deservedly. Tears are only formed when the fluid that lubricates the eye is secreted in excess; as it is under mental emotion, pain, irritation, &c.*

It has been observed that *vision* is less acute in man than in many other animals, particularly birds. In man, however, the two eyes are directed forward; and thus, though man does not see on two sides at once, like many quadrupeds, his vision is more truly binocular in the same direction, there is more unity in the result of it, and he can concentrate his attention more closely on the objects of his regard or scrutiny. He may not be capable, like nocturnal and feline animals, and most of the herbivora, of seeing in comparative darkness; nor, like the eagle and some other birds, of facing the full blaze of the sun's rays; but he enjoys the faculty of useful natural vision during a greater period of each day, and under a greater variety of circumstances, than any of them, whilst his reason and inventive powers enable him, by artificial means, to assist or to protect his eyes at will, in a manner that causes them to surpass those of every other species of animal in their respective visual peculiarities and excellence.

* It is stated, that a certain distinguished lady, after expatiating, for some time, on the incomparable beauty of a tear, pressed one of our most eminent professors of chemistry for his opinion on the subject; to which the professor replied:—"They are, indeed, very interesting; they consist of pure water, holding in solution one per cent. of solid matter, which I find is chiefly albumen and common salt, with a mere trace of phosphate of soda." The matter-of-fact professor took a scientific view of the subject; the lady, a poetical one.

A *beautiful eye* is one that is full, clear, and brilliant, appropriate in colour to the complexion, and in form, to the features, and of which the connected parts—the eyelids, eyelashes, and eyebrows, which, with it, in a general view of the subject, collectively form the external eye—are also beautiful, and in keeping with it.

The *management* of the *eyes*, in connection with the toilet, consists chiefly in daily bathing or washing them with pure water, and the avoidance of friction or pressure, exposure to dust, irritating fumes, or vivid light, and fatiguing, straining, or overtasking them. In washing them, and subsequently wiping them, the utmost delicacy should be exercised. Strong soap should be particularly avoided, and only a soft napkin should be employed to wipe them. The use of a thick, stiff, or coarse towel, for the last purpose, is very injurious to them, as it tends to flatten them, and hastens the arrival of the time when the assistance of spectacles becomes necessary. Rubbing the eyes with the fingers when drowsy, especially on awaking in the morning, has a like tendency, and is even more injurious.

To *strengthen* the *eyes*, to *relieve* them when fatigued or stiff, or weak, irritable or inflamed, or swollen or congested, and to remove chronic ophthalmia, purulent discharges, &c., nothing is equal to frequently bathing them with water, at first tepid, but afterwards gradually lowered in temperature to absolute coldness. The 'eye-douche' manufactured by Mr. Heather Bigg, and by Messrs. Savory and Moore, is an admirable invention for this purpose. In its absence an eye-glass, or eye-cup, will be found convenient, though less effective.

To *increase* the *beauty* and *expression* of the eyes various means are occasionally had recourse to, nearly all of which, except those hereafter mentioned in connection with the eyelashes and eyebrows, are not merely highly objectionable but even dangerous. Thus, some fashionable ladies and actresses, to enhance the clearness and brilliancy of their eyes before appearing in public, are in the habit of exposing them to air slightly impregnated with the vapour of prussic acid. This is done by placing a single drop of the dilute acid* at the bottom of an eye-cup or eye-glass, and then holding the cup or glass against the eye for a few seconds, with the head in an inclined position. It has also been asserted, and I believe correctly, that certain ladies of the *demi-monde* rub a very small quantity of belladonna-ointment on the brow over each eye, or moisten the same part with a few drops of tincture of belladonna. This produces dilation of the pupil, and gives a peculiar fulness and an expression of languor to the eyes which, by some, are regarded as exceedingly fascinating. The use of these active medicinals, in this way, must be manifestly injurious; and when frequent, or long continued, or carried to excess, must necessarily result in impaired vision, if not in actual blindness.†

* The dilute or medicinal acid (*acidum hydrocyanicum dilutum*, Ph. L.) is that referred to.

† The decay or loss of sight, without visible defect in the eye, called 'amaurosis' by surgeons, has been thus produced by its frequent exposure to the vapour of prussic acid, and, more frequently, by the application of preparations containing belladonna. Both the substances named, though useful medicinals, are active poisons.

The *eyes*, like the other organs, suffer *changes* and *functional decay* by age, improper treatment, and excessive use. They are also injured by many of the violations of the natural laws that accompany modern civilization. Among the last, those that affect the nervous system are the most injurious to the eyes. Dissipation, and the habitual use of narcotics—miscalled stimulants—are particularly so.* Persons in health, with a brain and nervous system unclouded and undepressed by artificial habits and the use of narcotics, are those that usually possess the best sight, and that retain it unimpaired the longest.

On the common defects called "long sight," "short sight," and "weak sight," a few words may be said here.

In *long sight* near objects are indistinctly seen, whilst remote ones are more readily perceived. This arises from the crystalline lens of the eye, after about the age of thirty, gradually acquiring greater density and flatness, and also from the gradual flattening of the transparent, horny membrane which forms the

* Tobacco-smoking has been named by some medical authorities as particularly injurious to the eyes, and as sometimes producing amaurosis. I think that it is the action of the fumes or smoke on the external eye that chiefly renders it open to this charge; and that the injurious action of tobacco on the eyes, through the internal nervous system, is not greater than that of other narcotics in common use. I have been led to form this opinion from two or three cases that formerly came under my notice—those of drivers of fast coaches and mails who continually smoked on the box, and whose sight became so defective that they were compelled to give up the practice in order to keep their situations. The result was that, though they smoked heavily when off duty, they recovered their original strength and steadiness of sight in a few weeks.

front part of the eyeball, and called by anatomists the 'cornea.' The extremely long sight of the aged depends chiefly on the last. Rubbing the eyes, and pressure on them, tends, as already mentioned, to produce or increase long sight.

Short sight is said generally to arise from the central portion of the crystalline humour being denser than the other portions; but it probably more frequently arises from excessive convexity of the eyeball.

Both the above defects may be remedied by the use of appropriate spectacles or eye-glasses.* Those formed of double-convex lenses, or preferably, as first recommended by Dr. Wollaston, of meniscus lenses,† are employed to assist 'long sight;' and those formed of lenses very slightly concave, or preferably, of convexo-concave lenses, for 'short sight.' Pantoscopic spectacles, or those in which the upper portion of each lens, to the extent of about one-third of the vertical diameter, is ground away, have the advantage of allowing the wearer to look *through* them at near objects, and *over* them at distant ones, by which the necessity of their removal is rendered less frequent, and fatigue of the eye avoided.

Weak sight, when not arising from organic lesion, or any derangement of the optical apparatus of the eye, may generally be more or less relieved by the use

* Spectacles were first used towards the end of the 13th century, and are said to have been invented, or suggested, by either Alhazen, in the 12th century, or Roger Bacon, who flourished about a century after.

† A meniscus lens is a concavo-convex lens, in which the convexity is greater than the concavity; or, in other words, one that is crescent-shaped.

of the spectacles of weak magnifying power, popularly called 'preservers.'*

The lenses of spectacles and reading-glasses, to be permanently useful, and not injurious to the eyes, should be accurately ground, so that the sphericity of each of their surfaces be equal in all its parts;† and the glass or pebble of which they are formed should be highly polished, perfectly clear, and perfectly free from streaks, bubbles, or other like defects.‡ Without all these points are combined in them, vision through them will be imperfect, and the eyes gradually but seriously injured by them. It is advisable to use glasses of the lowest power capable of effecting the desired object satisfactorily, and to replace them with stronger ones only as age or circumstances render it necessary. As the focal length of the two eyes is very frequently unequal, it is also proper to employ an appropriate lens for each, and not two lenses of equal power.§

Astigmatism,‖ and other rare defects of vision,

* This name is commonly given to spectacles mounted with double convex lenses, of which the focal distance is 36 or 40 inches (usually the former).

† This may be determined by observing whether the magnifying power is equal over their whole extent.

‡ These defects are most easily detected by 'blazing' them; *i. e.*, holding them in a certain manner at a distance from the eye, and near the flame of a candle.

§ The focal distance of the eye, or the limit of distinct vision, may be accurately determined by means of the *optometer*, an instrument which is now in the hands of every skilful optician and surgeon-oculist.

‖ Astigmatism is a want of agreement between the refractive powers of the eye in a horizontal and a vertical plane passing

of which the precise nature is difficultly detectable, and in which common lenses are useless, may be relieved by the use of others of appropriate forms, which the skilled professional observer will point out.

Defective sight, particularly short sight, often leads to awkward actions and a strangeness of deportment, which, by attracting the notice of the observer, are detrimental to the influence of the personal charms. When this is the case, it is due to ourselves, as well as to those around us, to endeavour to remedy the defect by the use of glasses, or by any other means.

The following *means* of *preserving* and *restoring* the *sight*, which has for some time been going the round of the periodical press, being really based on scientific principles, may be appropriately inserted here :—

For *near-sightedness*, close the eyes and pass the fingers, very gently, several times across them outward, from the canthus, or corner next the nose, towards the temple. This tends slightly to flatten the cornea and lens of the eye, and thus to lengthen or extend the angle of vision. The operation should be repeated several times a day, or at least always after making one's toilet, until short-sightedness is nearly or completely removed.

For *long sight*, *loss of sight* by age, *weak sight*, and generally for all those defects which require the use of magnifying glasses, gently pass the finger, or napkin, from the outer angle or corner of the eyes

through the axis of vision. The celebrated Professor Airey has astigmatic eyes, the defects of which are perfectly remedied by the peculiar glasses which he wears.

inward, above and below the eyeball, towards the nose. This tends slightly to 'round up' the eyes, and thus to preserve or restore the sight. It should be done every time the eyes are washed, or oftener.

It is said that many persons, by this last means, have preserved their sight, so as to read very small print, at eighty years of age; and that others, whose sight had been impaired by age or excessive use, have, in like manner, restored their sight and been able to dispense with the use of glasses, and have since preserved it by a daily continuance of the practice.* It must be remembered, however, that, to be successful or safe, great gentleness and caution must be observed. Violence, or rough pressure, must be carefully avoided.†

Short sight, arising from *abnormal density* of the central portion of the *crystalline humour,* is often materially lessened by rubbing the forehead, immediately above the eyebrows, with strong tincture of ginger or capsicum, essence of ginger, or Beaufoy's acetic acid, or by applying the same to the temples, near the eyes. Weak sight, and swollen eyes, arising from excessive use or fatigue, may also often be relieved in the same way.‡

There is good reason to believe that chicory (the common 'coffee' of the Londoners), from its peculiar

* I have both seen and personally experienced benefit from thus gently manipulating the eyes. The way in which we actually wipe the eyes—from the inner canthus outward—after washing them, is one which evidently tends to flatten them. *Vide* the article "*Vision*" in the author's "*Cyclopædia,*" 3rd ed., p. 1279; also p. 297 (*antè*).

† *Vide* p. 294 (*antè*).

‡ *Vide* p. 294 (*antè*).

narcotic character, exerts an injurious effect on the nervous system and, through it, on the eyes. "So convinced of this is Prof. Beer, of Vienna, a most celebrated German oculist, that he has enumerated chicoried coffee among the causes of amaurotic blindness."*

Squinting—"strabismus" of medical writers—when not depending on any organic peculiarity, is commonly acquired in childhood by silly efforts to look singular, or by imitating others. When one eye only is affected, it is recommended to blindfold the sound eye for several hours daily, until the affection be removed. When both eyes are affected, a projecting piece of pasteboard, in the line of the nose, worn for several hours daily, will generally effect a cure. In bad cases of 'squinting inwards,' as it is called, the division of the internal rectus muscle of the eyeball—an operation that must be performed by a skilful surgeon—is said often to relieve the deformity.

Of *diseases* of the *eyes* only two or three can be usefully noticed here :—

Inflammation of the eye—"ophthalmia" or "ophthalmitis" of medical writers—in ordinary cases is confined to the external membrane of the eyeball, or to the eyelids ; but it occasionally attacks deeper seated portions of the eye, and assumes a corresponding serious character.

The common causes of ordinary or conjunctival ophthalmia are exposure of the organ to cold, drying winds, to dust, gritty particles, irritating fumes, or to any external source of irritation or injury.

* The "*Lancet*."

The symptoms are, for the most part, those common to local inflammation, and are well known. The eye, or eyes, become more or less blood-shot, swollen, and tender, and a sensation of the presence of particles of sand or other gritty substance, with much heat and pricking, is constantly experienced. The fluid secretion of the eye becomes yellowish and thick, and during the night, by drying, frequently glues, as it were, the lids together. Sometimes only one eye is attacked, but, except in very trivial cases, after two or three days the disease extends to the other.

The treatment of mild cases of ordinary ophthalmia is extremely simple. The eyes should be frequently bathed or fomented with warm water, or with decoction of poppy-heads; the light should be excluded as much as possible; the diet should be reduced below the usual standard, and be light and easily digestible; stimulating liquors should be carefully avoided; and the bowels kept gently open by the use of mild aperient medicines. When the inflammatory symptoms have subsided, lukewarm water, and then cold water, may be used to bathe the eyes, and very mild astringent and cooling eye-waters,* applied three or four times daily.

In the chronic forms of ordinary ophthalmia, in the purulent ophthalmia of infants, and in that following the small-pox, measles, and fevers, when there is little

* Those containing sulphate of zinc, alum, or vinegar are, perhaps, the best. In chronic ophthalmia, arising from, or following, scrofula or syphilis, a solution of chloride of barium in distilled water (3 to 5 gr. to the fl. oz.) is an excellent application. (For references to formulæ, vide *Index*.)

or no inflammation, mild astringent solutions may be at once had recourse to. The diluted ointment of nitrate of mercury, or of nitric oxide of mercury, noticed below, is here also an excellent remedy.

In every variety of ophthalmia, the eye should be kept clean by careful and frequent ablution with warm water, or warm milk-and-water. The occasional use of the astringent solutions should be continued for some time after the disease has disappeared, for the purpose of preventing its recurrence and strengthening the eyes.

In the *inflammation* and *ulceration* of the *eyelids*, called "psorophthalmia," or "ophthalmitis tarsalis," by surgeons, which is attended with considerable itching and irritation, and with a copious discharge of viscid, acrimonious matter, the ointment of nitrate of mercury, or of nitric oxide of mercury, diluted with ten or twelve times its weight of fresh washed-lard, will be found an excellent remedy. A very small quantity of this ointment should be applied, night and morning, by means of a camel-hair pencil, a feather, or the tip of the little finger.

To relieve the pain and irritation in ophthalmia, psorophthalmia, and other like affections of the eye, a single drop of solution of hydrochlorate or acetate of morphia, or of wine of opium, previously diluted with twice or thrice its volume of water, may be applied to the organ two or three times a day.*

* An eminent French oculist has recently declared that solution of morphia is the most powerful curative agent in ophthalmia, which then requires no other treatment than frequently bathing of the organ in warm water. His plan is to drop one minim (drop) of the undiluted medicinal solution into the eye twice or thrice daily.

Ophthalmia is sometimes symptomatic of other affections, as gout, rheumatism, hysteria, &c., when the treatment, under medical advice, will have reference to the primary disease. Intense pain (*ophthalmodynia*), having this origin, is sometimes felt in the eye, when no inflammation or other affection of this organ exists.

The malignant forms of ophthalmia often produce intense suffering, ending in total blindness, and are highly contagious.

In *blear-eye*—"lippitudo"—there is an exudation of purulent matter from the margins of the eye-lids, which are red, humid, and somewhat painful; and frequently, during the night, glued together by the discharge. Mild astringent eye-waters, or the ointments mentioned above, are here also the best applications. Excess in eating and drinking should likewise be avoided, and some aperient medicine taken.

Weak, watery eyes, may be strengthened by frequently bathing them, at first with tepid water, and afterwards with cooler water, the temperature being daily lowered until perfectly cold water be used.*

Red or *blood-shot eyes*, when not depending on organic lesion or visceral disease, are usually produced by dissipation, gluttony, or excessive drinking or smoking. The only remedy known is the abandonment of the vicious habits on which the evil depends.

The peculiar, abnormal, *yellow appearance*, assumed by the *white of the eye*, and frequently observable in heavy drinkers of London porter, generally arises from

* On this and the preceding cases, *vide* page 294 (*ante*).

the action of picric acid, a substance commonly employed, in lieu of hops, to impart bitterness to that beverage. The complexion of such persons is also usually of a dirty, bilious, yellow colour.*

The small inflamed tumour, or boil, somewhat resembling a barley-corn, which sometimes forms at the edge of the eyelid, and is popularly called a *sty*,† though inconvenient and painful, is seldom of long duration. It is usually recommended to promote its maturation and suppuration by warm fomentations or poultices; since, when once formed, the sty, like other furunculous tumours, generally runs its course. A bread-poultice, to which a little sweet lard or olive oil has been added, is the best for the purpose.

Of *external injuries* of the *eyes*, those from blows, pressure, and the presence of foreign bodies are the most common.

The pain and tumefaction produced by *blows* and *pressure* may, in ordinary cases, be generally relieved by freely bathing or fomenting the organ with warm water. The pain may be further relieved by the use of solution of acetate or hydrochlorate of morphia in the way already mentioned.‡ If persistent, the diet should be at once lowered, stimulants avoided, and aperients taken.

Black-eyes, arising from blows, may be treated in the way noticed under 'bruises.'§ Any persistent

* *Vide* the Author's "*Cyclopædia*," 3rd ed., pp. 977, 1029, 1030, &c.

† Also written *stye*, *stian*; Lat., *hordeolum*, *tumor palpebræ*.

‡ *Vide* p. 303 (*antè*). § *Vide* pp. 225-6 (*antè*).

discoloration may be concealed, or greatly lessened, in the way mentioned in the next paragraph.*

The *darkness* or *discoloration* round the *eyes*, frequently observable in females, and which is sometimes permanent, but more frequently periodical, is either constitutional or depends on certain conditions of health, and occurs and disappears with them. In the fashionable world, the aid of the cosmetic art is not uncommonly called in to disguise these discolorations. A little French chalk or talc, in impalpable powder, is rubbed on the part and then gently 'dusted off' with a camel-hair pencil or a tuft of badger's hair, or the excess is blown off with the breath. A little of the same powder that has been very slightly tinted with rouge or carmine is next applied, the excess being removed as before. The application of the pencil to clear the edges of the eyelashes, and of the corner of a soft napkin to 'tone down' the outer margins of the parts treated, finishes the operation.

The *effects* of *dust*, *dirt*, *acrid fumes*, and other *irritating substances* on the *eyes*, may be met by freely bathing them in warm water, or by the use of the eye-douche. Gently raising the eyelid with the fingers, and holding it apart from the eye for a short time, will generally cause a copious discharge of tears, which will wash away the offending matter and relieve the irritation.

Foreign bodies, as *particles* of *sand*, *grit*, *glass*, *metal*, *lime*, *mortar*, or *sparks* from wood-fires, the

* There are persons residing about the Haymarket, and in other quarters of London, who practise the art of disguising black-eyes by painting them, or 'enamelling' them, as they call it; an operation which they certainly do very skilfully.

chimneys of steam-boats, locomotives, &c., lodged in the eye, should be at once removed by raising the eyelid, and the application of a feather, the corner of a silk handkerchief, or the moistened tip of the finger. If the substance be embedded in the eyeball, or in the substance of the eyelid, a pair of forceps may be necessary to remove it, but they should be used in the most careful and gentle manner. If the removal be delayed, the irritation* that is rapidly set up renders the operation more difficult, and the consequences more serious. After the operation, the eye should be freely bathed for some time with warm water, or when *lime* or *mortar* has been the offending substance, with water slightly acidulated with vinegar or acetic acid. In all serious cases, and particularly where the body of the eyeball is implicated, surgical aid should be immediately sought.

The *eyelids*† have been already spoken of in this and the preceding chapters. The practice of tinting the edges of them black for the purpose of increasing the apparent whiteness and brilliancy of the eye, common among the ladies of Eastern nations, is, in Western Europe, only occasionally adopted by actresses, courtezans, and ladies of the demi-monde.‡

* This arises chiefly from the exquisite sensibility of the inner membranes of the eyelid. Rapid winking aggravates the irritation, and a flow of tears ensue. If the latter do not wash away the offending substance, it is liable to be drawn further under the eyelid, or to be forced further into the eye by the efforts made by the eyelid to relieve itself. The sufferer should, therefore, grasp the eyelid between his thumb and finger, and raise it and hold it apart from the eye until the foreign substance be removed. In this way much irritation and pain may be prevented.

† *Palpebræ*, Lat. ‡ For *references*, vide *Index*.

The beauty of the *eyelashes** consists chiefly in their length and silkiness. These qualities may be promoted by occasionally 'topping' them with a pair of sharp scissors. The practice is most effective when commenced in early childhood. The least possible portion of their extremities should be removed; and the operation, to be neatly done, must be performed by a second person.

The *eyebrows*,† unlike the eyelashes, should never be cut, or in any way subjected to the action of the scissors or razor. Their beauty consists in their being smooth, glossy, and well-defined, in having little breadth vertically, and in extending in a graceful, arched line over the eyes. Cutting them ultimately destroys these qualities, by causing them to grow coarse, stiff, and irregular. After washing the face, the fingers or napkin should be passed over them to smooth them and to set the hairs in their places. This is all that is required. Some ladies, however, when making their toilet, pass the finger, very slightly moistened with oil or pommade, over the eyebrows, to darken them and give them gloss; but the practice is not to be recommended. An occasional gray or prominent bristly hair in the eyebrows may be plucked out with the tweezers. It should never be cut off, as is the common practice.

Persons who dye their hair or beards are very apt to meddle with the eyebrows, and often produce effects contrary to their intentions, and far from pleasing. This is nearly always the case with persons of a light complexion, or who are pale, either from

* *Cilia*, Lat. † *Supercilia*, Lat.

confinement indoors or from ill-health. It is true that oriental ladies darken their eyebrows to enhance their charms; but then it must be recollected that their hair is naturally black or dark, and that the tone of their complexions corresponds.* Any interference with the natural colour of the eyebrows should, therefore, be limited to merely brightening and slightly darkening them. Attempts beyond this generally end in discomfiture.

The *nose*, though so necessary to the tout ensemble, seems to labour under the misfortune of being generally turned into ridicule whenever it forms the subject on the tapis. How far it deserves the slights and fun so frequently 'poked' at it, I must leave the happy possessors of noses to form their own opinions. There have been, however, many excellent and philosophical writers who have deemed the human nose worthy of their serious consideration, and even of eulogy. Sir Joshua Reynolds regards a well-formed nose as essential to personal beauty. He tells us, that "the line that forms the arch of the nose is beautiful when it is straight;" and he further observes, "this, then, is the central form which is oftener met with than either the concave, convex, or any other irregular form which can be proposed."† Sir Charles Bell declares, among other matters, that "the nostrils" which form so prominent a portion of the nose, "are features which have a powerful effect in expression. The breathing

* *Vide* page 88; also chapters III. and IV.

† "*Essay on Beauty.*"

drawn through them, and their structure formed for alternate expansion and contraction, in correspondence with the motions of the chest, form an index to the condition of respiration when affected by emotion." *

A Mr. Warwick has written an elaborate work on noses,† in which he professes to develop a newly-invented science. This book is justly said, by one of its reviewers, to be "extravagant, original, and amusing;" but that it should be so is a natural consequence of its author being an enthusiastic connoisseur in noses. He thus angrily argues against the indifference to the subject now generally existing :—

"Because the nose is uninfluenced by the feelings which agitate and vary the mind, and is, therefore, immovable and unvaried, no one will hear the theory of Nasology broached without incredibility and risibility. Because the nose is subject only to those faculties of the mind which are permanent and unfluctuating, and is, therefore, likewise permanent and unfluctuating in its form, men have paid no attention to its indications, and will, accordingly, abuse as an empiric and a dotard the first nasologist. But is there, *a priori*, anything so unreasonable in attributing mental characteristics to the nose, when we all daily read each other's minds in the nose's next door neighbours, the eyes and mouth? Is not the *a priori* inference entirely in favour of a negative reply? And that, *a posteriori*, it may confidently be replied to in the negative, will, it is hoped, presently appear." ‡

The author next proceeds to "explain and demonstrate" his doctrine of noses, which he arranges in six different classes. To each class he ascribes certain mental and moral qualities, and sustains his argu-

* "*Anatomy and Physiology of Expression.*"

† "*Nasology, or the Science of Noses,*" *by* EDEN WARWICK.

‡ Mr. Warwick appears to have forgotten the importance given to the nose by certain physiognomists.

ments by outline-portraits of distinguished men. Then he furnishes us with examples of 'mixed noses,' or such as are compounded of two or more of his leading types. These he also illustrates from life. His classification of noses is as follows :—

"Class I. The Roman, or aquiline nose;
,, II. Greek, or straight nose;
,, III. Cogitative, or wide-nostrilled nose;
,, IV. Jewish, or hawk-nose;
,, V. Snub-nose;
,, VI. Celestial, or turn-up nose."

In this *Table*, Mr. Warwick has degraded the Grecian or straight nose—the nose of beauty and intellect—to the second place. He has also omitted the 'button nose,' the 'veritable pug-nose,' and the nose which Solomon, in a strain of enamoured flattery, compares to "the tower of Lebanon, which looketh toward Damascus."*

Now, although each of the preceding noses, if gracefully moulded and proportioned to the other features, may occasionally form a component part of a pretty, or even a somewhat handsome face, it must be admitted, that the Grecian nose is essential to the higher forms of beauty. "Solomon," observes the reviewer, "merely proves the antiquity of the adage—*De gustibus nil disputandum.*" "Now I deem it as becoming to see a woman standing behind a good, roomy nose, as to contemplate a fair temple with a majestic portico; but it may be questioned whether a nose like the tower of Lebanon, is not somewhat too elephantine,

* "*Solomon's Song*," vii., 4.

and bordering on the proboscis. The *nez retroussé** is undoubtedly smart and piquant; the button-nose, like all other diminutives, is endearing; and even the snub-nose absolutely has its admirers. Cupid can get over it, 'though it have no bridge,' in the same way that 'he jumps through a wall-eye like a harlequin.'"†

Mr. Warwick expatiates with evident zest on the noses of the Duke of Wellington and Napoleon Bonaparte. That of the first, he says, was a Roman nose —an undoubted fact; that of the latter, a Romano-Greek nose. He then triumphantly compares Wellington—nose and character—to Julius Cæsar; and Buonaparte, to Alexander the Great. According to Napoleon III., however, Cæsar had a long, straight nose—*i.e.*, a Grecian nose; while certain other historical writers tell us that Alexander's nose, to use a gentle term, was not a prominent or beautiful feature in his face. The "non-cogitative form" of the American nose almost brings tears into Mr. Warwick's eyes. He declares it to be "the most unthinking of any of the Gothic stock." "America is, however, a fast-growing nation; it had no infancy, but started at once into life, a full-grown youth." Mr. Warwick has, therefore, hope that the national nose of America will gradually improve, and ultimately assume the "cogitative form of that of its ancestors," which it should already possess by inheritance, but does not, according to this author.

"Give me," said Napoleon, "a man with a good allowance of nose;" from which we may infer, that

* "*Un nez retroussé*" (Fr.), a nose that turns up.

† "*New Monthly Magazine.*"

great military commander regarded a liberal development of this feature as indicating the character desirable in a soldier.

The *preference* given by certain nations to *particular forms* of the *nose*, and the *mechanical distortion* of this feature among savage and semi-civilised tribes during childhood, have been noticed in a previous chapter. *

Among refined nations, and even in the fashionable world, the nose may be regarded as one of the most fortunate of the features; since it almost uniformly escapes being interfered with at the toilet, further than simple cleanliness requires. This is precisely as it should be, for no interference with it, after childhood, can advantageously modify its form or promote its beauty. The nose, with the air-passages connected with it, always resents interference and mistreatment, whether there be frequent meddling with it with the fingers, blowing it frequently with ungracious violence, exciting it with stimulants, or choking it up with irritating powders. The ill effects of such treatment soon become perceptible, as may be frequently observed in irritable children and youth, and in inveterate snuff-takers. In the last, both the form of the nostrils and the tone of voice suffer. Heavy blows and pressure on the nose rapidly deform it, and destroy its beauty.

In early childhood, owing to the soft nature of the cartilages that form the nostrils, the shape of the lower part of the nose may generally be slightly modified by gentle continued pressure. Thus, a nose disagreeably wide or spreading at its base, by being very gently and very slightly compressed for a few hours

* *Vide* pp. 93–4.

daily, may be reduced to more reasonable limits;* but beyond this nothing should be attempted.

The disfigurement which the loss or distortion of the nose occasions must have been observed by the reader. The ambition of every one appears to be to possess a nose, even though it be not the nose of beauty. Individuals who have had the misfortune to lose this organ, have been known to expend immense sums in trying to obtain the most effective and respectable substitute for it, in India-rubber, gutta-percha, or membrane, that the art of the mechanical surgeon can produce. Others have submitted to tedious and painful operations and have endured prolonged confinement and sufferings for the purpose of the lost organ being replaced in veritable flesh and blood borrowed from the forehead, the fore-arm, or the breech.†

* A small U-shaped piece of watch-spring, with a small pad at each end, is sometimes thus applied at bed-time in fashionable life. It should only slightly compress the nostrils, and not in any way interfere with free respiration through them during sleep.

† *Rhinoplastic* or *nose-forming* operations are sometimes, though very seldom, performed by surgeons; and, in favourable cases, with admirable success. The *Tagliacotian operation*—so named after Tagliacozzi or Tagliacotius, an old Italian surgeon who was "very great" in thus supplying noses—many of my readers have probably read of. In a case of rhinoplasty, in one of our hospitals, which came under my notice in my early days, the result was eminently successful, the nose being an excellent one, but, unfortunately, scarcely of sufficient excellence to please the owner of it. The consequence was, that the party persisted in having it so often tampered with, in order to improve it, after all had become sound and well, and so distressed his mind about it, that his health rapidly declined, and the last operation on it, to bring it to his views of perfection, was followed by an attack of erysipelas—if I remember

Bleeding from the *nose* is a matter that may claim a passing notice here. When it is not the result of a blow or other violence, it is frequently an effort of nature to relieve the vessels of the neighbouring parts from an excess of blood, and, in this case, will generally cease of itself in a short time. When it is habitual, or the result of violence, or excessive and persistent, remedial measures should be had recourse to. A simple means of arresting the hæmorrhage is to introduce, by means of a probe,* a small piece of lint or soft cotton, previously dipped in some mild styptic liquid, as a solution of alum or creasote, strong black-tea, or even very cold water. Should this not succeed, a little of one of these liquids may be snuffed up the nostrils, or a small piece of ice placed in the one from which the blood flows. If the bleeding still continues, and is profuse, surgical aid should be called in.†

The method of arresting bleeding from the nose originally proposed and practised by Dr. Negrier, a physician of Angiers, will generally succeed in ordinary cases, and should, therefore, be always tried before resorting to the preceding or any other treatment. It consists in simply elevating the arm of the affected side as high above the head as possible, and holding it so for a short time, or until the hæmorrhage

rightly—which ended in his death. His ambition to possess a handsome nose cost him his life!

* A slender cedar-pencil, or any thing of like form, may be used when a probe is not at hand.

† Hæmorrhage from the nose is sometimes, though very seldom, dangerous. I have, however, personally met with two fatal instances of it. One of these (that of an innkeeper) resisted surgical treatment, and proved fatal in three days. The hæmorrhage was voluntary, and the only assignable cause was slight plethora.

ceases. Dr. Negrier recommends this plan as "both simple and certain," and says that he has never known it to fail when properly employed. His explanation of the rationale of the cure is based on known physiological facts connected with the circulatory system.*

Hairs in the *nose*, when troublesome, may be removed with the tweezers, as noticed in page 281. It should, however, be recollected that they are not idly placed there by nature; one of their purposes being to act as a filter to the air we breathe. Persons who are much exposed to a dusty atmosphere, had, therefore, better not remove them.

The beauty of the *human mouth* and *lips*, the delicacy of their formation and tints, their power of expression, which is only inferior to that of the eyes, and their elevated position as the media, with the palate, tongue, and teeth, by which we communicate our thoughts to others in an audible form, need scarcely be dilated on here. The poet tells us that—

"The lips of woman out of roses take
The tints with which they ever stain themselves.
They are the beautiful and lofty shelves
Where rests the sweetness which the young hours make,
And which the earnest boy, whom we call Love,
Will often sip in sorrow or in play.
Health when it comes doth ruddiness approve,
But his strong foe soon flutters it away!

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* *Vide* the Author's "*Cyclopædia*," 3rd ed., p. 142.—For *freckles*, *eruptions*, &c., on the nose, *vide* pp. 209, 215-6, &c. (*anté*).

Disease and health for a warm pair of lips,
Like York and Lancaster, wage active strife ;
One on his banner front the White rose keeps,
And one the Red ; and thus with woman's life,
Her lips are made a battle-field for those
Who struggle for the colour of a rose."*

A *beautiful mouth* is one that is moderately small, and has a well-defined and graceful outline; and *beautiful lips* are such as are gracefully moulded, neither thick nor thin, nor compressed nor lax, and that are endowed with expression, and tinted with the hues of health.

The ladies of Eastern nations commonly heighten the hue and freshness of their lips by means of cosmetics, a practice which in Western Europe is only adopted on the stage, and occasionally by courtezans and ladies of the demi-monde.

Smoking is detrimental to the colour and form of the lips. The cigar is less so than the pipe. Either of them should be placed or held between the lips in the centre of the mouth, and not on one side. The latter tends to deform the mouth, as may be seen in smokers who indulge in long or heavy pipes.†

The lips are very liable to suffer when exposed to cold and drying winds. The most common effects of such exposure are chaps or small fissures in them, and a species of erysipelatous eruption consisting of

* E. H. Burrington.

† The practice of placing the cigar or pipe at the side of the mouth is unnatural, and is regarded as 'snobbish' in fashionable life. It may be convenient with long or heavy pipes that require to be supported with the hand, and is, therefore, only permissible with them.

small clusters of minute vesicles, which soon become moist from the discharge of the watery humour which they contain.

Chapped lips most frequently occur in persons with pale, bluish, moist lips, and a languid circulation, who are much exposed to the wind in dry cold weather, or who are continually moving from heated apartments to the external air. East and north-east winds are those that generally produce them. The occasional application of a little cold-cream, lip-salve, spermaceti-ointment, or any other mild unguent, will generally prevent them, and remove them when they have already formed. A still more elegant and effective preventive and remedy is glycerine diluted with about twice its weight of eau-de-rose, or glycerinated lip-salve or balsam.*

The *moist vesicular eruption* of the *lips*, referred to above, may also generally be prevented by the use of glycerine, or any of the preparations just mentioned. After its accession, the best treatment is to freely dust the affected portion of the lips with violet-powder, finely powdered starch, prepared chalk, or French chalk or talc reduced to an impalpable powder by scraping or grating it.

Pustular and *scabby eruptions* of the *lips* may be treated by moistening them, twice or thrice a day, with a weak glycerinated lotion of bichloride of mercury or sulphate of zinc.†

Swollen lips, the effects of *blows*, may be treated as noticed under 'bruises.'‡

* † For references to formulæ, vide *Index*.

‡ *Vide* pp. 225–6.

The influence which the *teeth* are capable of exercising on the personal appearance is universally known and admitted. A beautiful set of teeth is one in which the teeth are compact and regular, and smooth, and pearly white, and in which the front ones, at least, are moderately small.*

The teeth have formed especial objects of attention, in connection with the toilet and cosmetic arts, from almost the earliest ages of the world to the present time. History and tradition, and the researches of archæologists among the remains of the prehistoric periods of the nations of the East, show us that even dentistry may trace back its origin to a date not very long subsequent to the 'confusion of tongues.'

The ancient Egyptians, Assyrians, and Persians used artificial teeth, and were familiar with the use of gold and enamel for filling decayed ones. Descending to later, but still remote periods, we find that the ladies of ancient Sicily and Rome used both artificial teeth and 'stopping,' and that the polished Romans generally were liberal patrons of tooth-cosmetics.

Albucasis, the Arabian physician who flourished in the early part of the twelfth century, made artificial teeth of ox-bones.

We are told that the ancient Welsh took particular care of their teeth, and kept them perfectly white by frequently rubbing them with a stick of green hazel and a woollen cloth. To prevent their premature decay, they scrupulously avoided acid liquids, and invariably abstained from all hot food and drink.

* The popular notion—an absurd one—is that the possession of small regular teeth, like small ears, hands, and feet, is a sign of 'gentle blood.'

In olden times, in these realms, the removal of the teeth, or some of them, was occasionally ordered by way of persecution or punishment. It is said that King John once demanded ten thousand marks from a Jew at Bristol; and, on his refusal, ordered one of his teeth to be drawn every day until he should comply. The Jew lost seven teeth, and then paid the sum so unjustly demanded of him.*

Towards the end of the fifteenth century, one Matthew Flint, dentist, received from Richard III. a grant of sixpence per day on condition of his drawing the teeth of the poor of London gratuitously.†

Europeans pride themselves on teeth of pearly whiteness; but many Asiatic nations regard them as beautiful only when of a black colour. The Chinese, in order to blacken them, chew what is popularly called 'betel,' or 'betel-nut,' a common masticatory in the East.‡ The Siamese and the Tonquinese do the same, but to a still greater extent, which renders their teeth as black as ebony, or more so. As the use of the masticatory is generally not commenced until a certain age, the common practice is to stain the teeth of boys and girls with a strong preparation of it, on the former attaining the age of ten or twelve,

* A.D. 1190. † *Vide* chapter VII. (*antè*).

‡ It is generally formed by dividing a fresh *areca-nut* into four or six equal parts or slices, one of which is rolled up, with a little *chunam* (shell-lime), in a sirih or leaf of the piper-betel, and then constitutes a 'quid' ready for use. There are different strengths and qualities thus prepared. By the Malays, Sumatrans, &c., it is regarded as an absolute necessary of life. The leaves of the piper-betel somewhat resemble those of the citron in appearance, and are stated to be bitter, stomachic, tonic, stimulant, sialogogue, and aphrodisiac ("highly aphrodisiac"—Gray).

and the latter, twelve or fourteen. The process occupies three or four days, during which time they take only liquids, for fear of being poisoned by the stain or pigment if they swallowed food masticated by their newly-dyed teeth. Every one in Siam and Tonquin undergoes this dyeing operation, as even the humblest and poorest regard it as a disgrace to grow up to manhood or womanhood with teeth as white as those of dogs, goats, and elephants. The Malays and Sumatrans commence chewing betel at an earlier age, which renders the above process of dyeing the teeth unnecessary. The ladies of Turkey, Persia, and other oriental countries, frequently stain their teeth red or black, but in a simpler and more expeditious way than is practised by the nations just referred to.*

The dental formula of man is—

Incisors,† or cutting teeth	$\frac{4}{4}$
Canine teeth,‡ or dog-teeth	$\frac{1}{1}$ $\frac{1}{1}$
Præmolars,§ or bicuspids ‖.....	$\frac{2}{2}$ $\frac{2}{2}$
Molars, or grinders ¶	$\frac{3}{3}$ $\frac{3}{3}$

being collectively thirty-two in number, the figures above and below the line respectively representing teeth in the upper and under jaw, and those repeated horizontally referring to each side of the mouth.

* *Vide* Chapters VIII. and IX. (*antè*).

† *Incisores* (L.), the four front or cutting teeth ; from *incido*, I cut.

‡ *Canines, dentes canini* (L.), dog-teeth ; from *canis*, a dog ; also called *laniaries, dentes laniari* (L.), lacerating or tearing teeth ; and *cuspids, cuspidati* or *dentes cuspidati* (L.), from having only one point or fang. The two upper ones are often popularly termed the 'eye-teeth.'

§ *Præmolares* (L.), front or false molars, lying before the true molars.

‖ *Bicuspides* or *dentes bicuspidati* (L.), from having two points.

¶ *Molares* (L.), the grinding-teeth, or cheek-teeth ; from *mola* (L., prim. Gr.), a mill-stone or mill.

Of these it may be remarked, that the front teeth are framed for cutting or dividing; the canine teeth,* for seizing or tearing; and the back teeth, for bruising or crushing. The short and but moderately strong jaws of man, in which they are set, do not admit of the ready mastication of herbage or raw grain, or the devouring of flesh that has not been previously prepared by cooking.

The *development* and *structure* of the teeth are singular and complicated:—

The first teeth, or milk teeth, beginning with the incisors, usually commence appearing a few months after birth, but occasionally earlier. Sometimes, though rarely, children are born with one or more of them. At two years, the whole of the deciduous teeth are cut. After the seventh year, these are gradually shed and replaced by others—the eight deciduous incisors being replaced by eight permanent ones; the four deciduous canine teeth, by four permanent ones; and the eight deciduous molars, by eight bicuspids or præmolars. Of the twelve true or posterior molars, which are permanent, and not deciduous or replaced by other teeth, like those previously mentioned, there are four—one on each side of both jaws—that usually make their appearance at about four and a half years; four more, at about nine years; the last four, between the sixteenth and the eighteenth year, but frequently not until the twentieth year, and sometimes even later.

* These are only slightly developed in civilized man, but are more prominent among savage tribes, particularly cannibals. They form the tusks or fangs of beasts of prey.

The period of *dentition* or *teething* is often a trying one to both the infant and the nurse, and particularly to the parents; but the trouble and danger attending it frequently arise, and are very generally increased, by improper treatment, or by the neglect of those matters which are, at all times, essential to health, and more especially so during infancy. At this time, excessive cleanliness, the use of warm, dry clothing, absolute freedom from tight bandages and pressure, with fresh air without undue exposure, and thorough ventilation without draughts, abundance of good nursing-exercise and of 'crawling on the carpet,' and frequent warm-baths, will be found more than usually advantageous. Indeed, one of our highest medical authorities asserts, that the last, without other treatment, are often sufficient to subdue the most distressing convulsions of this period, and the most obstinate diarrhœa; whilst in no case can they do harm, but only good. Above all things, the nursing mother, or wet-nurse, must be scrupulously regardful of her own health, always remembering that improper diet or indulgences, irregular habits, exposure, mental disquietude, and the like, exert, through her, a baneful action on the infant, though she may suffer little from them herself. By attention to all these points, dentition will generally interfere but little with the health of the infant, strong and regular teeth will be formed, and the foundation laid for a beautiful and durable set in after life.*

* The common practice of drenching infants with physic during dentition is highly objectionable. Beyond a mild dose or two of rhubarb-and-magnesia, in diarrhœa, to restore the tone of the bowels, a little castor-oil occasionally, to increase their action when

During childhood and youth the teeth demand particular care and attention, as at this period they are very easily affected by violence, being meddled with, and improper use, by which their beauty, regularity, and strength, may be permanently impaired. They are also liable, from these causes, and sometimes without any apparent cause, to cross or press on each other, by which they are forced out of their natural positions, and grow unequal and irregular. In such cases dentists frequently insert ligatures or wedges of gold, platinum, silk, or India-rubber, between the teeth, to cause them to grow equal and regular.* Sometimes even a supernumerary tooth or two will spring up behind the regular set, forcing the tooth or teeth in front of it out of their places. Here the

sluggish, and a small dose of mercurial powder (gray-powder) and rhubarb to relieve them when constipated, scarcely anything is usually actually required. In diarrhœa, when persistent, the daily use of a little genuine arrow-root, to which a few drops of pure old port-wine have been added, will generally effect a cure. Excessive irritability and restlessness, when unaccompanied with other marked symptoms, may be allayed by administering one to three drops (according to the age) of tincture of hops, in sweetened water. When there is excessive local irritation, with spasms or convulsions, the common practice is to lance the gums; and when there is drowsiness, stupor, or oppressed respiration, to apply one or two leeches to the temples, or a small blister to the back of the neck or behind the ear; each of which last should be done by a surgeon or under his directions. (*Vide* the Author's "*Cyclopædia*," 3rd ed., p. 1220.)

* M. Delabarre, who first recommended India-rubber for this purpose, says that, from its softness, and swelling with the heat of the mouth, it is better adapted than any other material for exerting pressure on such teeth, and causing them to assume a uniform and straight position.

proper treatment is generally the removal of the 'interloper' as soon as possible; but if the tooth in front of it be feeble and much displaced, it is often better to remove it instead of the other, when the former, during growth, will gradually fill up the vacant position in the gum.

The *preservation* of the *teeth* is an object of the utmost importance; since, besides their immediate connection with the personal appearance, their integrity is highly subservient to health, owing to their use in preparing the food for the subsequent process of digestion. Unfortunately the teeth are either wholly neglected, or very improperly treated, by the mass of mankind; and even those who are most attentive to their teeth, and who highly value their beauty, direct their efforts mainly to rendering the front teeth white, because these are seen when we speak, smile, or eat. A thought respecting their permanent preservation scarcely arises until their decay commences and warns them of their approaching failure or loss. Yet the preservation of the teeth, and the permanent promotion of their beauty, are nearly synonymous terms. The subject deserves the serious consideration of every one.

The rational *management* of the *teeth* consists essentially in thorough cleanliness, and the avoidance, as much as possible, of the use of beverages, condiments, and articles of food generally, that exert an injurious action on them, or on the gums. Among the substances referred to, are all those of a sour, or acid, or corrosive nature, including acid piquant sauces, pickles, sour fruits and preserves, salads seasoned with vinegar, and the like; to which also must be added

medicines containing acids or acid-salts,* or any salt in which a strong acid is united to a weak base.† When such articles are eaten, or taken, it is advisable either to clean the teeth, or to rinse the mouth with pure water, as soon afterwards as possible. The use of hot food and liquids is also very prejudicial to the teeth and gums; and this more so in youth and early maturity than in after life. Overtaxing the teeth, and frequently exerting them on hard, tough, or gritty substances, or in biting substances so thin or slender that their cutting edges are brought into immediate contact and act on each other,‡ are other practices which rapidly tend to injure them and to wear them out. Allowing particles of animal or vegetable food to remain in the interstices of the teeth, or in cracks or hollows in them, is particularly objectionable; as the first, from the heat of the mouth, in a short time generate a rancid acrimony, and the other an acidity, which not merely render the breath offensive, but rapidly corrode the teeth. Such particles should be removed by the toothpick immediately after every meal.§

* Here the acid seizes on a portion of the lime of the phosphate of lime in the teeth, to the injury of the enamel, and particularly of the necks or throats of the teeth next the gums.

† In such cases the acid in the salt leaves the weaker base, and seizes on the lime of the teeth.

‡ It is on this account that the habit, common among females, of biting off their thread or cotton when sewing, is so injurious to the teeth.

§ The best materials for a toothpick are tortoise-shell, ivory, gold, silver, or aluminium, in the order here given. The best form is that of a small, thin, tapering, pointed blade, either folding or sliding into a handle. A quill cut like a pen with long shoulders, but without the slit, forms an excellent and harmless toothpick. Pins, needles, and all steel instruments, should be avoided.

Keeping the lips apart and breathing through the mouth, instead of the nose, and particularly sleeping with the mouth open, are habits which are very prejudicial to the teeth and gums. In this way the mouth forms a trap to catch the dust and gritty particles floating in the atmosphere, which soon mechanically injure the enamel of the teeth by attrition; the saliva, by the evaporation of its aqueous particles, becomes inspissated, and, by the action of the oxygen of the air, its ptyaline suffers decomposition, its natural alkalinity is lost, and it grows slightly acid and corrosive. Particles of matter accumulated around the necks and in the cracks and interstices of the teeth, from the same exposure, suffer rapid decomposition, tainting the breath as it passes through and over them. Further, the membranes covering the gums, and lining the lips, mouth, and fauces, at the same time lose their natural delicacy and healthy character, growing unpleasantly parched and stiff, so that speech becomes difficult and imperfect until the parts are again lubricated with saliva by the action of the tongue. It is on this account that snuff-taking is so injurious to the teeth. Snuffers generally breathe through the mouth while awake, and uniformly do so when asleep. Besides which, snuffing acts injuriously by reducing the powers of the stomach.

The nostrils are the natural channels of respiration in man, and in most other mammals. Breathing through the mouth, when avoidable, is, therefore, unnatural; and being unnatural, must also be unfavourable to health. Besides exposing those who do so to many inconveniences, particularly increased liability to infectious diseases, it gives a more or less vacant

expression to the features, which, in exaggerated cases, is sometimes almost idiotic.*

On the subject of *cleanliness* in connection with the *teeth* and *mouth*, it may be said that the mouth cannot be too frequently rinsed during the day, and that it should be more particularly so treated after every meal. Pure cold water is the best for the purpose. It not only cleans the teeth and mouth, but exerts a tonic action on the gums, which warm water, or even tepid water, is deficient in. When cold water cannot be tolerated, tepid water may be employed, the temperature being slightly lowered once every week or ten days, until cold water can be borne. The addition of a few drops of spirit of camphor, or essence of camphor, to the water thus employed, is highly serviceable; as camphor, by its antiseptic and anodyne properties, and its odour, tends to arrest decay, allay tenderness and pain, and correct the fœtor of the breath. Where convenience permits, it is advisable to clean the teeth night and morning, and after dinner, or the principal meal of the day. When, as is frequently the case with the great mass of mankind, the only opportunities of attending to the teeth are those at the morning toilet and before retiring to rest, these should be taken advantage of for that purpose. At all events, every one who abhors a fœtid breath, rotten teeth, and the toothache, would do well to thoroughly clean his teeth at bedtime, observing

* Mr. Catlin tells us that savages, unlike civilized men, constantly keep their mouths closed when not speaking, eating, &c.; and even in a crowd, when gazing upward with astonishment. (*Vide* his "*Breath of Life*," a work enriched with numerous amusing pictorial illustrations.)

to well rinse the mouth with cold water on rising in the morning, and again in the day once, or oftener, as the opportunities occur. With smokers, the use of the tooth-brush the last thing at night is almost obligatory, if they value their teeth, and wish to avoid the unpleasant flavour and sensation which teeth fouled with tobacco-smoke occasion in the mouth on awaking in the morning.

The *operation* of *cleaning the teeth*, like all other operations of the toilet, should be carefully performed, and in as effective a manner as possible. The mode in which it is commonly done is worse than useless, and is not infrequently very injurious to the teeth and gums. To do it well and thoroughly, the action of the tooth-brush should not be confined to the visible portion of the front teeth, but every portion of both the upper and under teeth, back and front, and on the inner as well as the outer sides, and the crowns, should receive attention. Without all this be done, the use of the brush can effect little in the way of thorough cleanliness, correction of the odour of the breath, and the preservation of the teeth. Further, great care should be taken to avoid violence to the gums. If these bleed, or feel sore, real injury is done them by the operation, notwithstanding the assertions of certain interested dentists to the contrary. In such cases it will generally be found that the brush has been clumsily applied, or is of a coarse inferior quality, or that the tooth-powder, or other cosmetic used with the brush, is of an acrid or gritty nature.*

* In purchasing a tooth-brush, care should be taken to select one of an appropriate size and width, and of which the hairs are

Personal attention to the teeth should commence in early life. As soon as the permanent teeth begin to appear, a child should be taught to rinse its teeth and mouth with water after every meal, or two or three times daily. In another twelvemonth or two years, or as soon as it is capable of properly using a tooth-brush, one should be given it, and at the same time it should be instructed in the mode of employing it, and the importance of doing so. A little later, and some simple tooth-powder may be added to its little collection of toilet-requisites. Some watching, and further instruction, may be necessary; but by the time early youth commences, attention to the teeth will have grown into a pleasurable habit which will cling to the individual for life.

As to *tooth-powders* or *tooth-pastes* to be used with the brush, little need be said here, as I shall revert to the subject again. The simplest are the best. Plain camphorated chalk, with or without a little finely powdered pumice-stone or burnt hartshorn, is a popular and excellent tooth-powder. It is capable of exerting sufficient friction under the brush to ensure pearly whiteness of the teeth without injuring the enamel; whilst the camphor in it tends to destroy the animalcula in the secretions of the mouth, whose skeletons or remains constitute, as we shall presently

only moderately stiff, and the surface of a character adapted to penetrate the interstices and inequalities of the teeth. It should be dipped into the water employed, and the excess of water being shaken out, gently pressed on a little of the tooth-powder placed on a piece of paper or the palm of the left hand, and then applied to the teeth. After use, it should be at once well rinsed, shaken, wiped, and placed aside, ready for the next occasion.

see, the incrustation popularly called "tartar" or "fur." Powdered Castile-soap forms another simple tooth-powder which, besides other excellent qualities, perhaps exceeds all other substances in its powers of destroying the minute beings just referred to, and removing the tartar resulting from their presence. Recently burnt charcoal, in very fine powder, is another popular and excellent tooth-powder which, without injuring the enamel, is sufficiently gritty to clean the teeth and remove the tartar from them, and possesses the advantage of also removing the offensive odour arising from rotten teeth, and from decomposing organic matter. The charcoal of the heavy, hard woods, as lignum vitæ, box-wood, oak, are the best; and these, as to quality, range in the order here given. Still more valuable, as a dentifrice, is areca-nut charcoal, which, besides possessing the properties of the other vegetable charcoals in an eminent degree, has invaluable ones peculiar to itself, as noticed in the following chapter.*

Besides tooth-powders and tooth-pastes,† which are used with the tooth-brush,‡ there are collutories,§ masticatories, lozenges, pastilles, cachou aromatisé, and

* The substances and preparations mentioned above, or mixtures of them, variously aromatised and disguised, form the leading and more valuable portion of the advertised dentifrices now used in fashionable life.

† These are essentially tooth-powders, highly aromatised, to which a soft-solid form is given by means of honey, or some other agreeable vehicle.

‡ Tooth-powders and tooth-pastes are the usual forms of dentifrices.

§ Mouth-washes; *collutoria*, Lat.

other preparations which are employed as tooth-cosmetics and mouth-cosmetics, and which will be found fully noticed elsewhere.*

In the choice of tooth-cosmetics the greatest care should be taken to avoid those which contain gritty, acrid, or irritating substances; as the two first act injuriously on the teeth, and the last, on the gums.

Some dentists, and some persons in imitation of them, in order to whiten the teeth, rub their surfaces with hydrochloric acid, somewhat dilute; but the practice is a most dangerous one, which, by a few repetitions, will sometimes utterly destroy the enamel, and lead to the rapid decay of all the teeth so treated. Should the teeth be much discoloured, and ordinary tooth-powder prove ineffective, a little lemon-juice, used with the brush, will generally render them perfectly white. It should only be employed occasionally, and the mouth should be well rinsed with water immediately afterwards. A little of the pulp of an orange, used in the same way, is also very effective and safe; as are also ripe strawberries, which may be either rubbed on the teeth with the fingers, or applied with the brush. The last form, perhaps, the very best natural dentifrice known. Besides possessing singular power in whitening and cleaning the teeth, and rapidly removing tartar, they destroy the offensive odour of rotten teeth, and impart an agreeable fragrance to the breath. Oranges and strawberries are also useful in removing fur from the tongue.

The importance of a judicious attention to the teeth,

* *Vide* the following chapter; and for special references, the *Index*.

in connection with health, cleanliness, and personal comfort and appearance, cannot be too often alluded to and enforced. Yet, notwithstanding its importance, there is, perhaps, no part of our toilet-duties which are so generally neglected, or so carelessly performed, as those relating to the teeth. It is no exaggeration to say that, taking the whole community, there are few, very few, who clean their teeth, or even wash their mouths, once a day. With the masses, the operation, if performed at all, is confined to the Sabbath-day, or to holidays. Whilst refined, educated, and cleanly persons, regard the operation of cleaning the teeth as a daily duty, as necessary as washing the face and hands, the dirty and vulgar—the two words are here synonymous—wholly neglect it, and too often even consider it as unnecessary, effeminate, and absurd. The consequences of the careless performance, or the neglect, of this really necessary personal duty, are not long in being developed. Passing over the degradation of the other features, the offensiveness of the breath, often to a degree which renders the individual uncompanionable, and the unfavourable impression which, like other marks of uncleanliness, they convey of the taste and habits of their possessor, as the immediate effects of habitually neglected and dirty teeth, let us look at the more distant, but not less certain ones :—

It is a well-known fact that dirty teeth are very liable to premature decay. The decomposing animal and vegetable matter accumulated between and about them, and particularly around their necks or throats, rapidly corrodes them, and gradually impairs their vitality. The enamel suffers. It becomes

brittle, cracks, and here and there chips off, exposing the inner portion of the tooth, in which decay immediately commences. The edges of the incisors, and the points or tubercles in the crowns of the molars, gradually give way, by which the former teeth lose their efficiency as cutters, and the latter as grinders. The gums suffer, lose their adhesion, and shrink back, exposing the necks of the teeth to every unfavourable influence. Minute cracks in the enamel widen into fissures, and places where it is chipped or worn off become unpleasantly rough or scratchy to the tongue. The depressions in the crowns of the teeth grow deeper and deeper, as if the parts were contracting or shrinking on themselves. Soon caries in one or more of the teeth actively sets in, there is rapid loss of substance, the nerve becomes exposed to the air and cold, violent twinges of toothache follow, attention is directed to the part, and surprise is expressed at the discovery of a hollow or rotten tooth. The same thing occurs after a time with another tooth; and again, at intervals, until several are destroyed or rendered useless. A few years later, and several teeth are probably missing—some have been removed by the dentist—others have crumbled away or broken off, and, perhaps, only their stumps remain, to be sources of pain and annoyance on every subsequent exposure to cold or attack of a fit of dyspepsia. In another five or six years, more are missing or have become useless, whilst those remaining have probably grown so weak and defective that thorough mastication of solid food is impossible.

Bad teeth and defective sets of teeth, owing to the

resulting inability to properly masticate the food, are fertile causes of dyspepsia or indigestion, heartburn, diarrhœa, worms, and the like. So, on the other hand, dyspepsia, and some other affections of the stomach, frequently occasion toothache and premature decay of the teeth.

As a further incentive to cleanliness and care of the teeth and mouth, it may be added, that the mucus of the mouth commonly contains those microscopic creatures known as infusorial animalcula, and that, when foul, it is crowded with millions of them. Leuwenhoek was the first to announce this fact, which has since been confirmed by M. Mandl and others. M. Mandl further discovered that the fur or foul adhesive mucus of the tongue, and the tartar, fur, or greenish incrustation of the teeth, consist of the skeletons or dead remains of these minute beings compactly united into one mass by chemical decomposition. These animalcula are most observable in the mouths of persons who neglect their teeth, and who live on a spare diet, or eat putrescible articles of food, or are in bad health.*

Independently of the direct action on the teeth exerted by substances taken by the mouth, before noticed, the *nature of our food*, through the functions of nutrition, has much to do with their beauty, strength, and durability. This is particularly the case during the whole period of their development and growth. The mineral constituents of the teeth

* M. Mandl says that the quickest mode of destroying them is the application of a tooth-brush dipped in brandy, or other ardent spirit. (*Vide* pp. 330–1, *antè*.)

are essentially identical with those of the bones. It is therefore evident that, if a sufficiency of bone-matter be not contained in our food, the teeth will be ill-developed and feeble. Children and youth brought up on brown bread have almost uniformly good teeth, and retain them to a late period of life.* The only bread eaten by the rustic population of our agricultural districts is coarse meal-bread, and, as a consequence, with them cases of toothache and rotten teeth are extremely rare. On the other hand, the inhabitants of our cities and towns eat white bread, and are constant sufferers from weak teeth, rotten teeth, dyspepsia, and toothache. The people of the north of Europe eat coarse black-bread, and dentists and dentistry are unknown among them.

The popular notion, that *sugar* and *sweets* injure the teeth, is, like many other popular notions, incorrect. On the contrary, pure sugar and confections whiten and preserve the teeth. "Let those who believe the former unfounded assertion visit the sugar-plantations, and look at the negroes and their children, whose teeth are daily employed in the mastication of sugar, and they will be convinced of the absurdity of the statement."† Dr. Willis, many years ago,

* Bread made of wheaten meal, containing the whole of the bran, is here alluded to. The bran, with the attached gluten removed with it, contains the chief portion of the bone-matter and flesh-matter of the grain. (*Vide* Notes pp. 217, 220, &c.)

† Montgomery Martin, "*The British Colonies*," vol. ii.—I can confirm Mr. Martin's statements by my own observations in the Western World, and elsewhere. I need not go farther than my own personal experience to prove the view taken above. From my infancy I have consumed large quantities of pure sugar daily,

having given the sanction of his name to the popular opinion respecting the corrosive action of sugar on the teeth, Dr. Slare disproved the notion by reference to his grandfather, who had all his life consumed enormous quantities of sugar daily. This gentleman was in the habit of eating it, spread upon his bread and butter, at breakfast. He used also to put sugar in his ale and beer, and even into the sauces he took with meat and fish at table. When eighty years of age, he had all his teeth strong and firm, could crunch the hardest crust, and was free from all pain and soreness of the gums. In his eighty-second year one of his teeth dropped out, and soon after that he lost another, which was one of his front teeth. In the following two or three years all his teeth dropped out; but, what was more remarkable, they were replaced by the growth of a perfectly new and useful set. His hair was at that time quite white, but it now became somewhat dark. He continued to enjoy good health and strength until his death, which happened in the ninety-ninth year of his age.* This is, undoubtedly, a most extraordinary case; but numerous later authorities, of the highest eminence, might be quoted to show the innocuousness of pure sugar and sweets, in reference to the teeth, and even their preservative action on them. The practice of crunching dry lump-sugar, or crystallized sugar,

particularly in my tea, coffee, and other beverages, and in confectionery. I have not yet lost a single tooth from natural decay, and am never troubled with the toothache. I know of several like instances among my relatives and friends.

* Vide "*Phil. Trans.*," No. 337.

between the teeth, as is done by some persons, is, however, objectionable; since, owing to its greediness for moisture, it so rapidly deprives the crowns of the teeth, and the gums surrounding their necks, of the saliva that lubricates them, as to cause unnatural dryness and even pain. Sugar, in the solid form, should be sucked, not chewed. The use of sour, or even acidulous sweetmeats, or of those containing acrid substances, should also be avoided; for the former attack the enamel of the teeth, and the latter injuriously affect the gums.*

Cracks or *fissures* in the *teeth*, *defects* in the *enamel*, and *voids* or *hollows* resulting from *caries* or *rottenness*, should be filled up, or "stopped," as it is usually called, with gold, mineral marmoratum, or some other good cement or "stopping," as soon as possible after they become perceptible. For this purpose the services of a respectable dentist should be called in. Teeth that are useless and constant sources of pain, from the defects just mentioned, may be thus rendered again serviceable, and will generally remain so for many years.

Lost teeth, when it is practicable, should be replaced by effective artificial ones, care being taken to employ some respectable and skilful dentist to supply the latter. Cheap advertising dentists should be carefully

* This is why "acidulated drops," even those soured with citric or tartaric acid, are objectionable. The common ones, which are nearly always acidulated with oil of vitriol, rapidly destroy the teeth. Tamarinds, from being commonly sharpened by the druggists with "spirit of vitriol," as they call it, are also highly destructive to the teeth.

avoided, since, in general, they are imposing and clumsy pretenders to their art.

The *toothache*—"odontalgia" of the medical profession—is an affection which need not be described. "There is no disease to which the human frame is subject more excruciating or intolerable, or which so completely incapacitates a person from business or pleasure, as the toothache."* It commonly arises from mistreatment or neglect of the teeth, caries, or disordered stomach, or exposure to sudden changes of temperature or cold. When it arises from either of the two first causes, after its removal by any of the means mentioned below, its recurrence may generally be prevented by the daily use of strongly camphorated tooth-powder, followed, after a time, with a like use of areca-nut charcoal. When a disordered stomach is the cause, saline purgatives may be administered; or, if the stomach be loaded with indigestible matter, it should be first cleared by an emetic.† In persons subject to dyspepsia, an occasional dose of the "Abernethy medicines" will be subsequently advisable. When cold is the cause, an excellent remedy is a warm embrocation of poppy-heads, followed by the use of flannel and diaphoretics. When it arises from a hollow or decayed tooth, one of the best applications is a small piece of lint moistened with creasote, or with a strong spirituous solution of creasote, which

* Dr. Clark.

† An excellent emetic for this purpose is a little ipecacuanha wine. Another, equally good, is a teaspoonful of flour of mustard (a substance always at hand) in a half-pint tumblerful of lukewarm water. The action of either should be promoted by subsequently drinking copiously lukewarm water.

should be closely rammed into the cavity, or, where this is impossible, pressed against the tooth and gum. The essential oils of cloves, caraway, and cajeput, are also often effective when used in the same way. A few drops of the essence or concentrated tincture of pellitory of Spain,* either simple or camphorated, applied by means of lint to the tooth and gum, will frequently succeed when the other articles just mentioned fail. The ethereal essence or tincture of pellitory† is more effective than that made with rectified spirit, provided the mouth be instantly closed on its application. A still more active and certain remedy is concentrated liquor of ammonia (liquor ammoniæ fortior, Ph. L.) diluted with three or four parts of rectified spirit. In using it, a small piece of lint is moistened with the liquid and instantly applied to the gum of the affected tooth. It must be observed, however, that, in this kind of toothache, all the preparations just mentioned only afford temporary relief, the pain being liable to return with the slightest exciting cause. To prevent the recurrence of the attack, the cavity, or carious portion, should be carefully "stopped" with amalgam of gold, or with some durable mineral cement. Some dentists use arsenical tooth-cement for the purpose. It is most effective in relieving the pain, and in preventing its recurrence; but it should be avoided as a dangerous remedy,

* *Radix pyrethri*, Lat.; *Pyrethrum*, Ph. L. and E.

† Nearly all the most celebrated advertised "drops" and "essences" for the toothache have pellitory for their active ingredient. The essence or concentrated tincture is now also the common remedy used by dentists for toothache.

since, after a few months, the destruction of the remaining portion of the tooth, with exfoliation of the jaw, not infrequently commences, and occasions agonizing pain, worse than that which it was employed to remove.

In cases of ordinary toothache, even severe ones, chewing a small piece of really good pellitory will often give relief in a few minutes.* Chewing a piece of strong unbleached Jamaica ginger will often do the same, in slight cases. The celebrated John Wesley recommended a "few whiffs" at a pipe containing a little caraway-seed mixed with tobacco, as a simple and ready means of curing the toothache. I can bear testimony to the fact that, in some cases, it succeeds admirably.

A slight shock of electricity passed through an aching tooth will generally instantly remove the pain, even after all other means have failed.†

Those annoying little sores or tumours popularly called *gum-boils*, generally arise from heat of the mouth and disordered stomach. When mature, they should be ruptured by gentle pressure with the finger, or opened with a lancet. To prevent their recur-

* Good pellitory, when chewed, causes a sensation of smart tingling in the gums and lining of the mouth, and will thus frequently relieve toothache and common cases of face-ache. It is also often highly serviceable in tic-douloureux or facial neuralgia.

† One of Pulvermacher's or Mienig's "electrical chain-batteries" is very convenient for this purpose.

rence the diet should be regulated, and a dose of aperient medicine taken occasionally.

Foulness of the *tongue*, and particularly *furred tongue*, are noticeable here on account of their effects on the breath. They are both indicative of disordered health, and the last, of a feverish condition of the system which requires medical treatment. The free use of fruit, and particularly of oranges and strawberries, is the best local means of removing them.

Scarcely anything is more disagreeable, and, in marked cases, more disgusting, than *fœtid breath*. It is unpleasant to the person that has it, and it renders him unfit for the society of others. The cause of stinking breath may generally be traced to rotten teeth, diseased stomach, or worms. When the first are the cause, the teeth should be thoroughly cleansed, and then "stopped" in the manner already indicated; or, when this is impracticable, the offending tooth, or teeth, may be removed, and replaced by artificial ones. When this cannot be done, or is inconvenient, the evil may be greatly lessened by the frequent use of an antiseptic tooth-powder, as areca-nut charcoal, or camphorated chalk. Dirty teeth, even when quite sound, always more or less taint the breath. When a foul or a diseased stomach is the cause, mild aperients should be administered; and, if these do not succeed, an emetic may be given, followed by an occasional dose of the "Abernethy-medicines," scrupulous cleanliness of the teeth being observed, as in the former case. When worms are

the cause, worm-medicine, under medical direction, will be necessary.

Such are the only rational means of rectifying the odour of the breath; but various others have been proposed to remove the annoyance, depending chiefly on the administration of aromatics, which, by their odour, smother that of the breath for a time; but these require continual repetition, and are liable to derange the stomach. Highly aromatised or scented lozenges, tablettes, and globules, and cachou aromatisé are thus commonly employed, those containing oil of cloves, musk, orris, or neroli, being most esteemed. One, two, or three of these lozenges, &c., are slowly sucked at will. Occasionally rinsing the mouth with a little water to which a few drops of solution of chloride of lime, or of chloride of soda, have been added, is often an effective method; but, in this case, the mouth should be immediately afterwards rinsed with pure water. The use of spirit of camphor, in the same way, has been already pointed out.* It is less effective than the chlorides referred to, but has the advantage of being perfectly harmless.†

The *chin* is a feature on which little need be said. It has been remarked, that "it is grievous to allow a beautiful chin to be covered by the beard." Perhaps it is so, but this must depend on the taste of its happy possessor. The defects of an ill-formed or ungraceful

* *Vide* p. 328 (*antè*).

† For references to formulæ and substances referred to above, vide *Index*.

chin may be generally obscured, either wholly or in part, by wearing the beard in an appropriate manner; and this, too, must be left to personal taste, which, in such cases, ought to be a sufficient guide. Thus, a chin unduly long, or wide, may be easily concealed by the adjustment of the beard that covers it; and one unduly prominent, by a similar arrangement, assisted by the moustache.

Of the *beard*, *whiskers*, *imperials*, and *moustache*, like the chin, little need be said here. The cultivation and cut of any one or more of them, and the use or non-use of the razor altogether, are matters entirely depending on personal taste and caprice, and on the prevailing fashion of the times. It would be folly to attempt to show how easily the appearance of the face may be modified and improved by an appropriate and tasteful mode of wearing or dressing its crinal appendages—how a thin and long one is shortened and widened in appearance by the presence of hair on the sides and lower part of the chin, or by having its length broken by a moustache; or how a short or wide one may be modified by a contrary mode of treatment, assisted by the whiskers.

A book was published a few years since, to "prove" that "beard-shaving and the common use of the razor constitute an unnatural, irrational, unmanly, ungodly, and fatal fashion among Christians." Whether this work was written by an enthusiast in the quietude of Colney Hatch, or by a satirist in the crowded palace at St. George's in the Fields, I do not know; but if the writer be alive now, he would undoubtedly be

highly pleased at observing that beards *are* prevalent at the present day in England, and that even the entire non-use of the razor is fashionable among us. Still more would it give him pleasure to find that clean-shaved faces have become even rarer than beards were formerly, and that his opinion that such faces are "effeminate and unmanly" is now a common one.*

The *ears* are the only parts of the head and face that remain to be noticed. Moderately small and gracefully formed ears add greatly to the charms of the tout-ensemble.† In some persons the back and upper lobes of the ears form a considerable angle with the sides of the face. This may often be observed in females, having been caused by the practice of placing the hair behind the ears in childhood. The peculiarity is easily remedied, during early life, by wearing through the night a soft bandage round the head, so arranged as to restore the ears to their natural position.

The practice of wearing *ear-rings* is traceable to remote antiquity. In the Middle Ages they were commonly called "pendants." At the present day their use, in different forms, exists among almost all nations and tribes of men, both civilized and savage. In some countries their use is common to both sexes.‡

* On *promoting the growth* and *dyeing* the beard, whiskers, &c., *vide* Chapter XV., on the "Hair" (*antè*).

† *Vide* Note, page 319 (*antè*).

‡ *Vide* Chap. III.—VI.; also pp. 94–5.

The operation of "piercing the ears" to fit them for holding ear-rings, is generally a harmless one; but it is not always so. In persons prone to erysipelas it has occasionally been known, when clumsily performed, to cause sufficient irritation to bring on an attack of this disease.

To be safe, the portion of the ring or pendant held in the ear should be of gold, and of not less than eighteen carats fine. When formed of base metal it is almost sure to "canker" the ear; and even when made of inferior alloys of gold it sometimes causes inconvenience.

The ear is subject to numerous affections, but a notice of them, being purely medical or surgical, does not come within the province of the present work. It should never be meddled with, as it is so delicate that its functions as the organ of hearing are easily impaired. The use of ear-drops, and of other like advertised nostrums, should be avoided as dangerous. In all affections of it, functional or local, the advice of a qualified surgeon or aurist should be early sought. Deafness commonly causes a peculiar cast of features, and a carriage of the head, which are far from pleasing.

Of the *neck* and *throat* little need be said in addition to that contained in Chapter XII.* The evils resulting from tight bandages and pressure on these parts have been already pointed out; and here it may be useful to call attention to the ill consequences that frequently

* *Vide* pp. 169–70.

arise from their too free exposure, or from their being insufficiently protected from draughts, cold, and rapid vicissitudes of the weather. The low dresses of fashionable life that generally replace, at a later part of the day, the higher and warmer morning dress, which until then has been worn in safety and comfort, are perhaps the most certain traps ever invented by fashion to catch sore throats, bronchitis, influenza, and a whole host of breath-ailments, of which fatal lung-diseases are the common sequelæ. In early life, low frocks are more particularly dangerous, and are rendered still more objectionable from the habit which children commonly have of shuffling them off one of the shoulders, and thus leaving the upper portion of the chest exposed in a manner that even the most hardy often cannot long resist.

It should be recollected that the throat and neck, particularly the first, contain numerous important glands, and other organs, which are highly susceptible to cold and changes of temperature; and that, at the bottom of the throat, lie the apexes of the lungs—those delicate organs, which, in these latitudes, are many times more susceptible to disease from exposure and climatic changes than all the other viscera put together.

The *neck* of *beauty* is that of the period which ranges from the early prime to the ripe maturity of woman, of which the most perfect conception is given us in the Greek sculptures—the Venus, the Diana, the Niobe, and many of the Naiads. In masculine beauty, the Apollo Belvedere, in this respect, furnishes a transcendent model to all time. Neither the elongated cylinder that forms the neck of the crane-family, nor

the frustum of a cone which forms that of certain porcine bipeds, can possibly have the slightest pretensions to beauty.

Of the *shoulders*, it may be observed that, in woman, those are the most beautiful which are neither wide nor meanly narrow, and which droop or flow, as it were, into the arms in a graceful undulating curve. In man, broad shoulders, if well proportioned, are a sign of strength. Stays or corsets, worn in youth and early maturity, tend to make the shoulders high and broad; and thus distort, instead of improve, the figure.

The *armpit* or "axilla" may be referred to here, on account of the common practice, among ladies, of wearing pieces of oilskin, oiled-silk, thin sheet gutta-percha or India-rubber, and the like, inside their dress over the part, under the name of "dress protectors." This practice cannot be too strongly reprobated; since the axilla is full of important blood-vessels, nerves, glands, &c., and should not be subjected to undue heat, a close atmosphere, or pressure. Two or three folds of good blotting-paper, covered with a piece of gauze, will effect the same object as these so-called "dress-protectors," without any of their inconvenient results.*

* When soiled or broken, the paper may be easily renewed. The same may be said of *hats*. Many persons have patent-leather linings in their hats to prevent perspiration and grease penetrating

The *chest*—the "thorax" of anatomists—extends from the neck to the abdomen. Its bony structure includes the breast-bone or "sternum," and all the other bones, in front, from the collar-bone or "clavicle" to the lowest of the short ribs. In its cavity are contained the lungs and the heart, and some other most important viscera and organs. Its front portion forms the *bosom;* and here it is that those wondrous glands which constitute the *female breast* are situate. The evils resulting from pressure and improper clothing on parts so delicate, complicated, and important, have been already pointed out when speaking of dress, and will be again alluded to below.*

Sore breasts, which occasionally occur during the early days of maternity, are of so painful and distressing a nature that every effort should be made by both the mother and the nurse to prevent their appearance. In general they arise from the injudicious use of stimulants and improper food, and from the infant not being placed early enough at the breast, or from its not having sufficient strength to properly perform the duty assigned to it by nature; to which also must be added, inattention to the bowels. In some cases, keeping the patient too warm and in an ill-ventilated apartment are other and additional causes. The necessary pre-

to the nap. The result is, that the head is rendered hot and uncomfortable. By having the lining of porous leather, and placing two or three folds of blotting-paper between it and the body of the hat, the object aimed at may be equally effected, and with both comfort and healthfulness. (*Vide* pp. 165–6.)

* *Vide* pp. 170–2 (*antè*); also pp. 352–7 (*infrà*).

cautions to be observed to prevent the occurrence of sore breasts are therefore evident. When pain, hardness, or lumpiness appears, it should be at once brought under the notice of the surgeon attending the case. In the absence of medical or surgical aid, gentle continued friction with the hand, or with a little warm salad-oil, may be had recourse to, and will generally, in favourable cases, prove successful.* A mild aperient should at the same time be given, and the diet carefully regulated, everything of a heating or stimulating character, whether of food or drink, being carefully avoided. Should the infant be incapable of the task, the breasts should be regularly drawn by the mouth of the nurse, or some child or friend, or by the breast-pump.† In bad cases, these means often prove unavailing, suppuration commences, and active professional treatment is required.

Sore nipples are also very distressing, though much less so, and much less serious in their nature, than the affection just alluded to. The most common form in which they occur is that termed "chapped nipples" by nurses. Preventive measures should form part of the daily toilet duties of every female for some weeks prior to her accouchment. For this purpose the parts may be moistened, morning and evening, with a little brandy or rum, or a little strong black-tea, all of

* Oil-and-brandy is here the popular frictional remedy of the "nurses;" but the brandy had better be omitted.

† In such cases there is nothing more convenient for the purpose, and entirely at command, than a very young pup, the adopted favourite of many of the higher classes on such occasions. Its use removes many squeamish scruples which might arise in parties asked to perform the office.

which is improved by the addition of about a tea-spoonful of glycerine to the wine-glassful. Where a known disposition to chapped nipples exists, brandy very slightly soured with dilute sulphuric acid, and used in the same way, often proves an effective preventive. Some persons employ tincture of tolu, or compound tincture of benzoin, for this purpose.

When chaps, cracks, or like sores, arising from lactation, are once developed, one of the safest and most effective remedies is tincture of catechu, or a strong tincture formed by steeping black-tea for some days in brandy; to each ounce of which about half a tea-spoonful of glycerine should be added. It should be applied by means of a camel-hair pencil, or the tip of the finger, at least three or four times a day, after the removal of the child from the breast. Lotions containing lead, and nipple-shields of lead, though popular nostrums and effective remedies, are open to objection, as unless the greatest possible care be taken to subsequently wash the part, a minute portion of the remedy may remain concealed in the pores and cracks of the skin and be sucked off by the infant, to the serious disturbance of its health, and perhaps to its permanent injury.*

The *waist* is strictly the smaller part of the trunk of the body, situate between the bottom of the ribs and the hips; but loosely, as applied to the form of modern females, it includes the whole of the trunk between the hips and the bottom of the breast-bone.

* For references to these formulæ, &c., vide *Index*.

The zone or waist of healthy and symmetrically formed women, not exceeding the middle stature, when this part has not been injudiciously interfered with, is found to measure twenty-eight to twenty-nine inches in circumference. In no case with women of graceful figure and vigorous health, does it, as a rule, fall below twenty-seven inches; and any decrease in the measurement below this point is either indicative of imperfect natural development of this important portion of the body, or of its growth having been artificially arrested during youth and early maturity by compression. Every fraction of an inch that the zone of the adult female wants of this standard, may thus be regarded as material points tending to the deterioration of her health and the natural beauty of her figure. Yet most women do not permit themselves to exceed twenty-four inches round the waist, whilst tens of thousands lace themselves down to twenty-two inches, and many deluded victims of fashion and vanity to twenty-one and even to twenty inches. Thus, by means of whalebone, wood, steel, and hooks and laces, the waist and lower portion of the chest are often reduced to one-half their proper size, with all the consequences which must necessarily follow such unnatural and suicidal treatment.*

* The following are the average measurements of a finely formed adult woman in health :—Circumference at the level of the nipples, 32 inches ; from nipple to nipple, one-fourth of the circumference, or 8 inches ; waist, 28 to 29 inches. During pregnancy and lactation these measurements are proportionately increased. In incipient tuberculosis (consumption of the lungs), the space between the nipples diminishes to $7\frac{1}{2}$ or $7\frac{1}{4}$ inches ; and, as the disease progresses, it gradually lessens to $6\frac{3}{4}$ and even $6\frac{1}{2}$ inches.

The fashionable and foolishly esteemed "emmet-like" waist of Western Europe is not the waist of nature, nor the waist of beauty. It is an absolute deformity, and in the nude figure would be actually intolerable. It is only the extraneous assistance of dress that disguises it, and enables it to pass muster in the tout-ensemble.

The waist of nature and beauty, irrespective of dimensions and appropriateness, varies from the waist of art and fashion in those essential points of excellence—symmetry and form. The former is of a beautiful oval, with the shorter diameter running from the back to the front; the other is nearly cylindrical, and, if it has slight ellipticity, this is the reverse of that provided by nature. Thus it is that the compressed waist, when viewed in front, appears actually smaller than it really is. In other directions the eye is deceived; and, as it has been remarked, "the increased thickness of the figure from back to front being disguised by the fulness and folds of the dress, render it impossible, nowadays, to form the faintest conception as to what the figure of a lady really is."

Sculptors and painters, in their females, have copied the most beautiful models furnished them by their species, and their works excite the admiration of the world. We gaze on them with rapture, and we feel that there the human form most nearly approaches the divine. But why do our ideas and perception of natural beauty in women, and particularly those ideas which woman has of such beauty herself, pertain only to sculpture and painting, and desert us immediately we turn from the fine arts to real life? Yet, that such is the case, will be readily acknowledged if we

compare the figure of a modern belle with any of the statues or paintings of females which we have so recently admired. Place her beside the Venus de' Medici, Eve at the Fountain, the Niobe, the Three Graces, or any of the other like treasures with which our galleries abound, and observe how she bears the comparison. Replace her figure by that of the healthy village maiden just blushing into womanhood, whose form has not been distorted by artificial means, and observe her too. The first suffers enormously by the comparison, the last approaches the ideal of the sculptor in quality, though not in degree. Her figure is similar to that of the statue, though inferior to it in its exquisite proportions.

"Only observe," exclaimed the celebrated Dr. John Hunter, "only observe, if the statue of the Medicean Venus were to be dressed in stays, and her beautiful feet compressed into a pair of execrably tight shoes, it would extort a smile from an Heraclitus, and a horse-laugh from a Cynic."

The subject of *corsets* or *stays*, and *belts*, has been before briefly alluded to when speaking of "Dress."* The injurious action of the former of these articles on the health of females, and the distortion of the waist which they produce, are not the only evils that are referable to their use. Regarding merely their influence on the figure, it may be mentioned that, besides their effects on the waist, they retard or prevent the natural development of the bosom, and, as already hinted, force up the shoulders, causing them to grow high, broad, round, and ungraceful.

* *Vide* pp. 170–2.

Then again, in many habits of body, they occasion flushings, and even permanent discolorations and blotches of the face. Redness of the nose, and acne of the forehead, are not at all infrequent consequences of tight lacing. Surely these are neither promotive of beauty nor compatible with it.

A volume of the size of the present one might be easily filled with valuable extracts from the works of the leading medical and physiological writers of the present century, in condemnation of the common use of corsets or stays, belts, bandages, and all other instruments of compression, as articles of dress. Erasmus Wilson, one of our most eminent surgeons, remarks that stays or corsets, before womanhood, are instruments of barbarity and torture. "It is the duty of every mother, and every guardian of children, to enquire the purpose for which stays were introduced into female attire. Was it for warmth? If so, they certainly fulfil the intention very badly, and are much inferior to an elastic woollen habit, or one of silk quilted with wool. Was it to force the ribs, while yet soft and pliable, into the place of the liver and the stomach, and the two latter into the space allotted for other parts, to engender disease and deformity to the sufferer and her children for generations? Truly, if this were the object, the device is most successful, and the intention most ingeniously fulfilled."

But, enough! Every sensible person must see how hurtful the use of stays, belts, or other instruments of compression, must be to the vital organs of the chest and abdomen—hurtful alike to the health, comfort, and beauty of the wearer. Why should the lower portion of the chest be pinched in and made the smallest part,

when nature intended it to be the largest? And why, together with the upper portion of the abdomen, should it be restrained to certain fixed dimensions, when nature formed it to freely dilate and contract in correspondence to the play of the lungs in respiration? The spine, ribs, bosom, and shoulders, need no aid from stays; and the contents of the abdomen, instead of being supported and strengthened, as it is foolishly thought, by stays or belts, are absolutely forced somewhat downward, out of their natural position, so as materially to impede their functional action. It is thus that the natural respiratory movements of the lower portion of the chest and the hypochondria are almost wholly absent in females who wear fashionable corsets or stays.*

The Italian ladies, who are regarded by many as the most beautiful in the world, are innocent of the use of corsets, and exhibit surprise at their being so generally worn by the English and French. The beauties of the harems of the Oriental nations do not wear them. "The Turkish ladies," wrote Lady Montague, "express horror at seeing English women so tightly laced;"† and travellers tell us that this feeling still exists among the ladies of the East.

Lady Duff-Gordon, in her work just published, in speaking of the charms of Oriental females, remarks:—"If I get hold of a handsome fellaheen here, I will get her photographed, to show you in Europe what a woman's breast can be, for I never knew it before I came here. It is the most beautiful thing in the

* *Vide* Note (*), pp. 171-2 (*antè*).

† Lady M. W. Montague's "*Letters*."

world, and gloriously independent of stays or any support."*

Of the "limbs," the *arm* may rationally claim the first notice. To preserve its delicacy and beauty it should be shielded from the weather, and particularly from the direct rays of the sun, and from cold drying winds, by means of appropriate clothing, as noticed when speaking generally of the skin.†

The *human hand*, regarded either with reference to its ingenious construction and usefulness, or to its beauty, stands alone, in its superlative excellence, in the whole animal world. In no other species of animal is the hand so wonderfully formed, and so perfectly developed, as in man. Springing in a compactly moulded body from the wrist, and provided with fingers possessing expanded tactile extremities composed of an exquisitely sensitive and discriminative integument, and, above all, possessing a thumb which may be either placed in apposition or opposed to the other fingers, it is endowed with all the essential attributes of strength and mobility, and exalted powers of perception, of delicate and varied operations, that the ordinary purposes of life, and the industrial and constructive skill of an intellectual being can require. In the anthropoid orang—the animal the nearest approaching man in the formation of the upper extremi-

* "*Letters from Egypt*, 1863–5," by Lady Duff-Gordon—a highly interesting and valuable work, full of rich pictures of Arab life.

† *Vide* pp. 201–3.

ties—the disproportionate development of the fingers, and the dwindled thumb, mark its imperfections for handling and for touch; whilst the arms, lengthened to actual deformity, proclaim their chief use to be for grasping and climbing, as a forest animal.

In olden times, it was a common superstition that the character and fortune of the individual were legible in the hands, to the eyes of the initiated. Volumes were, indeed, written on the subject, and pretended professors of the art were numerous, and greatly sought after by the ignorant and superstitious. Of the different systems of "chiromancy," or divination by the hands, the most popular and extensively practised was "palmistry," or fortune-telling by the lines of the palm. Though now chiefly confined to gipsies, it was once professedly explained and warmly defended by grave and learned authors. Then there was "dactylomancy," or the art of divination by the fingers, and by finger-rings; and also "onychomancy," or divination by the nails.

The form and size of the *thumb*, too, were thought to be significant of the character, and of coming events that thus "cast their shadows before." A finely formed and well developed thumb was regarded as indicative of a strong and active individuality; whilst the reverse was conceived to be indicated when it was small and ill developed. The same parties conceived that persons with a small thumb are ruled by the heart, and are prone to be faithful in friendship and constant in love; whilst those with a large thumb are guided by the head, and oftener follow the dictates of self-interest, and cold calculating reason, than the impulses of affection and duty. The motive

hand, it was said, is always furnished with a large thumb. In La Vendée, a large thumb is still thought to indicate one who dabbles in the forbidden mysteries of the "black art." The term "pollex truncatus" was applied by the Romans to a person who, for the purpose of avoiding military service, basely cut off or mutilated the thumb; and lexicographers tell us that from this term, by contraction and corruption, comes our word "poltroon." In the Roman amphitheatre the desire that a conquered gladiator might be spared was expressed by raising the thumb; its depression was a sentence of death. Among the Anglo-Saxons, mutilation of the thumb was punished by a heavy fine. Itching of the thumbs was formerly supposed to indicate the approach of a stranger, and the words of Shakespeare, "I will bite my thumb at them, which is a disgrace to them if they bear it,"* show that thus biting the thumb was then held to be strongly expressive of insult and defiance.

"Chironomy" † was the old name of the science and art of gesticulation, pantomime, and rhetorical action; and "chirology" † and "dactylology" ‡ are names now sometimes given to the art of talking with the hands and fingers.

To *preserve* the *delicacy* and *beauty* of the *hands*, some little care, and more than that which is ordinarily bestowed on them, is required. Foremost in consideration must be the subject of cleanliness. Dirty and coarse hands are no less marks of slothfulness and low breeding, than clean and delicate hands are of

* "*Romeo and Juliet.*" † From χείρ (Gr.), the hand.
‡ From δάκτυλος (Gr.), a finger.

refinement and gentility. To promote the softness and whiteness of the skin, mild emollient soaps, or those abounding in oil or fat, should alone be adopted for common use; by which means the tendency to contract chaps and chilblains, and roughness from drying winds, will also be lessened. The coarse, strong kinds of soap, or those abounding in alkali, should, for a like reason, be rejected, as they tend to render the skin rough, dry, and brittle. The immersion of the hands in alkaline lyes, or in strongly acidulated water, has a similar effect, which increases with the temperature of the liquid. Rain-water, or soft water, is the best natural water for washing the hands, as it cleanses them more rapidly and completely than ordinary hard water, and with the use of less soap. It may be advantageously used tepid, or even warm; but hot water should be avoided. Distilled water, when obtainable, is preferable to even rain-water. In the absence of these, water that has been boiled and allowed to settle and cool, may be employed. With hard water the hands are cleansed with difficulty; and though it may be readily softened by the addition of a little soda, such an addition tends to make the skin of a delicate hand somewhat hard and rough. If hard water must be used to wash with, the only harmless substance that can be conveniently added to it, to soften it, is a little good powdered borax. This will also cause it to exert a genial action on the skin. When the hands are very dirty, or are oily or greasy, the best yellow-soap (of the shops), with warm water, may be employed to cleanse them. It is sufficiently detergent for the purpose, without being acrid. Fruit-stains and ink-

stains, and like discolorations, may be removed from the hands by washing them with lemon-juice or vinegar-and-water, or by immersing them for two or three minutes in water slightly acidulated with oxalic acid or a few drops of oil of vitriol, or to which a few grains of chloride of lime have been added; observing afterwards to well rinse them in clean water, and not to touch them with soap for some hours, as contact with alkaline matter will generally bring back the stains, after their apparent removal by each of the above substances, except the last.

The application, once or twice a day, of a few drops of Gowland's lotion to the hands, after washing and wiping them, imparts a delicate whiteness and softness to the skin which is highly agreeable. Glycerinated water, employed in the same way, also renders the skin soft, white, and supple. The best time for applying either of them, is immediately before retiring to rest at night. Coarse, red, dark-skinned hands, may be whitened by the occasional use of a few grains of chloride of lime, with warm water, in the manner mentioned above.*

Roughness of the *hands*, induced by exposure to cold and drying winds, may, in general, be removed by the use of a little fine Calais-sand, or a little powdered pumice-stone, with the soap in washing them. The subsequent application, particularly at night, of either of the above lotions, or of two or three drops of almond-oil or olive-oil, well rubbed in, will usually effect the object completely.†

The hands may be preserved *dry* for delicate work,

* *Vide* pp. 202–3.

† *Vide* pp. 202–3.

by rubbing a little club-moss (lycopodium), in fine powder, over them. So repellent is this substance of moisture, that, if a small quantity of it be sprinkled on the surface of a basin of water, the hand, by a little adroitness, may be plunged to the bottom of the basin without becoming wet.

Excessive *moistness* or *perspiration* of the *hands*, without obvious cause, is generally indicative of debility, or disordered stomach, and requires corresponding treatment. Frequently washing the hands in moderately cold water often proves a local remedy for the inconvenience. The addition of a few grains of alum, sal ammoniac, or sulphate of zinc, or of a tea-spoonful of vinegar, to the water, greatly increases its efficacy. Extremely delicate and susceptible persons cannot always bear the excessive perspiration of their hands to be thus suddenly lessened; and therefore some discretion should be exercised by them in their attempts to check it.

Persons who are compelled to handle substances, or to immerse their hands in liquids, that injuriously affect the skin,* would do well to wash their hands as soon after such exposure as possible, and to apply a little glycerine or oil to them every night. In many cases, injurious consequences may be prevented by well rubbing the hands with a little salad-oil or fat before

* All substances of an acid, alkaline, acrid, or astringent nature, injuriously affect the skin of the hand. So do also many substances, not acrid in themselves, by mere mechanical action, as by filling up the pores, extracting the natural moisture, destroying the natural suppleness, &c., of the skin. It is thus that the hands of grocers are injured by constant contact with sugar, and those of brewers and cellarmen by being constantly wet with beer, &c.

commencing their business duties, the excess of oil being removed by the free application of a towel.* When possible, thick leather gloves, or, what is often better, gloves of India-rubber or Mackintosh, may be worn.

Rough usage or violent exertion of the hands, whether in work or sport, tends to make them broad, thick, and coarse, and to produce enlargement and distortion of the joints of the fingers. Lifting heavy bodies with the fingers is particularly destructive to their beauty, as it causes the tapering circular form, so much admired in them, to be lost, their tips becoming broad and flat, and the nails also flattened.

In all cases the use of *gloves* out of doors is necessary, in both sexes, to preserve the delicacy and beauty of the hands—to protect them from the direct rays of the sun in summer, and the drying winds and cold of the other seasons of the year.†

"Gloves," says a French author on '*La Vie Elégante*,' "are the obbligato complement of every costume." "Their existence is not modern—traces of them are found in Scripture, in *Ruth* and in the *Book of Kings*. Homer, in his 'Odyssey,' shows us Laërtes pulling up thorns in his garden, his hands being defended by leather gloves. Xenophon refers their first use to the Persians. Athenæus describes a celebrated gourmand who came to a banquet with gloved hands, to eat more rapidly and easily, whilst

* In this way brewers and cellarmen, and others, may, in general, avoid the painful cracks in the skin, "sprung nails," &c., with which they are so often affected.

† *Vide* p. 174 (*antè*).

the other guests waited for the viands to become sufficiently cool to handle. Silk mittens remind us of the fine old days of Louis XIV. and the coquettish epoch of Louis XV. At the present day we have mittens, gloves of kid, worsted, silk, muslin, Scotch thread, and cotton. For your guidance learn that men of fashion must wear during the day doeskin, beaver, or chamois gloves, of various shades; and, in the evening, straw-coloured gloves for the salon or the theatre. Count D'Orsay established this at London in 1839. A gentleman belonging to the English fashion must use six pair of gloves a day. In the morning, to drive his dog-cart, reindeer-skin gloves; when hunting the fox, chamois-leather gloves; on returning to London in the tilbury, beaver gloves; on going later to walk (or ride) in Hyde Park, coloured doeskin gloves; on going to dinner, yellow dogskin gloves; and for the evening, the ball, or the rout, gloves of white thread embroidered with silk. This constitutes an outlay of 48 francs 75 cents a day for gloves alone; or, per annum, 17,793 francs (!). I limit myself to two pair a day." "It is only at the chase, either royal or that of a rich gentleman, that *three pair* become *indispensable*."*

* Vide "*The Second Empire, as exhibited in French Literature:* 1852–63." By Sir C. F. Lascelles Wraxall, Bart. London, 1865.—"Alas!" exclaims a recent sentimental writer, "alas, how dashed with bitterness are all sublunary things! The smaller" (and more costly) "kind of ladies' so-called" (French) "kid-gloves are made chiefly out of rat-skins. The smaller the hand, the more ratty the inference!" But this is not the only indelicacy inflicted on us by modern art. The same authority assures us that the jellies of the confectioners are now largely made from parchment-

The *finger-nails* require special attention if we desire to preserve them in their highest condition of beauty and usefulness. To keep them clean, the nail-brush, and soap-and-water, should be used once or oftener daily, as circumstances demand. Once a day, at least, on wiping the hands after washing them, and whilst they are still soft from the action of the water, the free edge of the scarf-skin which, if not attended to, is apt to grow upward over the nails, should be gently loosened and pressed back, in a neatly rounded form, by which the occurrence of cracks and sores about their roots (*agnails, nail-springs,* &c.) will be prevented, and a graceful oval form, ending in a crescent-like space of white, will be ensured.* This skin, as a rule, should never be cut,

trimmings, and ivory-dust and bone-dust. He might have added, and also, to a still greater extent, from that pleasing-looking "gelatine," which is obtained by boiling up the putrid clippings and waste of our tanyards, tawing-works, and fellmongers' shops. How a fair creature—admiring her elegantly gloved hand, or engaged in soft dalliance with a jelly—would shudder, and pout, and make wry faces, and thrust both the gloves and jelly from her, if she were told that the first were obtained from the sewers of Paris, and that, according to the writer just quoted, "most of the ivory-dust" of which the other is made "is purchased of the small-tooth comb makers!" He should have completed his list of agreeables by adding, that most of the so-called kid, of which gloves are made, is dressed with pigeons' dung or fowls' dung, and hence its peculiar odour.

* This little operation should be scrupulously attended to. If neglected for only two or three days, the edge of the scarf-skin will generally unite itself to the nail, and grow up with it. After some time it will crack, separate from the nail, curl back, and become sore, leaving the nail weak and unsightly. Some careless persons wholly neglect this portion of their toilet. It may be as well neglected altogether as only attended to occasionally. In the

pared, picked, or torn off, as is commonly done; and the less it is meddled with, otherwise than in the way just mentioned, the better. The ends or points of the nails should be pared once every week or ten days, according to the rapidity of their growth, which somewhat varies with the season of the year and the habit of the individual. This is best done with a sharp penknife or nail-knife. Scissors are less convenient for the purpose, and have the disadvantage of straining and distorting the nails during the process.

The length and shape of the nails, both for beauty and use, should exactly correspond with the tips of the fingers. Nails extending beyond the ends of the fingers are vulgar, claw-like, and inconvenient; whilst if shorter, particularly much shorter than the fingers, they are unsightly and of little use, and cause the tips of the fingers to become thick and clumsy. Biting the nails should be avoided as a dirty and disagreeable habit, and one utterly destructive to their beauty, strength, and usefulness.*

absence of the usual little instrument made especially for the purpose, one of the finger-nails may be employed to press back the skin, and has the advantage of being always at hand.

* The habit of *biting* the *nails* is said to be indicative of an irritable or nervous temperament, of mental anxiety, despondency, thoughtfulness, and I know not what else. At all events, it is easily acquired, rapidly grows on one, and is extremely difficult to leave off. Nothing but a strong will, and perseverance, will enable those addicted to it, to do the last. Rubbing the tips of the finger with aloes, extract of quassia, asafœtida, or some other disagreeable substance, is commonly adopted to remove the habit in children.

To remove *stains* and *discolorations* of the *nails*, a little lemon-juice, or vinegar-and-water, is the best application. Should this fail, a few grains of salt of sorrel, oxalic acid, or chloride of lime, each diluted with warm water, may be applied, care being taken to thoroughly rinse the hands in clean water, without soap, afterwards. Occasionally a little pumice-stone, in impalpable powder, or powdered cuttle-fish bone, putty-powder (polisher's peroxide of tin), may be used along with water and a piece of wash-leather, flannel, or the nail-brush, for the same purpose. The frequent use of any of these substances is, however, injurious to the healthy growth, strength, and permanent beauty of the nails. The common practice of scraping the surface of the nails cannot be too strongly censured, as it causes them to become weak and distorted. Blows on the nails, and, indeed, violence to them in any form, also distorts and marks them.

The ladies of Oriental nations commonly dye the nails; and amongst many savage tribes the same practice is adopted, and is not confined to the gentler sex. Among Western Europeans, and Americans, white and regularly formed nails are alone esteemed.*

The average rate of growth of the finger-nails has been estimated at one millimètre, or two-fifths of a line, per week; a rate quadruple that of the toe-nails, which require four weeks to grow the same length. This growth continues, with little variation, even during disease; but the portion of the nail then formed is thinner, and altogether deficient of its usual

* *Vide* Chapters VIII. and XI.

strength. In sudden and acute diseases, and in those accompanied with extreme debility, this attenuation is sufficient to mark the nails with deep transverse grooves, the upper surface of which is abrupt and clearly marked. In scrofulous subjects these marks, together with peculiar variegations, are very commonly observable. Extreme anxiety and mental depression has the same effect on the nails as physical disease.*

Of *affections* and *injuries* of the *hands*, the following may be usefully noticed here :—

Chapped hands are common among persons with a languid circulation who are continually "dabbling" in water during cold weather, and particularly among those with a scrofulous taint, who, without the last, expose their ungloved hands to bleak cold winds. The best preventives, as well as remedies, are the use of warm gloves out of doors, and the application, night and morning, of a little glycerine, diluted with

* Dr. Beau, a French physician, some years since suggested these changes in the nails as furnishing a means of determining how long since, within certain limits, a disease has occurred, as well as its duration. The thumb-nail is the one which he examines. The place of change is at the root of the nail, which he reckons as three millimètres below the free margin of the scarf-skin, and therefore invisible for the first three weeks. The number of millimètres from the root to the upper edge of the groove gives the interval of time that has elapsed since the occurrence of the disease ; whilst the breadth of the groove gives its duration, both in weeks. At the end of about five months, owing to the whole growth of the thumb-nail being accomplished, he transfers his observations to the nail of the great toe ; and now, instead of a week, takes each millimètre as representing a lunar month. Such observations, though apparently insusceptible of much precision, may be often useful as furnishing information which could not be otherwise obtained.

twice or thrice its weight of water, or a little cold-cream, spermaceti-cerate, salad-oil, or any other simple unguent or oil, which should be well rubbed in, the superfluous portion being removed with a towel. This treatment will not only preserve the hands from the effects of cold and damp, but also tend to render them soft and white. Deep chaps which have degenerated into sores should be kept constantly covered with a piece of lint wetted with glycerine, or spread with spermaceti-ointment, the part being at the same time carefully preserved from dirt, cold, and the wind. Persons employed in oil and tallow works, in oil shops, and similar places, and who have consequently their hands continually in contact with greasy matter, are well known to scarcely ever suffer from either chaps or chilblains. It is said that a once favourite actress, Madame V——, celebrated for the beauty of her hands even when "in the sere and yellow leaf," covered them nightly with the flare of a calf or lamb with the fat attached, over which was drawn a glove or mitten of soft leather. The application of a little glycerine or fatty matter, in the way just indicated, would have been found equally effective.

Chilblains—"perniones"* of the faculty—are those well-known inflammatory swellings, of a colour more or less leaden or purple, produced by the action of cold. They exclusively attack the extremities of the body, and are generally confined to the fingers, toes, and heels. Itching, irritation, and tenderness, often accompanied with shooting pains and tumefaction, are the common symptoms. Children, particularly those

* Lat.; sing., *pernio*.

of a weakly or scrofulous habit, and elderly persons, are generally the most liable to them; but they are frequent among all persons in whom the circulation in the extremities is languid. One of the most common causes of them is holding the hands or feet to the fire after they have been exposed to cold. Any sudden change of temperature under such circumstances, especially from cold to heat, should be carefully avoided, as the action of the minute surfacial blood-vessels is thereby more or less arrested, and their vitality, in many cases, partially destroyed.

The best *preventives* of *chilblains* are warm, easy-fitting gloves of worsted or leather, woollen stockings or socks, good water-proof, but not air-tight, boots and shoes, vigorous exercise, and vigorous friction. These act by keeping up the heat of the parts and protecting them from vicissitudes of temperature, by which the circulation of the blood in the minute vessels of the surface continues unchecked. In addition to these, the means noticed under 'chaps' (above), may also be adopted.

When *chilblains* have *once formed*, and during their incipient stages, the best *treatment* is with local stimulants and counter-irritants. Among these may be mentioned, painting the parts twice a-day with strong tincture of iodine,* or friction with oil of turpentine (with or without the addition of a little salad-oil), opodeldoc, camphorated oil, hartshorn-and-oil, and the like. Glycerinated lotion of sal-ammoniac is also an effective remedy. Linnæus recommended bathing the parts with dilute hydrochloric acid just strong enough

* A very effective, convenient, and cleanly remedy.

to slightly prick the skin. Others have recommended friction with a clove of garlic, or with made-mustard, or covering the part with a mustard-plaster. All these are proper applications only while the skin continues sound. When the inflamed parts ulcerate and break,* the usual treatment is to dress them with a little resin-cerate, or elemi-ointment; but a much more curative dressing is spermaceti-ointment to each ounce of which a few grains of tannic-acid or powdered gall-nuts, or of ointment of nitrate of mercury (citrine ointment), or ointment of nitric oxide of mercury, or a few drops of Goulard's extract (liquor plumbi), have been added. If glycerine (somewhat thickened, or not, with a little arrow-root) be substituted for the spermaceti-ointment, or a small portion of glycerine be well triturated with the ointment, a still more effective remedy will be produced. In all cases care should be taken to cleanse the ulcers with warm water at each renewal of the dressing.†

Persons subject to chilblains should be particular to wipe their hands thoroughly dry after washing them, and would do well to continue the friction with the towel for two or three minutes afterwards. It will tend to prevent their accession.

The treatment of *abrasions, bruises, cuts, galls, eruptions, &c.*, of the *hands* and *fingers*, have been already generally noticed.‡

Swelled and *distorted finger-joints*, arising from rheumatism, rheumatic gout, and the like, may gen-

* Broken chilblains are commonly called *kibes;* but the term is, I believe, properly restricted to ulcerated chilblains of the heels.

† *Vide* p. 382 (*infrà*).

‡ *Vide* Chap. XIV., on the "Skin," pp. 197–229 (*antè*).

erally be greatly relieved, and frequently wholly cured, by the free use of fresh lemon-juice internally, and a hot and strong solution of common soda (Scotch soda), as an embrocation. Even enlarged finger-joints containing the gouty excretions popularly called "chalk-stones" will, in general, yield to this treatment, if it be freely and perseveringly carried out.* Old distortions and enlargements of the kind, remaining after the disease that produced them has passed away, will frequently yield to painting them every night, or every other night, with tincture of iodine.

Warts—"verrucæ" of surgeons—like chilblains, are too well known to require description. They chiefly attack the hands, and particularly the fingers; but sometimes occur on other portions of the body. They may be removed by rubbing or moistening their extremities every day, or every other day, with lunar caustic (fused nitrate of silver), nitric acid, concentrated acetic acid, or aromatic vinegar, as directed under 'corns'; care being taken not to wash the hands for

* The effects of lemon-juice in gout, rheumatic gout, and rheumatism, exhibited in the trials of this substance, at St. Thomas's and Guy's hospitals, some few years since, as detailed by Dr. Babington in the *Lancet*, are truly astonishing, and in many points conclusive of its superiority over all other remedies in such cases. The dose in which it was first given by Dr. O. Rees, who originated the treatment, was two to three fluid ounces, twice or thrice a day; but the patients themselves often increased it to several times this quantity. I have repeatedly personally witnessed the admirable success attending the use of lemon-juice (fresh-expressed from the lemon), even in old and apparently hopeless cases of the nature referred to. (*Vide* the author's "*Cyclopædia*," 3rd ed., articles *Gout*, pp. 540–1, and *Lemon-juice*, pp. 685–6; also pp. 219, 220, of this work.)

some hours after. The first is an extremely convenient and manageable substance, from not being liable to drop or spread; but it produces a black stain, which remains till the cauterised surface peels off. The second produces a yellow stain, in depth proportioned to the strength of the acid employed. This also wears off after the lapse of a few days. The others scarcely discolour the skin. Erasmus Wilson mentions the case of a gentleman who removed an entire crop of warts from his knuckles and fingers, by subjecting them to a succession of sparks from the brass knob of an electrical machine.* German practitioners are in the habit of recommending the internal use of carbonate of magnesia in cases of warts; and Dr. Peez, of Wiesbaden, confirms their opinion of "its rapid curative agency," either alone, or when accompanied with any of the ordinary modes of local treatment.†

Warts often disappear under the influence of the imagination, and strong mental excitement, in a very singular way. Thus, among the ignorant and superstitious, amulets and incantations, and 'touches' with substances that cannot possibly exert the slightest chemical, dynamical, or physiological action on the part, supported by a lively faith, are not infrequently sufficient to cause their disappearance. The sudden confusion and embarrassment into which a sensitive

* Having read this, some years ago, I was induced to try the method on one of the members of my own family, whose hands were affected with warts, as well as on others. It succeeded admirably in several cases, but failed in others; the latter, I believe, chiefly from the discharges being too feeble, and insufficient in number.

† "*Brit. & For. Med. & Chir. Rev.*"

and nervous person is thrown, by being unexpectedly accused of something of which he is entirely innocent, will also sometimes produce a like effect.* Warts are also sometimes produced by agencies that are apparently insufficient for the purpose. Thus, blowing on the backs of the hands, or on the face, with a pair of bellows, has been known occasionally to be followed by a crop of warts on the part.

The papular eruption on the hands, popularly called *soft warts*, is an affection quite distinct from true warts. It is best treated by the daily application of Gowland's lotion, or glycerinated solution of bichloride of mercury.†

Whitlow—"paronychia"—is a painful inflammation at the end of one of the fingers, and mostly under or about the nail. When it occurs near the root of a nail it is commonly called an *agnail*. In general there is a tendency to suppuration and abscess, and when this is the case much pain and annoyance usually follows. Emollient poultices, and soaking the hands in warm water, are serviceable in every stage of the affection, and is the best treatment that can be adopted. When there is much pain, owing to the presence of pus or matter, for which there is no place of exit, an incision, made with a lancet, will generally afford immediate relief. This operation, though simple, should be performed by a surgeon. The poultices should be continued until the discharge lessens, when they may be replaced by dressings of spermaceti-

* This is a common trick in some parts of England, practised by one friend on another for this purpose.

† For reference to formulæ, here and *antè*, vide *Index*.

ointment, or better, of ointment of oxide of zinc (zinc-ointment; unguentum zinci, Ph. L.). During the whole time every effort should be made to establish the general health; as it is from the failure of this that whitlows generally occur, or are persistent, and, without internal remedies, local applications generally fail.

Proceeding from the upper extremities to the lower, the feet are the parts that chiefly demand a notice here. Before speaking of them, however, a friendly caution on two or three subjects which are continually brought before the public in some of the cheap periodicals of the day, may be useful to the reader. In these works advice is frequently given for the surgical treatment of deformities of the *knees* and *legs*, which, from the tone of apparent professional knowledge in which it is conveyed, might induce the confidence of those to whom it is addressed. To the last I would say, "rather bear those ills ye have, than fly to others that ye know not of;" for undoubtedly the modes of treatment recommended by these parties will, if adopted, in nine cases out of ten, be either perfectly useless, or increase the evil, and, in very many cases, reduce a curable or an ameliorable deformity into a persistent or incurable one. The only safe way, more especially in serious cases, is to consult a duly qualified surgeon who has made that branch of orthopædia a special object of his attention; or, when this, owing to the means of the parties, cannot be done, to resort to an orthopædic hospital, or to any of our great public hospitals. Neglecting this, do nothing; for absolute

non-interference, in such cases, is better than the 'meddling' of ignorance and quackery.*

The *human foot* is a wonderful piece of organic mechanism composed of many bones, ligaments, muscles, and tendons, associated with arteries, veins, nerves, and other vessels. "In order to secure in the foot the requisite firmness in standing, it is articulated with the leg at right angles, so that the heel and toes touch the ground; and the joint is placed nearer the posterior than the anterior part of the foot, so as to increase the base of support in that direction towards which the body tends most to fall; besides which, the weight is here received on the inner side of the foot where it is most arched, thereby offering not only the advantage of a strong support, but one which is highly elastic, yielding without injury in alighting on the feet, and acting as a spring in progression." †

A beautiful foot is one which is small, rather than large, in proportion to the leg and stature, and of which the instep is high, or moderately high, and arched; of which the waist, or portion under the instep, is hollowed and well raised above the level of the sole, with the toes regular and well developed, the heel narrow and non-protruding, and its general outline long, slender, and graceful. Among females, a very small foot possessing these proportions is considered the acme of beauty. The agility of foot

* On *Dress* in connection with the knees and legs, *vide* page 172 (*antè*).

† Green's "*Lectures.*"

and the pedestrian powers of the individual, other matters being equal, are in exact relation to the degree in which the above-mentioned qualities are present. The protruding heel and flat foot of the negro, and of some of the races of the Russian empire, are peculiarities, if not deformities, which render their possessors clumsy in gait, and incapable of continued long journeys on foot.

The health and beauty of the foot is promoted by exercise, easy-fitting and appropriate boots or shoes being worn. Walking, dancing, running, and skipping, whether taken as exercise or indulged in for amusement, are thus to be recommended, independent of their value in a hygienic point of view.*

To *preserve* the *feet* in a thoroughly *healthy* and *comfortable state*, the first object of attention should be cleanliness—thorough cleanliness. For this purpose they should be frequently soaked and well washed in warm or tepid water, good yellow soap being freely used to remove the dirt and perspiration which accumulate about them. This should be done, if possible, every day in summer, every other day in spring and autumn, and twice a week in winter. The appropriate time for the operation is at night, before retiring to rest. Once a week, after soaking, washing, and drying them with the towel, but whilst still soft from the action of the water, the feet should be carefully examined, loose portions of skin removed by friction with a dry part of the towel or with the fingers, and callosities or indurations reduced by the finger-nails, or by rubbing them with a piece of

* *Vide* pp. 195-6 (*antè*).

pumice-stone. About once a fortnight, on a similar occasion, the nails of the toes should be inspected, when such of them that require it should be pared with a sharp penknife, to prevent them becoming inconveniently long or growing into the flesh. Their proper length is that of the toes; and the shape of their extremities, that of the natural curve of the part. If they are allowed to grow beyond the ends of the toes, they are liable to be forced back and distorted by the pressure of the boot or shoe, and to grow into the flesh; whilst if they are shorter, or much shorter, than the toes, the extremities of the latter lose their natural support. Nails that have a tendency to spread sidewise and to grow into the flesh—a thing that always originates in pressure—should be kept carefully pared at the sides or offending part.*

It is highly necessary to the preservation of health to keep the feet dry, and to shelter them from cold and sudden changes of temperature. Persons who are exposed to the wet or cold, or who are frequently passengers through the public streets in bad weather, should, therefore, regard sound and good boots and shoes as of the first importance. In a hygienic point of view, a wet back should be less shunned than wet or cold feet. Damp feet are, as a necessary consequence, always cold; for it is one of the natural laws that 'evaporation produces cold,' and the way a wet or damp foot becomes dry is by the conversion of the

* Very great care should be taken to avoid cutting the toe-nails too short, more particularly so as to draw blood. A lady, once known to the author, died from tetanus (*trismus*) or lock-jaw, eight or nine days after having accidentally cut one of her toe-nails down into the 'quick' or flesh, and in consequence of it.

water into vapour, the latent heat necessary to the existence of the latter being derived from the sensible heat of the feet. "We may trace one half" (certainly a vast number) "of the consumptions of this country to cold suddenly applied to the feet, by which the sensible exhalation is checked; and it is not sufficiently impressed upon the mind that when once the regular perspiration from the feet is checked, it is a matter of the utmost difficulty to restore it. The nightly foot-bath or pediluvium is in vain had recourse to, although the natural instinct of the human mind has shown that this is the best remedy; the reasons for which it is required are overlooked, and the simple warmth it produces is thought to be all that is required." "Hence spring up a host of maladies which owe their origin to inattention to the humbler parts, as they are considered, of the human frame—the feet and toes; but which, in fact, are as important members of the body corporate as are any structures of more complicated organization."*

The subject of clothing in connection with the feet and legs has been already separately alluded to, and some further remarks on it will be found in the remaining portion of this chapter.

Tender feet generally arise from the neglect of cleanliness, the use of thin cotton or silk stockings, and boots or shoes that are either too tight or stiff, or misshaped, or not sufficiently porous to admit of the escape of the perspiration. Of these, tight boots and shoes and waterproof ones, which are also air-tight,

* Eisenberg, "*Surgical and Practical Observations on the Diseases of the Human Foot.*"

are the most common causes of tender feet, as also of headaches, dizziness, dyspepsia, diarrhœa, and even apoplexy.* Boots and shoes too narrow across the toes or the tread of the foot, or insufficiently long for ease and comfort, though large enough elsewhere, either cramp and distort the fore part of the foot and toes, or arrest the nails in their forward growth, forcing them back upon the sensitive flesh at their roots and sides, and causing them to grow in thickness and width only. The results may be gradual, but are always painful.

The best treatment of tender feet is soaking them nightly in tepid water, to which a handful of bran may be added, or not, at will. When the tenderness is extreme and persistent, a little powdered borax or sal-ammoniac should be added to the water. In all cases woollen or worsted stockings or socks, and boots or shoes with uppers of buckskin, goatskin, French calf, or some equally soft kind of leather, should be worn.

Coldness of the *feet* indicates delicate health, and a feeble state of the circulation. It should be met by active exercise and friction, the use of warm woollen stockings, and efforts to improve the general tone of the system. The *coldness* and *numbness* of the *feet* common in the *debilitated* and *aged* may also be treated in a similar manner; but here the socks or stockings may be advantageously kept on throughout the night, or, at all events, until the feet become comfortably warm. When this proves insufficient, a foot-warmer filled with hot water may be placed in the bed.

* *Vide* "Boots and Shoes," &c., pp. 173, and 165–6.

The peculiar and very disagreeable *odour* evolved by the *feet* of some persons in hot weather generally arises from unnatural perspiration, insufficient attention to cleanliness, and from wearing cotton stockings and non-ventilating boots or shoes. The remedy is obvious. The feet should be soaked and washed nightly in warm water, good yellow soap being at the same time freely used, thin woollen stockings, of which a clean pair should be put on daily, should be alone worn, and boots or shoes adopted which are light, easy, and permeable to the perspiration. When this fails, a teaspoonful of good chloride of lime, or about twice that quantity of sal-ammonia, or even of common salt, or a tea-cupful of strong vinegar, may be added to the water in which the feet are soaked, the use of soap being at the same time omitted.

Sore feet produced by walking, violent exercise, or in any other similar manner, may be treated as noticed above under 'tender feet.' *Abrasions*, after soaking and washing them, should be protected by a piece of common strapping or sticking-plaster, or a piece of lint spread with spermaceti-ointment, the dressing in either case being bound on with a strip of thin soft rag. If *bladders* have formed, they should be opened, and the water or serum which they contain should be pressed out. When they occur on parts where the skin is thin and delicate, it will be sufficient to pass a coarse needle through them; but where the skin is thick and hard, as on the heels and balls of the large toes, this is insufficient for the purpose. In this case the central part of the bladder should be pinched up between the thumb and finger, and the skin freely snipped, completely through, with the points of a pair of sharp

scissors. The whole of the water being then pressed out, the part should be covered with a couple of folds of soft rag, to protect the opening from the stocking, and to allow the escape of serum, which will generally continue to ooze out for some time. The loose skin should not be detached for some days, or until a new portion of cuticle has formed under it. If it be done before, the raw and tender surface of the cutis will be exposed, and will often, for some time, occasion much pain and inconvenience. The *stiffness* resulting from *long pedestrian excursions*, and, if not attended to; often lasting several days, may be treated by hot knee-baths or foot-baths, or, better still, by a general hot vapour-bath or a Turkish bath.

Chilblains in the *feet* have been noticed in speaking of chilblains of the hands.* The causes, prevention, and treatment, of the two are essentially similar. The feet, however, owing to the less vigorous circulation of the blood in them, are the more liable to chilblains. In addition to what has been already said on the subject, it may be remarked that soaking the feet, before retiring to rest, in warm water to which a handful of bran, and two or three tea-spoonfuls of powdered sal-ammoniac, have been added, is very useful either for preventing them, or relieving them when formed. A still more effective preventive and remedy is a solution of urea. This is presented by nature, ready-prepared for use, in human urine. It has been truly asserted, that soaking the feet occasionally in this liquid is a mode of treatment that is absolutely inexpensive, and is as certain as, if not much more so than, any other. It is the common resource of the vulgar in some of

* *Vide* pp. 369–371 (*antè*).

our provinces, and in other parts of Europe; and by them is commonly regarded in the light of a specific. Both the fluids named are appropriate applications, so long as the skin continues sound; but they should not be employed for broken or ulcerated chilblains.

Corns—"clavi"*—are horny indurations of the skin, with a central nucleus very sensitive at the base, and occur on the exposed portions of the joints of the toes. The common cause of them is continued pressure or friction on the projections of the bones from tight, stiff, or ill-fitting boots or shoes. This suggests the means of their prevention, which, in addition to cleanliness, consists essentially in wearing easy-fitting, soft boots and shoes. If this be neglected, corns are almost certain to form; and they will as certainly reappear, however often, and however perfectly, they may be removed.

The *curative treatment* of *corns* is very simple, though often somewhat troublesome and tedious. After soaking them for some minutes in warm water, to soften them, they should be pared, with a sharp penknife, as close as possible without causing pain or making them bleed, observing to extract as much of the central portion of the base, popularly, but incorrectly, called the 'root,' as possible. The pared surface of the corn, and particularly its central and upper portion, may be now touched over with any substance capable of destroying the vitality of the indurated cuticle, or at least the part of it next the surface, and thus causing it in a few days to separate, or permit its removal. For this purpose caustics or corrosives are employed. Of these the most convenient and

* Lat.; sing., *clavus*.

manageable, and the one most in favour, is fused nitrate of silver or lunar caustic. This substance, held between paper to shield the fingers, is used by simply rubbing it on the corn, previously slightly moistened with water. Nitric acid, concentrated acetic acid or strong aromatic vinegar,* and strong tincture of iodine or iodine-paint, are other effective substances which are frequently employed to remove corns. Being liquid and highly corrosive, the surface of the corn is moistened with them by means of a strip of wood, or, preferably, a small rod of glass, due care being taken not to allow the liquid to spread or touch the neighbouring parts, or, in conveying them, to drop on the skin or dress. After the application of either the caustic, or one of the liquids mentioned, the parts medicated should be left uncovered for a short time, until quite dry. In the course of three or four days a portion of the cuticle, more or less thick, disorganized by the action of the remedy, will begin to detach itself, and may be removed with the nail, either at once, or after soaking the foot for a short time in warm water. The application of the caustic, or the liquid, and the whole treatment, should then be repeated, and again every third or fourth day, until a cure be effected, soft, loose shoes being, as far as possible, worn during the whole time.

Some writers recommend ligatures of silk for the removal of large corns. The silk is applied as close to the base of the corn as possible, and is tightened daily until they drop off. This plan is tedious, is

* The two last are chemically the same, except in the one being aromatized.

often very painful and particularly inconvenient when the patient is compelled to wear ordinary boots or shoes during the day, and, further, is not always successful.

Another mode of extirpating corns, sometimes adopted, and with greater success than the last one, is the application of a small blister. This will frequently raise them, with the skin, out of their beds, and permit of their complete removal. The delicate exposed surface must then be dressed with a little simple ointment, spread on lint, and this must be retained in its place by a slight bandage formed of a strip of soft calico.

Among *methods*, purely *mechanical*, for the cure of corns, two particularly deserve notice. The one is, to wear upon the toe, or part affected, a small circular piece of soft buckskin, or, still better, of amadou, spread with diachylon, resin, or any other adhesive plaster, and having a hole punched in the centre corresponding to the size of the corn. In this way the pressure of the boot or shoe is equalized, and the apex of the corn protected from injury; by which the pain is at once relieved, and, provided the prominent surface of the corn be occasionally pared, a radical cure is ultimately effected. This plan had the approval of the late Sir B. Brodie, and it has also been recommended by many other eminent surgeons, as well as by some of our leading chiropodists.*

The other method above referred to, is to gradually reduce the corn by nightly rubbing it, in the dry and hard state, with the flat surface of a piece of pumice-stone, or with a piece of glass-, sand-, or emery-paper

* *Vide* 'Bunions' (*infrà*).

or one of the little instruments sold by perfumers and dealers in toilet articles under the name of 'corn-rubbers.' The relief afforded will increase daily until the extirpation be complete.

Soft corns, or those that occur between the toes, may generally be cured, as well as prevented forming, by daily scraping the part, whilst soft and moist, with the edge of a penknife, or with the finger-nail, so as to remove as much of the thickened and disorganised cuticle as possible. When this does not succeed, a little soap-cerate, spread on a piece of lint or soft rag, may be placed as a 'dressing' between the toes and renewed daily; soaking the feet in warm water, and scraping the part, being also adopted. Slightly rubbing the prominent parts with lunar caustic, or slightly moistening them with strong vinegar, or with tincture of iodine, every second or third day, will also remove them. When these substances are used, the toes should be kept apart until the skin becomes dry, when a strip of paper, or thin calico, should be placed between them. A common remedy for soft corns, among the vulgar, is a piece of ivy-leaf that has been soaked in vinegar. It is renewed daily.*

A *bunion* is a species of corn or swelling on the ball, or the chief joint, of the great toe, resulting from pressure and the irritation produced by friction. The treatment recommended for 'corns' applies, for the most part, also to bunions; but in consequence of their greater extent, and the greater degree of irritation accompanying them, the cure is more tedious.

* *Vide* Note (‡) p. 387 (*infrà*).

When there is much inflammation, and a manifest effusion of serum or matter at their base, their progress may generally be effectually stopped, and their removal effected, by the application of emollient poultices, and, at the proper time, carefully opening them with a lancet. Indeed, many eminent chiropodists assert that 'poulticing' is the best treatment of them both when forming and in the developed state. When of a slight character, wearing a piece of perforated plaster,* or better still, one of the little perforated India-rubber 'protectors' sold for the purpose,† will do much to arrest their progress, and will, in all cases, greatly relieve the pain attending them. Above all, the feet should be frequently soaked in warm water, and soft, easy-fitting boots or shoes alone worn.

The common causes of corns and bunions are also those which produce *enlargement* of the *principal joint* of the *great toes*. The treatment here, in all ordinary cases, may be that last indicated; viz., frequent soaking of the feet in warm water, wearing a vulcanised India-rubber protector, and wearing only soft, easy-fitting, ventilating boots and shoes. When there is much inflammation and pain, emollient poultices are also serviceable.‡

* *Vide* p. 385 (*antè*).

† These articles are made of vulcanised India-rubber, in the form of a flattened hollow ring, the hollow portion being distended with air or stuffed with cotton-wool. Being furnished with an elastic band to keep them on, they are particularly convenient. Care should be taken to purchase one of a size to fit the part.

‡ For references to a variety of popular remedies and nostrums for *corns*, *bunions*, and *enlarged toe-joints*, including 'caustics,' 'lotions,' 'plasters,' 'solvents,' &c., vide *Index*.

Distortion of the feet is sometimes congenital, but more frequently the result of bad nursing, or of weakness, exposure to damp and cold, or violence, during infancy or early childhood. Cases in which the feet are turned inwards, or unnaturally outwards, are generally remediable by the judicious use of proper bandages, early applied; but if this be neglected in infancy the deformity usually becomes incurable. *Club-foot*, of which there are several varieties, all exceedingly distressing and unsightly, may also be frequently, if not generally, relieved by a simple operation, which is perfectly safe in the hands of the experienced orthopædic surgeon.

From what has been said, the importance, and, indeed, the absolute necessity of paying due attention to the feet, and of properly treating them, if we value our ease, comfort, and health, will be seen even by those who, in order to be fashionable, are most prone to punish them, or who, from indolence and indifference, neglect them. It should be recollected that the feet, as forming, with the legs, the instruments of locomotion, are in constant requisition, and are most intimately and constantly connected with our personal conveniences and enjoyments in a variety of ways; whilst their exposure, neglect, and mistreatment, are each capable of affecting the general health of the body, and that to an extent which is always serious, and not unfrequently actually dangerous.

This concludes the subject of general personal management in connection with the 'toilet,' and brings me to the special consideration of 'cosmetics' and 'perfumes,' as promised at the commencement of this volume.

CHAPTER XVII.

COSMETICS: THEIR CLASSIFICATION, PREPARATION, ETC.—FORMULÆ, DIRECTIONS, CAUTIONS.

COSMETICS may be distributed into three great classes—*Skin Cosmetics*—*Hair Cosmetics*, and—*Tooth Cosmetics*;—and each of these classes admits of subdivision founded on the different nature of the actions of the substances and preparations composing it, and the different purposes for which they are employed. Thus, among CUTANEOUS COSMETICS, one class embraces all those articles which act as gentle "stimulants," increasing the circulation of the blood in the minute vessels of the skin, and, in this way, promoting its health and hue. The articles of another class act as mild "detergents,"* and increase the transparency and delicacy of the skin by the separation and removal of the decayed particles and foreign matter that obstruct its pores, or that obscure its surface. *Soap* and *slightly alkalized solutions* are of this nature. Those of a third class are "emollients,"† which soften and relax the texture of the skin, rendering it more elastic and sensitive, and of which the milder *oils* and *unguents*, *emulsions*, and *glycerine*, are examples. A

* Substances that remove and cleanse; from *detergeo* or *detergo* (L.), I cleanse or wipe away.

† From *emollio* (L.), I soften, or make supple.

fourth class are "astringents,"* which constrict and harden the fibres of the cuticle, and, while strengthening it, lessen its sensitiveness and its susceptibility to external actions and injury. *Alum, bark, tannin, black-tea,* and other like substances, belong to this class. "Skin-paints" and "skin-stains," as *carmine* and *rouge,* and their preparations, form other classes; as do also "skin-blanches" and white "skin-powders," which are employed for an opposite purpose. Mild "rubefacients" † and "irritants," ‡ used chiefly to promote the growth of the hair, may be also regarded as forming separate classes. Some skin-cosmetics are of a mixed nature, and combine two, or more, of these properties.

Of HAIR-COSMETICS, all those that are employed to promote the luxuriance and growth of the hair, are strictly speaking, skin-cosmetics, as already hinted. "Hair-dyes" and "hair-stains," "hair-powders," "depilatories," &c., form distinct classes by themselves.

Of TOOTH-COSMETICS, the principal are *dentifrices,* which admit of subdivision into "tooth-powders," "tooth-pastes" or "tooth-electuaries," "tooth-washes," &c., all of which are noticed elsewhere.

MOUTH-COSMETICS and BREATH-COSMETICS are, for the most part, tooth-cosmetics; since it is chiefly in, and about the teeth, that the foulness and corruption that taint the breath generally accumulate.

* From *astringo* (L.), I astringe, bind, brace, or contract.

† Substances that cause heat and redness when applied to the skin, without blistering it; from *rubefacio* (L.), I make red.

‡ Substances which cause heat, redness, and irritation, of the skin and flesh; from *irrito* (L.), I irritate or excite.

The following formulæ, &c., embrace the principal 'cosmetics' of value, with many others at present in use, including advertised nostrums :*—

I. Skin-cosmetics :—

Amandine.—A preparation used to whiten and soften the skin, and also to prevent its chapping. There are three kinds, and each of these is sometimes diversified by the addition of colouring matter :—

1. (Transparent.) Take of

Finest pale honey † . . . . . 4 ounces ;
White soft-soap ‡ . . . . . 2 „

mix them thoroughly in a marble or Wedgewood-ware mortar, adding (if necessary), of

Liquor of potassa . . . . . 2 or 3 teaspoonfuls ;

so as to produce a perfectly homogeneous 'paste' or 'cream.' To this add and rub in, by degrees, and very gradually, of

Oil of almonds . . . . . 3½ pounds ;§

(previously mixed and scented with—)

Essential oil of almonds . . . . of each
Essence (oil) of bergamot . . . . 3 drachms ;
Oil of cloves . . . . . of each
Balsam of Peru . . . . . 1½ drachm ;‖

and continue the trituration until the whole assumes the appearance of a rich transparent jelly. Lastly, put the 'product' into pots, or dumpy wide-mouthed bottles.

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* Those preparations and formulæ which are preceded by the simple name of a medical, or other authority, have been recommended, approved of, or suggested by the party referred to. When the name appears in the 'possessive case,' the paternity is often spurious, and it indicates that the article is, or has been, an advertised nostrum, or a proprietary preparation.

† 6 ounces of concentrated *simple-syrup* or *capillaire* is sometimes substituted for the 'honey' ordered above.

‡ That is, soap prepared from *lard* and *potassa*.

§ Some makers use even more oil ; but this injures the preparation.

‖ The 'balsam' should be triturated with a little of the oil (warm), before adding it to the rest ; and, after all the scents are added, the oil should be allowed to settle for two or three days, the clear portion, poured from the dregs, only being used.

2. (Opaque.) Take of

White soft-soap . . . . . 3 ounces;
Gum-mucilage (thick, clear) . . 4 „
Pale honey (finest) . . . . . 6 „

proceed as before; add the

Yelks of 5 *large eggs* (previously beaten and strained through gauze);*

and again thoroughly mix. Next add, very gradually, of

Oil of almonds (scented with half of the preceding oils, &c., or at will), } 2¼ pounds.

When the whole is perfectly blended, further add of

Pistachio-milk† (thick, rich) . . . ¼ pint;

and triturate until the union is complete.

3. (Glycerinated.) As either of the preceding, but adding, with the 'soap,' ¾ to 1 ounce of Price's *glycerine* for every pound of 'oil' intended to be subsequently added.

In *use*, a portion of amandine, about half the size of a small filbert, is rubbed with a few drops of warm water, and the resulting rich white lather applied to the hands, arms, face, and neck. In a short time, and whilst the water on it is still milky, the skin is gently wiped with a soft napkin.

Amandine may be coloured 'green' with *spinach-leaves*, and 'yellow' and 'orange' with *palm-oil* or *annotta*, by digesting or dissolving the substances in the oil before adding the scents. A beautiful 'scarlet' or 'crimson' may be given to it by adding a little *liquid rouge* or *carmine* (ammoniacal), just before removing it from the mortar.

To produce amandine of fine quality is a matter of some difficulty and labour, and requires experience and considerable manipular skill. The details essential to success are noticed under "Emulsions."

Olivine.—A similar preparation to "amandine," but made with *olive-oil*. It is often coloured green.

Almond-balls, Almond-cakes; Boules d'Amande.—These are used to soften the skin, and, in winter, to prevent chaps and chilblains:—

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* ¾ to 1 ounce of thick *gum-mucilage* is sometimes substituted for the 'yelks', but the product is then inferior, though it keeps better.

† Made of the *fresh-peeled nuts* and *rose-water*.

1. Take of

Spermaceti	2 ounces;
White wax (pure)	4 „
Oil of almonds (pale)	½ pint;

melt them together in a glazed earthenware-pipkin, or an enamelled iron-capsule, by the heat of a water-bath, and when the mixture has cooled a little, add of

Essential oil of almonds	1 drachm;
Expressed oil of mace	1½ „ .

Stir the mixture assiduously until it begins to cool, then pour it into slightly warmed moulds, which may be ounce-gallipots or egg-cups, with smooth bottoms. It will then assume the form of beautiful hemispherical cakes. Very fine. A drachm of *balsam of Peru*, added in the way noticed under "Amandine," further improves it.

2. Take of

Hard clarified suet	14 ounces;
White wax	2 „

melt, add of

Essential oil of almonds	1 drachm;
Oil of cloves (or of *pimento*) . . .	½ „

and otherwise proceed as before. Inferior to the last, but cheaper.

In using these balls, a little is well rubbed into the skin, previously washed clean and wiped dry, preferably at bedtime.

Almond-balls are sometimes *coloured*, which is done whilst the mixture is in the liquid state, and before adding the scents. A rich 'pink' or 'red' may be given by digesting or dissolving a little *alkanet-root* or *dragon's blood* in the melted fat; a 'yellow' or 'orange,' by *palm-oil* or *annotta* used in the same way; a 'blue,' by stirring in a little finely powdered *indigo;* and a 'green,' with *spinach-leaves* (steeped in the oil before use), or a few grains of *verdigris*. The usual tints given them, if any, are pale yellow, amber, or orange; but they are generally preferred of a pure white.

CAMPHOR-BALLS; CAMPHOR-CAKES; CHAP-BALLS; CHILBLAIN BALLS, &c.—A popular skin-cosmetic and preventive of chapping and chilblains, particularly of the hands:—

1. Take of

Spermaceti . . . .)	{ of each
White wax (pure) . .) . .	{ 2 ounces
Almond or *olive oil*	¼ pint;

melt them together by a gentle heat, add of

Camphor (cut small) . . . . . 1 ounce;

stir until it is dissolved, and otherwise proceed as directed under "Almond-cakes." Very fine.

2. Take of

Clarified suet . . . . . 1 pound;
Spermaceti . . . . . 3 ounces;
White wax . . . . . 2 „
Camphor . . . . . 1 ounce;

as before.

Camphor-balls are used in the same way as 'almond-balls.' They are usually sold uncoloured and unscented. Extreme whiteness is generally esteemed in them. For this reason, white or pale oil should be used in their preparation. If coloured, it should be pink, pale green, amber, or yellow, which may be imparted to them as previously noticed. The best scent for them is ambergris, balsam of Peru, cassia, cloves, mace, musk, rondeletia, vanilla, or violets, or mixtures of them.

Soap-balls; Wash-balls.—*Vide* "Savonettes," "Soap," &c. (*infrà*).

Balm of Mecca; Balm of Gilead; Balsam of Mecca; Opobalsam.—A fragrant oleo-resinous substance obtained from 'balsamodendron gileadense' (Kunth.), a tree growing in Arabia Felix, Asia Minor, and Egypt. It is the 'balm' of the Old Testament, and the βάλσαμον of Theophrastus and Dioscorides. When applied undiluted to the skin it causes redness and swelling. It was formerly thought to possess the most varied and exalted virtues; and even its fumes were supposed to impart health and beauty, and to prevent barrenness. It is still highly prized in the East as a cosmetic and perfume. It is there reputed to be unequalled for giving a healthy glow to the complexion, and for promoting the growth of the hair. It is extremely scarce and costly. The Turks and Egyptians hold it in such high estimation that none of it is exported by them as an article of commerce. It is difficult to obtain the finest quality of it even in Constantinople, where it is said to sell for more than 1s. (English) per grain. That which reaches England is an inferior quality rejected by the Orientals as worthless. Most of that sold in the shops here is entirely spurious. The 'cosmetics' so much advertised, of late years, as "*Balm of Mecca*," do not contain even a trace of it. There is not,

I believe, a single drop of the genuine balm, of good quality, for sale in London.

Pure 'balm of Mecca' is freely, though not entirely soluble in rectified spirit, but it dissolves more or less completely in the fixed and volatile oils, and the fats. Into these solutions it carries its fragrance and other properties. Cosmetic oils and pommades, emulsions, washes, &c., may thus be readily impregnated with it.*

CAMPHOR-BALSAM; CAMPHOR LINIMENT.—1. Take of

Spermaceti . . . . . 2 ounces;
Olive-oil . . . . . ¼ pint;

dissolve by a gentle heat, add of

Camphor (cut small) . . . . . 1 ounce;

stir the mixture until nearly cold, and then put it into dumpy wide-mouthed phials, which should be kept well corked. Only half the above quantity of camphor is sometimes used.

2. As the last, but adding (with the camphor), of

Oil of origanum (thyme) . . . 1 drachm;
„ *rosemary* . . . . . ½ „ .

3. Take of

Curd-soap . . . . . 1 ounce;
Water . . . . . 1½ „

dissolve by heat, and stir in, of

Camphor . . . . . ½ ounce;

(previously dissolved in)

Olive-oil (hot) . . . . . 3 ounces.

When the whole is thoroughly combined, and cold, further add of

Oil of origanum . . . . . ¼ ounce;
Strongest liquor of ammonia . . . ½ „
Rectified spirit of wine . . . . . 1½ „

and otherwise proceed as before.

The above are stimulant, anodyne, and resolvent. The two first are used to promote the growth of hair, prevent chapping, remove chilblains, &c.; also (with friction) in sprains, bruises, rheumatism, stiff joints, sore throats, glandular enlargements, lumbago, and local pains generally. The third one, which is the most powerful, is employed in similar cases, but is not used for the hair. It is greatly esteemed, by some persons, as a friction.

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* *Vide* the Author's "*Cyclopædia*," 4th ed., pp. 261-2, for further useful information respecting 'balm of Mecca.'

GLYCERINE-BALSAM.—A preparation used to soften and whiten the skin, to prevent chaps and chilblains, and to remove the former when present. It is an admirable substitute for lip-salve; and for roughness and chaps of the hands, during winter, has perhaps, no equal. For the latter, a small quantity should be applied at bedtime, and well rubbed in, the friction being continued until the surface of the skin appears dry, or nearly dry.—

1. Take of

White wax (pure) . . . . . 1 ounce;
Spermaceti . . . . . 2 „
Oil of almonds . . . . . ½ pint;

melt them together, by a gentle heat, in a glazed earthenware vessel, add of

Glycerine (Price's) . . . . . 3 ounces;
Balsam of Peru . . . . . ½ „

stir the mixture until nearly cold, and then pour it into pots, or china or glazed earthenware boxes.

2. As the last, but substituting 12 or 15 drops of *otto of roses* for the balsam of Peru.

BALSAM OF HONEY (Cosmetic).—1. Take of

Finest pale honey . . . . . 4 ounces;
Glycerine (Price's) . . . . . 1 „

unite by a gentle heat; when cold, add of

Rectified spirit . . . . . 1 fluid ounce;
Essence of ambergris . . . 6 drops;

and at once bottle it. Used to soften and whiten the skin, prevent chaps, &c.

2. In the last, dissolve of

Citric acid (pure) . . . . . 3 drachms.

Used to prevent and remove freckles, and discolorations.

BLANCHES.—*Vide* "Skin-paints," "Lotions," &c. (*infrà*).

BLOOM OF ALMONDS; ALMOND-BLOOM.—Take of

Brazil-wood (ground) . . . . . 1 ounce;
Cochineal (powdered) . . . . . ¼ „
Soft water . . . . . 1 quart;

simmer (in glass or earthenware) for 30 or 40 minutes, adding, toward the end, the

Juice of 2 lemons.

Strain the liquid, add of

Isinglass . . . . . 1 ounce;

and when it is dissolved, further add of

Alum (crushed small) . . . . $\frac{3}{4}$ ounce;

Borax (do.) . . . . $\frac{1}{2}$ „

Again strain (through muslin), and when the liquid is nearly cold add of

Essential oil of almonds . . . . 20 drops;

(dissolved in)

Rectified spirit . . . . . 1 fluid ounce.

Used as a colorific skin-cosmetic. It is a misnamed, clumsy preparation, and does not keep well. The substitution of 2 ounces of *Carrageen-moss* (Irish moss) for the 'isinglass,' is an improvement, as it then keeps better.

Bloom of Roses.—1. Take of

Soft water (boiling) . . . . . 1 pint;

Lemon-juice (recent; boiling) . . $\frac{1}{4}$ pint;

Dilute sulphuric acid (Ph. L.) . . $\frac{1}{4}$ ounce;

mix, add of

Dried red-rose leaves . . . . . 3 ounces;

and digest, in glass or glazed earthenware, with frequent stirring, for two hours. Then strain off and forcibly squeeze out the liquor from the leaves with the hands, and pass it through coarse muslin. Next add, and dissolve in it, of

Gum-arabic (fine pale) . . . . . 1 ounce;

Esprit de rose . . . . . $\frac{1}{2}$ fluid drachm.

Set it aside (corked) in a cool place for a few days; then decant the clear portion, or filter it through bibulous paper. Contact with alkalies and metals darkens and spoils its colour.

2. Take of

Carmine (genuine) . . . . . $1\frac{1}{2}$ drachm;

Liquor of ammonia (·900) . . . 5 fluid drachms;

put them into a stoppered bottle, set it in a cool place, and agitate it occasionally until solution be complete; then add, with agitation, of

Rose-water . . . . . 8 ounces;

Rectified spirit . . . . . $1\frac{1}{2}$ fluid ounce,

(previously mixed with)

Esprit de rose . . . . . 2 fluid drachms.

Lastly, dissolve in the mixed liquid, of

Gum-arabic (finest) . . . . . $\frac{1}{2}$ ounce;

and in a few days decant and bottle it. Very fine.

Both the above are used to give an artificial 'bloom' to the complexion, the liquid being applied with a camel-hair brush, or the tip of the finger, and, when nearly dry, 'toned off' with the corner of a soft napkin. The first is also sometimes used to remove 'freckles.'

CANTHARIDES (Spanish Flies); CANTHARIDINE; and their preparations.—*Vide* "Hair Cosmetics" (*infrà*); also Chapters XV., XIX.

COLD CREAM; COSMETIC CERATE; POMMADE EN CRÊME.—

1. Take of

White wax (pure) . .	} . .	{ of each
Spermaceti (do.) . .	}	{ 1 ounce;
Oil of almonds		¼ pint;

melt, pour the mixture into a marble or Wedgewood-ware mortar (or a porcelain-basin), which has been heated by being immersed, for some time, in boiling water; add, very gradually, of

Eau de rose . . . . . 4 fluid ounces;

and assiduously stir the mixture until an emulsion is formed, and afterwards until the whole is very nearly cold. Lastly, put it into porcelain or earthenware pots for use or sale.

The above is sometimes further scented by the addition of a little of the *oils* of *bergamot* and *lavender*, or of the *essences* of *vanilla* and *ambergris*, &c.; in which case English 'rose-water' may be substituted for 'eau de rose.' Occasionally, *orange-flower water* is used instead of rose-water, a few drops of *neroli* being also added. The oils and essences are stirred into the mass when in the state of emulsion.

2. (Hudson's.) As No. 1 (nearly), but adding of

Orange-flower water . . . . 1 fluid ounce.

3. (*Glycerinated.*) As No. 1, but adding of

Glycerine (Price's) . . . . . 1 ounce;

before stirring in the rose-water.

Cold-cream is emollient and cooling. It is a fashionable and agreeable application to chapped lips, irritable surfaces, excoriations, sore nipples, and the like.

GRANULATED CREAM; GRANULATED COLD-CREAM. — Take of

Oil of almonds.	½ pint;
Spermaceti (pure).	3 ounces;
White wax (do.)	2½ „

melt by a gentle heat, and add of

Otto of roses . . . . . 12 drops.

Pour the liquid into a marble or Wedgewood-ware mortar containing about 1½ pint of *lukewarm water*, and agitate the whole briskly with the pestle until the oleaginous portion is well divided. Then throw the whole *suddenly* into a broad vessel containing 1 or 2 gallons of *cold water*. Next throw the 'granulated cream' on a piece of muslin extended as a filter, and shake and drain as much of the water out of it as possible. Lastly, put it into china or earthenware pots. It is used as ordinary cold-cream.

COLLODION.—*Vide* page 226 (*antè*).

COLOURED COLLODION.—1. Take of

Collodion . . . . . 1 ounce;
Annotta (pure). . . . } { of each, (say)
Dragon's blood (genuine) } . . { 3 grains;

digest, with agitation, in a stoppered phial, for 24 hours; and, if necessary, decant the clear portion.

2. Take of

Collodion . . . . . 2 ounces;
Palm-oil . . . . . 1 drachm;
Alkanet-root (q. s.; say) . . . . 15 grains;

digest, &c., as before. This is the "Collodium Tinctum" of the Cutaneous Hospital. It dries of a good skin-colour; but it is not so strong as the product of the preceding formula.*

COSMETIQUE (Simple).—Take of

White soft-soap . . . . . ½ pound;
Olive-oil . . . . . 3 ounces;

melt them together, add of

Fine sand . . . . . a small teacupful;

and mould or form the mixture into cakes or balls. Shelly sea-sand, sifted from the shells, washed, and dried, is the best for this purpose. Used to soften and blanch the hands, and to remove roughness and coarseness occasioned by exposure to the weather, or by gardening or other dirty work.†

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* *Vide Note* (*), page 226 (*antè*).

† *Vide* "Soap" and "Savonettes" (*infrà*). Hard pomatum in 'sticks,' sold under the name, is noticed among "Hair-cosmetics."

EMULSIONS.—These are milky liquids, formed by the mechanical admixture of oil, balsam, or resin, with water, by means of some other substance that possesses the property of combining with both. There are numerous preparations of the kind in pharmacy and medicine, which, in the later pharmacopœias, have received the name of 'mixtures.' There are also several emulsions employed as cosmetics, either alone, or as vehicles for other ingredients. The common name of emulsions is '*milk*'; but the term is often incorrectly extended to opaque white liquids of an entirely distinct character.

The successful *preparation* of *emulsions* is a matter requiring some little skill and care. In some instances, as with the almond, the two substances necessary to produce a perfect emulsion are presented by nature, ready to our hand, in the same vegetable production; when nothing more is necessary than to reduce it with the pestle, and triturate it with water, gradually added. In other cases, and which are far the more numerous, we have to operate on oily or resinous ingredients in their common form. These we are enabled to suspend in water, or mechanically combine with it, by the intervention of *thick mucilage*, *almonds*, or *yelk of egg*. It is found that 1 drachm (60 grs.) of the *first*,* 1 ounce of the *second*,† and 1 in no. of the last,‡ will form 2 drachms of oil or resinous matter into an emulsion with about 1 fluid ounce of water, gradually added; and such an emulsion, if properly made, will then, in most instances, bear further dilution with water. Of these, mucilage is the medium most commonly employed. According to Montgomery, the accuracy of whose statements I can endorse, for conversion into permanent emulsions, "*oils* require about ¾ths their weight; *balsams* and *spermaceti*, equal parts; *resins*, twice their weight; and *musk* (and *ambergris*), 5 times its weight." In some cases, instead of the above substances, a little *liquor of potassa* is employed, when a saponaceous emulsion is formed, which differs considerably in its properties from an emulsion of the same ingredients produced by means of a bland medium.

In making an emulsion the *gum*, or other medium employed, should be first put into the mortar, and rendered thoroughly homogeneous with the pestle. If *almonds* are used, they should be treated as

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* Made with equal parts of good *gum-arabic* and *water*. Powdered gum is sometimes used instead of mucilage.

† Usually about 26 in number.

‡ The *yelk* of an ordinary-sized hen's egg is referred to. It should be remembered, that emulsions formed with yelk of egg will not keep long, owing to the putrescible nature of the latter.

noticed under "almond-paste,"* a few drops of water being added to prevent 'oiling,' and to reduce them to a smooth, soft paste. The oil or resinous matter may then be gradually added and rubbed in, carefully observing not to add it more quickly than it can be subdued by the pestle; and if, during this part of the manipulation, the mixture should begin to exhibit a 'breaking' or 'curdling' appearance at the edges, a few drops of water must be immediately incorporated with it, before adding the remainder of the oil. If this be not done, the emulsive mixture in the mortar will, in general, suddenly lose its tenacious consistence, and the process will fail. After the whole of the oil, balsam, or resinous matter, is thoroughly incorporated, the water or other aqueous vehicle intended to form the bulk of the emulsion, should be added gradually and with care, each portion being perfectly blended with the liquid mass in the mortar, by patient trituration, before adding the next. If any alcoholic liquid is employed, it should be added at the very end of the process, and then only very gradually, as otherwise it will cause the separation of the ingredients.

It must be observed that soluble salts, spirit, acids, and astringents, are, as a rule, incompatible with the emulsive form. If saline matter must be introduced, it should only be added in a very minute quantity, and in the state of solution, to the ready-formed emulsion; and in this case emulsion of almonds is the most suitable vehicle.† Spirits and acids act by precipitating the mucilaginous matter, or yelk. Even the addition of a very little lemon-juice, or of a portion of slightly acescent syrup, will often entirely destroy an emulsion. This inevitably occurs with emulsions made with liquor of potassa, or other alkaline medium, owing to the absolute incompatibility of acids and alkalies in the same liquid.

It is found that volatile oils are more readily made into emulsions if mixed with an equal volume of some simple fixed oil, as that of the almond or olive, before proceeding to operate on them.

All emulsions should be well shaken before use.‡

EMULSION OF ALMONDS; MILK OF ALMONDS; ALMOND-MILK.—

1. Take of

Sweet almonds (blanched) . . . . 1 ounce;

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* *Vide* formulæ (*infrà*).

† *E.g.*; 'Gowland's Lotion.'

‡ On the whole subject of emulsions and their preparation, *vide* the article "Emulsion" in the author's "*Cyclopædia*," 3rd, or subsequent editions; also "Milks," "Amandine," "Olivine," &c., in this work.

beat them to a smooth paste, avoiding causing them to 'oil,' add, gradually, triturating all the time, of

Distilled water (or clean soft w.) . . ½ pint;

and strain the liquid through gauze.

2. Take of

Blanched almonds . . . . . 5 drachms;
White lump-sugar . . . . . 2 „
Gum-arabic (in powder) . . . 1 „
Water . . . . . 8 fluid ounces;

proceed as before.

3. Take of

*Confection of almonds,** . . . . 2½ ounces;
Water . . . . . 1 pint;

as before.

4. To No. 1. add of

Glycerine (Price's) . . . . . 1 ounce.

The preceding are used to soften and whiten the skin, to remove and prevent roughness, sunburns, chaps, &c. The third formula is that of the London and the British Pharmacopœias; the second, that of the Dublin Pharmacopœia. The first formula (No. 1) produces the common "milk of almonds" of the perfumers; the last (No. 4) is the most powerful as a cosmetic. They both keep well, and are the ones to be preferred when the emulsion is intended as a vehicle for any saline ingredient. The second and third possess advantages when oils or balsams are to be added, and are those employed in medicine. The addition of 2 to 6 *bitter almonds*, or of 1 to 2 ounces of *rose-water* or *orange-flower water*, may be made, at will, to impart odour, or, when intended for external use, to diversify the flavour, a corresponding quantity of simple water being omitted.

Emulsion of Bitter-almonds; Bitter-almond Milk.—This is prepared wholly from *blanched bitter-almonds*, as before. It is highly esteemed, by many, to relieve itching and irritation of the skin, particularly that following shaving. As a remedy for 'freckles' it has been in repute from a period long antecedent to the time of Celsus.† It is poisonous, and, therefore, must neither be swallowed, nor applied to a raw surface, in quantities exceeding a few drops, or, at the most, a teaspoonful at a time.

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* *Vide* Chap. XIX. (*infrà*).

† *Vide* pp. 215-6; also Chap. XIX.

EMULSION OF OIL OF ALMONDS; ALMOND-OIL MILK.—Take of

Oil of almonds . . . . . 3 drachms;
Thick mucilage . . . . . ½ ounce;

triturate them together until united; then add, successively, of

Simple syrup or *capillaire* . . . 1 ounce;
Water (pure) . . . . . 8 „
Rose-water or *orange-flower water*, ½ to 1 ounce;

so as to form an emulsion. An elegant and efficient substitute for almond-milk.

EMULSION OF BALSAM OF PERU. EMULSION OF BALSAM OF TOLU.—See "Tooth-Cosmetics" (*infrà*).

EMULSION OF SPERMACETI; SPERMACETI-MILK.—1. Take of

Simple syrup . . . . . 1½ fluid ounce;
Powdered gum-arabic . . . ½ ounce;

mix them in a warm mortar, add of

Spermaceti (pure) . . . ½ ounce;

triturate with a hot pestle until united; then add, very gradually, of

Warm water . . . . . 12 fluid ounces;

so as to make an emulsion, observing to continue the agitation until the liquid is quite cold. In excoriations, roughness of the skin, chaps, &c.

EMULSION OF WAX; MILK OF WAX.—As the last, but substituting pure *white wax* for 'spermaceti.' Use, the same as the last.

ESSENCES.—The term 'essence'* is commonly very loosely applied to preparations that differ greatly from each other, and which are presumed or pretended to contain the essential principles or qualities of any thing disencumbered of grosser matter. Thus, the essential or volatile oils obtained from vegetable substances, by distillation, are frequently called 'essences,' as well as a strong solution of them in rectified spirit, a system of nomenclature which continually leads to confusion and mistakes. In *pharmacy*, the concentrated infusions, decoctions, liquors, solutions, and tinctures, are also frequently called 'essences' by those who vend them. In *perfumery*, a similar loose application of the term prevails; but it is more particularly appropriated to concentrated, or somewhat concentrated, alcoholic solutions of the essential oils and other fragrant substances, whether obtained by simple admixture, by distillation, or by digestion as in

* On the details of the manufacture of "Essences," *vide* "Perfumed Spirits," "Tinctures," &c. (*infrà*).

making tinctures. Indeed, the fragrant essences of the perfumers differ from their eaux, esprits, tinctures, and other forms of perfumed spirits, merely in their greater richness in the odorous principles that characterise them, and the greater strength of the spirit that holds these principles in solution.

The following formulæ, with those given further on, embrace the leading 'essences' of the shops connected with the subject of the present work:—

Essence of Roses (Red); Concentrated Tincture of Roses.—1. Take of

*Red-rose petals** or *leaves* (dried) .	6 ounces;
Proof spirit	1 quart;

digest for 14 days, press, strain, add of

Acetic acid (sp. gr. 1·044) .	2 fluid drachms;

and the next day filter. Used chiefly to colour and flavour cosmetics that do not contain alkalies or earths, particularly liquid ones made with spirit.

2. '*Concentrated infusion of roses.*' Use the same; but chiefly for aqueous liquids.

3. *Tincture of cochineal* to which a few drops of *essence of roses* have been added. Used for either acid or alkaline preparations, tooth-powders, &c.

Essence Royale (pour la Barbe).—This is the 'essence of soap' or 'shaving fluid' noticed below, more particularly that scented with *ambergris* and *musk*, or *essence royale*.

Essence of Soap, Shaving Essence, Shaving Fluid; Essence de Savon, Esprit de Savon; Essence pour faire la Barbe; Essentia Saponis.—1. Take of

White hard-soap† (in shavings) .	¼ pound;
Rectified spirit	1 pint;
Water	¼ pint;
Perfume (at will)	q. s.;

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* *Rosa Gallica* (French or Provence rose). They should be picked to pieces before digestion.

† *Olive-oil* (white Castile) *soap*, or *almond-oil soap* is here intended. It should be moderately dry when weighed, next reduced to thin shavings, and then further desiccated by exposure to warm, dry air; but no artificial heat should be employed.

put them into a strong bottle of glass or tin, cork it close, set it in warm water for a short time, and occasionally agitate it briskly until solution be complete. After repose, pour off the clean portion from the dregs (if any) into clean bottles for use, and at once closely cork them. If the solution be not sufficiently transparent, a little *rectified spirit* should be added to it before decantation. A little *spirit* (fully proof) may be added if it be desired to render it thinner. If much essential oil be used to perfume it, the transparency of the product will be lessened.

2. Take of

*White soft-soap**	¼ pound;
Liquor of potassa	2 fluid drachms;
Rectified spirit	1 pint;
Perfume (at will)	q. s.;

proceed as before. The product of both the above is excellent.

Chiefly used for shaving, by travellers and others, to avoid the trouble of carrying or keeping a soap-box. By simply rubbing two or three drops on the skin, and applying the shaving-brush,[1] previously slightly dipped in water, a good lather is produced. The choice of perfume is a mere matter of taste, as with the toilet-soaps. 15 to 20 drops of *essence of musk* or *ambergris*, 1 fluid drachm of any of the ordinary *fragrant essences* or *esprits*, or 12 or 15 drops of *essential oils* (simple or mixed), per pint, are sufficient for the purpose, a corresponding name being given to the preparation; as "*essence*," or "*esprit de savon à la rose*," "*Essence Royale pour la Barbe*," &c.†

Gelee Cosmetique.—Bandoline or fixateur.

Cosmetic Gloves; Gant's Cosmetiques.—Mock kid or lamb-skin gloves rubbed over, on the inside, with a composition of the following kind:—

Spermaceti-cerate (hardest; melted) .	5 ounces;
Balsam of Peru	1 drachm;

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[1] By replacing a portion (say one-third) of the above with an equal weight of dry white tallow-soap (i.e., *curd-soap*) the 'lathering' quality of the essence will be increased.

* Soap made of olive-oil or almond-oil and potash (e.g., white *Naples* or *Venetian soap*, or the white *soft-soap* of the Pharmacopœia), or of hog's lard and potash (*pearl soft-soap*), is here intended. A mixture of the two produces the best lather.

† *Vide* "Ropophagon," &c. (*infrà*).

stir for 5 minutes, pour off the clear portion, add of

Oil of nutmeg . . . . . ½ drachm;
Oil of cassia . . . } . . { of each
Essence of ambergris . } . . { 12 to 15 drops;

and stir the whole until cold. Worn by ladies in bed, all night, to soften and blanch the hands, and to prevent and cure chaps and chilblains.

GLYCERINE. HONEY.—*Vide* Chapter XIX. (*infrà*).

HONEY OF BORAX.—*Vide* "Tooth-Cosmetics" (*infrà*).

INFUSION OF ROSES: COMPOUND I. OF R.; ACID I. OF R.—Take of

Distilled water (boiling) . . ½ pint;
Dilute sulphuric acid . . . 1 fluid drachm;

mix; add of

Red-rose petals (picked to pieces) . ¼ ounce;

infuse, in a covered (glass or porcelain) vessel, for an hour, then press and strain or filter.

Although the pharmacopœias order 'boiling water,' it is preferable to use *cold water*, and to continue the maceration for 24 hours, or longer; as the product then keeps better. As a cosmetic it is used as an application to freckles, acne, &c. Sometimes a little honey or lump-sugar is added to the infusion.*

"A concentrated infusion of roses" is kept in the druggists' shops, which is eight times the pharmacopœia strength.

KALYDOR.—A name given to several nostrums extensively advertised in Europe and America, and pretending to possess extraordinary power of beautifying the skin.

MAY-DEW KALYDOR; EAU DE MIEL INCOMPARABLE; &c.—Certain nostrums vended under these names profess to be "*pure may-dew*," collected by placing soft sponges on "grassy banks and beds of flowers." Of the samples examined, one appeared to consist of—

Borax . . . . . ½ drachm;
Glycerine . . . . . ½ ounce;
Orange-flower water . . . . . 1 „
Distilled water . . . . . 18½ „

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* *Rose-leaves*, 3 drachms; *dilute acid*, 1½ fluid drachm; *boiling water*, 1 pint; and *white sugar*, 6 drachms (all Troy); are the old proportions of the L. Ph. The new British Ph. omits the 'sugar,' as may be seen above.

In another sample *myrtle-flower water* was substituted for orange-flower water.

ROWLAND'S "KALYDOR."—This is said to resemble 'Gowland's Lotion'; but it is 'got up' in a more pleasing and showy style.

LIP SALVES.*—Several emollient ointments, scented, pass under this name, of which the following are the usual and principal ones:—

PERUVIAN LIP SALVE; RED LIP SALVE.—Take of

Spermaceti-ointment † . . . ½ pound;
Alkanet-root . . . . . 3 or 4 drachms;

digest, at a gentle heat, until the first has acquired a rich deep red-colour, then pass it through a coarse strainer. When the liquid fat has cooled a little, well stir in, of

Balsam of Peru . . . . . 3 drachms;

in a few minutes pour off the clear portion from the dregs (if any), and add, of

Oil of Cloves . . . . . 20 to 30 drops.

Lastly, before it cools, pour it into the pots or boxes. The product forms the finest and most esteemed "lip-salve" of the shops. Two or three drops of *essence of ambergris*, or of *essence-royale*, improve and vary it.

ROSE LIP SALVE.—As the above, but using only 1½ drachm of *balsam of Peru*, and replacing the 'oil of cloves' with a few drops of *otto of roses*, or sufficient to give the mixture a marked odour of roses. Some makers omit the 'balsam' altogether. If uncoloured, it forms "White (rose) Lip Salve."

WHITE LIP SALVE.—Take of

Spermaceti-ointment . . . . . ½ pound;

liquefy it by the heat of warm water, and stir in of

Neroli or *essence de petit grain* . ½ drachm;

as before.

GLYCERINE LIP SALVE; GLYCERINATED DO.—This is prepared by adding ⅛ to ¼ part of *glycerine* to any one of the above whilst in the melted state, and stirring the mixture assiduously until it begins to cool.

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* Any consistent greasy preparation (ointment or cerate) was formerly called *salve* (properly *salf*); but the word is now confined to the above application, and occasionally to eye-ointments, except among the vulgar.

† Or its constituents.

Lip-salve is chiefly used to cure and prevent chaps in the lips, and the effects of cold winds on them generally. It is also often applied to the nipples. With the view of disguising its greasy flavour, and rendering it sweet-tasted if licked off by the tongue, $\frac{1}{5}$th to $\frac{1}{4}$th part of *lump-sugar*, in impalpable powder, is frequently added. When this addition is made, the mixture must be very assiduously stirred until it begins to cool. To prevent its affecting the richness of the colour of the red salve, some makers tinge the sugar 'red' with *tincture of cochineal*, before powdering it. Some makers tinge "orange-flower lip-salve" of a pale bright 'orange-colour,' with a little *annotta*, in which case, if they add sugar, they also tinge it with *infusion of saffron*. 'Glycerinated lip-salve' has a sweetish flavour without any such addition. The perfumes are sometimes varied, when the salve is named after them.

The so-called—

French Lip Salve contains a very small quantity of *alum*, in impalpable powder.

German Lip Salve is made of *cocoa-nut butter*, and scented with *essence of Portugal*.

Italian Lip Salve contains a small quantity of *finely powdered borax*.*

Lotions.—These preparations, popularly called "washes," are local external applications consisting of water, or some simple aqueous vehicle, holding in solution medicinal or cosmetic substances. 'Medicinal lotions' are usually applied by wetting a piece of linen with them, and keeping it on the part affected; 'cosmetic lotions,' by simply moistening the skin with them, by means of the corner of a napkin, a small piece of sponge, or the tips of the fingers, previously wetted with them.

Lotions are more agreeable when made with *rose-water* or *orange-flower water*, but not more effective. In all cases, *distilled water* or *pure soft-water*, or a vehicle made with them, is alone admissible in their preparation.

Alum Lotion.—Take of

Alum (crushed)	1½ drachm;
Distilled or soft water	1 pint;

dissolve. A little *rose-water* may be introduced to scent it. Used

* For other formulæ, *vide* "Ointments," "Pomades," and for special references, the *Index*.

for sore gums, nipples, excoriations, &c.; also as a daily application to the nipples before accouchement. For the last purpose a little *glycerine* improves it.

Arsenical Cosmetic Lotion; Aqua Cypria; Eau de Rose minerale. Water in which 'white arsenic,' or 'arsenious acid,' has been steeped, has become a favourite cosmetic wash with many ladies, since its assumed property of softening and beautifying the skin was announced, a few years since, in a certain popular periodical. Always an objectionable preparation, on account of involving the use of a dangerous and insidious poison, it becomes doubly so when carelessly and clumsily manufactured as a secret or 'contraband' article. The following formulæ produce a very elegant and effective article which is perfectly harmless for external use, provided the directions be strictly followed:—

1. Take of

Arsenious acid (solid or crystallized) 3 to 5 grains; crush it to fine powder,* place it in a jug or basin, pour on it, of

Distilled or *soft water* (boiling) . . ¾ pint;

and promote solution by constantly stirring the liquid for some time with a small glass-rod or a clean piece of wood. After repose, and, when cold, pour off the clear solution into a clean bottle, carefully observing not to disturb the sediment or any undissolved portion, which must be entirely rejected. To the clear liquid add, of

Eau de rose (foreign) . . . . . } of each
Glycerine (Price's) . . . . . } 1 ounce;

and after mixture, by agitation, further add enough cold *distilled water* or *pure soft-water*, to make the whole measure exactly one pint. It should then be poured into 5-ounce or 6-ounce bottles, only one of which, for safety, should be kept out for use.

2. As the last, but adding, with the 'arsenious acid' an equal weight of *salt of tartar*. This addition facilitates the solution of the former, but the product is said to be slightly less effective as a cosmetic wash.

3. *Solution of arsenite of potassa*† . . } of each
Eau de rose . . . . . } 1 fluid ounce;
Glycerine (Price's) . . . . . ½ ounce;
Distilled or *pure soft-water* (cold) . 1 pint;

mix. A convenient formula, but less esteemed than No. 1.

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* It should be weighed after being crushed.

† *Liquor potassæ arsenitis*, L. Ph.; *liquor arsenicalis*, Br., E., and D. Ph.

This wash is applied to the clean skin once or twice a day, like 'Gowland's Lotion,' the least quantity possible being used. It has the reputation of rendering the skin beautifully soft, transparent, and delicate, of preventing and removing freckles, chaps, and ordinary eruptions, including 'acne,' and of improving the health of consumptive and scorbutic persons. It, however, appears probable, that the virtues assigned to it by those that use it are either chiefly imaginary, or greatly overrated.*

Lotion of Bichloride of Mercury.—Take of

Corrosive sublimate (in coarse powder) 10 grains;
Distilled water . . . . . 1 pint;

agitate them together until solution be complete. The addition of 5 or 6 grains of *hydrochlorate of ammonia* (pure sal-ammoniac) or 5 or 6 drops (not more) of *hydrochloric acid*, increases the solvent action of the 'water,' and renders the preparation' less liable to suffer change, but is not otherwise advantageous. When absolutely pure distilled water is not used, this addition of acid should be made to prevent decomposition. Some persons dissolve the sublimate in 2 or 3 fluid drachms of *rectified spirit* before adding the water, to facilitate the process; but this also, though convenient, is unnecessary.

Apart from its value as a cosmetic, which is noticed elsewhere, the above lotion is an excellent application in a variety of obstinate eruptions, and in obstinate sores and glandular swellings and indurations of a minor character; the first of which it seldom fails to relieve, provided the bowels and diet be carefully attended to, and sufficient exercise be taken daily. Ordinary mild cases of itch rapidly disappear under its use. The addition of about 1 ounce of *pure glycerine* converts it into a lotion admirably adapted to allay itching and irritation generally; as well as into one of the best cosmetic washes known. For the latter purpose, a little pure *rose-water* or *orange-flower water* may be added, at will, to give it fragrance; a like quantity of distilled water, in the case of any of the above additions, being omitted. *Almond-milk* may be used as the menstruum instead of distilled water; but the addition of no other articles than those just mentioned can

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* As this wash beyond being slightly sweet, is almost tasteless, it should be carefully kept out of the way of children. The precaution respecting 'putting it up' in small bottles should also be observed. These points strictly attended to there is no danger in its use. The smallest fatal dose of arsenic recorded, according to Christison, is 4½ grains; but Letheby, and others, have asserted that 2½ or even 2 grains, have caused death; and it is well known that even very small doses, frequently repeated, will do so. (*Vide* the Author's "*Cyclopædia*," 4th ed., pp. 225-230.)

be made to it, without causing the decomposition of its active ingredient. Contact with any thing metallic, alkaline, or saline, immediately decomposes it.*

Lotion of Borax.—1. Take of

Borax (powdered) . . . . . 2½ drachms;
Distilled water . . . . . ½ pint;

mix. An effective wash for sore gums, sore nipples, excoriations, &c., applied twice or thrice daily, or oftener.

2. Take of

Borax (powdered) . . . . . 3 drachms;
Glycerine (Price's) . . . . . ¾ ounce;
Rose-water or *elder-flower water* . 12 ounces;†

mix. Resembles the last, but is fragrant and much more agreeable and effective. Its daily use as a cosmetic wash renders the skin beautifully soft and white, and prevents and removes chaps, sunburns, &c.

Lotion of Chlorate of Potassa.—Take of

Chlorate of potassa (powdered) . ½ ounce;
Distilled water . . . . . ½ pint;
Rose-water . . . . . 4 ounces;
Glycerine (Price's) . . . . . 1 ounce;

dissolve. Used like Gowland's Lotion, night and morning, as a cosmetic wash to brighten the hue of the complexion and lips, which it is *said* to do by its chemical action on the blood of the capillaries of the skin. It is also excellent to allay itching and irritation.

Chlorinated Lotion; Cosmetic C. L.; Blanching Deodorising Wash, &c.—

1. ("Lotion of Chloride of Lime.") Take of

Chloride of Lime (best; fresh) . . ½ ounce;
Pure water . . . . . 1 pint;

mix in a bottle, and agitate, occasionally, for 2 or 3 hours; after repose, filter the clear portion through a piece of calico that has been previously moistened with water, and preserve the 'filtrate' in a stoppered bottle.

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* *Vide* Chapter XIV. (*antè*), "Gowland's Lotion," (*infrà*), &c.

† Or, *distilled water*, ½ pint; *eau de rose* or *orange-flower water*, 2 ounces; make a very agreeable and fashionable cosmetic.

2. ("Lotion of Chloride of Soda.")—*a.* As the last, but substituting *chloride of soda* for 'chloride of lime.' Or—

b. Take of

Chloride of lime . . . . . ½ ounce;
Water . . . . . ¾ pint;

mix, &c., as before; then add, of

Carbonate of soda (crystallised) 3½ drachms;

previously dissolved in

Water . . . . . ¼ pint;

agitate the whole for 12 or 15 minutes, and filter, &c., as before.

3. ("Lotion of Chloride of Potash.") As the last, but substituting 3 drachms of dry *salt of tartar* for the 'carbonate of soda.'

The preceding liquids are used to remove stains from the skin, and to whiten it. Largely diluted with water they form useful occasional washes to whiten the teeth, and deodorise the breath, and are hence favourites with smokers to remove the smell of tobacco-smoke from the mouth. They are also used as "preventive lotions," to obviate the danger of infection; and they form excellent and effective washes for foul ulcers (particularly sore legs), the itch, &c. When intended for application to tender or abraded surfaces, they should be largely diluted with water; and, in the case of the teeth, mouth, and hands, a thorough rinsing with pure tepid water should follow their use.*

LOTIONS FOR FRECKLES.—1. Take of

Bichloride of mercury . . . . . 6 grains;
Hydrochloric acid (pure; sp. gr. 1·16) 1 fluid drachm;
Water (distilled) . . . . . ¼ pint;

mix, and add of

Rectified spirit . . . . } . { of each
Eau de Rose . . . . . } . { 2 fluid ounces;
Glycerine (Price's) . . . . . 1 ounce.

2. Take of

Lemon (citric) *acid* . . . . . 3 drachms;
Hot water . . . . . 12 ounces;

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* The substance popularly called "chloride of lime" is in reality a mixture of hypochlorite of lime and chloride of calcium with a variable quantity of unaltered hydrate of lime. It is on the first only that the bleaching and deodorising properties of this so-called 'chloride' depend. So of the corresponding compounds of soda and potash. They all possess similar properties; but chloride of lime being the cheapest and most easily obtainable, is the one usually employed.

dissolve, add of

Red-rose leaves . . . . . 1 ounce;

infuse for an hour, strain with expression, and the next day decant the clear portion.

3. Take of

Red rose leaves . . . . . ¼ ounce;
Lemon-juice (fresh) . . . . } . . { of each
Brandy or *rum* . . . . . } . . { ¼ pint;

digest, in the cold, for 2 or 3 hours, and otherwise proceed as before.

4. (Kittoe's.) Take of

Sal-ammoniac (powdered) . . 1 drachm (Troy);
Distilled water . . . . . 1 pint;
Eau de Cologne (or *lavender water*) 2 fluid drachms;

mix. About ½ fluid drachm of *hydrochloric acid* increases its efficacy.

The above lotions are applied with the fingers, night and morning, or oftener.*

Glycerine Lotion; Glycerinated Lotion.—1. Take of

Glycerine (Price's) . . . . . 1 ounce;
Distilled or *pure soft water* . . . 19 ounces;

mix. A good strength for daily use as a cosmetic wash, or as a vehicle for other ingredients, for which purpose it is greatly preferable to milk of almonds; also as a lotion to allay itching and irritation of the skin, prevent chaps, excoriations, the effects of weather, climate, &c. It is likewise applied to the hair instead of oil.

2. Take of

Glycerine (Price's) . . . . . 1 ounce;
Distilled water . . . . . 9 ounces;

mix. A proper strength when more marked effects are desired; as in chapped hands, lips, and nipples, obstinate excoriations, abrasions, chafings, sun-burns, persistent roughness or hardness of the skin, &c.

3. Take of

Glycerine (Price's) . . . . . 3 ounces;
Water . . . . . 17 ounces;

mix. This is adapted for use in obstinate cases, or when still more rapid effects are desired; also as an application to burns and scalds.

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* For references to other remedies for 'freckles' vide *Index*.

The above may be rendered fragrant and more agreeable by employing *rose-water* or *elder-flower water* as the menstruum, or by the addition of a little *eau de Cologne*, *lavender-water*, or other scent, at will. The addition of a few drops of *essence of musk* or of *ambergris*, per pint; or of a couple of ounces of *eau de rose* or *eau de fleurs d'oranges*, in lieu of an equal bulk of water, imparts a delicate odour which is always highly esteemed. In like manner they may be medicated or increased in efficacy, in various ways, for toilet and personal use. Thus, the addition of a little *borax* (2 or 3 drachms per pint), renders them more effective in chaps, excoriations, &c.; a little *salt of tartar*, or of *lemon-juice*, *vinegar*, or *rectified spirit*, increases their power of allaying itching and morbid irritability in skin-diseases, as well as converts No. 1 (more particularly) into an excellent wash for freckles and like discolorations. 8 or 10 grains of *bichloride of mercury*, per pint, converts it into the admirable lotion of that substance already noticed. In like manner, by the addition of a drachm or so of *iodide of potassium*, or of *compound tincture of iodine*, we have a healthful cosmetic wash particularly serviceable to persons with a scrofulous taint. Strongly scent it with the *oils of origanum* and *rosemary*, or impregnate it with a certain proportion of *cantharides*, or some other appropriate stimulant and rubefacient, and we have respectively the most cleanly, convenient, and useful hair-cosmetics. Indeed, merely to enumerate all the uses it may be placed to in the cosmetic, and allied treatment, of the person, would alone fill many pages.*

Gowland's Lotion.—This is now the popular name of 'milk of almonds' holding in solution a minute quantity of 'bichloride of mercury.' The formula in use, sanctioned by the medical profession, is—

Take of

Jordan almonds (blanched) . . 1 ounce;
Bitter almonds (do.; say 7 to 9) 2 to 3 drachms;
Distilled water . . . . . ½ pint;

form them into an emulsion.† To the strained emulsion, with agitation, gradually add of

Bichloride of mercury (in coarse powder) 15 grains;

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* For references to "Glycerine," and its numerous preparations and uses, *Vide Index*.

† *Vide* "Emulsion of Almonds" (*antè*).

previously dissolved in

Distilled water . . . . . ½ pint;

after which, further add enough 'distilled water' (2 or 3 tea-spoonfuls) to make the whole measure exactly one pint. The product is the "Gowland's Lotion" referred to in this work.

The long celebrated and fashionable 'cosmetic-nostrum,' vended under the name of "Gowland's Lotion," is a clumsily prepared article of greater strength than the preceding, and is made as follows, only in a much larger quantity at a time:—

Take of

Valentia almonds (blanched) . . 1 ounce;
Bitter almonds (do.) . . ½ „
Water . . . . . 1 pint;

proceed as before. To the strained emulsion add of

Bichloride of mercury . . . . 25 grains;

previously dissolved in

Rectified spirit . . . . . 2½ fluid drachms;

with *water*, q. s. (if any), to make the whole measure exactly one pint; and at once put it into bottles.*

The uses of "Gowland's Lotion" have been noticed at length in Chapter XIV. on the "Skin." As a cosmetic, and as a wash in obstinate eruptions and minor glandular swellings and indurations of a nature not requiring active medical treatment, it is inferior only to "glycerinated solution of bichloride of mercury," already noticed. It is employed by simply wetting the clean skin with it, night and morning, either by means of the corner of a napkin or the tips of the fingers dipped into it, a few drops being poured out into a cup, or the hollowed palm of the hand, for the purpose. The moistened surface, after a few seconds, is commonly gently wiped with a soft towel.† Care should be taken that nothing alkaline or metallic touches the liquid; and the fingers should never be wetted with it by placing them on the mouth of the bottle, and then shaking it up, as these things decompose it. It is more active than the ordinary lotion of bichloride of mercury before noticed, and is hence superior to it

* Dr. Paris represents this nostrum to contain fully ½ drachm (Troy) of *corrosive sublimate* per pint, which, according to my analysis, is not the case. Even the smaller quantity which is employed is, in part, gradually decomposed by the organic matter of the emulsion.

† This may be omitted on retiring to rest at night; also in eruptions, &c.; as its efficacy is greater if it be allowed to dry on, instead of being wiped off with the towel.

as a remedy for itch and other animalcular eruptions, as also as a wash to remove pediculi.

LOTION OF IODIDE OF POTASSIUM.—1. Take of

Iodide of potassium . . . 1 to 2 drachms;
Distilled water . . . . . 1 pint;

dissolve.

2. (Glycerinated.) To the last add of

Glycerine (Price's) . . . . 1 ounce.

Both are excellent skin-cosmetics, employed like Gowland's lotion particularly for persons with a scrofulous or scorbutic taint, or who are troubled with eruptions, swellings, or indurations arising from it It is also excellent as a hair-wash. The product of the last formula may be advantageously used instead of hair-oil.

IODURETTED LOTION; COMPOUND LOTION OF IODINE.—Take of

Iodide of potassium . . . . . 30 grains;
Iodine . . . . . 15 „
Distilled or *soft water* . . . . 1 pint;

add only a couple of tablespoonfuls of the water at first, and when by agitation the solids are dissolved, add the remainder. This is the common and best form of ioduretted lotion or wash for ordinary purposes. Its properties are similar to the preceding; but it is more active. It is often serviceable in enlarged and indurated glands, itch, &c.

LOTION OF LEMON-JUICE.—1. *Lemon-juice* (recently expressed), diluted with 4 or 5 times its bulk of *pure water*. Cooling and detergent. Used chiefly to remove discolorations, itching and irritation, excessive irritability of the skin, &c.

2. Take of

Fresh lemon-juice . . . .
Rose-water . . . . . } equal parts;
Rectified spirit . . . .

mix. The next day decant the clear portion, and strain it through muslin. Other scents may be added, at will. Used chiefly to touch freckles, acne, and discolorations of the face.

LOTION OF POTASSA; VEGETABLE COSMETIC WASH.—Take of

Liquor of potassa . . . . 1 fluid ounce;
Distilled water . . . . . 19 „

mix, and keep the bottle closely stoppered or corked. Used as a wash for scorbutic eruptions and gums, freckles, &c. It forms one of the common "Preventive Lotions" sold by the quacks.

SAPONACEOUS LOTION.—Vide "Hair-Cosmetics" (*infrà*).

SHAVING LOTION.—The three lotions immediately following, as well as "emulsion of bitter-almonds," being used after shaving, frequently pass under the name:—

CHERRY-LAUREL LOTION; CHERRY-LAUREL SHAVING WASH.—Take of

Cherry-laurel water (genuine, distilled) .	2 fluid ounces;
Rectified spirit	1 „ „
Glycerine	½ ounce;
Distilled water	7½ fluid ounces;

mix. Used to allay irritation of the skin, particularly after shaving, the part being moistened with it by means of the tips of the fingers; also used as a wash for freckles and acne, and to remove excessive moistness or greasiness of the hair.

Milk of bitter-almonds is often substituted for the glycerine and spirit; but not for the hair.

⁂ For "cautions," &c., vide *infrà*.

LOTION OF CYANIDE OF POTASSIUM.—1. Take of

Cyanide of potassium	5 grains;
Emulsion of bitter-almonds . .	3 fluid ounces;

dissolve. Used like the last, to allay itching and irritation, particularly after shaving; also for freckles and acne.

The above is Cazenave's formula. The following is, however, preferable:—

2. Take of

Cyanide of potassium	6 grains;
Glycerine	½ ounce;
Camphor-julep (strongest) . . .	2½ ounces;

mix.

⁂ As cyanide of potassium is highly poisonous when swallowed, and as the above lotions are pleasant-tasted, they should not be left out of the dressing-case; nor should a larger quantity than that above given be kept in use at once; nor, under ordinary circumstances, should they be applied to a large surface at a time. If not kept under lock and key, it is safest to label them "Poison." Kept with care, and properly employed, they are safe and useful lotions. The

same also applies to lotions containing 'cherry-laurel water' and 'prussic acid.'

LOTION OF PRUSSIC ACID.—Take of

Medicinal prussic acid	½ fluid drachm;
Rectified spirit	1 „ ounce;
Distilled water	2 „ ounces;

mix, cover the bottle with thick purple paper, and keep it in the shade. Recommended by Dr. Elliotson as a lotion to moisten the face both before and after shaving, as "being very soothing to an irritable skin." It is also useful in the other cases noticed under the last two lotions. It is poisonous. For 'precautions,' see *above*.

SULPHURETTED LOTION.—1. Take of

Sulphuret of potassium	1 drachm;
Distilled water	1 pint;

dissolve. Used to render the skin soft, white, and smooth, particularly when there is a tendency to slight eruptions of a pustular or vesicular character. ½ to 1 ounce of glycerine improves it for present use.

2. Take of

Sulphuret of potassium . . .	1½ drachm;
Water	½ pint;

dissolve. A cleanly and effective remedy for itch, used twice or thrice daily. It does not soil the linen, and leaves very little smell.

3. (Cazenave.) Take of

Sulphuret of potassium	1 drachm;
White soft-soap	2 „
Water	8 ounces;

dissolve. Used as the last; also to destroy pediculi.*

MILK; LAIT; LAC.—New milk, skimmed milk, and butter-milk, each possessing properties peculiar to itself, furnish simple and useful cosmetic-washes, which may well replace many of those of a complicated and less harmless character at present employed. The *first* exerts a general emollient action on the skin, and its daily application tends to make it soft, smooth, and white, and to preserve it

* For weaker preparations that may be used *ad libitum*, *vide* "Washes" and "Waters" (*infrà*).

from the action of drying winds, colds, vivid sunshine, and the like. The *second* and *third*, either simple or medicated, are applicable in a variety of cases, as noticed elsewhere; whilst the *last* is esteemed by many persons as an application to freckles and acne, and for its power of relieving itching and morbid irritation of the skin; and internally, when obtained from sweet cream, as an agreeable and nutritious beverage, which is often peculiarly serviceable in allaying the nervous irritability produced by the excessive use of tea and spirituous liquors. Rich *cream* is a simple and very effective preventive of chaps in the hands, lips, and nipples, as well as an excellent application to them when formed.*

Milk in which *horseradish* has been infused is recommended as a "skin-cosmetic" by Withering; and both new milk and butter-milk, in which *sulphur* has been steeped, have been highly extolled by others in freckles, discolorations, and slight eruptions.

Milks (Compound and Artificial).—Vide "Emulsions," "Lotions," &c.; also the following article:—

Milk of Roses; Lait à la Rose; Lac Rosæ; Lac Rosarum.—Of the preparations sold under this name there are three or more varieties, which so differ from each other in composition, if not in appearance, that they may be regarded as distinct articles. Then, again, almost every maker has his own formula, and scents it to suit his own taste or caprice, from which scarcely two samples exactly resemble each other. The chief object should be to produce a perfect emulsion, or one at least which, if it separates after long repose, may be restored to a homogeneous state by slight agitation. It should also be recollected that, though other perfumes may be, and are commonly, added to it almost at will, the scent of roses should predominate, and form its characteristic one. The following are examples:—

Milk of Roses; English Milk of Roses.—1. Take of

Almonds (blanched)	1½ ounce;
Oil of almonds	of each
White soft-soap†	1 drachm;
Rose-water	¾ pint;

* The milk of healthy grass-fed cows is here alluded to—not the washy unwholesome liquid given by the stall-fed animals kept in the crowded districts of large cities.

† *White Windsor-soap*, or *honey-soap*, is used by some makers instead.

make an emulsion ;* to the strained emulsion add a mixture of

Essence or *spirit of roses* . . . ½ fluid drachm;
Rectified spirit . . . . . 2½ „ ounces;

and, subsequently, of

Rose-water . . . . . q. s.,

to make the whole measure one pint. More spirit is often ordered and used; but much of it is apt to cause the separation of the ingredients. In many samples, and in the inferior ones generally, it is omitted altogether. Some makers add a few drops of *oil of bergamot*, with 2 or 3 drops each of *oil of lavender* and *otto of roses*, dissolved in the spirit.

2. Take of

Oil of almonds . . } . . { of each
White soft-soap . } . . { 1 ounce;
Salt of tartar . . . . . ½ drachm;
Boiling water . . . . . ¼ pint;

triturate and subsequently agitate until perfectly united. When cold, further add, of

Rectified spirit . . . . . 2 fluid ounces;
Spirit of roses . . . . . a few drops;
Rose-water . . . . . q. s.,

to make the whole measure a pint. The above are used as cosmetic-washes in a similar way to 'Gowland's lotion'; also to remove scurf, freckles, and acne and other pimples, and eruptions, in slight cases.

French Milk of Roses.—1. Take of

Tincture of benzoin (simple) . . ½ fluid ounce;
Tincture of styrax . . . . . ¼ „ „
Esprit de rose . . . . . 1 to 2 fluid drachms;
Rectified spirit . . . . . 2½ fluid ounces;

mix, and add gradually, with agitation, of

Rose-water . . . . . 16½ fluid ounces.

Augustin recommends the addition of a little carbonate of potash (say 1 dr. to the pint) when it is intended to be used as a lotion in acne.

2. (Giannini.) Take of

Tincture of benzoin (simple) . . 1 fluid drachm;
Tincture of balsam of Peru . . 20 drops;
Rose-water . . . . . ½ pint.†

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* *Vide* "Emulsions," pp. 400-1 (*antè*).

† "1 pint" (Giannini); which must be a misprint.

The addition of an ounce of rectified spirit, in lieu of a like quantity of rose-water, improves it.

3. (Schubarth.) Take of

Almond-paste	3 drachms;
Rose-water	½ pint;
Tincture of benzoin	½ fluid ounce;

and make an emulsion, as before.

Use, &c., same as the preceding.

German Milk of Roses.—Take of

Dilute solution of diacetate of lead *	½ fluid ounce;
Lavender-water	2 „ drachms;
Rectified spirit	2½ „ ounces;
Rose-water	¾ pint;

mix, with agitation. The spirit is often improperly omitted, or less is used. It is cooling and astringent, and is employed as a wash, like the preceding; as also in moist eruptions, excoriations, &c.; but it is more active, and less fitted for very frequent use.

Oils and Greasy Preparations.—The larger number of these fall under the denomination of "hair cosmetics" and "perfumery," and are noticed under these heads, further on. The products of the following formulæ, like "cold-cream" † and "lip-salve," ‡ are intended chiefly for the skin:—

Camphor-cerate; Pommade du frère Cosme.—Take of

Olive-oil	½ pound;
White wax (pure)	¼ „
Spermaceti	2 ounces;
Camphor	½ „

mix, as directed under 'camphor-balls.' Used as an application to chaps, chilblains, abrasions, excoriations, &c.; also as lip-salve in cold weather, as a hair-cosmetic, and as a mild stimulating and anodyne friction.

Cocoa-nut Cerate; Cacao-Pommade; Cacao Lip-salve.—Take of

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* *Goulard-water.*

† *Vide* pp. 398-9 (*antè*).

‡ *Vide* pp. 407-8 (*antè*).

Cacao-butter . . . . . }
Oil of almonds . . . . . } equal parts;
White wax (pure). . . . . }

melt them together, and stir until nearly cold. Used as an emollient skin-cosmetic, particularly for chapped lips, hands, &c. It is sometimes coloured with a little palm-oil. Scent may be added at will. It is highly esteemed by some persons as a hair-pommade.

Cosmetic Cerate.—See "Cold Cream" (*antè*).

Ointment of Borax; Pommade de Toscanie.—1. Take of

Borax (in very fine powder) . . 1 drachm:
Spermaceti ointment . . . . 1 ounce;

mix by trituration. In excoriations, chaps, &c. It also forms an excellent lip-salve. A drop of *neroli*, or ½ drop of *otto of roses*, renders it more agreeable.

2. To the last add, of

Glycerine (Price's) . . . . . 1 drachm;

using a slightly warmed mortar for the mixture. Very effective.

Elder-flower Ointment, White Elder-ointment; Unguentum Sambuci Florum.—1. Take of

Elder-flowers . . }
Lard . . . . . } . . . equal weights;

simmer them together, by a gentle heat, until the flowers become crisp, then strain, with pressure, through a linen cloth. The product is "Unguentum Sambuci" of the London Ph. It is darker and less fragrant than the following:—

2. Take of

Lard (hard, white, and sweet) . 5 pounds;
Mutton-suet (white, clarified) . 1 pound;

melt them together in a well-tinned copper or earthenware vessel which it will only one-third fill; add of

Elder-flower water . . . . . 5 pints;

agitate briskly for about half-an-hour, and set it aside, out of the dust. The next day draw off the water, drain the fat thoroughly liquefy it by a very gentle heat, and add of

Benzoic acid . . . . . 1 drachm;
Otto of roses . . . . . 5 or 6 drops;
Oil of bergamot . . }
Oil of rosemary . . } . . { of each 12 to 15 drops.

Next stir the whole briskly for a few minutes, and, after 10 minutes' repose, pour off the clean portion into pots for use or sale. The product forms the finest "elder-flower ointment" of the wholesale druggists.

An agreeable emollient cooling ointment or pommade, used in the place of cold-cream, lip-salve, &c.

ROSE OINTMENT, ROSE POMMADE, ROSE LIP-SALVE; POMMADE À LA ROSE (Cosmetique).—1. Take of

Washed lard (melted) . . } . . equal parts;
Rose-leaves (rosa centifolia) }

mix. In two days re-melt the mass, press out the fat, and repeat the process with fresh rose-leaves of equal weight. Lastly, press and strain. When required red, it is coloured with a little *alkanet-root*. The product is the officinal "rose-ointment" of French pharmacy, and was formerly the usual "rose lip-salve" of our shops.

2. Take of

Spermaceti-ointment (melted) . . 3 ounces;
Rose-water . . . . . 2 fluid ounces;

heat them together until the mass congeals. This is the officinal "cold-cream" of American pharmacy.

SULTANA OINTMENT; SULTANA POMMADE; SULTANA COLD-CREAM.—Take of

Spermaceti (pure) . } } of each
White wax (do.) . } . . } ¼ ounce;
Almond-oil . . . } } of each
Butter of cacao . . } . . } ¼ pound;

melt, and stir in of

Balsam of Peru . . . . . 1 drachm.

After repose, pour off the clear portion, add of

Orange-flower water . . . . . 2 fluid drachms;

and stir it briskly until it concretes. Used like cold-cream, lip-salve, &c.

POMATUM;* POMADE; POMMADE.† — Originally, pomatum, or

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* From *pomum* (Lat.), an apple.

† Fr.; from *pomme*, an apple; hence the preferable orthography, of this form of the word, when used in English, appears to be with two *m*'s.

pommade, was a fragrant unguent or ointment in the composition of which, as the name implies, apples entered as an essential and characteristic ingredient. Old authors describe it as a soft ointment prepared of *apples*, *lard*, and *rose-water*. The term has, however, long lost its original signification, and, in this country and America, is applied to any solid greasy substance used in dressing the hair. In France, besides the 'pomatums' of the English perfumers (pommades, graisses pour les cheveux), it embraces the scented fats employed in preparing extraits and to impart fragrance to other preparations, and various compounds of a corresponding nature used as skin-cosmetics. In *French pharmacy* pommades are soft ointments having a basis of lard or fat, without resinous matter.

The following pommades, with one or two exceptions, are exclusively skin-cosmetics :—*

Pommade de Beauté ; Pommade de Vénus.—Take of

Oil of almonds	1 pound ;
Spermaceti (pure)	2 ounces ;
White wax (do.)	1½ „
Glycerine (Price's)	1 „
Balsam of Peru	½ „

mix by a gentle heat, and stir the mass until it begins to solidify. It is sold either white, or tinted of a delicate rose or green colour. Used both as a hair and skin cosmetic. It forms an elegant substitute for ordinary cold-cream, lip-salve, &c., and is much recommended by the makers for improving the quality and promoting the growth of the hair.

Pommade d'Hèbe.—Take of

White wax (pure)	2 ounces ;

melt, add of

Juice of lily-bulbs . .	of each
Narbonne-honey . . .	4 ounces ;
Eau de rose	½ ounce ;
Esprit de rose	½ fluid drachm ;

and stir until it solidifies. Applied night and morning to remove wrinkles, freckles, &c.

Pommade Divine.—Vide "Hair Cosmetics" (*infrà*).

Pommade en Crême.—This is "cold-cream," already noticed.

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* Numerous other formulæ for pommades are given under "Hair Cosmetics," "Perfumery," &c., further on.

POMMADE FOR THE LIPS.—Vide "Cold Cream," "Lip-salve," &c. (*antè*).

POMMADE DE NINON DE L'ENCLOS.—Take of

Oil of almonds	. . . . .	4 ounces;
Hog's lard	. . . . .	3 „
Spermaceti	. . . . .	1 „

melt, add of

Expressed juice of house-leek	. .	3 fluid ounces;

and stir until the mixture solidifies by cooling. A few drops of *esprit de rose*, or of *eau de Cologne* or *lavande*, may be added to scent it, at will. Used as a general skin-cosmetic; also for wrinkles and freckles. It is *said* to be very softening, cooling, and refreshing.

POMMADE FOR FRECKLES.—1. Take of

*Citrine ointment**	. .	of each
Oil of almonds	. .	1 drachm;
Spermaceti-ointment	. . . . .	¾ ounce;
Otto of roses	. . . . .	3 drops;

mix well, in a Wedgewood-ware mortar, using a wooden or bone knife.

2. Take of

Sulphate of zinc (levigated)	. .	20 grains;
Elder-flower ointment	. . . .	1 ounce;

mix, &c., as before.

These ointments are recommended for either summer-freckles or cold-freckles, a little being applied night and morning, preceded by soap-and-water.

PERUVIAN POMMADE; OINTMENT OF BALSAM OF PERU.—This is ordinary 'red lip-salve,' in which the oil of cloves is sometimes, but not generally, omitted.

COURT PLASTER; STICKING PLASTER; COSMETIC PLASTER; ISINGLASS PLASTER.—1. Take of

Isinglass (best, genuine)	. . .	1 ounce;
Water	. . . . .	½ pint;

dissolve, by heating them together in a covered vessel, strain the

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* "Ointment of nitrate of mercury" of the pharmacopœia.

solution, and, when only lukewarm, add to it gradually, but quickly, a mixture formed of

Rectified spirit . . } { of each
Tincture of benzoin . } . . { 2 fluid ounces.

Apply this composition (still warm), by means of a flat *camel-hair brush*, or any appropriate 'spreader,' to the surface of silk, or sarcenet, stretched in a frame, repeating the application as soon as the preceding coating is dry, and again as often as necessary (6 to 12 times). Lastly, when quite dry and hard, give the prepared surface a 'finishing coat' with a solution of

Chio-turpentine . . . . . 1 ounce;

dissolved in

Tincture of benzoin . . . . . 2 fluid ounces.

Tincture of balsam of Peru, or of *styrax*, may be substituted for the tincture of benzoin; and a few drops of *essence of ambergris* or of *musk* may be added to increase the fragrance of the compound. Some parties simply employ one or other of the above tinctures for the finishing coat; and others apply it to the unprepared side of the silk, by which the plaster is rendered partially waterproof, but the appearance of its exposed surface injured. Care should be taken that the first two or three applications of the gelatine composition do not sink into the silk, so as to appear on the right side, which will not be the case if it be only sufficiently warm to remain liquid, and be applied very thinly and rapidly, and with a light stroke of the brush or spreader.

2. (Deschamp's.) Apply to the *stretched silk* a very thin coating of smooth, strained *flour-paste;* and over this, when dry, two or three coats of *warm size* made with *colourless gelatine* and *water*, to which some *odorous tincture* or *essence* has been added. Said to be superior to the ordinary court-plaster; but I cannot see how it can be so.

3. (Liston's.) Take of

Isinglass . . . . . 1 ounce;
Water . . . . . 2½ ounces;

keep them in a covered vessel, in a hot place, until the isinglass has swollen and absorbed all the water, and become quite soft; then beat it to a uniform semifluid mass, strain it by squeezing it through muslin, and add, of

Proof-spirit. . . . . 3½ fluid ounces.

Next expose the mixture, with frequent stirring, in a covered bottle or other vessel, until the union be complete. Lastly, with a brush,

apply four coats of the solution to the surface of *oiled-silk* stretched out and nailed on a board. A little of the *tinctures* or *essences*, before noticed, may be added, to impart a slight odour to the plaster.

The common court-plaster of the shops is generally silk or sarcenet coated with isinglass-size, without the addition of any spirit, with merely a finishing coat of *tincture of benzoin*, or of other aromatic, to give it an agreeable odour. Chequered silk or satin is now frequently employed as the basis of the plaster; and, in the fashionable world, "Flesh-coloured Court-plaster" appears to be the most esteemed. "Waterproof Court-plaster" is either simply the common plaster which has been lightly brushed over, on its exposed surface, with pale *quick-drying oil*, or it is one or other of those following. "Transparent Court Plaster" is usually that which is spread on *oiled-silk*. The "finest quality" of court-plaster of the Paris and London (West-end) houses is now prepared on *gold-beater's skin*, one side of which is coated with the isinglass-solution, in the way before explained, and the other side with pale *quick-drying oil*, or with a pale *solution* of either *gutta-percha* or *caoutchouc* in *chloroform*, or, what is much cheaper, in *bisulphuret of carbon*. A flesh-tint is sometimes given to this oil, or solution, by means of a little *dragon's blood* and *annotta* in appropriate proportions.

Court-plaster forms a useful, sightly, and agreeable, protection to slight cuts, raw places, &c., on the face, neck, and hands. Formerly patches of black court-plaster were constantly worn on the face by the fashionables of the day, of both sexes, without the least occasion for their use, under the absurd idea that they greatly enhance the personal charms. At the present time, court-plaster is only worn when actually required; and the same fashionable world that formerly conceived that black patches of it, artistically arranged, constituted the very essence of fascination, prefer that which is transparent or flesh-coloured, as being the least conspicuous.

Gold-beater's skin, without any preparation, forms the very best court-plaster that can be employed. A piece of it applied (dry) to the slightly moistened skin, and held there for a few seconds, with the hand, will adhere firmly for several days, or until the part be wetted; and, from being transparent and almost colourless, will, when of the finest quality and skilfully applied, be scarcely visible.

Skin Paints; Skin Stains; Skin Blanches.—These are employed to impart either an artificial bloom, or whiteness and apparent delicacy, to the skin. Substances used with the first intention are

those popularly known as "skin-paints;" the others being commonly called "skin-whites" and "blanches."

Rouge and *carmine*, and their preparations, are the articles chiefly used to communicate the roseate tints of health. The first is said to be the only cosmetic of the kind that can be employed, for any length of time, to brighten a lady's complexion, without permanently injuring it. The second, though possessing almost unrivalled beauty, is apt to render the skin sallow by frequent or long-continued use. The form in which these articles are generally used is that of powder; but many persons prefer them made into 'pommade,' or into 'crepons.' Sometimes, though seldom, they are employed in the state of solution.* Withering recommends an *infusion of horseradish* in *cold milk*, as a safe and excellent cosmetic. It not only tends to soften and promote the health of the skin, but increases its hue.

Among substances employed by ladies to 'whiten the skin,' powders appear to hold the first place, from being the more generally used. *Starch* or *farina* in impalpable powder ('violet-powder') is thus very commonly employed, and, in general, proves perfectly harmless; but its effects are not sufficiently marked to meet the wishes of the majority of those who are vain enough to employ cosmetics of the kind. The American ladies, who have a passion for painting their necks white, use finely-powdered *light carbonate of magnesia*, another comparatively innocent substance.† *Finely-powdered talc* and *scraped French chalk*‡ are other harmless substances also used, and have the advantage of being very adhesive. Ladies of the haut ton, however, are not content with the effect of these simple powders, and usually employ metallic compounds which possess greater whiteness and brilliancy to revive their faded complexions, all of which are more or less injurious to the skin. Among them *pearl-powder* ('subchloride of bismuth'), *pearl-white* ('trisnitrate of

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* *Vide* pp. 430-2.—In a curious work on "Cosmetics," published a few years since, the author, after strongly condemning rouge, carmine, and pearl-powder, informs his readers that, the only way ladies may safely give the hue of health to their cheeks is, by rubbing them with a fragment of *bright-crimson silk* previously dipped in *spirit of wine*. "This," he says, "defies detection, and is perfectly harmless." (*Vide* pp. 431-2).

† It has, however, been asserted by some persons, that the constant use of magnesia for years, in this way, is apt to induce glandular swellings; just as habitually drinking water tainted with magnesia is said to be the cause of goitre.

‡ French chalk, soap-stone, or stealite, is a magnesian mineral, harder than ordinary talc, which it otherwise resembles, and forming a whiter and richer powder.

bismuth,' 'Fard's Spanish white'), and *hydrated oxide of bismuth*,* hold the first place. Sometimes even *flake-white* ('carbonate of lead') and *white precipitate* ('ammonio-chloride of mercury'), highly poisonous substances, are so employed. Of these metallic powders, the first two appear to be least actively injurious to the skin; but their constant use imparts to it a sallow hue and a leathery appearance, which is far from pleasing; whilst spasmodic tremblings of the muscles of the face, ending in partial or complete paralysis, have been known to be occasionally produced by them. The last two substances named above act as slow, it may be very slow, poisons, by being taken up by the absorbents of the skin, the one gradually producing all the symptoms of 'lead-poisoning,' the other of 'mercurial poisoning,' including salivation.

Among "liquid blanches" the only ones that can be safely employed are those that act by improving the softness, clearness, and healthy tone of the skin. *Emollient* and *slightly detersive lotions*, as almond-milk, alumina-milk,† glycerinated water, oily emulsions, Gowland's lotion, &c., are of this class. The skin-washes and creams containing sugar of lead or Goulard's extract as their active ingredient, sold under the names of "milk of roses," "cream of roses," "almond-blanch," &c., and in common use in fashionable life, are all alike dangerous, for the reasons previously stated.

Another disadvantage attending the use of all the metallic preparations just mentioned is, that they are darkened by sulphuretted hydrogen, and by sulphurous fumes, such as frequently escape into the apartment from coal-fires. There are many instances recorded, and I have known more than one myself, of a whole company being suddenly alarmed by the fair complexion of one of its belles being thus in part transformed into a sickly gray or black.

The unnatural and injurious practice of painting the skin appears recently to have acquired a prevalence in the fashionable world, worthy of the most effeminate days of the most effeminate nations. Formerly, in these realms, the use of 'face-paints' and 'face-blanches' was chiefly confined to courtisans and ladies of the demi-monde, and to actors and actresses, in whom it is necessary to

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* All commonly, though improperly, vended under the name of "pearl-powder" and "pearl-white."

† Pure hydrate of alumina (or even kaolin) agitated with water. M. Bonnamy has recently asserted that this is a powerful detergent and blancher when used as a skin-cosmetic, and perfectly mild and harmless. (*Vide* "Soaps," page 442, and "Alumina," Chap. XIX., *infrà*.)

counteract the effects of the artificial lights to which they are exposed. But the case is different now. "Is it possible," exclaims a recent reviewer, "Is it possible that any woman can be silly enough to paint her children's faces with the pigments that were bought to make her own face 'beautiful for ever'? Our eyes seem to report the disgusting fact. What are we coming to? Except in the most debased days of Rome, and those equally vile years when the Grand Monarque ruled France, we do not know that this practice has obtained upon the earth. Whatever a woman may be foolish enough to do with her own countenance in this fashion, she is personally responsible for, and may be willing to bear the ridicule which her folly brings with it. A painted child is nothing less than loathsome!" *

Carmine.—Pure *carmine* is a very light, lustrous, scarlet powder, of exquisite beauty, obtained from cochineal. It is entirely soluble in liquor of ammonia, a test by which its *purity* is readily determined. It is chiefly manufactured on the Continent; and so much care, dexterity, and patience is required for its successful preparation, as well as a favourable state of the weather, that amateurs seldom attempt it.

Carmine is much employed in the fashionable world by ladies, as a skin-cosmetic. When skilfully applied it imparts a glow of unrivalled brilliancy and beauty to the complexion; but its frequent and long-continued use is apt to produce a sallowness which is, in general, permanent. It is the only substance capable of imparting the apparently true ruddiness of health to the portrait, or the bloom of the rose to the artificial flower.†

Liquid Carmine.—A solution of *carmine* in *liquor of ammonia*. It may be diluted, at will, with *rose-water*. Used as 'liquid rouge.' ‡

Rouge, Toilet Rouge, Safflower Lake; Rouge Végétal, Rouge d'Espagne, &c.—Take of *safflower*,§ any quantity, and soak

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* "*Athenæum*," Nov., 1865.

† On the manufacture of carmine, including the points necessary for its success, *vide* the Author's "*Cyclopædia*," 3rd or subsequent editions. On its application, which is similar to that of rouge, *vide* page 431 (*infrà*).

‡ *Vide* "Bloom of Roses," "Liquid Rouge," &c., pp. 397, 432, &c.

§ Bastard saffron, Dyers' saffron, or carthamus; the flowers of 'carthamus tinctorius,' Linn., a plant cultivated in Spain, Egypt, and the Levant.

and wash it in *pure water*, or in *water* very slightly acidulated with *citric* or *acetic acid*, until the water comes off perfectly colourless, and ceases to remove any thing. Then drain and dry the 'washed safflower,' coarsely pulverise it, and digest the powder, until exhausted, in a *weak solution* of *crystallised carbonate of soda*.* Next place some washed *fine cotton-wool* (or pieces of clean *white muslin* or *calico*) at the bottom of a glass or porcelain vessel; pour the last solution (previously filtered or decanted) over it, and gradually add *dilute acetic acid*,† or a *solution* of *citric acid*,‡ in slight excess, or until the whole of the colouring matter is thrown down, the cotton-wool being stirred about all the time, in order that it may receive the colour as precipitated.§ Collect the 'prepared cotton,' carefully, but thoroughly, wash it in *pure water*, and dissolve out its 'colouring matter' with a fresh *solution of carbonate of soda*, as before. To this last solution, placed in a suitable glass or porcelain vessel, add a quantity of *talc* or *French chalk* (in impalpable powder), proportionate to the intended quality of the rouge; mix them well, and again precipitate the colouring matter with *acid*. Collect the powder, wash it, and dry it in the shade, with as little heat as possible.‖ Lastly, triturate it with a few drops of *almond-oil* or *olive-oil*, to increase its smoothness and adhesiveness.

Rouge, as already noticed, is extensively employed by ladies to brighten the complexion, and give the seeming bloom of health to the pallid or sallow cheek. It is said, of all cosmetics of the kind, to be the one least injurious to the skin. It is usually applied by means of a camel-hair pencil, a hare's foot, or a small powder-puff. It is also employed under the form of pommade ("pommade rouge") ¶

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* Containing 5 or 6 per cent. of the carbonate.

† *Distilled vinegar*, or *white-wine vinegar*, is often used instead of the pure acid.

‡ Clarified or filtered *lemon-juice* is commonly substituted, and, though not the best precipitant, is more generally employed than the others.

§ The use of cotton-wool, or pieces of cotton, is unnecessary, though general. The colouring matter may be precipitated, collected, and washed, as a powder; and this is preferable on the large scale.

‖ If the colouring matter be precipitated pure (*i.e.*, without the use of chalk or talc), the product, instead of being of a superb red colour, is "pure rouge," "safflower carmine," "vert rouge d'Athènes," &c., and the "carthamine" or "carthamic acid" of chemists. It is soluble in alcohol forming a gorgeous purple solution, which is turned of a rich red by dilute acids. It is also soluble in weak alkaline lyes, giving an equally rich and beautiful red solution.

¶ In a recent work on Cosmetics, 'pommade rouge' is extravagantly extolled as being greatly superior in convenience and effect to the powder, or any other preparation of it. It is applied with a stiff pencil or the finger.

and tinctured crape ("rouge crepons"),* and sometimes in solution ("liquid rouge").† The first is made by simply triturating it with a little *simple pommade* or *fat*; [the second, by throwing down the red colouring-matter of the carthamus on pieces of *white woollen-crape* instead of on the powdered talc or French chalk; the third, in the manner noticed elsewhere.‡

Chinese Card Rouge.—According to O'Shaughnessy, this is 'carthamate of soda,' formed by dissolving *pure rouge* in a *solution* of *carbonate of soda*. It is colourless when applied, but, being gradually decomposed by the acid secretions of the skin, soon acquires a most beautiful roseate tint.

Liquid Rouge.—Several different preparations are sold under this name, but the first of those following only strictly deserves it:—

1. Dissolve *pure rouge* (carthamine) in *alcohol*, and acidulate the solution with *acetic acid*. Very rich.

2. A solution of *carmine* in *liquor of ammonia*, or in *carbonate of potash water*, to be diluted for use. Rich coloured.

3. The *red liquid* left from the preparation of carmine. Inferior to the preceding.§

Spanish Lady's Rouge.—This is properly 'rouge crepons'; but *cotton-wool* which has been repeatedly wetted with a strong *ammoniacal solution of carmine*, and dried, is usually sold for it. Used like 'rouge crepons.'

Alumina. Kaolin.—*Vide* Chapter XIX.

Pearl White; Pearl Powder.—This, as already noticed, is properly the basic chloride or subchloride of bismuth. It is a pearly white, inodorous powder. To obtain it in the greatest beauty, it should be precipitated from a rather concentrated *acid-solution* of the *metal*, and should be dried at a very gentle heat in the shade, as it is

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* The 'crepon,' either dry, or moistened with spirit of wine, is rubbed on the cheeks, until a sufficient tinge is produced. Pieces of silk are also prepared and used in the same way. Some writers assert that this way of using rouge is superior to all others. The author of "Cosmetics, and the Art of the Complexion," says, "the effect produced defies detection, and is perfectly harmless."

† *Vide* pp. 397-8 (*antè*).

‡ *Vide* "Skin Paints," page 428, also Chap. XIV. (*antè*).

§ *Vide* pp. 397-8 (*antè*).

then more silky, white, and lustrous. Subnitrate of bismuth, which is inferior to it in beauty, is now commonly sold for it by the druggists.

The continued use of either of the above 'bismuth-whites' injures the skin, and ultimately produces paralysis of its minute vessels, rendering it yellow and leather-like—an effect which, unfortunately, those who employ it generally attempt to conceal by its freer and more frequent application.

The following is also often sold under the above name:—

PEARL POWDER; COSMETIC P. P.—Pure *pearl-white* and *French chalk* or *talc*, equal parts, triturated together. It is generally preferred by ladies to pearl-white alone, from being more adhesive. The French chalk, for this purpose, is said to be best reduced to powder by scraping it with Dutch rushes. Some makers add a little more chalk.*

POWDERS; POUDRES†; PULVERES‡.—Solid substances are reduced to powder, on the small scale, by pounding and triturating them in a mortar; on the large scale, by grinding them in a mill. The resulting powder is then passed through a fine sieve, so that the coarser and imperfectly divided portion may be separated, and again submitted to the action of the pestle or mill. Some substances, as French chalk for instance, when the quantity required is small, may be powdered by scraping or grating them; some, as ginger, nutmegs, and the like, by grating or rasping them; and others, that are small and moderately brittle, by grinding them in a pepper-mill or coffee-mill. A fine powder cannot, however, be obtained by the action of a common cutting-mill.

Compound powders should be invariably passed through a sieve, to ensure the due admixture and distribution of their component parts.

Nearly all powders suffer by age, and by exposure to air and light; and those containing perishable or volatile substances do so rapidly. The latter, therefore, should be invariably kept in corked bottles, or in tin-canisters with tightly-fitting covers. All powders should also be chosen as recently prepared as possible.

The following are a few powders connected with our subject:—§

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* *Vide* "Blanches," "Pearl-white," &c. (*antè*), and "Enamel Powder," &c. (*infrà*).

† French.

‡ L.; sing., *pulvis*.

§ References to many others will be found in the *Index*.

COSMETIC POWDER.—Under this general head may be included all the various pulverulent substances employed as cosmetics, and in making the toilet; but nearly all the articles vended under the name appear to be intended to be used as skin-cosmetics. The following is the *cosmetic powder* ("pulvis cosmeticus") of the Hanover Ph.:—

Take of

Sweet almonds (blanched)	of each 18 ounces;
Beans (ripe; dry)	
Orris-root	8 ounces;
White Spanish-soap	6 „
Spermaceti	1½ „
Dried carbonate of soda	1 „
Oil of bergamot	of each 6 drachms;
„ *lavender*	
„ *lemon*	

mix, beat or grind to fine powder, and keep this from the air. Used, with a little water, to clean, whiten, and soften the skin, in lieu of soap.*

ALMOND POWDER.—See "Almond Paste" (pulverulent), "Hand Powder," &c.

ENAMEL POWDER.—Take of

Talc or *French chalk* (finely scraped)	equal parts;
Pearl-white	
Rouge or *carmine* (to slightly tinge it)	q. s.;

mix. Used to conceal discolourations; and, without the colouring, to whiten the skin.†

HAND POWDER.—Almond-paste, and other like cosmetic powders, often receive this name. The product of the following formula is also much esteemed among the higher classes:—Take of

Almond-powder	1 pound;
Cuttle-fish bone (powdered)	5 ounces;
Curd-soap (air-dried; do.)	of each 2½ ounces;
White Castile-soap (do.; do.)	
Orris-root (in fine powder)	1½ ounce;

mix, and pass the whole through a fine sieve. Used to clean, soften, and whiten the hands, and to prevent chaps and chilblains. It may

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* *Vide* "Hand Powder" (*infrà*).

† *Vide* p. 433.

be varied by substituting honey, palm-oil, or Windsor soap, for those ordered above.

NURSERY POWDER.—Violet-powder.

SOAP POWDER.—*Castile-soap* (cut or sliced small) dried by exposure to a warm dry atmosphere, and then powdered. Used as a hand, shaving, and tooth-powder; also in dispensing. As a cosmetic it may be scented at will. As the first two, any of the other toilet-soaps may be substituted for Castile-soap.*

VIOLET POWDER; NURSERY POWDER; SKIN POWDER.—This resembles ordinary hair-powder, in being simply *finely-powdered starch* scented, appropriately with *orris-root* or *violet*, to which, in the best kinds, a 'dash' of *ambergris*, &c., is generally added. The best potato-starch (*farina*), or rice-starch, is now usually employed for the purpose in England, the former being generally preferred. The following are examples :—

1. Take of

Starch or *farina* (in fine powder)	1 pound;
Orris-root (do.)	½ to ¾ ounce;
Essence of ambergris } . . {	of each
Oil of bergamot } . . {	10 drops;
Oil of rhodium	2 drops;

mix thoroughly, and rub the whole through a fine gauze-sieve. Very fine. It should be put up in packets of thin non-porous pasteboard, and packed moderately close, to prevent loss of odour.

2. Take of

Powdered starch or *farina* . . .	1½ pound;
Oil of bergamot	½ fluid drachm;
Oil of cloves	12 to 15 drops;

as before. This forms the common powder of the shops.

3. (French.) From the *flowers*, as "poudre à la violette" (*infrà*).

Violet powder is used as a dusting-powder to remove and prevent excoriations and chafings; also in moist eruptions of a vesicular or erysipelatous character, slight abrasions, irritability and moistness of the skin, &c.†

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* *Vide* p. 331.

† *Vide* page 228 (*antè*).—The sale of "violet powder" in these realms is immense. It is kept on sale by every perfumer and druggist, and by nearly every stationer and fancy-dealer in the Kingdom.

WASHING POWDER.—Vide "Almond Powder" and "Paste," "Hand Powder," &c., in this Chapter; also "Washing Powders," Chapter XIX.

PASTES.—In *cosmetics*, *perfumery*, and *pharmacy*, the term paste is not confined to semi-solid and more or less tenacious, moist preparations, but is very loosely applied to a variety of articles differing widely from each other, including even certain powders. It is, therefore, impossible to class them correctly together, as the reader will perceive by reference to individual formulæ bearing this general name in the subsequent portion of this work.

The general principles that should be kept in mind by the operator in preparing pastes, whether simple or compound, may be gathered from what is said under the heads "Powders," "Tooth Pastes" or "Electuaries," &c., in the present and following chapter.

ALMOND PASTE; PASTA AMYGDALINA, PASTA REGIA; PÂTE ROYALE.—

a. Moist.—1. Reduce *Valentia-almonds* (blanched) to a very smooth paste by patiently pounding them in a marble-mortar, adding gradually, toward the end, a little *rose-water*, or *orange-flower water*, with a few drops of *otto of roses* or *neroli*, or a little *eau de Cologne*, or other perfume, at will. Lastly, put the paste into covered porcelain-pots or jars.

2. (Bitter Paste.) Take of

Bitter almonds . . . } { equal
Sweet almonds . . . } . . { parts;
Rose-water . . . . . q. s.;

and proceed as before. No scent need be added. Both the preceding are occasionally diversified by the addition of either *powdered spermaceti* in weight equal to about 1-8th part of that of the 'almonds,' or of 1-2th this weight of *white soap*. Sometimes the *white* of an *egg* is added.

3. Take of

Narbonne-honey (finest) . . } { of each
White paste (bitter or sweet*) } . . { ½ pound;

beat them to a smooth paste, then add, in alternate portions,

Yolks of eggs . . . . . 3 in number;
Almond-oil . . . . . 1 pound;

* See "Pulverulent Almond-paste" (*infrà*).

and reduce the whole to a perfectly smooth and homogeneous pasty mass, adding a little scent toward the end. Very fine. It forms the best "Pâte de Miel," "Pâte Royale," &c., of the shops. By adding the respective perfumes it is converted into "Nosegay Paste," "Orange Paste," "Orange-flower Paste," "Rose Paste," "Vanilla Paste," "Violet Paste," and other like 'pastes' having almonds as a basis.

b. Dry or Pulverulent.—1. (Bitter Gray.) This is the *cake* of *bitter almonds* from which the oil has been expressed, dried, ground to fine powder, and sifted.

2. (Sweet Gray.) Prepared from the *cake* of *sweet almonds*, as the last, with the addition of *scent*, at will, from which it then takes its name.

3. (Bitter White.) As *b*., 1. (above), the *almonds* being *blanched* before expressing the oil from them.

4. (Sweet White.) As *b*., 2. (above), but using *blanched almonds*. Some makers grind with the almonds a tenth or twelfth of *toilet-soap*, dried in the air.

All the above are fashionable cosmetics for softening and whitening the skin, preventing chaps, chafings, abrasions, chilblains, &c., a little being used in a similar way to soap. Bitter-almond paste was recommended by Celsus to remove freckles.

Honey Paste; Pâte de Miel.—Vide "Almond Paste" (*antè*).

Shaving Paste; Pâte pour faire la Barbe.—1. Take of

Naples-soap (genuine) . . . . 4 ounces;
Curd-soap (air-dried and powdered) . . . . . 2 „
Honey (finest) . . . . . 1 „
Essence of ambergris (or *ess. royale*) } of each
Oil of cassia . . . . . } 8 or 10 drops;
„ *nutmeg* . . . . . }

beat them to a smooth paste with

Water or *eau de rose* . . . . q. s.;

and put it into covered pots.

2. Take of

White wax . . . . } { of each
Spermaceti . . . . } { ¼ ounce;
Almond-oil . . . . . ½ ounce;

melt them together by a gentle heat, and beat in, of

Honey or *Windsor soap* (finest) . ¼ pound;

(the soap having been previously sliced, and reduced to a paste,) with

Rose-water . . . . . q. s.

When the whole has sufficiently cooled, further add of

Essence of musk (or *ess. royale*) . 10 or 12 drops;

and otherwise proceed as before.

3. Take of

White soft-soap . . . . . 4 ounces;
Honey-soap (finest; sliced) . . 2 „
Olive-oil . . . . . 1 „
Water . . . . . 1 or 2 tablespoonfuls;
Carbonate of soda . . . . . 1 drachm;

melt them together, and form a paste, as before, adding a little proof *spirit* and *scent*, at will. Some persons melt with the soap about 1 drachm of *spermaceti*.

In use, a very little of one of the above pastes is rubbed on the beard, with the tip of the finger, when the wetted shaving-brush is applied. Produces a good lather with either hot or cold water, which dries slowly on the face.*

Ropophagon.—A celebrated advertised nostrum "pour faire la barbe," prepared as follows:—Take of

Yellow soap (finest; sliced) . . 1 ounce;
Toilet soft-soap (finest) . . . . 3 „

melt them together by the heat of hot water, and, when the mass has cooled a little, stir in, of

Oil of cloves . . . . . ½ drachm;
Essence of ambergris . . . . . 10 drops;

the last two being previously dissolved in a little *over-proof spirit*. It is kept a month before sale. Used as a 'shaving-soap.'

Savonettes; Soap Balls; Wash Balls.—These are made of any of the mild *toilet-soaps*, scented at will, generally with the addition of powdered *starch* or *farina*,† and sometimes, *sand*. The spherical or

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* *Vide* "Shaving Lotions," "Soaps," &c.

† In some of the finest 'savonettes' of the French perfumers, *white sweet-almond paste* (meal) replaces, either wholly or in part, common starch or farina. Recently, *alumina* and *kaolin* have each been separately substituted for 'starch' or 'farina' in toilet-soaps and savonettes, with the most surprising results. (*Vide* "Soaps," *infrà*.)

spheroidal form is usually given to them by pressure in moulds, or by roughly forming them into balls with the hands, and when they have become quite hard, turning them in a lathe; or, on the small scale, by taking a lump of the prepared soap in the left hand, and acting on it with a conical drinking-glass with a rather thin edge, held in the right. By placing the glass and ball of soap in contact, and turning them in every direction, the rounded form is soon given. When they have become dry and hard, the surface is scraped and rubbed to render it smooth and even. An egg-shaped form can be only conveniently given them by moulds. Lastly, the labels are attached, or the balls are enclosed in wrappers. Scented ones, if intended to be kept long, should be covered with tin-foil; camphor balls, always so.*

In the best 'savonettes' formed of the ordinary toilet-soaps and starch or farina, the soap employed should be very highly scented to compensate for the dilution; or, if this be not the case, a proportionate quantity of the characteristic odorous ingredients of the soap should be added to the mass before forming it into balls.

Soap-balls formed of the toilet-soaps, without additions, simply differ in form from the ordinary cakes of such soaps, and therefore require no special formulæ.

In all cases the soap employed to make savonettes should be preferred recently made; as old soaps are troublesome to melt without employing a degree of heat that is injurious to them. The heat should be that of a water-bath or steam. The heat of a naked fire is inadmissible.—

1. (Ordinary "Savonettes Communes.")—*a*. Take of

Curd-soap (finest; in shavings) . 1½ pound;
Yellow-soap (do.; do.) . . . . 1 „
Soft-water (say) . . . . . ½ pint;

melt them together by a continued gentle heat, stir in, of

Powdered starch or *farina* . . . ¾ pound;

and when the mixture has cooled a little, further add, of

Oil of bergamot . . . } { of each
„ *lemon* . . . . } { ½ fluid ounce;
Essential oil of almonds . . . . 1½ fluid drachm;

and thoroughly incorporate the whole. When the mass, by cooling, has acquired the proper consistence, at once form it into balls.

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* *Vide* "*Cooley's Cyclopædia*," 3rd ed., p. 1126.

b. Take of

White curd-soap (in shavings)	2 pounds;
White Castile-soap (do.)	1 „
Powdered starch or *farina*	¾ to 1 pound;
Carbonate of soda (powdered)	2 to 3 ounces;
Oil of bergamot (or *cedrat*)	¾ fluid ounce;
Oil of cassia	of each
„ *cloves*	1½ fluid drachm;
Essential oil of almonds	1 fluid drachm;
Soft water (say)	1 pint;

beat them together, without heat, to a perfectly smooth mass, and form it into balls, as before. The soap, as well as the scents, in the above formulæ, may be varied almost at will. The addition of a few drops of *essence of ambergris*, or of *musk*, greatly improves the products.

2. (Camphor Balls.)—Take of

Spermaceti	2 ounces;
Camphor (cut small)	1 „

dissolve by a gentle heat, add the mixture to

White curd-soap (recent)	1½ pound;

previously melted by the aid of a very little (if any) water and a gentle heat; and form the mass into balls, or spheroidal or egg-shaped cakes, weighing about 1½ to 2 ounces each. Lastly, after a few hours, cover them with *stout tin-foil*, and store them in a moderately cool place, to prevent loss of camphor. Used to cure and prevent chaps and chilblains. Sometimes 1-6th to 1-5th part of *starch* or *farina* is added, and they are also rolled in *farina*.

3. (Cream Balls.)—*a.* Take of

White curd-soap (grated)	¾ pound;
White Castile-soap (do.)	¼ „
White soft-soap	¼ „
Starch or *farina*	6 to 8 ounces;
Gum-water or *starch-jelly*	q. s.;

beat them together to a perfectly smooth paste of the proper consistence, and form it into balls or cakes, as before.

b. To the last add of

Powdered spermaceti	3 to 5 ounces;

before beating the mass up. Esteemed for whitening and softening the hands, as also in chaps, &c.

4. (Glycerine Balls.)—To any recently made *toilet-soap* (at will), sliced, and melted by a gentle heat, without water (if possible),

add of *Price's glycerine*, in the proportion of 1 ounce to the pound; thoroughly incorporate them by vigorous stirring, which should be continued until the mass has cooled considerably, when it should be at once made into balls.*

5. (Honey Balls.)—Good *honey-soap* made into balls, instead of cakes. If *starch* be added, 1 ounce of bright *palm-oil* should be previously melted with each pound of the *soap*.

6. (Mottled Balls.)—Cut the *soap* (recently prepared, and not too dry) into dice, or small square pieces, roll them in *coloured powder*, (see below), and then mould them into balls by powerful pressure, observing to mix the colours as little as possible.

The colours usually employed, and which should be in very fine powder, are—

Blue:—Indigo, powder-blue, or smalts;
Green:—Powder-blue and bright yellow-ochre;
Orange:—Yellow deepened with a little red;
Red:—Red bole, sesquioxide of iron, or jeweller's rouge;
Yellow:—Bright yellow-ochre or Dutch pink.

By varying the colour, by diluting it with a little *farina* or *chalk*, and by using soap-dice separately coated with two or more colours, "mottled savonettes" of any colour, or mixture of colours, may be produced, at will.

7. (Sand Balls.)—These are prepared by adding to the *melted soap* about half its weight of fine *siliceous sand*. Sifted *Calais-sand* is usually employed. Some persons prefer the *shelly sea-sand* (sifted from the shells and well washed) for the purpose. For the finer qualities, finely-powdered *pumice-stone* is now usually employed. Used to prevent roughness and thickening of the skin in cold weather; also to clean the hands when dirty. The best *yellow-soap*, with or without the addition of 1-3rd its weight of *white soft-soap* and a little *sweet-oil*, is the best for these balls.†

8. (Violet Balls.)—Take of

Palm-oil soap	1½ pound;
Yellow-soap (best)	¾ ,,
Farina	½ ,,
Powdered orris-root	¼ ,,

* *Vide* "Glycerine," Chap. XIX. (*infrà*).
† *Vide* "Cosmetique (Simple)," (*antè*).

and proceed as for No. 1. They are sometimes coloured, or, what looks better, mottled with a little *smalts* or *powdered indigo*.*

Soaps (Toilet and Cosmetic).—The principal "toilet-soaps" being more or less highly scented, and sold chiefly by perfumers, a notice of their preparation is reserved for the following Chapter. The following formulæ embrace a few "cosmetic" and "medicated soaps" in which scent (if any) is not an essential ingredient:—

Arsenical Soap (Cosmetic); Arsenicated Soap.—Take of

Arsenite of soda . . . . . ½ drachm;
Soft water (hot) . . . . . 1½ ounce;

dissolve, add the solution to

White Windsor-soap (melted) . 1 pound;

mix thoroughly, and form the mass into small cakes. The whole process should be performed in glass, porcelain, or stoneware. Used by some ladies in fashionable life, under the idea that it promotes the softness, clearness, and general beauty of the skin. It is perfectly harmless as a toilet-soap; but its use is objectionable, on the grounds stated elsewhere.† Sometimes the solution is beaten up with the soap (in shavings), instead of being added to it in the melted state, with or without the addition of 1 to 2 drachms of *powdered camphor*.‡

Boracic Soap; Boraxated Soap.—Take of

Borax (in fine powder) . . . . 1 ounce;
Honey or *Windsor soap*§ (recent) 1 pound;

mix by either beating them together in a mortar, or by a gentle heat. Used to whiten and soften the skin, prevent chaps, &c. It is an excellent soap for raw or tender parts requiring washing, and will lather with hard water. Like other soaps of the kind, it should not be left or dipped in the water.

Camphor Soap.—Take of

Spermaceti . . . . . 4 ounces;

melt it by a gentle heat, add of

Camphor (cut small) . . . . . 2 „

and when dissolved, add the mixture to

White curd-soap‖ . . . . . 6½ pounds.

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* *Vide* "Soaps" (Scented), Chap. XVIII. (*infrà*).
† *Vide* "Arsenical Lotion," pp. 409-10 (*antè*).
‡ *Vide* "Sulphur Soap" (*infrà*).
§ Any other simple toilet-soap will do, whether scented or not.
‖ Previously melted with a *very little water*, and allowed to cool considerably.

As soon as the soap is hard enough, cut or form it into cakes, tablets, or small flattened egg-shaped masses, and at once cover them with tin-foil. They should be kept in a cool place. Used to soften and whiten the skin, and to prevent and cure chaps, chilblains, &c.

CHLORINATED SOAP; SAVON ANTISYPHILITIQUE.—1. Take of

White Castile-soap (in powder) . 1 pound;
Chloride of lime (best; dry) . . 1½ to 2 ounces;

mix, and beat them, in a wedgewood-ware mortar, to a stiff mass, with

Rectified spirit . . . . . q. s.

Lastly, form the mass into small flat tablets, and closely envelope them in thin *sheet gutta-percha* or *oilskin*. It is usually 'scented' by adding 1½ to 2 fluid drachms of *oil of verbena* or *ginger-grass*, or of *oil of cassia* and *bitter-almonds;* but is better without it. An excellent detergent and disinfecting soap, useful in itch and various other affections, and admirably adapted for hospital-use. As an occasional cosmetic soap, it is serviceable for removing stains and discolorations from the skin, and rendering it white. It is a powerful agent for preventing infections by all contagious diseases communicable by contact.

2. Take of

Castile-soap (recent; in shavings) ½ pound;
Chloride of lime (say) . . . . ¾ to 1 ounce;

beat them together without water, and form them into cakes, as before. Will keep for years.

IODINE SOAP; IODURETTED SOAP.—1. Take of

Iodide of potassium . . . . . 1 ounce;
Water (say) . . . . . 1½ „

dissolve, and add the solution to

White Castile-soap (melted) . . 1 pound;

thoroughly incorporate them, and form the mass into cakes. Useful in various skin-diseases, and particularly serviceable as a common soap for scrofulous subjects. 2 drachms of *oil of verbena, ginger-grass, cassia,* or *bitter-almonds,* or of a mixture of them, may be added as scent.

2. Take of

Iodine of potassium . . . . . 1 ounce:
Iodine . . . . . ¼ „
Water . . . . . 3 ounces;*

* Or preferably, *proof spirit.*

dissolve, beat up the solution with

White Castile-soap (in shavings) 1¼ pound;

and at once form the mass into cakes, which should be well wrapped in thin *sheet gutta-percha* or *oilskin*, or placed in pots, to preserve them. A wedgewood-ware or porcelain mortar must be used, and nothing metallic must touch them. More serviceable, but less agreeable than the last. They are better without scent.*

Mercurial Soap.—1. Take of

Corrosive sublimate (crushed small) 1 drachm;
Rectified spirit (to dissolve; say) . 1 fluid ounce;
White Castile-soap (in powder) . 4 ounces;

beat them to a uniform mass in a wedgewood-ware mortar, adding a few drops of *otto of roses*, or of a mixture of the *oils of cassia* and *bitter-almonds*. Nothing metallic must touch it. This is the "sapo hydrargyri bichloridi" of medical writers.

2. Take of

White Windsor-soap (recent) . . 4 ounces;
Red precipitate (levigated). . . ¼ „
Rectified spirit. . . . . ½ fluid ounce;

and beat them to a mass, as before. This is the "sapo hydrargyri precipitati rubri" of Sir H. Marsh, and the "s. h. nitrico-oxydi" of other medical writers. Sir H. M. adds 10 or 12 drops of *otto of roses*, an expensive and unnecessary addition, the soap being already scented. Both the above have been recommended as stimulant detergents and repellants, in various skin diseases, including itch; also as "Savon Antisyphilitique," under which name the first more particularly is often sold.†

Sand Soap.—This is made by adding about half its weight of *siliceous sand*, or of *powdered pumice-stone*, to the soap whilst in the semi-fluid state, with or without scent, at will.‡

Shaving Soap.—*Vide* "Shaving Paste," "Ropophagon," &c.

Skin Soap.—Any soap adapted for toilet or personal use may be so called. A few years since this name was given, by a certain house, to a few mild toilet-soaps of superior quality made by them, from (as they asserted) containing glycerine artificially introduced in the pro-

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* *Vide* "Sulphur Soap" (*infrà*). † *Vide* "Sulphur Soap" (*infrà*).
‡ *Vide* "Sand Balls," page 441 (*antè*).

cess of manufacture. At the present time, the name is employed by the inferior makers, as a mere 'lure' to catch purchasers. Nine-tenths of the samples labelled, stamped, or advertised, under the name, which I have examined, are the crudest trash possible, calculated rather to destroy the beauty of the skin, than to promote it.

SPERMACETI SOAP.—*White Windsor* or other like *soap*, melted and intimately combined with about 2 ounces of *spermaceti* to each pound. Used, in cold weather, to keep the skin soft, prevent chaps, &c.

SULPHUR SOAP; SULPHURETTED SOAP.—1. Take of

White curd or *Castile soap* (recent) . .	½ pound;
Flowers of sulphur (best; levigated) .	1 ounce;
Rectified spirit (strongly coloured with *alkanet*)	1 fluid ounce;
Otto of roses (to strongly scent the mass)	q. s.:

beat the whole together, to a smooth paste, in a marble or wedgewood-ware mortar. This is Sir H. Marsh's formula. Recommended in itch, and various other skin-diseases. It is particularly serviceable as a common toilet-soap, to persons troubled with slight cutaneous eruptions. Its daily use tends to render the skin fair and smooth. The spirit and colouring may be omitted, at will; and, as a toilet-soap, only half the above quantity of sulphur is amply sufficient.

2. Take of

Yellow-soap (best)	4 ounces;
Sulphuret of potassium	1 to 2 drachms;

(the last dissolved in)

Water	½ fluid ounce;

to be beaten together as before. More active than the last, but less agreeable.

*** *Observe.* Before using chlorine, iodine, mercurial, or sulphur soap, finger-rings, ear-rings, and bracelets of gold, &c., should be removed, and not replaced until some short time after the hands have become quite dry; as otherwise they will be tarnished and even blackened or corroded. The same applies to all other cosmetics containing the same mineral ingredients.

SOLUTIONS.—Several formulæ for these occur, under one or other of their synonyms, in the present and following Chapter. Some of

a stronger kind, and which are only used diluted, will be found in Chapter XIX.

SPANISH WOOL.—Clean *white wool* prepared and used in the same way as 'rouge crepons.'

SPIRITS; TINCTURES.—Several of those which are also employed as 'skin-cosmetics' occur in Chapters XVIII., XIX.; and under one or other of their synonyms in the present Chapter.*

SPIRIT OF CAMPHOR; TINCTURE OF CAMPHOR.—Take of

Camphor . . . . . 1 ounce;
Rectified spirit . . . . . 9 fluid ounces;

dissolve. This is the formula of the new British Pharmacopœia. That of the London Ph., is 1 oz. of *camphor* to 8 fl. oz. of *spirit*. The "tinctura camphoræ," of the Edin. Ph., has only 1 ounce to 16 fl. oz. Used as an application to chilblains, and in mouth-rinses, and as "Camphor Drops," &c. It is commonly sold as "Concentrated Essence of Camphor." The "Spirit of Wine and Camphor," and "Camphorated Spirit," of the shops, is a much weaker preparation.

VINEGARS (Cosmetic).—For the formulæ of several "cosmetic" and "medicated vinegars," vide the two following Chapters.

SKIN WASHES.—Vide "Lotions," "Emulsions," "Milks," &c.

WATER (Natural).—Vide Chapter XIX.

WATERS (Compound, Distilled, Medicated, Scented).—Vide Chapters XVIII., XIX.; as also "Lotions," "Solutions," "Washes," &c., in the present Chapter.

CAMPHOR-WATER; CAMPHOR-JULEP; CAMPHOR-MIXTURE.—

1. Take of

Camphor . . . . . ½ drachm (Troy);
Rectified spirit . . . . . 10 drops;

triturate until reduced to powder, subsequently gradually adding, with continued trituration, of

Distilled water . . . . . 1 pint;

lastly, strain through linen or bibulous paper. This is the formula

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* For special references, vide *Index*.

of the London Ph., but unless agitation and contact be continued for 2 or 3 hours, the water will not be fully saturated.

2. Take of

Camphor (crushed small) . . . 1 drachm (avoir.);
Distilled Water . . . . . 1 quart;

enclose the camphor in a muslin bag, and attach this to the stopper of a jar or bottle containing the water; invert the bottle, and allow it to stand at least two days, before pouring off the solution. This is the formula of the new British Ph., and an excellent and convenient one. 1 fl. ounce of water dissolves only about 1¼ gr. of camphor.

Camphor-water is slightly anodyne and stimulant. It is an excellent wash to allay itching and irritation, in slight cases, and is much esteemed by some persons as a lotion after shaving. It is very useful for rinsing the teeth and mouth, and is much used as a vehicle in lotions and mixtures. It may be prepared extemporaneously, by agitating a few drops of *essence, spirit,* or *tincture of camphor,* with *water,* as noticed elsewhere. This is the method adopted in the Dublin Ph.

Goulard Water.—This article, which enters into the composition of several 'cosmetic' and 'medicinal lotions,' is separately noticed in Chapter XIX.

*** *Formulæ* and *notices* of several 'skin-cosmetics,' of a mixed character, will be found under other heads in the remaining portion of this work, and which, without needless repetition, could not be inserted here.

II. Hair-cosmetics :—

The principal of these are *oils, pommades, washes, fixateurs, paints, powders, dyes,* and *depilatories,* which, with a few others of a minor and miscellaneous character, embrace nearly all the preparations of the kind now in use.* Formulæ, &c., for articles of each of the above classes are given below :—

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* *Vide* pp. 241-82, &c. (*antè*).

OILS FOR THE HAIR; HAIR-OILS; HUILES ANTIQUES; HUILES POUR LES CHEVEUX.—These essentially consist of some *bland fixed oil*, more or less strongly scented, the oil being either in its natural state or coloured, or sometimes bleached before the essential oils, or the fragrant essences, that impart the odour, are added to it. The relative proportions of *scent* and *fixed oil*, and the manner in which the union is effected, are explained, under "Scented Oils," in the following Chapter.* The *fixed oils* used for the purpose by the first-class perfumers are those of *almonds, olives*, or *ben*.† Among the inferior perfumers, and among the wholesale druggists and oilmen, who mostly supply the retail shops with the article, *colza-oil, rape-oil, lard-oil, oleine*, or any similar cheap oil, that does not very readily become viscid by exposure to the air, is usually employed, the 'cheapest' being preferred, regardless of its other qualities. The usual mode of testing an oil before purchasing it, or employing it for the first time for the purpose, is to smear a slab, a glazed tile, or a plate, with it, and then to expose it to the air, in a situation of equal warmth to that of the human head, for two or three days. If the oil do not become materially thick or sticky, and do not acquire a rancid odour too strong to be covered by the scent subsequently added, it is passed as "test-proof," although it may be of a character ill-adapted to promote the beauty and luxuriance of the hair, and probably, by long use, calculated greatly to injure it. Nor is the sale of such oil for 'hair-oil' confined to those who vend small quantities by retail in humble neighbourhoods. On the contrary, by far the larger portion of all the hair-oil sold is of this character, including the major part of that which is vended in showy and elegantly labelled bottles at large shops of which the proprietors are pretentiously respectable, as well as of the nostrums which are advertised as possessing "exalted purity" and the "most extraordinary virtues." Sometimes, for reasons stated further on, *castor-oil* is employed for the hair.

The selection of the perfumes for hair-oils, like that for pommades, depends entirely upon the taste or caprice of the operator, or on the fancy of the purchaser. The same remark applies, in a limited degree, to their colour. Hence arises, as far as odour and external appearance extend, the almost endless variety of these articles met

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* *Vide* "Scented Oils" § 1, Chap. XVIII. (*infrà*).

† *Vide* "Fixed Oils," Chap. XIX. (*infrà*).

with in the shops. In general, a mixture of two or three perfumes, with one of them predominant, or not, is preferred, in England and America, to the pure fragrance of any single flower, and a grossness of taste is exhibited here, in these matters, which surprises our Continental neighbours, and the Italians more particularly. In the case of the hair-oils and pommades of our shops, the selection of a mixture of coarse strong perfumes is generally made for the purpose of concealing the rancidity or inferior quality of the oil or fat of which they are composed.

The mixtures of essential oils, and other odorous substances, used in the preparation of the 'perfumed spirits,' will furnish the operator with examples which he may follow in scenting 'hair-oils' and 'pommades,' and from these he can frame other combinations, ad libitum.

In preparing colourless or white hair-oils, blanched fixed-oil,* and new and colourless, or nearly colourless, essential oils and essences only are employed.

The 'coloured oils' derive their hues from the fixed oil of which they are prepared, being tinged, before the scent is added. Thus—

A 'red' and 'crimson' tinge may be given by steeping, for two or three days, a little *alkanet-root* (say 2 or 3 drachms) in each pint of the oil. By warming the oil, the time required may be reduced to 1 or 2 hours.

A 'yellow' and 'orange' tinge may be given by rubbing up a little *annotta* with a portion of the oil whilst hot, and then adding it to the rest at a gentle heat; or, more simply, by adding a little bright *palm-oil* to it whilst warm.

A 'green' tinge may be given by steeping a little *green parsley*, or *spinach-leaves*, or *lavender*, in the oil for a few days, in the cold; or by dissolving 2 or 3 drachms of *gum-guaiacum* in each pint of it, by the aid of heat.

In each case the 'coloured oil' should be allowed to clarify itself, by repose, in a closed vessel and a warm situation (60 to 70° Fahr.), before being decanted for further treatment. It is also better to pass it through a piece of coarse muslin, to remove floating particles; and, in some cases, it may be necessary to filter it, to render it quite brilliant—a quality which it should always possess.

The—

Huile antique au Jasmin,
" " aux Fleurs d'Oranges,

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* *Vide* Chapter XVIII. (*infrà*).

Huile antique à la Rose,
„ „ à la Tuberose,
„ „ à la Violette,
&c. &c.,

of the French perfumers, are simply one or other of the bland fixed oils, before noticed, strongly scented with the oils (*huiles*) of the respective flowers, or some other preparation of them.

Their 'Huile antique rouge à la Rose,' is their 'white rose-oil' coloured with *alkanet-root*. Their—

'Huile antique verte,' is simple oil coloured green in the way already described, and scented. Their—

'Huile antique aux Millefleurs,' is simple oil so scented with several perfumes that none predominate; for which purpose a mixture of the *oils* of *bergamot*, *cloves*, *lavender*, *lemon*, and *pimento* or *nutmeg*, *neroli*, and *ambergris* or *musk* (usually both), is commonly employed.

The proper mode of using 'hair-oil' and 'hair-creams' is noticed at page 243 (*antè*).*

Hair Oil (Ordinary; of the shops).—This is usually *simple oil* † scented with ½ to 1 drachm of *essential oil* per pint; oil of bergamot, with or without the addition of a little oil of lemon, being commonly employed for the purpose.

Oil of Roses; Rose Hair-oil.—1. (*Red.*) In this country, the 'finest quality' is *oil of almonds*, *olives*, or *ben*, preferably the last, tinged by digesting a little *alkanet-root* in it for a few days, and scented with *otto of roses*, ½ drachm to the pint. On the Continent, it is either scented with *otto*, or with a large addition of *huile à la rose*; ‡ or it

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* The quantity of hair-oil consumed, in these realms, is absolutely enormous. The number of quart, 2-quart, gallon, and larger bottles and jars of it, sent out, in bulk, by the wholesale houses, would astonish the reader. Every hair-dresser and perfumer, every druggist, oilman, and huxter, now sells it. A retail druggist in one of the lower and more thickly populated districts of this Metropolis, who scents his own oil, recently assured me, and subsequently furnished me with evidence of the truth of his assertion, that every Saturday, between 7 and 12 P.M., he sells from 45*s.* to 48*s.* worth, all in penny and twopenny lots, but with a vast preponderance of the former. In addition to this, he sells numerous ¼-pints, ½-pints, and pints, to little hair-dressers and huxters in the neighbourhood, as well as many 3*d.*, 6*d.*, and 1*s.* sealed bottles. Further, he sells, during the same hours, several 3*d.* and 6*d.* pots and bottles of pommade. This is not a rare instance; I could produce several.

† *Vide* page 448 (*antè*).

‡ *Vide* Chapter XVIII. (*infrà*).

is the latter prepared of weaker quality; the two oils thus formed being slightly different. A few drops of *neroli*, or of *oil of rose-geranium*, or a little *huile au jasmin*, with or without 2 or 3 drops of *oil of musk* or *huile royale*, are occasionally added to improve and slightly modify the odour.

'Second' and 'inferior qualities' are made of fixed oils gradually receding in quality, scented with less 'otto,' the deficiency being made up by a mixture of *oil of rhodium*,* *rosemary*, and *bergamot*. At length the otto wholly disappears, and in the common 'rose-oil' of the shops, barely sufficient of the cheaper oils, last-named, are employed, to disguise the unpleasant and generally rank odour of the crude 'seed-oils' to which they are added.†

Formerly, "oil of roses" for the hair was prepared, in these realms, from picked and crushed *rose-petals* by 'infusion' or digestion in the sun, or an equally warm situation, for a few days, when the oil was pressed out, and, for the best quality, treated with a *fresh quantity of roses*. Formulæ for the preparation of an oil of this kind were inserted in some of our national pharmacopœias of the eighteenth century; and one of a like kind still exists in the Paris "Codex."

2. (*White.*) This differs from the preceding only in being uncoloured, and being, in all cases, scented only with essential oils.

Marrow Oil.—Take of

Clarified beef-marrow . . . . . 1½ ounce;
Oil of almonds . . . . . ¼ pint;

melt them together, and scent the mixture at will. Held in high repute as a hair-oil, by many. That of the shops has seldom any marrow in it, but lard instead. The appropriate scents are the same as for bears' grease. It is generally tinged slightly 'yellow' by means of a little *palm-oil* or *annotta*. If the marrow of a Guernsey ox or cow be used it will be sufficiently yellow of itself.

Macassar Oil; Huile de Macassar.—

1. (Rowland's.) Two samples of this oil obtained, at different times, from the authorised agents, and which, from the labels, wrappers, and 'get up,' were undoubtedly genuine, differed from each other in the fixed oil of which they were chiefly composed. The one was permanently miscible with highly rectified spirit, in all proportions, and appeared to have a basis of castor-oil; the other, which was only partially and imperfectly miscible with alcohol, appeared to

* Or *oil of rosewort*, or of *sandal-wood*, which somewhat resemble it.
† *Vide* page 448 (*antè*).

be chiefly composed of either oil of ben or almonds (I believe the former). I have since heard from two or three druggists who vend it, and who have surreptitiously examined the article, that "it mixes with rectified spirit of wine:" and I hence infer, that the first of the two fixed oils mentioned is the one used, or generally used, for it by its proprietors. The products of the following formulæ (*a.* and *b.*) are precisely similar to the samples I examined:—

a. Take of

*Castor-oil** (reddened with 'alkanent-root')	1 pint;
Alcohol (sp. gr. ·817†)	¼ „
Oil of nutmeg	½ fluid drachm;
„ *rosemary*	of each
„ *origanum* (white) . .	15 drops;
Neroli	10 „
Essence of musk (or *ess. royale*),	4 or 5 „
Otto of roses	20 grains;

mix, agitate for some time, and in a week decant or separate the clear portion from the rest, if necessary. The odour of the otto must perceptibly predominate. Should the ingredients not mix thoroughly on brisk agitation, place the bottle (corked tight) in a little *warm water* for a short time, and then agitate it (cautiously at first) until cold.

b. Take of

Oil of ben (finest, reddened with 'alkanet')	1 pint;
Essential oils and *essences* . . .	as before;

mix, and add *alcohol*, drop by drop, with agitation, as long as it will bear it, or until about 2 fluid ounces have been added.

The following formulæ for this oil have been long current as the genuine one, but the products do not exactly represent it:—

c. Take of

Oil of ben or *almonds* (reddened),	1 pint;
„ *rosemary* . . .	of each
„ *origanum* . . .	1 drachm;
„ *nutmeg*	of each
Otto of roses	15 drops;

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* This oil must be perfectly pure, sweet, and winter-strained. The essential oils must also be quite pure and recent.

† That is, alcohol of 92 per cent.; or, what is the same, rectified spirit fully 66 p. c. over-proof.

Neroli . . . . . 6 drops;
Essence of musk . . . . . 3 or 4 „

mix, as before.

d. (De Naquet.) Take of

Oil of ben . . . . . 1 quart;
Nut-oil (finest) . . . . . 1 pint;
Rectified spirit (strongest) . ¼ „
Essence of bergamot . . . . 3½ drachms;
Tincture of musk . . } { of each
Esprit de Portugal . } { 2 drachms;
Otto of roses . . . . . ½ drachm;
Alkanet-root . . . . . q. s.;

mix, let it stand until sufficiently coloured, and decant the clear portion.

The smallest bottle of Macassar Oil, holding somewhere about an ounce, is vended at 3*s.* 6*d.*; and the most marvellous virtues are ascribed to it by its proprietors. Of all the hair-nostrums of the last half-century, it is the one which has been the most extensively and persistently be-puffed by advertising.*

2. *Rose hair-oil* (red), to which a few drops of the *oils* of *nutmeg* and *origanum* have been added. Commonly vended fraudulently for the preceding, and is probably quite as good, provided the fixed oil in it be of fine quality.

Huile Comagene.—Take of

Marrow-oil . . . . . 4 ounces;
Spirit of rosemary . . . . . 1½ fluid ounce;
Oil of nutmeg . . . . . 12 drops;

mix, by agitation. A similar hair-nostrum to "Huile de Phénix" (infrà).

Huile de Java; Fluide de Java.—*Marrow-oil* coloured with a little *palm-oil*, and scented. A hair-nostrum of much pretension and little virtue beyond that of its basis.

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* I have, at different times, tried it myself as a hair-cosmetic, and have known many others do the same; but its pretended effects were all moonshine. It furnishes an admirable illustration of the old adage about "fools" and "their money." It is undoubtedly a good, and nicely-scented hair-oil, pleasant in use, and elegantly "put up," and that is all that can be said in its favour, except the agreeable fact, to its proprietors, that it has made their fortunes.

HUILE DE PHÉNIX.—Take of

Clarified beef-marrow . . . . . } of each 4 ounces;
Lard (sweet) . . . . . } of each 4 ounces;
Nut-oil (pale) . . . . . } of each 4 ounces;
Expressed oil of mace . . . . . } of each 4 ounces;
Camphor . . . . . 1½ drachm;

melt them together by the heat of hot water, strain through muslin into a slightly warmed wedgewood-ware or marble mortar, and when cooled a little, stir in, of—

Oil of cloves . . . } of each ½ drachm;
„ *lavender* . . } of each ½ drachm;
„ *mint* . . . . } of each ½ drachm;
„ *rosemary* . . } of each ½ drachm;
„ *sage* . . . . } of each ½ drachm;
„ *thyme* . . . } of each ½ drachm;
Rectified spirit . . . . . 1 fluid ounce;

(in which has been dissolved by a gentle heat—)

Balsam of tolu . . . . . 4 drachms.

Triturate actively, until the whole is cold, then put it into dumpy wide-mouthed phials, and at once cork them. A stimulating 'olla podrida' *said* to be infallible in making the hair grow luxuriantly, and preventing its falling off. Like other nostrums of its class, its virtues reside chiefly in its label and advertisements.

HUILE PHILOCOME D'AUBRIL.—*Cold-drawn nut-oil* and *marrow-oil*, equal parts, mixed together, and scented. Another hair-nostrum.

The following compound oils are in common use and much favour in "*failing hair*" and "*partial*" or "*impending baldness*":—

1. Take of

Oil of almonds, olives, or *ben* . ¼ pint;*
„ *origanum* . . . . . 1 drachm;
„ *rosemary* . . . . . ½ „
„ *lavender* (English) . . . 15 to 20 drops;

mix by agitating them together.

2. As the last, but doubling the quantity of *oil of rosemary*.

The above are also esteemed for promoting the 'curl' or 'waviness' of the hair.

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* Either white, or reddened with a little *alkanet*, at will.

3. *Simple oil* (as before; warm) . . ¼ pint;
Oil of nutmeg (essential) . . } { of each
Expressed oil of mace (nutmeg) } { 1 drachm;
mix in a corked bottle, agitate until their union be complete, and the next day decant the clear portion. A few drops of some other *essential oil*, with five or six drops of *essence of musk*, may be added to render the scent more agreeable.

4. *Simple oil* (as before; hot). . . ¼ pint;
Balsam of Peru (pure) . . . 2½ drachms;
Oil of nutmeg (essential) . . . 1 „
mix, as the last. The products of the preceding formulæ, diluted with an equal weight of *simple oil*, are also highly esteemed for common use, as promoting the strength and luxuriance of the hair.

5. As No. 1 or 2 (antè), but using *camphorated oil* instead of simple 'fixed oil.'

6. As No. 4 (antè), but using pure pale and sweet *cod-liver oil*, with the addition of 15 to 20 drops each of the *essences of musk* and *ambergris*. Has been highly recommended. The only objection to its use is, that unless the oil be recent, and employed sparingly, and the head be frequently well washed, the odour is liable to become slightly disagreeable.

7. *Oil* medicated with *cantharides*, or with one or other of its preparations.*

Oils of the preceding character, variously disguised by the addition of scents, &c., form the mass of the nostrums vended under fanciful names as specifics in failing hair and baldness.

Dr. Williams has recommended the use of *oil of cajeput* in hair-oils of the above kind, as being more effective than either oil of origanum or nutmeg.

The following are a few other 'medicated oils' which are used, or have been recommended, in failing hair and baldness:—

Camphorated Oil.—*Olive-oil* in which 5 or 6 per cent. of *camphor* (crushed) has been dissolved, by means of a gentle heat. A popular application in weak and failing hair. To increase its action, a little *oil of thyme, rosemary*, or *nutmeg*, should be added to it.†

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* Formulæ for 'cantharidised' preparations are separately noticed hereafter. For special references, vide *Index*.

† *Vide* "Skin Cosmetics" (*antè*).

Oil of Cantharides; Oil of Spanish Flies.—This is prepared by digesting *Spanish flies* (recently powdered), for 3 or 4 hours, in *olive-oil*, at a gentle heat, by means of a water-bath, and then straining through flannel, with pressure. It is clarified by repose, or by filtration. The proportions commonly used by the perfumers are about 2½ ounces of flies to each pint of oil (or 1 to 8), which are those of the Paris "Codex." The like preparation ('linimentum cantharides') of the Dublin Ph., is of double this strength, being made with 3 oz. of *flies* to 12 fl. oz. of *oil*.

Oil of cantharides is kept in stock by the perfumers and druggists as affording a ready means of extemporaneously impregnating hair-oils and pommades with the virtues of the Spanish fly. It is stimulant and rubefacient; and is in high repute for promoting the growth of hair. It is sometimes employed by courtezans to increase the hue of the complexion, particularly of the cheeks, a little being rubbed on the part and allowed to remain on it for 2 or 3 hours.*

Iodureted Oil; Iodized Oil.—Take of

Iodine (crushed small)	½ drachm;
Olive-oil (lukewarm)	¼ pint;

agitate them together in a phial until solution is complete. It may be scented with a little essential oil of almonds or lemons; but is better without it. Most of the other essential oils cause its gradual decomposition. It has been highly recommended as a hair-oil or friction, for use daily, in partial loss of hair and baldness; also to rub indurated glands, &c. Its long continued daily application to the head has been said to temporarily impair the memory, by occasioning absorption of a portion of the cineritious cortical part of the brain.†

Peach-kernel Oil.—Take of

Oil of sweet-almonds	½ pint;
„ *bitter-almonds* (essential) .	2 fluid drachms;
„ *cassia*	1 „ „
„ *musk* (huile)	½ drachm;

mix. Used as ordinary hair-oil to 'dry' excessively moist and soft, lax hair, which it is said to remedy. The 'musk-oil' may be omitted, at will.

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* *Vide* page 276 (*antè*).

† *Vide* page 277 (*antè*).

PHOSPHURETTED OIL; PHOSPHORATED OIL.—Take of

*Phosphorus**	20 grains;
Oil of almonds	3 fluid ounces;

mix, place the phial in hot water, and when the phosphorus is perfectly liquid, and the oil thoroughly warm, apply the cork, and agitate briskly for some time (say half an hour), observing to replace the phial occasionally in the water to keep up the temperature. Next, set it aside in a dark place, and, when quite cold, carefully decant the oil from any undissolved phosphorus. Lastly, aromatise it with any pure *essential oil*, at will.†

Used as a diffusible stimulant to the scalp, with friction, in baldness; and, diluted with an equal bulk of oil, as ordinary hair-oil in weak or failing hair.‡

The following is Augustin's mode of employing 'phosphorus' in baldness:—

PHOSPHURETTED LINIMENT; LINIMENT OF PHOSPHORUS.—(Augustin.) Take of

Phosphorus	6 grains;
Camphor	12 „
Oil of almonds	1 ounce;

dissolve, as before; and to the clear decanted portion add of

Strongest liquor of ammonia . .	10 or 12 drops.

It has been much recommended in baldness, and has long been esteemed as a friction in gout, rheumatic pains, &c.

OIL OF ANTS; HUILE DE MAGNANIMITÉ.—Take of

Ants	1½ ounce;
Olive oil	½ pint;

digest for 12 to 20 hours at a gentle heat, and otherwise proceed as for 'oil of cantharides.' It is stimulant, rubefacient, and aphrodisiac; but is obsolete in this country, except in certain nostrums for baldness. In some of the remote provinces it is occasionally employed by rustic belles to increase the hue of their complexion.

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* It should be wiped quite dry before being weighed, and should be sliced before digestion, the *utmost care* being used, as phosphorus, while exposed to the air, is very liable to inflame when rubbed or slightly warmed. When immersed in water or oil it is perfectly safe.

† A fluid ounce of *oil* dissolves scarcely 5 grains of pure phosphorus. The Ph. Bor. orders 6 gr. to the oz. Magendie orders ½ dr. to the oz., and digestion, with frequent agitation, in the cold and dark, for a fortnight; and adds a little *oil of bergamot* to the product. The latter quantity is uselessly large.

‡ *Vide* page 277 (*antè*).

CREAMS.—These, as the name implies, are semi-solid hair-cosmetics, intermediate in consistence between the 'oils' already noticed and the solid fats (pommades, &c.) which follow them.

CRYSTALLISED CREAM (D'Illotte's*); CRYSTALLISED VEGETABLE CREAM.—Take of

Oil of almonds		½ pint;
Spermaceti (pure; about) . .		1½ ounce;

melt them together by a gentle heat, add of

Neroli	}	of each
Oil of bergamot . .	} . .	15 drops;
„ *verbena* . .	}	
Huile au jasmin		30 „

and at once pour the mixture, which should be clear, into small, dumpy, wide-mouthed bottles, to crystallise. The precise quantity of spermaceti to produce a nice-looking article depends on the season of the year, more being required in summer than in winter.

FOX'S CREAM.—Take of

Marrow pomatum .	}	of each
Oil of almonds . .	} . .	2 ounces;

melt them together, by a gentle heat, add of

Huile au jasmin . .	}	of each
Oil of bergamot . .	} . .	1 drachm;

and otherwise proceed as above. A popular and excellent hair-cosmetic of its class.

SOLID GREASY PREPARATIONS FOR THE HAIR.—These are, for the most part, simple *grease* or *fat* aromatised with *essential oil*. A few are also medicated. The following are examples:—

BEAR'S GREASE.—The *fat* of the *bear* has long been highly esteemed for promoting the growth of human hair, but without sufficient reason, since experience shows that it possesses no superiority over the fats ordinarily employed by the perfumers. Indeed, if we may regard the somewhat rank smell of genuine bear's grease as an indication of its quality, it must be inferior to them as a hair-cosmetic; besides which, it is much more costly. The greater portion of the so-called 'bear's grease' now sold in England is a factitious article, and is prepared by one or other of the following formulæ:—

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* An anagram formed out of "D. Elliott," the name of one of the makers and vendors of it.

BEAR'S GREASE (Factitious).—1. Take of

Washed hog's-lard (dry) . . . 1¼ pound;

melt it by the heat of a water-bath, add of

Balsam of Peru . . . . . 2 drachms;
*Flowers of benzoin** . } . . { of each
Palm-oil (bright) . } . . { 1 drachm;

stir vigorously for a few minutes, to promote solution. Then remove the pan from the bath, and, after repose for a short time, pour off the clear portion from the sediment, and stir the liquid mass until it begins to cool.

2. Take of

Soft veal-fat . . . . . 1 pound;
Palm-oil . . . . . ½ drachm;

melt, and when nearly cold, stir in of

Nitric ether (genuine) . . . . 2 fluid drachms;
Essence of ambergris . . . . 7 or 8 drops.

3. Take of

Hog's-lard . . . } . . { of each
Veal-suet . . . . } . . { 1 pound;
Olive-oil . . . . . 3 ounces;

melt, cool a little, and stir in of

Compound tincture of benzoin . 1 fluid ounce.

The 'products' of the above formulæ have the advantage of not readily becoming rancid by age, as genuine 'bear's grease' does. Those who wish them of a deeper colour may give to them a rich 'yellowish' or 'pale orange' tinge by melting, along with the fat, a little *annotta* (½ dr. to the lb.), or *palm-oil* (¼ oz. to the lb.). They have an agreeable, though slight scent; but more may be imparted to them, at will. Genuine 'bear's grease' is usually rather highly scented, to cover its rankness and rancidity. The *oils* of *cassia*, *cloves*, *mace*, *nutmeg*, and *lavender*, the *essences* of *ambergris* and *musk*, and *balsam of Peru*, one, or a mixture of them, are the most appropriate, and generally preferred for the purpose. A certain celebrated Continental perfumer uses for his grease a mixture of *oil of cloves* and *oil of lavender*, with a 'dash' of *essence of musk*.†

MARROW; BEEF-MARROW.—This is extensively employed by the perfumers as the basis of pommades and other allied cosmetics, on account of its extreme blandness, its little disposition to rancidity,

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* *Benzoic acid* obtained by sublimation.

† See "Pommades," &c. (further on).

the readiness with which it may be scented, and the tenacity with which it retains any odour imparted to it; in all which properties it excels most of the other fats.

The *marrow* having been extracted from fresh *beef-bones*, it is first soaked and then worked, for some time, in lukewarm water. It is then allowed to cool, and after being freed from adhering moisture by pressure with a soft towel, is melted by the heat of a water-bath, strained, whilst hot, through muslin, and set aside, out of the dust, to cool and solidify. When appropriately scented, it forms the finest "Marrow Pommade," and is, probably, one of the best solid greasy hair-cosmetics known, and vastly superior to genuine 'bear's grease.'*

Pomatums; Pomades; Pommades.—The origin of these terms, and the preparations they embrace, have been generally alluded to under "Skin Cosmetics."† Any scented greasy matter of appropriate consistence, or any mixture of fats, used, or intended to be used, in dressing the hair, now commonly passes under the name of 'pomatum' or 'pommade.'

The usual basis of ordinary pomatum, or pommade, for use in

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* Such is, or rather should be, the article referred to. A very large, and probably, the larger portion of the so-called 'beef-marrow' now so extensively used by the perfumers, druggists, and pastry-cooks, is, however, obtained from the knackers' yards, though some of them do not, perhaps, know it, or trouble themselves respecting its source. The knowledge of this fact may probably, in the minds of some of their patrons, somewhat diminish the apparent fragrance of their delightfully scented 'marrow-pommade' and 'marrow-oil,' and lead others to take, with less than their usual gusto, the exquisitely light and delicate puff-paste and other articles of the pastry-cook, into which it enters. But such parties must be considerate, and not unduly squeamish and scrutinising. They are not treated with greater attention by those chevaliers d'industrie—the enterprising tradesmen and manufacturers—than their neighbours who patronise 'jellies' (*vide* pp. 364-5), costly rich soups, gravies, and sauces, fashionable puddings, high-priced German sausages (those relishing bon-bouches), and the like. A very large maker of the last, who had long been celebrated far and wide for them, as also for his brawn, collared and potted meats, delicate ham and-veal pies, &c., &c., not very long since declared in evidence at a trial, that it is "*impossible* to produce them, or even (humble) saveloys and polonies, of the proper flavour, and action under the teeth, required by purchasers in the best qualities of many of them, without a liberal allowance of horse-flesh," of course, from the knackers' yards—where else in England? But then he added, as a sort of panacea for alarm and squeamishness on the subject, that "there was nothing unwholesome in it; and, as it made the articles more relishing and saleable, the maker was *compelled* to do it." The readers of the leading daily Journals were recently, perhaps, surprised to learn, that one of the great sausage-makers of this metropolis consumed weekly, in his factory, from 4 to 5 tons of horse-flesh, which he receives from contractors in the same way as he does his ordinary beef, pork, and veal.

† *Vide* pp. 423-4 (*antè*).

this climate, is either a mixture of 2 parts of *hog's lard*, and 1 part of *beef-suet;* or, of 5 parts of *lard*, and 2 parts of *mutton-suet;* the fats being both previously carefully 'rendered' or prepared, and then melted together by a gentle heat. The latter mixture is chiefly used for 'white' pomatum or pommade. Essential oil, and other volatile matter, used to scent this fat, should be added to it, and stirred up with it, after it has somewhat cooled, but before it begins to solidify, in order to prevent loss. The unscented mixed fats form the "Plain Pommade" or "Pomatum" of the perfumers.

Reserving, for the next Chapter,* a notice of the higher class of 'pommades,' many of which are chiefly employed as vehicles for extracting perfumes, or conveying them to other preparations, I shall here confine myself to a few of those in more general use, in England, as hair-cosmetics. Before proceeding further it may, however, be useful to remark, that—

In *using* ordinary pommade, a little of it should be placed in the palm of the hand, and liquefied by rubbing the palms together, before applying it to the hair; over which it should be first equally diffused by the hands, and then completely so by the hair-brush. If used in any other way, the fat is apt to collect or remain in patches, or be unequally diffused, as often observable in the heads of the vulgar and indolent.

The following are examples of a few (scented) 'pomatums' or 'pommades' frequently met with :—

1. Take of

Plain pommade (or *fat*) . . . . 1 pound;

melt it at the lowest degree of heat that will effect the object, add of

Oil of bergamot . . . } { of each
„ *lemon* . . . . } { 1 drachm;

stir the mixture until it begins to concrete, and then pour it into the pots or bottles. This forms the ordinary "Pomatum" or "Pommade" of the shops.

2. *Plain pommade* . . . . . 1 pound;
Oil of bergamot . . . . . 1 drachm;
„ *lemon* . . . . . ¾ „
„ *cassia* . . . . . ½ „
„ *cloves* or *nutmeg* . . . 20 drops;

as before. More fragrant and agreeable than the first.

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* In the chapter on "Perfumery" referred to, the reader will find the preparation of "pommades" more fully treated of.

3. *Plain pommade* . . . . . 1 pound;
Oil of bergamot . . . . . 1 drachm
„ *lavender* (English) . . ½ „
„ *cassia* . . . . } . { of each
„ *cloves* . . . . } . { 20 drops;
„ *verbena* . . . . }
Essence of ambergris . . . . 12 „

as before. Very fragrant and agreeable.

4. *Plain pommade* . . . . . 1 pound;
Oil of bergamot . . . . . 1 drachm;
Huile au jasmin . . . } . { of each
Neroli . . . . . } . { ½ drachm;
Oil of verbena . . . . . 20 drops;
„ *cassia* . . . . . 10 „

as before. Very fragrant and delicate.

5. *Plain pommade* . . . . . 1 pound;

melt, as before, add of

Balsam of Peru (or *liquid styrax*) 2 drachms;

stir until dissolved, and then add, of

Oil of cassia . . . . . 20 drops;
„ *cloves* . . . . . 15 „
Essence of ambergris . . . . . 12 „

6. *Plain pommade* . . . . . 1 pound;
Oil of cassia . . . . . 1 drachm;
„ *cloves* . . . . . ½ „
Essence of ambergris . . . . . 20 drops;
Oil of rhodium . . . } . { of each
Essence of musk . . . } . { 15 drops;

as before. Possesses a very agreeable and durable odour.

7. *Plain pommade* . . . . . 1 pound;
Otto of roses . . . . . ½ drachm;
Oil of rhodium . . . } . { of each
Neroli . . . . . } . { 15 drops;
Essence royale . . . . . 12 „

as before. Much esteemed by those who appreciate the fragrance of roses.

Inferior qualities of the above, and other like pommades, are less highly scented. They are also often coloured, which is done in the way previously noticed. Of similar preparations there is really no end, each maker scenting his mixed pommades just as his tastere

caprice may dictate, and giving them any names which he fancies will attract purchasers.

The following formulæ embrace a few 'named' pommades, including some of a mixed character, met with in the shops:—

HARD POMATUM; ROLL POMATUM; STICK POMATUM.—1. Take of

Prepared beef-suet (hard) . . .	1 pound;
Beeswax (pure, bright)	2½ ounces;
Gum-benzoin (in coarse powder) .	1 drachm;

melt them together, at a gentle heat, stir well, and, after a little repose, pour off the clear portion. To the latter, when it has cooled a little, add of

Oil of lavender	1 fluid drachm;
„ *cassia*	of each
Essence of ambergris . .	15 drops.

Just before the mass concretes, pour it into moulds of paper or tin-foil, and when these have become quite cold and hard, cover them with ornamental wrappers. Very fine. Has a slight yellowish colour.

2. (White.)—Take of

Mutton-suet (hard)	1 pound;
White wax (pure)	2½ ounces;

melt, add of

Oil of lemon	1 drachm;
„ *cassia*	½ „

and otherwise proceed as before. By replacing half an ounce of the wax with 1 ounce of spermaceti it will be rendered whiter, but rather less glossy. Other perfumes may be used, ad libitum.

3. (Coloured.) See "Cosmetiques" (*infrà*).

Hard pomatum is used to gloss and set the hair. It acts both as ordinary pommade and fixateur. It is preferred to the former, and to hair-oil, by some persons, in hot weather, on account of its remaining longer in the hair.

It is best applied like soft pomatum;* but when it is used merely to 'set' or fix certain portions of the hair, the stick is commonly rubbed over the part, and the detached portion diffused by the application of the hand or brush in the direction of the intended 'set' of the hair. The coloured varieties ('cosmetiques') are exclusively used as 'hair-paints.'

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* *Vide* pp. 243, 461 (*antè*).

Formerly hard pomatum, instead of being 'moulded,' was made up into cylindrical or flattened 'rolls' or 'sticks,' whilst semi-cold, on a wet slab of marble or hard polished wood; whence its old name of "roll" or "stick pomatum."

ROLL POMATUM.—Vide "Hard Pomatum" (antè).

SOFT POMATUM.—The general name of all the fatty pomatums, plain or scented, of the ordinary consistence, as distinguished from 'hard pomatum.'

EAST-INDIA POMATUM; POMMADE DES INDES; POMMADE D'ORIENT.—Take of

Beef-suet	¾ pound;
Lard	½ „
Beeswax (pure, bright)	2 ounces;
Annotta (finest)	¼ drachm;
Gum-benzoin (in coarse powder)	¾ ounce;
*Grain-musk**	6 to 8 grains;

digest in a covered vessel set in a water-bath, with frequent agitation, for 2 or 3 hours. After repose, decant the clear portion, add of

Oil of lemon	1 fluid drachm;
„ *lavender* (English)	½ „ „
„ *cassia*, „ *cloves*, „ *verbena*	of each 10 or 12 drops;

and stir the mass until it has somewhat cooled. Lastly, pour it into pots or bottles, and let it cool very slowly, and undisturbed. Very fragrant. A favourite pommade in the East Indies, and other hot climates, to which it is largely exported; also as a hard pomatum in England. *Palm-oil*, ½ an ounce, is generally substituted for the 'annotta,' but the resulting colour is inferior.

CACAO POMATUM; COCOA-NUT OIL POMMADE.—Vide "Skin Cosmetics" (antè).

CASTOR-OIL POMMADE; PALMA-CHRISTI POMATUM.—1. Take of

Castor-oil	1 pound;
White-wax (pure)	4 ounces (or q. s.);

melt them together, as before, add of

Oil of bergamot	2½ drachms;
„ *lavender* (English)	½ „
Essence royale	10 or 12 drops;

and stir the mixture whilst cooling.

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* Previously 'rubbed down' with a little *clean sand* or *powdered glass*.

2. (Crystallized.) Take of

Castor-oil	1 pound;
Spermaceti	3 to 4 ounces (or q. s.);
Oil of bergamot	2 drachms;
„ *lavender*, „ *rosemary*, „ *verbena*	of each, ½ drachm;

and proceed as for "crystallized pommade."* Both are used to render the hair glossy. The scents may be varied, at will; but the above are usual ones.†

Cowslip Pommade or Pomatum.—Take of

Plain pommade	1 pound;

liquefy it at a very gentle heat, and stir in, of

Oil of bergamot	1½ fluid drachm;
„ *lemon*, „ *orange-peel*	of each, ½ fluid drachm;
Huile au jasmin, *Essence de petit grain*	of each, 15 to 20 drops;
„ *of ambergris*	5 or 6 drops.‡

Crystallized Pommade or Pomatum.—1. Take of

Oil of almonds or *olives*	1 pint;
Spermaceti (best, pure)	¼ pound (or q. s.);

melt them together by a gentle heat, add *scent*, at will, and, whilst sufficiently warm to be clear, pour it into warm glass bottles, and allow it to cool very slowly, and without disturbance. Some persons add 1 drachm of *camphor*. It is usually preferred uncoloured. If tinged at all, it must be only very faintly so, and with substances that will not cause opacity.

2. (D'Illotte's.) Same as D'Illotte's "Crystallized Cream," but with a larger proportion of *spermaceti*, to increase its consistence.

Pommade Divine.—1. Take of

Refined beef-marrow	1 pound;
Cypress-wood (rasped), *Orris-root* (in coarse powder), *Liquid styrax*	of each, 1 ounce;

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* *Vide* formula (*infrà*). † *Vide* "Oils," Chap. XVIII.-XIX. (*infrà*).

‡ *Vide* the following Chapter, on "Perfumery."

Cinnamon (powdered, but not dusty) . . . . . ½ ounce;
Cloves (well bruised) . } . . { of each,
Nutmegs (do., or grated) } . . { ¼ ounce;

digest, by the heat of a water-bath, in a covered vessel, for 5 or 6 hours, and then strain through flannel. Very fine, and much esteemed for the hair, and also as an occasional skin-cosmetic.

2. Take of

Plain pommade (or *soft beef-fat*) . 1 pound;

melt by a very gentle heat; and stir in, of

Essence of violets . . . . . 2 fluid drachms;
Huile au jasmin . . . . . 1½ „ „
Oil of bergamot . . . } . . { of each,
„ *lemon* . . . . } . . { 1 fluid drachm;
„ *lavender* . . . . } . . { of each,
„ *origanum* . . . } . . { ½ fluid drachm;
Neroli . . . . . }
Oil of cassia . . . . } . . { of each,
„ *cloves* . . . . } . . { 6 or 8 drops.
„ *verbena* . . . . }

Delightfully and powerfully fragrant, but apparently unnecessarily complicated. The product of the first is, however, the genuine "pommade divine." In second and ordinary qualities, double the above proportion of fat is usually employed.

Macassar Pommade.—Take of

Castor-oil . . . . . 10 ounces;
White-wax (pure) . . . . . 2 „
Alkanet-root . . . . . 1 drachm;

gently heat them together until sufficiently coloured, then scent with

Oil of nutmeg . . . } . . . { of each,
„ *origanum* . . } . . . { ½ fluid drachm;
„ *rosemary* . . }
Otto of roses . . . . . 20 drops;
Essence royale . . . . . 5 or 6 drops.

Said to be equal, or even superior to 'Macassar oil' for glossing and promoting the growth of the hair. The original pommade has a bright red or rose colour; but there are pommades occasionally sold under the name, that have a rich pale orange-tint; and others, that are colourless. A few grains of *carmine*, well triturated with a little of the melted mass, and then added to the rest, gives a richer shade of colour than alkanet.

MARROW POMATUM or POMMADE.—Take of

Prepared beef-marrow	½ pound;
Prepared beef-suet	¼ „
Palm-oil	¼ ounce;

melt them together, and add *scent*, at will. Used to promote the strength and luxuriance of the hair.*

ROMAN POMATUM or POMMADE.—Vide "Vanilla Pomatum" (*infrà*).

ROSE POMATUM or POMMADE; POMMADE À LA ROSE.—That of the shops is usually *simple pommade* or *fat* coloured (or not) with *alkanet*, and scented like the corresponding 'hair-oil.' That prepared from the 'flowers' is noticed under "Perfumery." †

The following 'pommades' are chiefly intended for use in failing hair and baldness:—

CAZENAVE'S POMMADE.—Take of

Beef-marrow (prepared)	4 ounces;
Tincture of cantharides (Paris Codex)	½ fluid ounce;
Cinnamon (coarsely powdered) . . .	½ ounce;

melt them together, by the heat of a water-bath, stir until the spirit in the tincture has evaporated, decant the clear portion, and again stir until the mass concretes. It is cheaper and more convenient to omit the 'powdered cinnamon,' and to strongly scent it with *oil of cinnamon* (or of *cassia*) after the removal of the vessel from the bath. Dr. Cattell scents it with the *oils* of *origanum* and *bergamot;* and others employ the *oils* of *nutmeg* and *lavender* for the purpose. Recommended in weak hair and remediable baldness. It is ordered to be used night and morning; the head being washed with soap-and-water, and afterwards with salt-and-water, and wiped dry, each time before applying it, or at least once a day.

COUPELLE'S CRINUTRIAR or CRINOGEN.—Ordinary fatty matter agreeably scented. According to the advertisements, it possesses marvellous hair-producing power, even beard, whiskers, and eyebrows, *invariably* appearing, in luxuriance, after its use for about three weeks!

POMMADE DE BEAUTÉ.—Vide "Skin Cosmetics" (*antè*).

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* *Vide* pp. 451, 459-60 (*antè*).

† *Vide* Chap. XVIII. (*infrà*).

POMMADE DU FRÈRE COSME.—Vide "Skin Cosmetics" (*ante*).

DUPUYTREN'S POMMADE.—1. Take of

Prepared beef-marrow . . . . 12 ounces;

melt by a gentle heat, add of

Baume nerval * . . . . . 4 ounces;

Balsam of Peru . . . } . . { of each,
Oil of almonds . . . } . . { 3 ounces;

and mix thoroughly. Then add of

Alcoholic extract of cantharides . 36 grains;
(dissolved in)
Rectified spirit . . . . . 3 fluid drachms;

and stir the mass until it concretes. This is the original formula for this celebrated pommade; but, in serious cases, Dupuytren was in the habit of doubling, or even tripling the proportion of the 'extract of cantharides', without altering that of the other ingredients. The product is a genial stimulant and rubefacient, and, not undeservedly, has long been held in high esteem, on the Continent, as a hair-cosmetic, acting by medicating the scalp.

Various modifications of Dupuytren's formula, chiefly with a view to its simplification, have been adopted, or proposed, by eminent Continental authorities:—

2. (M. Cap.) Take of

Beef-marrow . . . . . 2 ounces;
Extract of cantharides (alcoholic) 8 grains;

triturate them together in a warm mortar until combination be complete, then add of *huile à la rose*, with half its weight of *oil of bergamot*, in quantity sufficient to scent it.

3. (M. Guibourt.) Take of

Beef-marrow . . . } . . { of each,
Baume nerval . . } . . { 2 ounces;
Extract of cantharides (alcoholic), 12 grains;
(dissolved in)
Rectified spirit (hot; q.s.; say) . ½ fluid drachm;
Huile à la rose . . . . . 2 drachms;

as before.

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* This is a noted ointment in French pharmacy. The formula of the Paris "*Codex*" is:—*Expressed oil of mace*, and prepared *ox-marrow*, of each, 4 ounces (melted together); *oil of rosemary*, 2 drachms; *oil of cloves*, 1 drachm; *camphor*, 1 drachm; *balsam of tolu*, 2 drachms; (the last two dissolved in) *rectified spirit*, 4 fluid drachms; (and the whole stirred till cold).

Other formulæ, which are numerous, are, for the most part, similar to the preceding. In this country, the proportions commonly employed, are 3 to 6 grains of the *extract* to each ounce of pommade, veal-fat, or beef-marrow (often previously coloured), the mixture being effected either with or without the solution of the extract in alcohol; scent being added according to the taste of the manufacturer. For this purpose *balsam of Peru*, *expressed oil of mace*, and the *essential oils* of *cassia*, *nutmeg*, *origanum*, and *rosemary*, or mixtures of them, appear to be the favourites.

This pommade is used to prevent and remove baldness. To be useful, a little of it must be applied, with friction, at least once a day, for several weeks, and the head should be washed daily, or every other day, with soap-and-water.

PERUVIAN POMMADE.—Take of

Lard (good, washed) } { of each,
Beef-suet (clarified) . } . . { ½ ounce;
Balsam of Peru . . . . . ¼ „

mix, as before, add of

Oil of nutmeg . . . . . ½ fluid drachm;

and pour it into pots or dumpy wide-mouthed phials. Dr. Copland adds a little *oil of lavender*. In high repute as a hair-restorer.

IODURETTED POMMADE.—1. (Simple.) Take of

Iodine . . . . . ½ drachm;
Lard . . . . . ¼ pound;

rub the 'iodine' down in a glass or porcelain mortar, with a little of the 'lard' melted by a gentle heat; then add the rest (softened only by heat), and stir until the mixture is quite cold. Nothing metallic must touch it. ½ fluid drachm of *rectified spirit* may be advantageously rubbed with the iodine before adding the oil. Use, &c., same as "ioduretted oil" (which see).

2. (Compound.) Take of

Iodine . . . . . } { of each,
Iodide of potassium } . . { ½ drachm;
Rectified spirit . . . . . 1 fluid drachm;

rub them well together, then gradually add of

Lard . . . . . ¼ pound;

and mix thoroughly. Stronger than the last.

PHOSPHURETTED POMMADE.—Its preparation and uses are similar to those of "phosphuretted oil" already noticed, simple *pommade* or *fat* being used.

QUININE POMMADE; QUININE POMATUM; OINTMENT OF QUININE.—1. Take of

*Anhydrous quinine** (pure; in powder)	½ drachm;
Lard (melted)	2 ounces;

triturate them together in a hot porcelain or marble mortar until the former is wholly dissolved. When considerably cooled, add of

Oil of nutmeg . . . }	{ of each,
„ *lavender* (English) } . .	{ 12 drops.

Some persons dissolve the quinine in the least quantity of pure *anhydrous ether* or strong *liquor of ammonia*, and triturate the resulting solution with the fat, in the cold.

2. (Antonini.) Take of

Disulphate of quinine	1 drachm;
Alcohol	2 fluid drachms;
Sulphuric acid	10 drops;

dissolve, and triturate the solution with

Lard (pure, hard)	3 ounces.

Both are used to promote the growth of hair in laxness of the scalp, the former being the more active and scientific preparation. They are said to be also serviceable in nervous headache of an intermittent kind.†

SOUBEIRAN'S POMMADE.—Take of

Oil of almonds	½ ounce;
Disulphate of quinine	1 drachm;

triturate them together in a warm wedgwood-ware mortar until thoroughly united; then add of

Prepared beef-marrow	1½ ounce;

and continue the trituration until the mass is cold. Scent may be added. Recommended for strengthening and restoring the hair.‡

TAR POMMADE. — A short time since Dr. Dauvergne, in the "*Bulletin Général de Thérapeutique*," extolled, in unmeasured terms, the virtue of 'vegetable tar' in failing hair and baldness. His formula is—

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* This is obtained by carefully heating pure *quinine* (recently precipitated), in a capsule of glass or porcelain, by the heat of an oil or sand bath, until it assumes the appearance of a brownish resin, and then allowing it to cool out of contact with the air.

† *Vide* "Soubeiran's Pommade" (*infrà*).

‡ *Vide* "Quinine Pommade" (*antè*).

Lard	30 grammes;
Norwegian tar	3 „
*Butter of nutmegs**	2 „
Gum-benzoin	2 „
Fiovarenti balm	3 „
Baume de commander	3 „
Essence of patchouli	50 „
Musk	3 centigrammes;

mix. This formula appears unnecessary and absurdly complicated. I have no hesitation in stating that the substitution of 2 or 3 grammes of *English oil of lavender*, and 1 gramme of *essence of musk* or *essence royale*, for the last four articles, would disguise the smell of the tar quite as well, without impairing the efficacy of the preparation.

Juniper-tar ointment, scented, has long been in repute as a hair-restorer, and its active ingredient has the advantage of its empyreumatic odour being also slightly aromatic, and more easily concealed than that of ordinary tar. It may be prepared as follows:—

Take of

Juniper-tar †	¾ to 1 ounce;
Beef-suet (rendered)	7 ounces;
Balsam of Peru	2 drachms;
Oil of nutmeg	1½ „
„ *lavender* or *verbena*	½ „
Essence of musk (or *royale*)	½ fluid drachm;

mix by a gentle heat, adding the 'oils' and 'essence' last. A small quantity to be applied, with friction, once a day, the head being previously washed clean with soap-and-water. This is the "pommade de l'huile de cade, pour les cheveux," of the French. Both the above are also useful in 'ringworm' and some other skin diseases.

*** Other pommades for weak hair, baldness, &c., may be made by merely substituting *plain pommade* or *fat*, for 'oil' in the formulæ given under "Hair-Oils" (*antè*). The greater number of those advertised and vended in the shops, with this difference, have a similar constitution to the 'oils' noticed at pp. 450-5, 506-7.

The following 'pommades' are intended to 'dye' or gradually 'darken' the hair:—

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* That is, 'expressed oil of nutmeg,' commonly called 'oil' or 'butter of mace.'

† *Pyroligneous oil of juniper*, also called *huile de cade*.

POMMADE COLORER; POMMADE DYE. — Vide "Hair Dyes" (*infrà*).

POMMADE DE LA JEUNESSE; ONGUENT COSMÉTIQUE.—1. Take of

Simple pommade or *fat* . . . . 5 ounces;
Trisnitrate of bismuth (or the *sub-chloride*) . . . . . 3 to 5 drachms;

triturate them together in a warm mortar, until nearly cold, adding towards the end,

Oil of bergamot . . } . . { of each,
„ *lavender* . . } . . { 10 drops;
„ *rhodium* . . . . . 6 or 8 drops.

Its constant use darkens light vigorous hair, and is said ultimately even to turn it black.

2. (Quincey.) Take of

Spermaceti . . . . . ½ ounce;
Oil of almonds . . . . . 2 „
Trisnitrate of bismuth . . . . 1 drachm;
Oil of rhodium . . . . . 6 drops;

triturate them together in a warm mortar until cold. Both are used as hair-cosmetics, and also in itch and some other cutaneous eruptions.*

The following partake more of the nature of 'fixateur' and 'cement' than of the preparations before noticed:—

POMMADE COLLANTE.—1. Take of

Oil of almonds . . . . . 3 ounces;
White wax . . . . . 1 „

melt, and before it cools, stir in, of

Tincture of mastic (strongest) . 1 fluid ounce;
Oil of bergamot . . . . . 20 to 30 drops.

Used, like bandoline, to stiffen the hair, and to keep it in its place.

2. Take of

Burgundy-pitch (genuine) . . 3 ounces;
White wax . . . . . 2 „
Lard . . . . . 1 „

melt, as before, and add of

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* *Vide* page 265 (*antè*).

Tincture of benzoin . . . . . 1 fluid ounce;
Essence of bergamot . . . . . ½ fluid drachm.

Chiefly used to fasten false curls.

Pommade Épilatoire.—Vide "Depilatories" (*infrà*).

Cosmetiques.—Hard pomatum, either coloured or uncoloured, under the form of flattened sticks, is now commonly so called by the perfumers. The pigment, in the state of impalpable powder, is intimately mixed with the semi-liquid fat, and the whole is then poured into moulds of tin-foil. When perfectly cold, they are covered with ornamental paper 'sheaths.' They are used to colour the eyebrows, whiskers, moustache, and beard, as well as to keep the hair in its place. The application must be renewed daily, or oftener, as the 'cosmetique' is removed by the friction to which it is incidentally exposed, and perfectly so by soap-and-water. The habitual and extensive use of coloured cosmetiques is dirty and discreditable.*

Cosmetique Blanc.—1. Take of

Lard (good, hard) . . . . . 5 parts;
White wax (pure) . . . . . 2 „

melt them together, and otherwise proceed as noticed above.

2. See "Hard Pomatum" (*antè*).

Cosmetique Brun.—The preceding, coloured with any harmless brown pigment; as with levigated *umber* (raw and burnt), for "plain brown;" and levigated *terra di Sienna* or *Spanish brown* for "auburn" and "chestnut." A "golden brown," for very light hair, may be given by strongly impregnating the melted fat with *annotta*, and then adding a little *burnt terra di Sienna*.

Cosmetique Noir.—*Hard pomatum* (cosmetique blanc) coloured with 1-4th or 1-5th of its weight of the best levigated *ivory-black*. The way to ensure a perfect mixture of the pigments is to triturate them with a little of the melted fat in a warm marble-mortar, before adding them to the rest.

Hair Washes; Eaux pour les Cheveux.—*a*. To strengthen and improve the growth of the hair:—

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* *Vide* page 270 (*antè*).

1. Take of

Rosemary-tops . . . . . 2 ounces;
Boiling water . . . . . 1 pint;

infuse, in a tea-pot or covered jug, until cold, then express the liquor, and add to it, of

Rectified spirit . . . . . 1 fluid ounce;

or

Good Jamaica-rum . . . . . 2½ fluid ounces;*

and shake them well together.

2. Take of

Box-leaves . . . . . a small handful;
Boiling water . . . . . 1 pint;

infuse, as before, and add to the expressed liquor, or not, at will, of

Jamaica-rum . . . . . 2½ fluid ounces.

3. As the last, but substituting good *black-tea*, 1 ounce, for the box-leaves. These are all popular favourites.

4. ("Regenerative Glycerine Hair-wash.") Take of

Glycerine (Price's) . . . . . 1 ounce;
Eau de Cologne (strongest) . . ¼ pint;
Liquor of ammonia (·880-·882) . 1 fluid drachm;
Oil of origanum . . } . . { of each,
„ *rosemary* . . } . . { ½ fluid drachm;
Tincture of cantharides . . . 1 fluid ounce;

briskly agitate them together for 8 or 10 minutes, then add of

Camphor-julep (strongest) . . ½ pint;

and again well agitate. A few drops of *essence of musk*, or of *essence royale*, are often added. An excellent hair-lotion; and one that supersedes the necessity of using oil or pommade.

5. (Erasmus Wilson.) Take of

Eau de Cologne (strongest) . . 8 fluid ounces;
Tincture of cantharides . . . 1 „
Oil of lavender (English) } . . { of each,
„ *rosemary* . . } . . { ½ fluid drachm;

mix. More energetic than the preceding. It is improved by the addition of ½ fl. dr. of *oil of origanum*, or by its substitution for the 'oil of lavender;' but the omission of the latter renders it less odorous.

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* This quantity is popularly known as "half a quartern."

6. (Dr. Locock's "Lotion for the Hair.") Take of

Expressed oil of mace (nutmeg) . 1 ounce;
Olive-oil . . . . . ½ „

liquefy them together by trituration in a warm mortar. When cold, form the mixture into an emulsion, by trituration and brisk agitation, with

Eau de rose . . . . . ¼ pint;
Spirit of rosemary . . . . . 2½ fluid ounces;
Liquor of ammonia (·880-·882) . 1½ to 2 fluid drachms.

It must be briskly agitated before use. A popular advertised nostrum.

The preceding are used by well rubbing them into the 'partings' and hair, previously washed or brushed clean, so as to moisten the skin of the head, the hair being then at once combed and arranged whilst moist.

b.—To clean the partings, remove scurf, and promote the growth of the hair:—

1. ("Antipityrienne.") Take of

Sesquicarbonate of ammonia . . ½ ounce;
Spirit of rosemary . . . . . ¼ pint;
Rose or *elder-flower water* . . ¾ „

mix by agitation.

2. ("Balm of Colombia.") This is said to possess a similar composition to "American Shampoo-liquid;" but with the omission of the 'potash,' the quantity of 'carbonate of ammonia' doubled or trebled, and the addition of sufficient *scent* to disguise it.

3. ("Detergent Essence.") Take of

Narbonne-honey . . . . . 2 ounces;
Borax (powdered) . . . . . 1 „
Cochineal (bruised) . . . . . ¼ „
Camphor . . . . . 1 drachm;
Oil of rosemary . . . . . ½ fluid drachm;
(the last two dissolved in)
Rectified spirit . . . . . 2 fluid ounces;

mix, add of

Pure soft-water . . . . . ¾ pint;

and digest, with frequent agitation, for a week. Then, after a brisk final agitation, and repose for about ½ a minute, pour off the liquid from the dregs. The substitution of 1½ ounce of *glycerine* for the 'honey' is a great improvement. This and No. 1 are useful stimulating lotions, and are quite harmless.

4. ("Extrait Végétal;" "Vegetable Extract for the Hair.")—Take of

*Carbonate of potash** . . . . . 1 ounce;
Rosemary-water . . . . . 1 pint;
Burnt sugar (to colour) . . . q. s.;

agitate until solution is complete, then filter, add of

Essence of musk . . . . . 10 or 12 drops;

and again agitate. Very effective, but, owing to the quantity of potash in it, the hair and partings ought to be washed after its application. Its frequent use is *said* to turn brown hair on the 'red.' A similar article is commonly sold, and is much used by the hair-dressers.

5. ("Lime Juice and Glycerine for the Hair;" "Glycerinated Lime Juice;" &c.) Of the many articles recently vended in bottles under these, and similar names, the best are prepared as follows:—Take of

Lemon-juice or *lime-juice*† . . . ½ pint;
Rose-water (or *elder-flower water*) ¼ „
Rectified spirit, (added gradually) . . 2½ fluid ounces;

agitate them well together. After 24 hours' repose, decant or filter through calico or muslin, and further add, of

Glycerine (Price's) . . . . . 2½ ounces;
Oil of lemon (or *cedrat*) . . . ½ drachm.

Lastly, again agitate them together for some time. It should be somewhat milky, but quite free from any coarse floating matter, or sediment. It is much 'puffed' for its assumed power, which only exists in the label, of removing and preventing scurf, promoting the growth of hair, superseding the use of hair-oil, &c. In the commoner kinds, the 'spirit' is omitted and only 1 ounce of 'glycerine' used, the place of the portion of the latter omitted being supplied by *honey* or *sugar*, and the risk of fermentation prevented by the addition of a few drops of *oil of cloves*, or by previously exposing the lemon-juice to the *fumes of sulphur*. Sometimes, for the last purpose, even a few drops of *oil of vitriol*, or 10 or 12 grains of *corrosive sublimate* are added.

6. ("Shampoo Liquid;" "American Shampoo Liquid.")—Take of

Sesquicarbonate of ammonia } . . { of each,
Carbonate of potash . . } . . { 2 drachms;
Soft-water . . . . . ¼ pint;

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* *Salt of tartar.*

† It is a good plan to previously heat the juice, in glass or porcelain, to near the boiling point, as the preparation then keeps better.

dissolve, and add the solution to a mixture of

Tincture of cantharides . . . . 1½ fluid ounce;
Rectified spirit . . . . . ¼ pint;
Good rum . . . . . 1½ „

and agitate the whole well together, adding a little scent, or not, at will. This preparation, too, has been highly puffed for removing dandruff, preventing the hair falling off, &c. In using it, the hair is wetted with it, well rubbed so as to form a lather, and then either washed with cold or lukewarm water, or rubbed dry with a towel, and at once arranged with the brush and comb. A commoner kind, in which the 'rectified spirit' and one-third of the 'rum' is replaced by *water*, forms the "Shampoo Liquid" often used by the hairdressers, after cutting the hair.

The preceding, as well as the following lotions, or washes, should be shaken before use. They are usually applied by means of a small piece of sponge, or the palm of the hand, into which a little is poured.

c.—Drying Washes for Moist, Lax Hair:—1. Take of

Essential oil of almonds . . . 1 fluid drachm;
Oil of cassia . . . . . ½ „ „
Essence of musk . . . . . ½ „ „
Rectified spirit . . . . . 2½ „ ounces;

mix, and add gradually, with brisk agitation,

Distilled water . . . . . 16 ounces;
(in which has been dissolved)
Gum-arabic (finest) . . . . . 1 ounce.

The hair and scalp is slightly moistened with the liquid, and the hair at once arranged (without wiping), whilst still moist.

2. Take of

Bicarbonate of soda (powdered) } of each,
Biborate of soda (do.) . } ¼ ounce;
Eau de Cologne or *lavande* . . 1 fluid ounce;
Rectified spirit . . . . . 2 „
Tincture of cochineal . . . . ½ „
Distilled water . . . . . 16 „

mix, and agitate until solution is complete. Used as the last. Its constant daily use is said to turn the hair on the 'red.'

d.—Washes for Dry, Stubborn Hair.—The best and most effective of these consist of *glycerine* dissolved in any *fragrant distilled water*, as that of roses, or orange or elder flowers, in the proportion of 1 to

1½ ounce of the former, to 1 pint of the latter. Some of them also contain 15 to 20 grains of *salt of tartar* per pint.

e.—Washes for Failing Hair and Baldness.—Those of the shops mostly contain *tincture of cantharides* as their active ingredient. The following is a good formula:—

1. Take of

Tincture of cantharides . }	{ of each,
Jamaica-rum (strong; good) } .	{ 2½ fluid ounces;
Glycerine (Price's)	1 ounce;
Sesquicarbonate of ammonia (crushed)	2 drachms;
Oil of origanum . . . . }	{ of each,
„ *rosemary* . . . . } .	{ 15 drops;

mix, add of

Distilled water	9 ounces;

and agitate the whole well together. The skin of the head to be moistened and rubbed with it twice daily. It will keep the hair soft and moist like oil. *Liquor of ammonia* may be substituted for the 'sesquicarbonate.' It may be diversified by omitting the ammonia altogether, or by substituting ½ drachm of *oil of nutmeg* for the 'rosemary' and 'origanum.'

The following are in less frequent use, but have been highly extolled for their efficacy by certain writers:—

2. Take of

Iodide of potassium	2 drachms;
Rosemary-water	1 pint;

dissolve, and add a little *eau de Cologne* or *lavande* to scent it.

3. To the last, add of

Tincture of iodine	¼ fluid ounce.

4. Take of

Phosphuretted oil . }	{ of each,
Mucilage (thick) . . } . . .	{ 1 ounce;
Glycerine (Price's)	½ „
Distilled water	½ pint;

form them into an emulsion,* adding a few drops of *essence of roses* and of *musk*, to scent it.

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* *Vide* "Emulsions," pp. 400-1 (*antè*).

f.—To gradually Darken the Hair :—1. Take of

Sulphate of iron (green ; crushed)	1 drachm ;
Rectified spirit	1 fluid ounce ;
Oil of rosemary	10 or 12 drops ;
Pure soft-water	½ pint ;

agitate them together until solution and mixture are complete. Many persons substitute the strongest *old ale* for the 'water' ordered above.

2. Take of

Rust of iron	1 drachm ;
Old ale (strongest)	1 pint ;
Oil of rosemary	12 or 15 drops ;

put them into a bottle, very loosely cork it, agitate it daily for 10 or 12 days, and then, after repose, decant the clear portion for use.

3. ("Parisian.") Take of

Sulphate of iron (green) . . .	15 to 20 grains ;
Distilled verdigris	5 or 6 grains ;
White wine (good)	¼ pint ;
Eau de Cologne (to scent) . .	q. s. ;

mix. A favourite among the fashionable Parisians. The above washes will 'iron-mould' linen if they come in contact with it.

4. ("Pyrogallic Hair-wash.") *Pyrogallic Stain*, diluted with twice or thrice its weight of *pure water* and a little *spirit*.*

5. (La Forest's "Cosmetic Lotion.") The same as La Forest's "Liquid Hair-dye," either with or without dilution with one-half its volume, or an equal volume, of *white wine*. Will 'iron-mould' linen.†

In using the above liquids, the hair is thoroughly moistened with them, and, after a few minutes, lightly wiped with a towel. Lastly, the adjacent skin and partings are cleansed with a corner of the towel previously dipped in water, and are then wiped dry.‡

The following are also used as "Hair Washes :"—

Infusion of Cantharides.—Take of

Cantharides (powdered ; recent)	2 to 3 drachms ;
Boiling water	1 pint ;

infuse, with frequent agitation, in a covered vessel, for 2 hours.

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* *Vide* "Hair Dyes," page 495 (*infrà*).

† *Vide* "Hair Dyes," page 493 (*infrà*).

‡ *Vide* pp. 264-5 (*antè*).

When cold, pour off the liquor, press the residuum, and filter. A little *spirit of rosemary* or *thyme* may be added. Used as "Shampoo-Liquid;" also as a wash in baldness.

LOTION OF QUININE; QUININE HAIR-WASH.—Take of

Disulphate of quinine	1 drachm;
Rose-water	8 ounces;
Dilute sulphuric acid (sp. gr. 1·103)	15 drops;
Rectified spirit	2 ounces;

mix; then further add, of

Glycerine	¼ ounce;
Essence royale	5 or 6 drops;

and agitate until solution is complete. The next day decant or filter. A fashionable tonic wash in weak hair, the skin of the head being moistened with it once or twice daily.

SAPONACEOUS LOTION; VEGETABLE HAIR-WASH.—1. Take of

White soft-soap	1 ounce;
Soft-water	18 fluid ounces;

dissolve by heat. When cold, strain the solution (if necessary), and add of

Liquor of potassa	2 fluid drachms;
Rectified spirit	2 „ ounces;
Essence royale (or *ess.* of *musk*) .	10 drops;

and agitate the whole well together. Used chiefly to clean the partings of the hair, being afterwards rinsed off with water.

2. Take of

Salt of tartar	½ ounce;
Olive-oil	3 „
Mucilage (thick)	1 „
Rose-water (or *elder-flower water*)	¾ pint;

agitate them together until they form an emulsion; and again each time before use. As the last; also as an emollient cosmetic for the skin. Both are vended under various outré names.

CURLING FLUIDS.—1. Take of

Gum-arabic (finest white) . . .	1 ounce;
Moist sugar (good)	½ „
Pure water (hot)	¾ pint;

dissolve. To the solution, when cold, add of

Rectified spirit . . . . . 2 fluid ounces;
Corrosive sublimate (powdered) } of each,
Sal-ammoniac (do.) } 6 grains;

the last two being dissolved in the 'spirit' before admixture. Lastly, add enough *water* to make the whole measure 1 pint, with a little *esprit de rose*, *eau de Cologne*, or *eau de lavande*, to scent it. The hair is moistened with the fluid before putting it in papers or papillotes, or twisting it with the fingers.

2. Take of

Salt of tartar (dry) . . . . 1 drachm;
Cochineal (powdered) . . . . ½ „
Liquor of ammonia . } . . { of each,
Esprit de rose . . . } . . { 1 fluid drachm;
Glycerine . . . . . ¼ ounce;
Rectified spirit . . . . . 1½ fluid ounce;
Distilled water . . . . . 18 ounces;

digest, with agitation, for a week, and then decant or filter. The hair is moistened with it, and then loosely adjusted. The effect occurs as it dries. This is often labelled "Wild-rose Curling Fluid."

Sécretage Liquid; Permanent Curling Fluid.—Take of

Quicksilver . . . . . 1 drachm;
Aquafortis . . . . . 2 ounces;

dissolve. Before use, it is diluted with half its volume to an equal volume of water. It is '*poisonous*,' and, if used at all, it should only be after long intervals.*

Bandoline; Clysphitique, Eau Collante, Fixateur; Fixature; Gelée Cosmétique; &c. — Vegetable mucilage, usually combined with a little spirit, to preserve it, and with a little perfume, to render it more agreeable.

1. Take of

Carrageen, Irish, or *pearl moss* . (say) 3 drachms;

pick it to pieces, soak it in cold water for an hour or two, and then

* *Vide* pp. 259-60 (*antè*), for directions and cautions.

drain it, and press it quite dry in a clean napkin. Next dissolve it by gently boiling it in

Clean soft-water . . . . . (say) 1 pint;

strain the solution through muslin, and, when nearly cold, to the strained decoction (which should be ¾ pint), add a mixture of

Rectified spirit . . } . . { of each (say),
Eau de Cologne . . } . . { 1 fluid ounce;
Oil of cloves . . . . . 7 or 8 drops.

After mixing the whole thoroughly, keep it in a corked bottle, and in a cool place.

2. Take of

Quince-seed . . . . . 2 or 3 drachms;
Water . . . . . 1 pint;

and otherwise proceed as before.

3. Take of

Gum-arabic (clean; white) . . 2 ounces;
Rose-water . . . . . 6 „

dissolve, and add, of

Tincture of cochineal, or } . . { q. s., to colour;
Essence of roses (red) } . . {

together with a little *spirit*, if the product be intended to be kept long in hot weather.*

4. Take of

Gum-arabic . . . . . 3½ to 4 ounces;
Water . . . . . ½ pint;

dissolve, &c., as before, and gradually drop

Eau de Cologne or *Lavender-water*

into the clear strained liquid, until the cloudiness, at first occasioned, ceases to be removed by agitation. The next day decant the clear portion for use.

Bandoline is used by ladies, and by hairdressers, to stiffen and fix the hair in curl or place. It is applied either by moistening the fingers and passing the hair through them, or by means of a small piece of sponge. As a home-manufacture, a little *brandy* or *rum* is employed instead of the spirit, &c., ordered above; and any scent at hand, added at will; or when intended for present and ordinary use, both spirit and scent are often wholly omitted.

Bandoline may be coloured and scented at will, and is named accordingly. Thus the product of the third formula is often labelled

* 10 or 12 drops of *dilute sulphuric acid* are often substituted for spirit.

"Rose Bandoline," or "Wild-rose Bandoline;" and others, "Cowslip," "Jasmine," "Lavender," "Orange-flower," "Rose-geranium," &c., "Bandoline." *

HAIR DYES; ATRAPILATORIES; ATRAPILATORIA; TEINTES POUR LES CHEVEUX.—The numerous preparations vended, under different names, as 'hair-dyes,' have generally a basis of lead or silver, and possess a sameness of composition which scarcely occurs, to an equal extent, in any other class of cosmetics. A few, it is true, contain bismuth, crude pyrogallic acid, and certain astringent vegetable juices, as their active ingredients; but these are only occasionally met with in the shops. The following list embraces some of the best hair-dyes at present in use, as well as others met with in trade and puffed as invaluable secret preparations in advertisements, hand-bills, and labels:—

§ *a*.—LEAD DYES:—1. Take of

Litharge (pure; levigated) . . } equal
Fresh-slaked lime (dry) . . . . } parts;
Prepared chalk . . . . . }

mix thoroughly, pass the whole through a sieve, and keep the mixed powder from the air in a well-corked bottle. Powdered starch may be substituted for the chalk ordered above. This is the most harmless of the common dyes prepared of lime and litharge, and sold under the form of 'white powder,' in packets, in the shops. Much that is so sold contains double, and even triple, the above proportion of lime, and, when newly prepared, is so caustic as to seriously irritate the skin and, not infrequently, to act as a depilatory. A dye containing more than 2 parts of *lime* to 1 part of *litharge* is absolutely unsafe. The above is, at best, a clumsy preparation, for oxide of lead, under the form of litharge, and lime, only slowly and with difficulty react on each other, and enter into combination, under the influence of water; and as this can here occur only after the powder is mixed up for use, and applied, the time it must be kept in contact with the hair is unnecessarily and inconveniently lengthened.

The following formulæ are modifications of the preceding one:—

2. (Orfila's.) Take of

Litharge . . . . . 3 parts;
Quicklime . . . . . 2 „
Starch . . . . . 1 „

* *Vide* "Pommade Collante," page 472 (*antè*).

mix. This is *sold* as "Orfila's;" but the hair-dye recommended by Orfila is noticed below.

3. (Dr. Hanmann.) Take of

Litharge	1 part;
Quicklime	$6\frac{3}{4}$ „
Hair-powder (or *starch*) . . .	$3\frac{1}{2}$ „

(all in fine powder); mix, &c., as No. 1. Since the publication of this formula by Dr. Hanmann, it has been copied by almost every compiler, as one of the best; instead of which the product not merely fails as a hair-dye, but often damages the hair-bulbs, and, not infrequently, where applied for some time, acts more or less as a depilatory.

4. (Prof. Redwood.) Take of

Litharge	2 ounces;
Fresh-slaked lime	of each,
Powdered starch	1 ounce;

mix. For use, add of

Liquor of potassa	2 fluid drachms;
Water (to form a thick cream) .	q. s.;

and stir the whole briskly for some time. The proportions here are excellent; but, owing to the caustic nature of the liquor of potassa, it is advisable to wet the paste up about an hour before applying it, and to stir it frequently during the whole time.

5. (Dr. Ure.) *Litharge*, *fresh-slaked lime*, and *bicarbonate of potassa*, each in fine powder, in equal, or other proportions, according to the shade of colour desired. Recommended by Dr. Ure as one of the most harmless and best forms of employing lime and litharge.

The common mode of using the above hair-dyes is, to mix up the *powder* to the consistence of thin paste, or thick cream, with *warm water* (for "black"), or *milk* (for "brown"),* and then to apply the mixture freely to the clean and dry hair, by means of a small sponge or brush, or the fingers; observing to rub it well into the parts around the roots, and to bring it into thorough contact with all the hair intended to be dyed. The old plan was next to cover the part with a leaf of moistened cotton-wadding, or a few folds of brown-paper well-damped with hot water, and to allow the whole to remain

* Such is the common practice, and the instructions usually given in the labels; but, theoretically, hot water would be better in all cases.

in this state for 3 or 4 hours, or longer; the object being simply to prevent evaporation of the moisture. For the head, Dr. Hanmann recommends the use of an oil-skin cap, or a bladder, to be worn all night. The present and more convenient method is, to keep rubbing the paste about the hair with the brush or fingers, as long as may be required, occasionally adding a few drops of water to keep the whole moist. In this way the action of the dye is facilitated, and the operation concluded in a much shorter time. After this is effected, the powder is removed by rubbing it off with the fingers, and afterwards washing it out with warm soap-and-water. A little oil or pomatum is next applied to the dried hair, which is then arranged in its place with the brush and comb.

The chief objection to the above form of lead-dyes is, the long time they require to be in contact with the hair to effect the object in view. The following, also having 'lead' for their basis, act much more quickly, and are hence more manageable:—

6. Take of

Lime (slaked by exposure to damp air) . . . . . 2 parts;
Carbonate of lead (pure white-lead) . . . . . 1 „

mix thoroughly, pass the mixture through a gauze sieve, and at once bottle it and preserve it from the air. Used as the preceding, but acts in one-third or one-fourth the time. The shade depends chiefly on the length of its application. (Vide No. 11.)

7. (Chevallier.) Take of

Fresh-slaked lime . . . . . 5 drachms;
Water . . . . . 1½ ounce;

mix, strain through gauze, and pour the milk into a four-ounce bottle. Next take of

Sugar of lead . . . . . 5 drachms;
Water . . . . . 3 ounces;

dissolve; add to this solution

Dry-slaked lime . . . . . 1 drachm;

and agitate them well together for a few minutes. Wash the resulting precipitate with a little *distilled* or *soft water*, drain it, and add it to the 'milk of lime' in the 4-oz. bottle. Lastly, shake the whole well together, and again before use, if it be not at once applied. It must be kept well corked. As the last, but acts much more quickly.

8. (Delcroix's.) Take of

Acetate (sugar) *of lead*	2 ounces;
Prepared chalk	3 „
Quicklime	4 „

reduce each, separately, to impalpable powder, and then mix them thoroughly. This nostrum has a very large sale. It is intermediate in action between Nos. 6 and 7.

9. ("Poudre d'Italie.") Resembles No. 2 (antè).

10. (Orfila.) Take of

Sulphate of lead	4 parts;
Fresh-slaked lime (dry)	5 „
Water	30 „

boil them together for one hour, with frequent stirring; then collect the paste on a piece of calico, and drain off the excess of water, if any. Resembles No. 7 in the quickness of action, &c. The dry mixed powders may be preserved for any length of time in a well-stopped bottle.*

11. (Warren's.) Take of

Litharge	1 ounce;
White-lead (quite pure) . . .	2 „
Quicklime (in fine powder) . .	16 „

mix, as No. 6, which it for the most part resembles. "With milk," it is said "to dye the hair *brown;* with warm water, *black.*"

The next formula includes both lead and bismuth:—

12. Take of

Carbonate of lead †	1 ounce;
Litharge (pure; levigated) } .	{ of each,
Hydrated oxide of bismuth } .	{ ½ ounce;
Fresh-slaked lime	2 ounces;
Distilled or *soft water*	1 pint;

boil, with constant stirring, for 30 or 40 minutes. When cold, pour the whole into a wide-mouthed bottle, add of

Liquor of ammonia (·880–·882) . 2 fluid drachms;

put in the cork, and shake frequently for some hours. The next day pour off the liquid portion. The sediment, which forms the dye, must then be well stirred together, and again before use. It is to be

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* *Vide* formula No. 2 (*antè*).

† Not 'white-lead.'

applied for 8 to 10 minutes to produce an "auburn colour;" 15 minutes, for "chestnut;" 20 minutes, for "full brown;" and 30 minutes, or longer, for "deep brown" and "black." For the paler shades, it is to be washed off with water containing a little *common soda*.

13. ("Liquid Plumbic Dye.") Take of

Hydrated protoxide of lead . . ¼ ounce;
Liquor of potassa . . . . . 2 fluid ounces;

mix in a stoppered phial, and agitate it frequently for some days. It must be used more or less diluted, according to the object in view. By its skilful application, every shade, from a pale "sandy red" to "dark brown," may be produced; and these may be turned on the "golden brown," "auburn," and "chestnut," by subsequently moistening the hair with a weak solution of sulphuret of potassium or hydrosulphuret of ammonia.

Persons using hair-dyes containing preparations of lead should recollect that, although they do not stain the skin, like most of those that follow, they will permanently stain the nails, the same as they do the hair, the nails as well as the hair containing sulphur; also that unless the hair be absolutely clean and free from grease, these dyes will either not stain it at all, or only very slightly, and irregularly.

The daily use of a *leaden comb* will, in general, gradually darken vigorous hair rich in sulphur, and was once in high repute for the purpose. When the reverse is the case, its use may be persevered in, even for months, without any perceptible change of colour occurring. The continued use of a leaden comb is apt to produce premature baldness.*

§ *b*.—Silver Dyes:—The old forms of these were the three next following:—

1. Take of

Nitrate of silver (cryst.) . . . 1 drachm;
Distilled water . . . . . 1 ounce;

dissolve. Used undiluted, as noticed below, it dyes the hair "black;" diluted with an equal bulk of pure water, "deep brown" and "chestnut;" and with twice its bulk of water, "light brown" and "auburn;" all of which may be modified by the mode of using it. The colour it produces also depends on that of the hair to which it is applied.

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* On the modus operandi of 'hair-dyes' with a basis of lead, the shades they produce, &c., *vide* pp. 265-6, 268-9, &c. (*antè*).

2. Take of

Nitrate of silver (cryst.) . . . 1 to 1½ drachm;
Distilled water . . . . . 2 ounces;

dissolve. For "browns" of different shades, diluted, as before, according to the result desired. Hair moistened with either of the preceding gradually changes its colour by exposure to the light, and almost immediately on exposure to sunshine.

3. Take of

Nitrate of silver (cryst.) . . . 1 drachm;
Distilled water . . . . . 5 fluid drachms;

dissolve, and add, gradually, with agitation, of

Liquor of ammonia (·880–·882) . q. s.;

so that the precipitate that forms may be entirely redissolved, without any marked excess of ammonia. The liquid is then to be made up, with *distilled water*, either to measure 1 fl. oz. (for "black"), or 1½ fl. oz. (for "brown"), and used as before. Or—

Take of

Oxide of silver . . . . . 1 drachm;
Liquor of ammonia (·880-·882) . q. s.;

dissolve, and dilute the solution with 3 or 4 times its bulk of *distilled water*. Any marked excess of ammonia must be here also avoided, and if any precipitation occurs from the dilution, *liquor of ammonia* must be added, drop by drop, with agitation, until the newly-formed precipitate be redissolved. Hair moistened with either of these liquids gradually turns "brown" or "black" as the ammonia flies off, which it does rapidly on exposure to heat. Light also darkens it, as in the preceding cases. Stains of the skin produced by these dyes, when recent, may be removed in the way noticed below.

These liquid dyes are applied to the clean and dry hair, by means of a small-toothed comb, or a brush, in the way noticed below. As, however, the skin is sometimes accidently wetted with them, as well as the hair, and the discovery is frequently not made until permanent stains on it appear, the plan of adding a little colouring matter to them came gradually into use, so that the operator might at once perceive the parts touched by the liquid. For this purpose 3 or 4 grains, per ounce, of *nitrate of copper*, or 6 or 8 grains of *sap-green*, were dissolved in them; or a little *archil*, or finely pulverised *indigo*, *lamp-black*,* or *plumbago*, were added to them, commonly with (in the

* The *lamp-black*, for this purpose, must have been deprived of its oily nature by calcination, at a low heat, in a covered crucible.

case of the powders named) a few drops of clear thick mucilage. This mode of dyeing the hair has now, for the most part, been superseded by the use of a *solution* of *nitrate of silver* in conjunction with a *mordant*, as noticed next below :—

4. (With Two Liquids.) Take of

Sulphuret of potassium (good; recent)	3 drachms;
Distilled water	2 fluid ounces;
Liquor of potassa	1½ drachm;

agitate them together; after repose, decant the clear solution into a stoppered phial, and label the bottle either "Solution, No. 1," or "The Mordant."* This solution does not stain the skin. Next take of

Nitrate of silver (cryst.) . . .	1½ drachm;
Distilled water	2 fluid ounces;

dissolve, in a stoppered phial, and mark it either "Solution, No. 2," or "The Dye."† This solution stains the skin as well as the hair. These solutions are usually 'put up' in flat stoppered phials, and one of each, handsomely labelled, sold together in a case under various fanciful names, for which a most extravagant price is generally

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* This is an effective and easily prepared mordant. In some of the "mordants" sold in the shops, the liquor of potassa is omitted. Others of a nearly similar nature are recommended by different authorities. A good formula is :—Take of

Liquor of potassa	3 fluid drachms;
Hydrosulphuret of ammonia	7 ,, ,,
Distilled water	1 ,, ounce;

mix.

Professor Redwood recommends a "mordant" prepared thus :—Take of

Liquor of potassa . . . . } . . . { *Distilled water* . . . . }	equal parts;

mix, and pass *sulphuretted hydrogen* through the liquid to saturation. To each 5 parts of this solution, add 1 part of *liquor of potassa*, shake the two together, and keep them in a stoppered bottle.

Another good formula is—Take of

Hydrosulphuret of ammonia	7 fluid drachms;
Liquor of potassa	3 ,, ,,
Distilled water	1 ,, ounce;

mix, as before.

A mixture of equal parts of *bihydrosulphuret of ammonia* and *water* is also vended as a mordant; but only answers well when used *after* the silver-solution.

† This is the average strength of the best silver-dyes of the shops. The strongest, intended to dye the hair black, in a few cases, are made with 1 drachm of the nitrate to 1 fl. oz. of distilled water; weaker ones, for brown, with only ½ dr. of the nitrate to the fl. oz.

charged. They form the most convenient, effective, and expeditious hair-dye known, and the one now chiefly sold and used by the large perfumers and hairdressers, and in fashionable life.

The method of using these liquids is as follows:—

The hair (perfectly clean) is first thoroughly wetted, to the roots, with the 'Mordant,' or 'Solution, No. 1,' previously diluted with 4 or 5 times its bulk of *pure water*, or of the highest strength that can be used without irritating the skin, care being taken not to make the hair too wet, as that would interfere with the next operation. A small brush is commonly used for the purpose, and the action and absorption of the 'mordant' is promoted by the free application of the former for a short time. After the lapse of 2 or 3, to 5 minutes, the hair is thoroughly but lightly moistened with the 'dye,' or 'Solution, No. 2,' by means of a small-toothed comb, or what is more convenient, a half-worn tooth-brush, care being taken to avoid touching the skin as little as possible. Any stains left on the skin by accidental contact with the dye, are now removed by rubbing them with a piece of rag or sponge, or the corner of a napkin, wetted with a little of the 'mordant' previously diluted with water. After the lapse of a few minutes, the skin is sponged clean with a little warm water, and wiped dry, and the hair arranged with the comb, in the usual manner. It is better to avoid rubbing or washing the hair for a few hours. Sometimes the two operations are reversed, and the 'dye' applied first. The colour thus produced is more permanent, but stains on the skin are less easily removed. The whole process, if expertly managed, may be completed in from 10 to 15 minutes.*

The following are some of the 'named' and advertised hair-dyes of the shops, having a basis of oxide or nitrate of silver:—

5. ("Aqua Orientalis;" "Eau Orientale.") Take of

Grain-silver	2 drachms;
Steel-filings	4 „
Nitric acid (strong)	1 fluid ounce;

(previously diluted with—)

Distilled water	1½ „ „

digest until solution is complete, then add of

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* The stains produced on linen by nitrate of silver or marking-ink may be removed by soaking them in *liquor of ammonia*, or in a *solution of cyanide of potassium*, *chloride of lime* or *soda*, *hyposulphite of soda*, &c., without injuring the texture of the fabric. The only precaution necessary is that of well rinsing the part in clean warm water immediately after the operation.

Distilled water . . . . . 3½ fluid ounces;

and after repose decant the clear portion. Used as Nos. 1, 2, and 3.

6. ("Argentan Tincture.") Same as No. 1 (above), but made with *rose-water*, and coloured with 2 or 3 grains of *nitrate of copper*. Used as the last.

7. (Dr. Cattel.) Take of

Nitrate of silver . . . . . 5½ drachms;
Nitric acid . . . . . ½ fluid drachm;
Distilled water . . . . . ½ pint;

dissolve. To the solution add, of

Sap-green . . . . . 1½ drachm;*
Gum-arabic (finest) . . . . . 1 „

digest them together, with occasional agitation, for some days, and, after repose, decant the clear portion from the dregs. Used as No. 5.

8. ("Eau d'Afrique.") Two liquids, the same as No. 4. Other 'two-liquid' hair-dyes, vended under various fanciful names, are similar, the "mordant" being that of No. 4 (antè), or one or other of the two first mentioned in the 'Note,' and the 'dye,' a solution of nitrate of silver.

9. ("Eau d'Egypte.") Resembles "Argentan Tincture" (No. 6, antè).

10. ("Essence of Tyre;" "Eau de Mecque.") Resembles the last.

11. ("Grecian Water;" "Aqua Græca.") Resembles "Eau Orientale" (No. 5, antè).

12. (Hewlet's.) This resembles "Spencer's Hair Dye" (No. 15, infrà).

13. ("Instantaneous Hair Dye.") The white liquid, or "dye," is a *solution* of *nitrate of silver* (1 to 8, 12 or 16). This is applied first. It is followed by the "mordant" (diluted). The latter is usually a mixture of *hydrosulphuret of ammonia* and *distilled water*, in nearly equal proportions. The colour of the hair, unaltered by the silver solution, instantly turns "brown," or "black," according to the

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* This should be rubbed down with two or three spoonfuls of the *water* (retained back for the purpose), before adding it to the solution.

strength of the dye, when moistened with the hydrosulphuret. Any of the mordants named in No. 4 (antè) and 'Note,' will effect the same transformation. "Eau d'Afrique" and other 'two-liquid dyes' of the nature of No. 4, are also commonly labelled and vended as "Instantaneous Hair Dye."

14. ("Pommade Dye;" "Pommade Colorer.") The articles sold under this name usually consist of a *concentrated nitric* or *ammoniacal solution* of *silver* intimately blended, by trituration, with twice or thrice its weight of *lard* or *simple pommade*. They are unchemical and clumsy preparations, and yield most unsatisfactory results as hair-dyes. Indeed, to combine a solution of silver with greasy matter, for such a purpose, is manifestly absurd.*

15. (Spencer's.) Take of

Sap-green . . . . . 1 drachm (Troy);
Distilled water (hot) . . 2¼ ounces;

rub down the sap-green in a mortar, with the water, gradually added, put the mixture into a phial, and agitate occasionally until cold. To the cold liquid add, of

Nitric acid (sp. gr. 1·42) . . 6 or 8 drops;

again agitate briskly, and the next day decant the liquid from the dregs, or filter it. To the clear liquid add, of

Nitrate of silver . . . . . 2 drachms;

agitate until solution is complete, and, in a few days, cautiously decant the supernatant liquid from the dregs, if any. The product should measure fully 2 fl. oz. It is used as Nos. 1, 2, & 3 (antè). It is one of the best forms of one-liquid hair-dyes having a basis of nitrate of silver. This, as well as all others of its class, may be used with 'mordants,' as in No. 4.

16. ("Vegeto-mineral Hair-dye.") Resembles the last.

Persons using a solution of silver as hair-dye, should constantly keep in mind the fact that it stains the skin and linen, as well as the hair, and that such stains on the nails are particularly permanent. The only easy way of removing the last, is by gently scraping the nail with a sharp knife, or rubbing it with a little finely-powdered pumice-stone.†

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* Also see "Bismuth Dyes" (*infrà*).

† On the general application of 'hair-dyes' having a basis of *silver*, and on the shades they produce, &c., *vide* pp. 266-8 (*antè*).

§ *c.*—Bismuth Dyes:—These are chiefly used to gradually darken the hair, unless when combined with oxide of lead. The following is a popnlar favourite on the Continent:—

1. ("Pommade de la Jeunesse.")—Vide "Pommades" (antè).*

2. Vide § *a.*, 12 (antè).

§ *d.*—Iron Dyes:—These also are in comparatively little use in Western Europe, except as gradual darkeners of the hair, of which some examples are noticed under "Hair Washes." The following are of a mixed character:—

1. (La Forest's "Cosmetic Lotion for the Hair," or "Liquid Hair Dye.")—Take of

Chloride of sodium (common salt) . 1 drachm;
Green sulphate of iron . . . . . 2 „
Red French wine (good) . . . . 12 fluid ounces;

simmer them together for 2 or 3 minutes, in a covered, glazed pipkin, or a glass-flask; then add of

Verdigris (best; pure) . . . . 1 drachm.

In 2 or 3 minutes remove it from the fire, and further add, of

Aleppo-galls (powdered) . . . 2 drachms;

and agitate occasionally, still keeping the vessel covered. When the liquid has cooled considerably, put it into a bottle, add a table-spoonful of *French brandy*, put in the cork, and agitate it frequently for a few hours. In a day or two, decant the clear portion for use, and filter it, if necessary. The product—a strange olla-podrida, indeed nothing more than a rude species of weak cupro-ferric ink—is a popular nostrum on the Continent. In using it, the hair is moistened with the liquid, and kept so for a few minutes, when it is lightly wiped with a cloth; after which the 'partings,' and naked portions of the skin adjacent, are washed clean with water.

2. ("Turco Beard Dye.")—Various powders in single packets, and in double packets to be used together, are vended under this and like names in Europe and America. The true Turkish beard-dye into the composition of which iron enters, and the mode of using it, is, I believe, the following:—The powder, which, for convenience, we will call 'No. 1.,' consists of *Aleppo-galls*, mixed, or not, with a little *henna*.† The galls are prepared by first reducing them to

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* *Vide* pp. 264-5 (*antè*). † *Vide* pp. 86-7 (*ante*).

coarse powder, very slightly roasting or scorching this, in an earthen vessel, under cover, and then reducing it to impalpable powder, when the 'henna,' if any, is added. The powder, which we will call 'No. 2.,' is made by pulverising a species of *iron pyrites* found in the East, which, by long exposure to air and moisture, has suffered partial decomposition, and hence contains sulphate of iron. Both these powders are commonly mixed with starch, or some other amylaceous or simple vegetable powder, either previous to or at the time of using them. The first powder, made into a paste with *hot water*, is well rubbed on the beard (previously washed clean and dried), care being taken to avoid the adjacent skin as much as possible. In 10 or 12 minutes, during which time the 'paste' has been freely worked about on the hair, to promote its action, the whole is removed by means of a little *tepid water*, and the beard lightly dabbed with a soft towel, but not wiped absolutely dry. The skin of the face around the beard is then very carefully cleaned by rubbing it with a small piece of sponge, or the corner of a napkin, and soap-and-water, and is then wiped dry. After the lapse of a few hours, but generally the next day, a portion of the second powder is made into a paste with warm water, and then applied in the same way as the former one. Two or even three applications of the first paste are sometimes made, at intervals of a few hours, or on consecutive days, before the application of the second. In many cases the whole process is performed at one sitting, particularly after leaving the bath, at which time the beard is most susceptible of the action of dyes. The result is a deep-brown colour approaching black, or a deep black, according to the quantity of dye employed and the length and skill of its application. The tone or shade of colour thus produced, is rich and natural, without the use of 'henna,' when the hair operated on is of a deep, warm brown; when otherwise, 'henna' is required. Sometimes the henna is separately applied either before, or after, the above operations. In this way most of the fine black beards, of an even tone throughout, which are seen at Constantinople, and other large cities of the East, are said to be produced.*

§ *e*.—Vegetable Dyes:—Several preparations of which the tinctorial basis is purely mineral, and particularly those containing nitrate of silver, are often thus labelled and advertised by the conscientious

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* On the action of *iron solutions*, &c., on the hair, *vide* pp. 264-5 (*ante*).

manufacturers or venders. The following deserve the name, being purely vegetable:—

1. ("Anacardium Hair Dye;" "Cashew Dye.")—The *fluid* contained between the 'kernel' and 'shell' of the *cashew-nut*, or *fruit* of "anacardium occidentale." Every shade of "brown" up to "black," rich in tone, and indelible, may be given by it.

2. ("Pyrogallic Hair Dye;" "Pyrogallic Stain.") Take of

*Pyrogallic acid** . . . . . ¼ ounce;
Distilled water (hot) . . . . . 1½ „

dissolve, and, when the solution has cooled, gradually add of

Rectified spirit . . . . . ½ fluid ounce.

It may be made a little stronger or weaker, at will.

The "Pyrogallic Stain" of the shops is commonly made by the dry distillation of *Aleppo-galls* (coarsely powdered) in a retort with a short wide neck, dissolving the 'solid acid,' which sublimes, in a little hot water, and after mixing this solution with the 'acid-liquor' which also passes over, adding a little *rectified spirit*. The 'oil' floating on the surface is then skimmed off, or otherwise separated, and the liquid either decanted or filtered.†

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* The brown or crude acid will do for this purpose, if the pure be not at hand. Pyrogallic acid may be prepared thus:—

1. By distilling either *gallic acid* or *tannic acid*, per se, by the heat of an oil-bath steadily maintained at a temperature of about 420° Fahr., as long as vapour rises and condenses in a crystalline form. Pure.

2. By a like dry distillation of the *dry aqueous extract of Aleppo* or *Chinese nut-galls*. The product is fully 10 per cent. of the weight of the extract employed, and is nearly pure. The apparatus, in each of the above cases, should be either a glass-retort with a short wide neck, and a receiver, kept well cooled, or a cylindrical pot of porcelain or cast-iron, tied over with blotting-paper and surmounted with a 'cone' or 'cap' formed of cartridge-paper, to receive the fumes and for them to condense in, similar to that employed in distilling benzoic acid from gum-benzoin, and known as "Mohr's Apparatus." With the last, a sand-bath may be used as the source of heat, so long as the upper part of the pot and 'cap' or 'head' be well sheltered from its influence.

3. By heating *Aleppo* or *Chinese galls* (coarsely powdered) in a somewhat shallow dish or pot covered with thin filtering paper pasted to its edges, or in a shallow wide-bottomed retort, either being connected with a well-cooled receiver. Dr. Ure says that the so-called "Chinese galls," treated in this way, furnish "a very concentrated solution of pyrogallic acid, which, evaporated on the water-bath, yields of brown (crude) crystalline pyrogallic acid nearly 15 p. c. (?) of the weight of the galls operated on."

If, in the above processes, the heat rises much higher than 420°, the product will consist chiefly of metagallic acid, instead of pyrogallic acid.

† *Vide* page 268 (*antè*).

3. ("Walnut Dye.")—The simplest form is the *expressed juice* of the *bark* or *shell* of *green walnuts*. This is the venerable hair-dye of Paulus Ægineta. To preserve this juice, a little *rectified spirit* is commonly added to it, with a few *bruised cloves*, and the whole digested together, with occasional agitation, for a week or fortnight, when the clear portion is decanted, and, if necessary, filtered. Sometimes a little *common-salt* is added with the same intention. It should be kept in a cool place.

A German nostrum with the somewhat unattractive name, to a plain Englishman, of "Tinctur zum Schwarzfärben der Haare" on the label, and professedly possessing the most marvellous tinctorial properties, is a *strong tincture* of the *fresh shells* of *green walnuts*, scented with *oil of lavender*.

The above 'vegetable hair-dyes' are less extensively used in England than abroad. Similar vegetable preparations, and pastes formed of *henna* and *indigo-leaves*, are the common hair-dyes of the East. Persons using them should recollect that they stain the skin, as well as the hair, if they remain for more than a second or two in contact with it.*

§ *f*.—Animal Dyes:—The only one of this class worth noticing here is the *ink* or *black fluid* secreted by "sepia officinalis" (Linn.) and several other species of cuttle-fish, and found in what is popularly called the "ink-bags" of the fish. It is usually employed fresh in the parts where this mollusc is found. It may be preserved by the addition of *sugar*, or a *little salt* or *spirit*; but it does not keep well. An article introduced a few years since, under the name of "Sepia Hair Dye," is a strong solution of *sepia* in a mixture of about equal parts of *liquor of potassa* and *water*, with the addition of a little *spirit*, and scented with *essence of musk*. The hair is ordered to be wetted with the liquid, and, in the course of 12 or 15 minutes afterwards, re-wetted with lemon-juice or vinegar. This dye has some good qualities besides giving a fine "brown-colour," but it is now scarcely heard of.

By means of the 'dyes' in the preceding sections, black, and every shade of brown, may be given to the hair.

§ *g*.—Red, Auburn, Golden Brown, &c.—The rage which has

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* *Vide* page 268 (*antè*).

recently existed for hair of these colours, in the fashionable world, has led to the introduction of various processes, washes, and dyes, to effect this "darling object of a modern belle's ambition." Rufous-haired damsels, who were wont formerly to conceal, as much as possible, the crinal appendage of their heads, to save their ears the pain of being saluted with the epithet "carroty" applied to it by the rude and vulgar, now display it, with ostentatious pride, to the envy of their dark-haired sisters. Indeed, such is the estimation in which hair of this kind has been held, for the last two or three years, that several pounds are said to have been often given in exchange for a single crop of it, to females who possess it in luxuriance, in order to its reappearance under the form of an artificial coiffure—we dare not say 'wig,'—or as a 'chignon,' on the head of some lady of the haut ton.*

The common method by which it is attempted to turn brown and dark hair on the 'red' is by frequently washing it with *strongly alkalized water*, as noticed under "Hair Washes." This plan seldom perfectly succeeds; and the number of failures are even more numerous than the partial successes. One thing, however, which is not intended, it constantly effects, and that is, the gradual impoverishment of the hair; and this, in some cases, particularly with weak hair, to such a degree that it soon begins to fall off, and every application of the brush and comb removes a portion of it. Not infrequently, the 'partings' widen, and the crown becomes daily more thinly covered, until partial baldness ensues. All preparations containing any notable quantity of alkali, even the stronger soaps, exercise a solvent action on living human-hair, and deteriorate the hair-bulbs. Even rather weak solutions of alkalies in the caustic state dissolve human hair, and convert it into a species of soap.

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* "Not many years since, it was considered so great a misfortune to have red, or even auburn hair, that all sorts of expedients were adopted to change the unfashionable locks,—artists were laughed at for depicting tawny tresses; now, many coiffeurs thrive on making dark hair auburn, and even, it is whispered, as the strangest freak of all, in turning that which was auburn to a brighter hue. It is true that the demand for rubious *chignons* far exceeds the supply of Nature, and that one sees very few of those 'hideous excrescences' which go so low in the scale as brown. Was it a French or an English 'Anonyma' who set the stupid fashion of wearing ugly bunches of false hair at the back of the head?—a fashion, be it said, which is far more remote from taste than even that of wearing crinoline—now happily so vulgar, and only less irrational than the same, inasmuch as it is tolerably free from danger; nobody need burn herself and others by means of a *chignon*."—"*Athenæum*," Nov., 1865.

A more certain method is the use of 'dyes,' among which may be named the following:—

Red.—The prince of red hair-dyes, and the one always used in the East, is *alkanna* or *henna*, and its preparations. They are little employed in Western Europe simply on account of the difficulty of obtaining them.

Most of the common dyes sold for the purpose in the shops, are essentially *plumbite of lime* with an excess of *lime*, such as are noticed under "Lead Dyes" (antè). These, when not applied too long, give a reddish tinge to hair not too dark to receive it; but the colour is not an agreeable one when pale, but is improved by the application of oil or pommade. The liquid lead-dyes are also used.

A strong *infusion of safflowers*, or a *solution of pure rouge*, in a *weak solution of crystallized carbonate of soda*, gives a "bright red," like henna, or a "reddish yellow," according to its strength, if followed, when dry, by a 'mordant' of *lemon-juice* or *vinegar* diluted with one-half to an equal bulk of *water*.

An *acidulated solution* of a *salt of antimony*,* followed by a weak 'mordant' of *neutral hydrosulphuret of ammonia* or the *bisulphuret*, carefully avoiding excess, gives a "red turning on the orange," which tones well on light-brown hair.

A *solution* of *sulphantimoniate of potassa* (Schlippe's salt) with a mordant of *water slightly acidulated* with *sulphuric acid*, gives a "bright orange-red" or "golden-red colour."

Golden Yellow.—A *solution of bichloride of tin* (sufficiently diluted), followed by a 'mordant' of *hydrosulphuret of ammonia*, gives a rich "golden-yellow tint" to very light hair, and a "golden-brown" to darker hair, owing to the formation of aurum musivum, mosaic gold, or bisulphuret of tin.

A *solution of acetate* or *nitrate of lead*, followed by a 'mordant' of *yellow chromate of potash*, gives a brilliant rich "golden yellow." If wanted 'warmer' or 'deeper toned,' a few drops of *solution of diacetate of lead* (Goulard's extract) should be added to the acetate-solution.

A *solution* of pure *annotta* obtained by boiling it in *water* slightly alkalized with *carbonate of soda*, or with *salt of tartar*, gives a "golden yellow" or "flame-yellow," according to its strength, to very pale hair, and corresponding tones to darker hair. A previous

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* A *solution* of *potassio-tartrate of antimony* (tartar emetic; 1 to 16), acidulated with a little *tartaric*, *citric*, or *acetic acid*, may be used.

'mordant' of *alum-water* 'deepens' it; and a subsequent washing with *water soured* with *lemon-juice* or *vinegar*, 'reddens' it, or turns it on the "orange."

A *solution* of a *neutral salt of iron* (sulphate, acetate, or chloride), followed by a *weak solution* of *carbonate of soda* or *salt of tartar*, or *lime-water*, gives a warm "yellow" or "nankeen-colour," which when deep turns on the "red." In the latter case it is apt to assume a sandy shade on very light hair.

Pure *orpiment* (tersulphuret or golden sulphuret of arsenic) dissolved in *liquor of ammonia* (diluted), imparts a gorgeous "golden yellow" to white, flaxen, and very light hair, as the ammonia volatilizes, which it does quickly; but, owing to its extremely poisonous nature, it should *never be applied to living hair*, although it is sometimes foolishly thus employed. It is now extensively used for false hair, particularly curls and chignons; and there is probably some truth in the rumour, that certain perfumers and hair-dressers have applied it, and sold it for application, to the living head.* Warmth, and a current of air, facilitates the volatilization of the ammonia. Its application to living hair would necessitate sitting in a current of air, with the face towards it, to prevent annoyance from the ammoniacal fumes. The same applies to hpdrosulphuret of ammonia when used as a hair-mordant. It would also be imperative that the skin of the head be not wetted with the solution, and that the hair and head be thoroughly washed with abundance of tepid water, as soon as the requisite colour be attained. Even then this application of orpiment *would not be* absolutely *safe*, nor can it be rendered so by any ordinary precautions. False hair, dyed in this manner, should also be well washed and dried before being made up or dressed for sale or wear. That known as "golden orpiment," imported from Persia, is the best; after it, the pure artificial *tersulphuret of arsenic*. The factitious orpiment, or king's yellow, of the shops, is a horribly poisonous compound, often containing 80 to 90 per cent. of uncombined white arsenic, besides the arsenic in a state of combination; whereas true orpiment only contains 61 p. c. of arsenic, and that in the state of metal combined with sulphur. The latter is very poisonous, but very much less so than the former. Hot irons gradually remove the colour imparted by it, by causing its volatilization.

Golden Brown.—Brown hair may have a "golden tone" imparted to

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* If any serious consequences followed, such parties would not only be liable to action for damages, but, in a fatal case, also indictable for manslaughter.

it by the judicious application of any of the yellow dyes already noticed. Light hair may be previously dyed of a warm light brown before applying the latter.

A *solution of sulphate of copper* (blue vitriol), followed by a *solution of ferrocyanide of potassium*, gives an extremely rich "golden brown" or "bronze-brown" to light hair, when the process is expertly managed.

The application of the above dyes, so as to produce appropriate and agreeable shades, requires more consideration and experience than that of the 'brown' and 'black dyes' of the preceding sections. The complexion, and the natural colour of the hair, of the person operated on, with other attendant circumstances, must be carefully considered beforehand, and allowed for. Without all these points be attended to, the party may, on looking in his mirror, to his, or her surprise (for it is generally a lady), suddenly find herself strangely altered in appearance, and probably for the worse. To meet and to remove the unpleasantness of such a predicament, the party would do well to be previously provided with one or other of the simple quick-acting brown or black dyes, previously noticed; when she will be able to 'tone down' the imperfection into a shade more appropriate to her complexion, and less conspicuous.

Sometimes ladies, before applying these dyes, endeavour to lower the colour of their hair, when dark, either by the use of alkaline washes, or by bleachers. The attempt is absurd, since no material change can be effected in living hair, except by the use of liquids highly detrimental to it and to the hair-bulbs, and by incurring considerable risk and inconvenience.*

Not long since it was a common practice on the Continent, and, I believe still is so, for ladies of the beau monde and demi monde, with dark hair, to effect that change of colour with *coloured hair-powder*, which they could not do by means of hair-dyes. This was the revival of the fashion of a bye-gone age. This practice has not yet obtained any extensive adoption in these realms.

Observe.—Hair-dyes, of all kinds, will only act effectively and satisfactorily on perfectly clean hair. The presence of the slightest contamination of oily or greasy matter will arrest or greatly lessen their action, and render it unequal in different parts. Hence the hair, in all cases, should be first thoroughly washed with warm soap-

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* *Vide* pp. 270-1 (*antè*).

and-water, then rinsed with tepid water, and lastly wiped dry, previous to their application. A few grains of *soda* or of *salt of tartar*, added to the first water, will facilitate its detergent action.*

HAIR-PAINTS. See "Cosmetiques" and "Pommades;" also page 270 (antè).

HAIR-POWDER; POUDRE POUR LES CHEVEUX.—Ordinary hair-powder is *starch* reduced to very fine powder, then scented, and, lastly, rubbed through a fine gauze-sieve. Formerly, wheat-starch was exclusively used for the purpose; but, of late years, potato-farina, on account of its superior whiteness and lustre, has superseded wheat-starch. In its simple form, without scent or any other addition, it constitutes the "Plain Hair-powder" of the shops. In other cases, it is usually distinguished by the name of the substance added to perfume it. Thus, we have—

Maréchale Hair-powder,
Millefleur ,,
Rose ,,
Violet ,,
&c., &c.

The finer class of hair-powders of the Continental perfumers, having a basis as above, are scented in the way noticed under "Poudre de Chipre." Another class, chiefly confined to ladies and persons of rank, are the "poudres de chipre odorantes" noticed elsewhere.

Among the 'Jeames' and 'cochers' of the higher ranks, the contents of the 'flour-dredger' of the kitchen, are said to be often misappropriated as hair-powder. A similar use of flour for the wigs of certain officials, is said to be also common.

The "coloured hair-powders" that have been recently worn by ladies of the haut ton, are merely the basis of the ordinary white powder tinged with cold tinctorial liquids, or with any harmless pigment, before being sifted and scented.†

DEPILATORIES; ÉPILATOIRES.—These are intended to remove hair and to prevent its future growth.‡—

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* On the whole subject of "hair-dyes" and "hair-dying," *vide* pp. 261-272 (*antè*).

† *Vide* pp. 271, 73-4, &c.

‡ *Vide* pp. 281-2 (*antè*).

§ *a.* Chemical:—1. Take of

Sulphuret of calcium (recent)	}	{ equal
Quicklime	}	{ parts;

reduce them separately to fine powder, mix, and keep the mixture in a well-stopped bottle. Very effective and as safe as any.

2. A *strong solution* of *sulphuret of barium*, made into a paste, as wanted, with *powdered starch*, and at once applied. Prof. Redwood says this is "the best and safest depilatory."

3. (Boudet's "Depilatory.") Take of

Hydrosulphuret of sodium (crystallized) .	3 parts;
Quicklime	10 „
Starch	11 „

mix, &c., as No. 1. Very effective. It is ordered "not to be applied for longer than two to four minutes."

4. (Cazenave's "Pommade Épilatoire.") Take of

Quicklime	1 part;
Carbonate of soda	2 „
Lard	8 „

rub them together so as to form an ointment.

5. ("Chinese Depilatory.") Take of

Sulphuret of potassium .	}	{ of each,
Pearlash (dry) . . .	}	{ 1 part;
Quicklime		8 parts;

mix. Effective and safe, if properly used.

6. (Colley's "Depilatory.") Take of

Nitre	}	{ of each,
Sulphur	}	{ 1 part;
Orpiment		3 parts;
Quicklime		8 „
*Soap-lye** (strong)		32 „

boil them together, in an iron-vessel to the consistence of cream, and keep it in a stopped green-glass bottle.

7. (Delcroix's "Poudre Subtile.") Take of

Orpiment	1 ounce;
Quicklime	10 „
Starch	13 „

mix, &c., as No. 1.

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* The *caustic alkaline lye* left from making soap. *Liquor of potassa* may be substituted for it.

8. (Messrs. Mahon's "Depilatory;" "Depilatory Ointment.") The same as No. 4.

9. ("Oriental Rusma.") See "Rusma" (infrà).

10. ("Pâte Épilatoire.") To No. 6 add of

Powdered orris-root . . . . . 3 parts;

or enough to form it into a paste.

11. ("Dep latory Paste.") Take of

Fresh-slaked lime . . . . . 2 parts;
Water . . . . . 3 „

mix, pass a stream of *sulphuretted hydrogen* into the 'paste' as long as it continues to absorb the gas, and then at once put it into stoppered bottles. It is said to be so powerful, that a layer a line in thickness will denude any portion of the scalp or beard in less than 3 minutes. Its use, therefore, requires the utmost care.

12. (Plenck's "Pasta Epilatoria.") Take of

Orpiment . . . . . 1 part;
Quicklime . . . . . } . . { of each,
Starch . . . . . } . . { 12 parts;

mix, &c., as No. 1.

13. (Rayer's "Depilatory.") Take of

Charcoal . . . . . 1 part;
Quicklime . . . . . 8 „
Salt of tartar (dry) . . . . . 16 „

mix, &c. as No. 1.

14. ("Roseate Depilatory.") No. 5 coloured with *rose-pink* or *light-red.**

15. ("Rusma;" "Oriental Rusma;" "Turkish do.") The true "rusma" is composed of an *arsenical iron-pyrites*, found in Galatia, mixed with half its weight of *quicklime*, both being first reduced to fine powder. In this state it is preserved by the ladies of Turkey, and of other parts of the East, to make their '*psilothrons*' or compounds to remove superfluous hair. Before use it is either boiled or mixed with a strong alkaline lye, as noticed immediately below. A spurious rusma is, however, made and extensively used in the East, by the following formulæ:—

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* That is, *calcined yellow ochre.*

Take of

Orpiment	1 part;
Quicklime	9 „

mix, and bottle.

Or, as a preparation ready for use:—

Quicklime	3 ounces;
Orpiment	½ „
*Strong soap-lye**	¾ pint;

boil, in a clean iron-vessel, until a feather dipped in it almost instantly loses its flue. Very caustic and certain. The substances sold in this country under the name are prepared by one or other of the last two formulæ.

16. ("Savon Épilatoire;" "Depilatory Soap.") Take of

Orpiment	1 part;
Quicklime	8 „

mix. It is made into a paste with an equal weight of *soft-soap*, and a few drops of *water*, immediately before applying it.

17. (Spolasco's "Depilatory.") Same as No. 1.

§ *b*. Mechanical.—See *page* 381.

In use, the above 'chemical depilatories' which are in the state of powder, are made into a paste with warm water,† and immediately applied to the part, previously shaved close, a little *starch* being generally added to those which do not contain it, in order to render the paste more manageable. Sometimes *soap-lye* is used, instead of water, to form the paste. Another mode of application is to make the paste rather thick, spread it on a piece of strong paper, and apply it like a plaster. In from 5 to 10 or 15 minutes, or *sooner* if *much smarting occurs*, the paste should be washed off with *warm water*, and a little *cold-cream* or any *simple ointment*, applied to the part. The liquid depilatories are usually thickened with a little starch-powder, before application. Both classes require caution in their use. They should be applied to only a small surface at a time, and great care should be taken to prevent them extending to the adjacent parts. They lose their properties unless kept entirely excluded from the air; and no liquid must be added to the dry ones until just before their application, and then no more should be mixed than is required for immediate use.

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* *Vide* Note (*), page 502.

† A bone or wooden knife should be used for the purpose.

The *inconvenience*, and even *danger*, often attending the use of depilatories, have been pointed out in a previous Chapter.* They are all of them highly corrosive; and those containing orpiment (tersulphuret of arsenic) are, in addition, highly *poisonous*.

Baldness† (Remedies for, &c.).—Baldness, actual, partial, and impending, has been briefly treated of at pages 272-8 (antè), and various formulæ, &c., in connection with it, have been already given in the present Chapter. The following remarks are in extension of previous ones, and are chiefly intended to facilitate the safe and effective employment of the principal remedies already referred to, as well as other and more recent ones.

Cantharides; Spanish Flies.—This substance, the one most generally relied on and in the highest popular favour, may be employed to medicate 'oils,' 'pommades,' and 'lotions,' either directly or by means of one or other of its preparations. The commonest, and perhaps the most convenient and easily prepared, cosmetic of the kind, is a mixture of equal parts of *tincture of cantharides* and *olive-oil* or *almond-oil*, simply agitated together, and again before use. But this, owing to the little cantharides in the officinal tincture,‡ is often much too weak to be serviceable in actual baldness, or where there is a strong tendency to become so. In such cases, the proportion of the tincture may, in general, be safely doubled, or even tripled, according to the degree of sensibility possessed by the scalp.

A more effective and cleanly liquid preparation may be made by substituting *proof-spirit* (or *good rum*) for the 'oil,' and adding 1 to 1½ drachm of *glycerine* (Price's) to each ounce of the mixture, a corresponding increase being made in the proportion of the *tincture*, to compensate for this addition. This preparation imparts equal moist-

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‡ *Vide* pp. 281-2.

† *Calvitie, Chauveté*, Fr.; *Calvitas, Calvities* (—vish'-e-eze), *Calvitium* (—vish'-e-um), L.

‡ This tincture is prepared of *cantharides* (in coarse powder), ½ ounce; *proof spirit*, 1 pint; macerated together for 7 days, with agitation, and then strained, with expression. In the Edin. Ph. and the new Br. Ph., it is ordered to be prepared by 'displacement' or 'percolation.' The proportions here, are 1 to 80. A better tincture for cosmetic purposes would be made of 1 to 30 or 32, and used in equivalent proportions. In purchasing 'tincture of cantharides' care must be taken to avoid that prepared with 'methylated spirit,' or with what is called 'finish,' as the first exercises a very depressing influence on the scalp, and the gum-mastic (though little) in the second, unites with the soluble portion of the 'fly,' and renders it inert.

ness and gloss to the hair, as the former one, and is much more genial in its action on the scalp. *Distilled water*, or *rosemary water*, is often substituted for 'proof spirit' in the last formula. A still more active preparation is made of *tincture of cantharides* and *glycerine* only, as above.

The preparations next in order as to common use, are made by digesting *coarsely powdered cantharides* in *simple oil* or *fat*, at a gentle heat, as noticed antè. Of this nature are the "cantharidized oils" and "pommades" of the perfumers and druggists, and nearly all the advertised nostrums for baldness. The proportions may be 1 to 60 or 70 in ordinary cases; increased, in others, to 1 to 45, or even 1 to 30 or 32, according to the sensibility of the scalp, and other circumstances connected with their use.

More elegant preparations are made by the addition of the *alcoholic extract of cantharides*, the *ethereal extract*, and *cantharidine*, to *simple oil* or *pommade*. The proportion of the first may be 3 to 6 grains per ounce; of the second, 2 to 4 or 5 grs.; of the third, 1 to 2, or 2½ grs.; the strength being proportioned to the condition of the scalp, as before mentioned. The common practice, and the plan adopted by Dupuytren and Guibourt, is to dissolve the 'first' in a little *rectified spirit*, before adding it to the oil or fat. The 'second' being soluble in *warm oil* and *fat*, may be at once dissolved in them; but some persons prefer to dissolve it in a small quantity of pure *ether* before adding it to them. The 'third,' if pure, is freely soluble in *oil* and *fat*, and in *ether*, and may be added in either of the last-named ways. To ensure perfect solution and admixture of these active substances with the *oil* or *fat*, the most certain way is to patiently triturate them with a portion of the oil or liquefied fat, gradually added, in a slightly warmed wedgwood-ware mortar; and, after solution is complete, to add the remainder of the fat, and to continue the trituration until the whole is cold; or, in the case of oil, pour the solution into a phial or other bottle, and to agitate it until cold.

A little *oil of lavender*, *otto of roses*, or other scent, may be added to the above preparations, but do not appear to improve their action as hair-cosmetics, but rather to deteriorate them. The only addition of the kind that can be made without apparently lessening their activity, is that of 3 or 4 drops of *essence of musk*, or *essence royale*, per ounce. Some persons, with the intention of increasing their efficacy, add a little *oil of origanum* or of *rosemary*,* or of a mixture of them†; but the addition is of doubtful advantage.

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* 15 to 20 drops of either.

† 20 to 30 drops of the mixed oils.

After preparations of cantharides, in popular favour and use, come "oils" and "pommades," and "washes," strongly scented with *oil of rosemary, oil of origanum* or *thyme, essential oil of nutmeg*, or a mixture of them. The proportion of these *oils* may be from ¼ to ½ drachm per ounce, or even more. The addition of a little *oil of lavender* or *oil of verbena*, or of some other strong-scented oil, is also commonly made, to render them more agreeable. These preparations are better adapted to cases of weak and failing hair than to actual baldness.

"Washes" of a corresponding character to the above oils and pommades, are made in the way noticed in a subsequent part of this Chapter. Except those containing *ammonia* or some preparation of *cantharides*, they possess little efficacy in baldness.

Croton-oil, one of the last Continental remedies for baldness, is employed by simply adding it to *oil* or *pommade*, and stirring or agitating the two together, until admixture or solution be complete. The formula adopted by the eminent French physician who introduced this remedy, and who speaks, in the most confident and enthusiastic way, of the success attending its use, is—Take of

Croton-oil . . . . . 12 drops (minims);
Oil of almonds . . . . . 4 drachms (Troy);

mix.* A little is to be well rubbed on the scalp twice a day, and the part is to be kept covered with a waterproof cap.† Soft down, we are assured, appears in three weeks. I have tried a number of experiments with croton-oil, thus used, in partial loss of hair and baldness, and am compelled to bear testimony to its efficacy in several apparently hopeless cases, in which even cantharidine had failed. Soft hair, resembling down, did begin to appear in from 3 to 4 weeks, and continued to grow and increase in strength for some time. It was, however, only in about one-third of these cases that this 'down' subsequently increased in stiffness and quantity so as to well cover the part, and to deserve the name of hair, in the popular sense of the word. Still, this is a degree of success, which is remarkable, and shows croton-oil to possess greater power in extreme cases, than the best preparations of cantharides. In other cases, it appears to possess no advantage over them, and is less agreeable in use, unless

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* These proportions are 1 to 20.

† The use of a *waterproof cap* is not merely inconvenient and unnecessary, but is actually injurious. Croton-oil not being volatile, under the circumstances, cannot require a cap to be worn as ordered. The use of such a cap renders the application intolerable.

amply diluted. I found that oil of the above strength was too strong for use *twice* daily, unless very sparingly employed; as, in three or four cases, it caused a slight pustular eruption, accompanied with some irritation, which, though not serious, was far from agreeable. By intermitting its application for two or three days, and beginning, de novo, with the least possible quantity (2 or 3 drops), and employing it only once daily, when it occasioned much rubefaction or irritation, this inconvenience was avoided. Should a few slight pimples (pustules) appear, no harm is done; but the part should be avoided on the next application of the oil, and until they have nearly disappeared. In two or three days they run their course, emit a little watery fluid, dry up, and scale off. They must, on no account, be scratched or picked, as that retards their disappearance, and injures the scalp. It does not appear that croton-oil, employed in this way, has any action on the bowels; at least I have never met with any instance of it sufficiently marked to attract my notice.*

A pommade prepared of 1 part of *Norwegian tar* to about 10 parts of *lard*, with the addition of a large quantity of aromatics, to disguise the smell, is strongly recommended by Dr. Dauvergne, as one of the very best remedies in baldness. Whether this be so, or not, the disagreeable nature of the preparation is a material objection to its use.†

Very recently, the *alcoholic extract* and *tincture* of the *leaves* and *stem* of the common "*ranunculus*" or "crow-foot" have been introduced into hair-cosmetics, in the place of the corresponding preparations of cantharides, over which they are said to possess some advantages besides cheapness. It has long been known that this plant has vesicant and rubefacient properties of a high order, and that its preparations are less liable to change than those it is proposed they should supersede. Their active principle has also no action on the kidneys, if absorbed, which is another advantage.

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* The gentleman who originated this treatment, asserts that croton-oil is the best counter-irritant known. He constantly employs it, with success, as a counter-irritant in all local pains (even when deep-seated), ophthalmia (rubbed in behind the ears, near the scalp), dyspepsia arising from gastric irritation (rubbed on the epigastrum or over the seat of the stomach), &c. For these purposes he employs a stronger oil (1 to 6). After 2 to 3 frictions with 8 or 10 drops, and upwards, rubefaction is intense, and the pain subsides. (Vide "*Journ. of Prac. Med. and Surg.*," 1862.) Caventou has a rubefacient or counter-irritant pommade made with 1-3rd *croton-oil*; but this is unmanageably strong.

† Vide "*Bulletin Générale de Thérapeutique*," 1862. A formula for this pommade has been given (*antè*).

From the above particulars and general formulæ, the reader will be able to construct others, at will. A variety of special formulæ for hair-cosmetics intended for the prevention and cure of baldness are given under "Oils," "Pommades," "Lotions," "Solutions," "Washes," &c. (antè), to which the reader is referred.

*** *Caution.*—Although the stronger hair-cosmetics are, as a rule, perfectly safe when applied according to the directions given, and the chief inconvenience that may arise, even from their too free or injudicious use, will be only temporary irritation, perhaps accompanied or followed by slight desquamation of the cuticle, or by a few unimportant pustules which will pass off in two or three days, yet there are cases in which their application would be unwise, and liable to produce more serious consequences. Thus, persons of a nervous temperament with a highly irritable skin, and bad habit of body, persons liable to attacks of erysipelas, or to swollen glands behind the ears, or to swellings or tumours in the upper part of the neck behind, or to eruptive or other attacks of the scalp, and the like, should not have recourse to them. In other cases, and, indeed, in all cases, it is wise to use them very sparingly, or in a diluted state, at first, and thus, as it were, feel our way, and be able to judge from experience, the strength that can be employed, without inconvenience, to produce the desired effect.

The following are other remedies occasionally used in "failing hair" and "baldness:"—

Balm of Mecca.—Vide "Skin Cosmetics" (antè).

Eau de Miel pour les Cheveux; Honey Water for the Hair.—Mix *honey* (finest) with about twice its weight of clean (washed) dry *sand*, and subject it to dry distillation, as long as liquid passes over. The heat must be insufficient to carbonize or scorch the contents of the retort, as in that case the product would be empyreumatic. Hence the process must be carefully conducted and watched, and the receiver changed if the heat rises too high. Yellowish, acidulous, and somewhat fragrant. Used to promote the growth of hair, and sometimes to remove freckles, acne, &c. For the first purpose it was formerly very highly esteemed.

Essence of Quinine.—Vide "Tooth Cosmetics" (infrà).

III. Cosmetics for the Teeth; Tooth-Cosmetics.

Under this head are included a wide range of substances and preparations used to cleanse and beautify the teeth, and also to act on them through the medium of the gums. The most usual form in which they are employed is that of powder (*tooth-powder*), and next, that of electuaries (*tooth-pastes*) and washes (*tooth-washes*). The whole of them, except a few of the last which are merely used to rinse the teeth and mouth, are applied with the tooth-brush, and hence receive the general name of '*dentifrices*.' *

The solid ingredients forming the base of dentifrices should not be so hard and gritty as to be capable of injuring the enamel of the teeth; nor should they be so soft as to be incapable of exerting gentle friction under the brush; nor so adhesive, as to hang about the teeth and gums after rinsing the mouth with water. Nothing should enter into their composition, or into that of any other form of tooth-cosmetics, which is capable of injuriously affecting the teeth or gums. Thus, as a rule, the solid ingredients should be in the state of extremely fine powder, and acids, and acrid and pungent substances generally, should be carefully excluded from them.

The principal substances which enter into the composition of 'dentifrices,' with the objects for which they are employed, may be briefly summarised:—

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* *Dentifricia*, Lat.; sing., *dentifricium*; from *dens*, a tooth, and *frico*, I rub. Hence 'dentifrices' are properly only such tooth-cosmetics as are applied with friction.

Pumice-stone (in fine powder) is very generally present in the various advertised dentifrices which are esteemed for rapidly cleansing and whitening the teeth. It is one of those substances that act entirely by mechanical attrition, and from its extreme grittiness and ready action on the enamel, is a highly objectionable ingredient in a tooth-powder intended for daily use. *Bath-brick* is another substance of a similar nature to pumice-stone, though somewhat less gritty, and, like that article, should be only occasionally and cautiously employed. *Cuttle-fish bone, red coral, burnt hartshorn, burnt bone,* and *shell-lac,* are other substances which enter largely into the composition of many of the tooth-powders and tooth-pastes of fashionable life, and are used with the same intention as the preceding ones. Provided they are in sufficiently fine powder, they appear unobjectionable. *Prepared chalk,* which forms the basis of perhaps the majority of all the dentifrices not purely carbonaceous, is also harmless; but it is rather too soft, absorbent, and adhesive to form the sole ingredient of a tooth-powder, and does not act sufficiently readily on dirty and neglected teeth to meet the requirements of hasty use. *Charcoal,* when recently burnt, acts both mechanically and chemically in cleansing, whitening, and deodorizing the teeth, and is thus undoubtedly superior to all other substances as a dentifrice.*

Powdered *rhatany-root, cinchona-bark, quinine, catechu, alum,* and some other astringents, are added to dentifrices on account of their efficacy in foulness,

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* *Vide* page 519 (*infrà*).

tenderness, bleeding, and sponginess of the gums. *Myrrh* and *mastic* are also employed on account of their presumed tonic and preservative action on the gums, and their power of fixing loose teeth. *Borax* is another addition very serviceable in tenderness and bleeding of the gums.

To remove the defect of being apt to accumulate between the folds of the gums and in the cracks and interstices of teeth, charged against the white powders by those who use them carelessly, a reddish or flesh-coloured tinge is commonly given them by the addition of a little *rouge, red coral, rose-pink, Armenian bole,* or other harmless colouring substance. In this way, any portion that may remain unrinsed off is rendered less conspicuous.

Sometimes 'soluble substances' are used as the basis of tooth-powders, on the ground of being free from the objection noticed above. Thus, *borax, cream of tartar,* and *sulphate of potassa,* from yielding somewhat gritty powders of slight solubility, are occasionally so employed; but the two last are objectionable, unless carefully removed by rinsing the teeth, from their exerting a chemical action on the enamel when left for any time in contact with it. *Phosphate of soda, bicarbonate of soda,* and *common salt,* used as dentifrices, though less active by attrition, possess the advantages of being perfectly harmless, and being readily and completely removed from the mouth by the act of rinsing it with water. The last is also an antiseptic and deodorizer.

Among the substances applied to the teeth as 'blanchers' and 'deodorizers' are *charcoal, alumina, common salt,* and the *chlorides of lime* and *soda;* the

first three in the form of powder; the others, as extremely weak solutions, in the way and with the precautions noticed elsewhere.*

Tooth-pastes (*electuaries*) which are also intended to medicate the gums, are preferred, in fashionable life, and by many dentists, to the corresponding powders; but without sufficient reason.†

The following formulæ will furnish the reader with examples on which, with what has been said above and elsewhere, he can construct others, ad libitum:‡—

Tooth Powders; Dentifrices; Poudres pour les Dents; &c.—The general principles which should be kept in view in the selection of the materials, and in the preparation of tooth-powders, as well as the best method of using them, have been already noticed elsewhere.§ It may, however, be useful to repeat here, that great care should be taken to finely pulverize all the dry ingredients, and to reduce the harder and gritty ones to the state of impalpable powder, either by patient levigation or trituration, or by elutriation. To ensure the perfect mixture of the ingredients, they should be stirred together until they form an apparently homogeneous powder, which should then be passed or rubbed through a fine gauze-sieve. Those which contain volatile or perishable substances, or which, like charcoal, are affected by contact with the air, should be 'put up' in dumpy wide-mouthed bottles, and kept closely corked.

Tooth-powders are nearly all compound powders. The only simple powder in common use as a dentifrice is powdered charcoal. Powdered bicarbonate of soda, cream of tartar, &c.,‖ are also employed, though less frequently.

The following list includes some of the best tooth-powders in common use, as well as several advertised nostrums and 'named powders' of the shops:¶—

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* *Vide* page 343. † *Vide* page 331 (*antè*). ‡ *Vide* pp. 325-41.
§ *Vide* pp. 329-32, &c. ‖ *Vide* page 512 (*antè*).
¶ By omitting the *honey* and *spirit*, the formulæ given for "tooth pastes" furnish others for tooth-powders; and vice versâ. Thus, the examples given under each will increase the number of the other; and both will suggest to the reader other formulæ.

1. *Prepared chalk* mixed with one-half its weight, to an equal weight of *cuttle-fish bone*, and aromatized, or not, with 8 or 10 drops of *oil of cloves*, or with 5 or 6 drops each of the *oils of cloves* and *cassia*, or with 1 drachm of *orris-root*, per ounce. A simple and really excellent tooth-powder for frequent use.

2. *Prepared chalk*, *burnt hartshorn*, and *cuttle-fish bone*, equal parts, scented as before. Acts rather more rapidly than the preceding.

3. *Burnt hartshorn*,* mixed with half its weight of *cuttle-fish bone*, as before. Resembles the last in quality, but preferred to it by some persons.

4. *Prepared chalk* mixed with 1-6th to 1-4th its weight of *pumice-stone* in impalpable powder, as before. Acts more rapidly than the preceding, but is less fitted for frequent use.

5. To any one of the preceding add about 1-3rd to half its weight of powdered *Castile-soap*. Rapidly whitens the teeth and removes tartar. The preceding, with this addition, are highly esteemed in fashionable life.

6. As the last, but using *hydrate of alumina*, instead of 'soap.' Recommended by M. Bonnamy for its power of rapidly whitening and deodorizing the teeth. It is perfectly harmless.†

The above may be coloured, medicated, and scented, at will. They thus form the basis of hundreds of other tooth-powders. The addition of 1-16th to 1-12th part of *powdered camphor* converts them into excellent "Camphorated Tooth Powder." When *marble-dust* is obtainable, it may be advantageously substituted for the prepared chalk. It indeed forms a good and very harmless dentifrice by itself, well adapted for the use of ladies and young persons with white, healthy teeth.

7. Take of

Burnt hartshorn (or *prepared chalk*) .	3 ounces;
Cuttle-fish bone	2 „
Orris-root	of each,
Armenian bole (or *rose-pink*) . .	1½ ounce;
Oil of cloves, or *essence of ambergris* or *musk* . .	15 to 20 drops;

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* Finely powdered calcined bone (*bone-ash*) is commonly substituted for this on the large scale.

† *Vide* "Alumina," Chap. XIX.

mix. Variously scented, and slightly modified, it forms one of the commonest tooth-powders of the perfumers and druggists.

8. *Prepared chalk* . . . . . 4 ounces;
Cuttle-fish bone . . . . . 3 „
Orris-root . . . . . 2 „
Dragon's blood . . . . . 1 „
Oil or *essence* (as last) . . . . . ½ drachm;
mix. 1 or 2 ounces of *red bole* or *rose-pink* are often added. A common formula in the West-end shops.

The last two (7, 8) are also varied by the addition of 2 or 3 ounces of *powdered pumice-stone*, or 3 to 5 ounces of *charcoal* each, when the colouring ingredients are frequently omitted.

9. *Yellow cinchona-bark*, *Myrrh* . . . . . each, ½ ounce;
Cloves, *Cassia* . . . . . each, ½ drachm;
Burnt hartshorn, *Cuttle-fish bone* . . . . . each, 2 ounces;
Essence of ambergris (or *ess. royale*) 10 or 12 drops.
As the last. An excellent tooth-powder in foul, spongy, or scorbutic gums, loose teeth, &c.

10. *Red cinchona-bark*, *Armenian bole* . . . . . each, 1 ounce;
Cinnamon, *Bicarbonate of soda* . . . . . each, ½ ounce;
Oil of cinnamon . . . . . 2 or 3 drops.
This formula was given in the "*Lancet*" a few years since, and highly recommended by its editor in the cases last named, and also as one of the best tooth-powders for general use.

11. *Red cinchona-bark* . . . . . 4 ounces;
Orris-root . . . . . 2 „
Catechu, *Myrrh* . . . . . each, 1½ ounce;
Sal-ammoniac . . . . . 1 „
Oil of cloves . . . . . ½ drachm.
As Nos. 9 & 10. This is the formula of the Russian Pharmacopœia.

The following miscellaneous formulæ are arranged according to

the names by which they are commonly known, or under which they are advertised or vended:—*

ARECA-NUT TOOTH POWDER.—Take of

Areca-nut charcoal	5 ounces;
Cuttle-fish bone	2 „
Areca-nuts (raw)	1 „

mix. About ½ drachm each of *cloves* and *cassia* are usually added, but it is better without any such addition. Areca-nut charcoal, in fine powder, is often sold under this name.†

AROMATIC TOOTH POWDER.—This name is commonly given to any powder strongly aromatized with cassia, cloves, and the like. The following is the composition of three samples from West-end houses:—

1. Take of

Cuttle-fish bone	4 ounces;
Red bole	2 „
Calamus aromaticus	1½ „
Bicarbonate of soda	2 drachms;
Cassia . . . . . }	of each,
Cloves . . . . . }	1½ drachm;
Musk-seed . . . }	of each,
Yellow sandal-wood . }	½ drachm;

mix.

2.

Prepared-chalk . . }	of each,
Bone-ash . . . . }	2 ounces;
Pumice-stone . . . }	of each,
Red bole . . . . }	1½ ounce;
Cardamom-seeds . . }	
Cloves . . . . . }	of each,
Cassia . . . . . }	¼ ounce;
Orris-root . . . . }	
Oil of orange-peel . . }	of each,
Essence royale . . }	15 drops.

* The names, in general, have been copied from their labels. The products of the preceding formulæ are also often labelled and vended under 'fancy names,' to attract purchasers, and are not infrequently passed off as secret or proprietary articles.

† *Vide* "*Areca nut Charcoal*," Chap. XIX.

3. *Cuttle-fish bone* . . }
Powdered oyster-shells }
Pumice-stone . . . } . . { of each, 2 ounces;
Rose-pink . . . . }
Dragon's blood . . . . . 1 ounce;
Cloves . . . . . } { of each,
Cassia . . . . . } . . { ½ ounce;
Oil of rhodium . . . } { of each,
Essence royale . . . } . . { 12 drops.

Some samples of similar composition contained 1-4th to 1-5th part of *powdered soap*.

ASIATIC DENTIFRICE.—Take of

Red coral . . . . } { of each,
Prepared oyster-shells } . . { 5 ounces;
Pumice-stone . . . } { of each,
Venetian red . . . } . . { 3 ounces;
Oil of cloves . . .
„ *cassia* . . . } { of each,
Essence of vanilla . } . . { ½ fluid drachm.
„ *musk* . .

CADET'S DENTIFRICE.—Take of

Charcoal . . . } { of each,
Lump-sugar . . . } . . { 2 ounces;
Peruvian bark . . . . . 1 „
Cream of tartar . . . . . ½ „
Cinnamon . . . . . 1 drachm;

mix. An excellent tooth-powder, very serviceable in foul teeth, foul and spongy gums, &c.

CAMPHORATED CHALK; CAMPHORATED TOOTH-POWDER.—1. Take of

Camphor . . . . . 1 ounce;

place it in a marble or wedgwood-ware mortar, and after crushing it with the pestle, sprinkle it with

Rectified spirit of wine . . . a few drops;*

and at once reduce it to very fine powder, by careful trituration. Then add, of

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* Without this addition and treatment, it is impossible to reduce the camphor to powder by means of the pestle-and-mortar.

Chalk (see below) . . . . . 7 ounces;

and, after thorough admixture, pass the powder through a clean fine gauze-sieve, and at once put it into 'dumpy' wide-mouthed bottles. This forms the strongest "Camphorated Tooth-powder" of the shops.

2. Take of

Camphor . . . . . 1 ounce;
Chalk (see below) . . . . . 15 „

and proceed as before. These are the best, and safest proportions, and those now generally adopted by the fashionable West-end perfumers. A larger proportion of camphor is unnecessary, and makes the product unpleasant in use.

'Camphorated chalk' is a fashionable and highly esteemed dentifrice, and one that is an especial favourite of smokers, and of those troubled with rotten or foul teeth, or a stinking breath. It does not, in ordinary cases, require the addition of aromatics; but it may be scented at will, the *oils* of *cloves* and *cassia*, the *essences* of *ambergris*, *musk*, and *vanilla*, *otto of roses*, and *neroli*, being most appropriate for the purpose, care being taken not to overdo it. A little *carmine*, *rouge*, *light-red* (burnt-ochre), *red coral*, or *rose-pink*, is also sometimes added, to give it a tint approaching that of the gums. Either 'precipitated chalk,' or the 'prepared chalk' of the druggists, may be used in its preparation. The first produces the whitest and most velvety samples; but the latter has the greatest cleansing power, and is, therefore, preferable. It should always be used when colouring matter is added. When the teeth are much furred or discoloured, a fourth part of the chalk may be advantageously replaced by a like quantity of finely-powdered *cuttle-fish bone* or *burnt hartshorn*, the first being preferable. The addition of 1-7th or 1-8th part of *pumice-stone*, in very fine powder (sifted through fine lawn), renders it still more effective, but less adapted for very frequent use. A little powdered *Castile-soap* (say 1-5th) added to camphorated chalk greatly increases its detersive action on the teeth, and particularly its power of removing fur.*

CARBON DENTIFRICE; CHARCOAL DO.; DENTIFRICE CARBONIQUE; &c.—This is *charcoal* either alone, or mixed with its own weight, or twice its weight, of *prepared chalk*, *burnt hartshorn*, or *pre-*

* *Vide* page 330; also *infrà*.

pared shells. If such an addition be made, the second, or after it, the third, of these articles should be preferred as least injurious to the properties of charcoal. (Vide infrà.)

CHARCOAL TOOTH POWDER; CHARCOAL DENTIFRICE; &c.—This is recently-prepared *charcoal*, reduced to fine powder. It should be kept in a bottle carefully excluded from the air. The addition of scents and medicinals greatly injures it, and much of either of them completely destroys those properties which render it so valuable as a dentifrice. *Willow-charcoal* is that usually employed by the perfumers and druggists; but *areca-nut charcoal*, as noticed elsewhere, is superior to all other kinds for the teeth.*

CORAL TOOTH POWDER; CORAL DENTIFRICE.—Take of

Red coral, *Red bole*, *Cuttle-fish bone*	of each 3 ounces;
Dragon's blood	1½ „
Cinnamon	¾ „
Cochineal	3 drachms;
Cloves	1 „
Bitartrate of potassa †	4½ ounces;

mix, as before. This is the "Poudre Dentifrice" of the Paris "Codex," and the officinal "Coral Dentifrice" of the French. The so-called 'coral dentifrice' of our shops has generally no coral in it, or merely a nominal portion "just to swear by." In the latter, the coral, cinnamon, and bitartrate, are, in general, respectively replaced by *rose-pink*, *cassia*, and *bone-ash*, and the 'dragon's blood' and 'cochineal,' wholly, or in part, omitted. Indeed, a mixture of *chalk* (or ground shells), *burnt hartshorn* (or bone-ash), and *cuttle-fish bone*, coloured and scented, is usually sold for it.‡

DESCHAMP'S ALKALINE DENTIFRICE.—Take of

Powdered talc	4 ounces;
Bicarbonate of soda	1 „
Carmine	6 or 8 grains;
Oil of mint	15 drops;

mix.

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* *Vide* page 331; also Chap. XIX.; &c.

† *Cream of tartar.*

‡ "Asiatic Dentifrice," "Grosvenor's Tooth-powder," above and below, furnish other formulæ for "coral dentifrices."

FLORENTINE DENTIFRICE.—Take of

Prepared shells	5 ounces;
Orris-root	1½ „
Bitartrate of potassa	1 „
Florentine lake (to colour)	q. s.;

mix. Often sold as "Coral Dentifrice."

GALVANIC DENTIFRICE.—Take of

Gold	3 leaves;
Silver	4 „
Alum, *Sulphate of potash*	of each, 1½ drachm;

triturate them together in a wedgwood-ware mortar, until perfectly mixed, then add of

Common salt (dry), *Pellitory-root*, *Peruvian bark*	of each, 1 drachm;
Burnt hartshorn	1 ounce;
Smalts or *red lake* (to colour)	q. s.

An absurd compound, of which the galvanic action is confined to the labels and the purchaser's pocket.

GROSVENOR'S TOOTH POWDER.—Take of

Red coral	6 ounces;
Prepared oyster-shells	5 „
Orris-root	1 „
Oil of rhodium	4 or 5 drops;

mix. This is the original formula. Equal parts of *prepared shells*, *rose-pink*, and *cuttle-fish bone*, are now generally substituted for the coral. It is also sold as "Coral Dentifrice" and "Coral Tooth Powder." They are all favourites in the fashionable world.

HEMET'S DENTIFRICE.—Take of

Cuttle-fish bone	6 ounces;
Cream of tartar	1 „
Orris-root	½ „

mix. Cleans and whitens the teeth rapidly, and is quite harmless, if the teeth be well rinsed after its use.

DENTRIFICE INCOMPARABLE.—Take of

Burnt hartshorn, *Cuttle-fish bone*	of each, 5 ounces;

Armenian bole . . . . . 3 ounces;
Calamus aromaticus . . } . . { of each,
Cassia . . . . . } . . { 1 ounce;
Pellitory of Spain . . }
Camphor . . . . . 1 drachm;
Essence of vanilla . . . . . ½ „
„ *royale* . . . . . 10 or 12 drops;

mix. A good pleasant tooth-powder, much esteemed by smokers and others troubled with a foul breath, or with the toothache.

LARDNER'S TOOTH-POWDER; LARDNER'S PREPARED CHARCOAL.—Take of

Powdered charcoal (recent) . . . 1 ounce;
Prepared chalk . . . . . 3 „

mix and keep it from the air. A simple, but good tooth-powder.

MIAHLE'S RATIONAL DENTIFRICE.—Take of

Sugar of milk . . . . . 3 ounces;
Tannin (tannic acid) . . . . . 3 drachms;
Red lake . . . . . 1 „
Oil of mint . . . . . } { of each,
„ *aniseed* . . . } . . { 7 or 8 drops;
Neroli . . . . . 4 or 5 „

mix. Very serviceable in foul, lax, or bleeding gums, loose or rotten teeth, &c. As a tooth-powder it is improved by the addition of 1 ounce each of *burnt hartshorn* and *cuttle-fish bone*.

MYRRH DENTIFRICE.—Take of

Cuttle-fish bone . . . . . 6 ounces;
Burnt hartshorn . . . } { of each,
Myrrh . . . . . } . . { 2 ounces;
Orris-root . . . . . }

mix. A good powder, often serviceable in foul gums, loose teeth, &c.

OPIAT EN POUDRE.—Take of

Bath brick (in very fine powder) . 8 ounces;
China-ware (white; do.) . . . 4 „
Red coral (or *red bole*) . . . . . 1 „
Cinnamon . . . . . } { of each,
Cloves . . . . . } . . { 1 drachm;

mix. Used either in the dry state or made into a tooth-paste with *honey*. It rapidly whitens the teeth, but is not adapted for very

frequent use. A like article, variously coloured and scented, is extensively vended under other names.

ORANGE TOOTH POWDER; GOLDEN DENTIFRICE.—Take of

Hay-saffron	½ drachm;
Boiling water	1 ounce;

digest, in a covered basin, for ½ an hour, then add of

Precipitated chalk	3 ounces;
Cuttle-fish bone	1 „

and dry the paste by a very gentle heat. Next powder it and further add, of

Oil of orange-peel	15 to 20 drops;
Essence of ambergris	2 or 3 „

mix well, and pass the whole through a fine gauze-sieve, as before. A fashionable and agreeable dentifrice.

PEARL DENTIFRICE; PEARL TOOTH POWDER.—Take of

White-marble dust	4 ounces;
Cuttle-fish bone	1 „
Smalts (finest)	1 drachm;
Essence de petit grain	10 to 12 drops;

mix. A favourite with ladies who have white, healthy teeth. *Precipitated chalk* or *heavy carbonate of magnesia* is commonly substituted for the marble-dust, but the quality of the product suffers in all but colour.

PELLETIER'S QUININE DENTIFRICE.—Take of

Red coral	3 ounces;
Myrrh	1 drachm;
Disulphate of quinine	15 grains;
Scent (at will)	q. s.;

mix. Recommended as a tonic for the teeth and gums. *Prepared oyster-shell* is commonly substituted for the 'coral' and a little *red bole* added to colour it.

RIGHINI'S ANTISEPTIC DENTIFRICE.—This is *recently-burnt charcoal* mixed with 1-4th its weight of *yellow cinchona bark*. Recommended as a general tooth-powder; also in foul teeth and gums, &c.

ROSE DENTIFRICE; ROSEINE TOOTH POWDER.—Take of

Precipitated chalk	3 ounces;
Cuttle-fish bone	1½ „
Bicarbonate of soda	1 „
Red lake	¼ „
Otto of roses	10 drops;

mix. Resembles "Pearl Dentifrice," except in colour and odour.

RUSPINI'S DENTIFRICE.—Take of

Cuttle-fish bone	8 ounces;
Bitartrate of potassa	2 „
Orris-root . . . . }	} of each,
Roach alum . . . . }	} 1 ounce;
Oil of rhodium	6 or 8 drops;

mix.

SOAP DENTIFRICE or TOOTH POWDER.—Powdered *Castile-soap* mixed with an equal weight, or twice its weight, of *cuttle-fish bone* or *burnt hartshorn*, and coloured and scented, or not, at will. One of our best tooth-powders.*

SOLUBLE TOOTH POWDER.—This is usually powdered *bicarbonate of soda*, *bitartrate of potassa*, *borax*, or *sulphate of potassa*, coloured, or not, with a little *lake* or *cochineal*, and scented.†

VIOLET TOOTH POWDER; POUDRE DENTIFRICE À LA VIOLETTE.—Take of

Precipitated chalk	6 ounces;
Cuttle-fish bone	3 „
Rose-pink (bright)	2½ „
Orris-root	1½ „
Essence of violets (orris) . . .	½ fluid drachm;
Indigo (pure; to strike a violet tint)	q. s.;

mix. A favorite dentifrice among ladies of the higher classes.

ZIETER'S DENTIFRICE.—Same as "Dentifrice Incomparable."

TOOTH PASTES; TOOTH ELECTUARIES; PÂTES POUR LES DENTS.—These may consist of any of the substances ordinarily used as dentifrices, reduced to the state of impalpable powder, and beaten up with sufficient *honey* (liquefied by a gentle heat), *syrup*, or *capillaire*, to give them the form of a smooth and moderately stiff paste or electuary, a sufficient quantity of *aromatics* being usually added, as it were, to "embalm and perfume the mouth." *Honey of roses* is often, and *conserve of roses* sometimes, used for those in which their odour and colour are suitable. A little *rectified spirit* is a useful addition, as tending to preserve them, and promote their action. A little *eau*

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* *Vide* page 331 (*antè*); also "Soap," Chapters XVIII., XIX.

† *Vide* page 512 (*antè*).

de Cologne or *lavender-water* is often employed, with the same intention. They are usually 'put up' in porcelain or ornamental glazed-earthenware pots, furnished with closely fitting covers, to preserve their contents from the air. The 'mixed powders' should be passed through a very fine gauze-sieve, before adding the 'honey,' and the paste' should not be potted until the day following that on which it is made.

Tooth-pastes are used by gently rubbing the tooth-brush, slightly wetted, over the surface of the composition, and then applying it to the teeth, in the same manner as when tooth-powder is employed. In this way, the gums are also acted on; but when it is specially intended to medicate the latter, a little of the paste may also be rubbed on them with the tip of the index finger. The remainder of the operation resembles that with ordinary tooth-powder.

The aromatics and perfumes appropriate for tooth-pastes are the same as for tooth-powders and other dentifrices.*

The following formulæ of a few of the advertised tooth-pastes of the shops will serve as examples for others.†—

ARECA-NUT TOOTH-PASTE.—1. Take of

Areca-nut charcoal (recent; in fine powder)	5 parts;
Areca-nuts (raw or unburnt; do.)	1 „
Narbonne-honey (liquefied by a gentle heat, and allowed to cool)	q. s.;

beat them to a stiff paste, adding gradually, for each ounce of the mixture, of

Rectified spirit (about)	1 fluid drachm;
(holding in solution—)	
Oil of cassia . . . }	} of each,
„ *cloves* . . . }	} 10 or 12 drops.

The next day beat up the mass again, adding, if necessary, a few drops of *proof-spirit*, or of *eau de rose* or *orange-flower water*, to give it a proper consistence, and at once put it into pots. A very excellent preparation.‡

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* *Vide* the "Teeth," pp. 329–33 (*antè*); al-o "Dentifrices," "Tooth-powders," 'Charcoal," &c.

† On the construction of other formulæ, *vide* "Note," page 513 (*antè*).

‡ *Vide* "Areca-nut Tooth-powder" (*antè*).

2. (Lloyd's "Aromatic Areca-nut Tooth-paste.")—Take of

Cloves (finest) . . .	}	{ of each,
Cassia (do.)	} . .	{ 1 drachm;
Areca-nuts (raw, powdered)	}	{ of each,
Cuttle-fish bone . . .	} . .	{ 2 drachms;

mix, reduce them to very fine powder, add of

Areca-nut charcoal (in fine powder)	4 drachms;
Narbonne-honey	q. s.;

beat the whole to a smooth paste, and again the next day, adding a little *proof-spirit* containing 3 or 4 drops of *essence of ambergris*. An excellent but expensive nostrum. Both the above would be more effective without the aromatics.

Areca-nut Charcoal Tooth-paste.—*Areca-nut charcoal* (recent, in fine powder), beaten up with pure *honey* or *capillaire*. Aromatics though commonly added, do not improve its efficacy.*

Carbon Tooth-paste; Dentifrice Carbonique, Opiat Carbonique, &c.—1. Take of

Chippings of Turkey-stone (in very fine powder)	}	{ of each,
Cylinder charcoal (do.)	} . .	{ 2 ounces;
Prepared chalk . . .	}	
Cochineal	}	{ of each,
Cloves	} . .	{ 1½ drachm;
Honey		5 ounces (or q. s.);
Eau de Cologne		q. s.;

mix, as before. In some samples *powdered pumice-stone* replaces the 'Turkey-stone.' Much prized by smokers and persons with rotten teeth and foul breath; but is not fit for very frequent use.

2. Take of

Charcoal (recent)		3 ounces;
Cuttle-fish bone . . .	}	{ of each,
Prepared chalk . . .	} .	{ 1 ounce;
Honey of roses		4 „ (or q. s.);
Essence of vanilla		1½ fluid drachm;
„ *royale*		10 drops;

as before. An agreeable, safe, and effective dentifrice.

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* *Vide* "Charcoal," Chap. XIX.

CHARCOAL TOOTH-PASTE.—

1. See "Areca-nut Tooth-paste" (antè).
2. See "Carbon Tooth-paste" (antè).
3. (Dyon's "Charcoal Tooth-paste.") Take of

Chlorate of potassa (in very fine powder)	1 drachm;
Charcoal (recent; do.)	2 ounces;
Honey (best raw; cold)	1½ „
Mint-water	q. s.; ,

form a paste as before. A rather unchemical mixture, esteemed, particularly by smokers, for deodorising the teeth and breath.

CORAL TOOTH-PASTE; OPIAT DENTIFRICE ROUGE.—Take of

Red coral	1 ounce;
Cuttle-fish bone	½ „
Gum-mastic	¼ „
Cochineal (silver-grain)	½ drachm;
Honey of roses	1½ ounce (or q. s.);
Essence of ambergris	8 or 10 drops;
Oil of cloves	5 or 6 „
(the last two dissolved in—)	
Rectified spirit	1½ fluid drachm;

mix, as before. It cleans the teeth rapidly, and is also useful in spongy and foul gums.

2. Take of

Prepared coral (red)	4 ounces;
Cream of tartar (pure)	2 „
Cuttle-fish bone, *Cochineal*	of each, 1 ounce;
Alum	½ drachm;
Narbonne-honey	10 ounces;
Essential oil (at will)	q. s. to aromatize the mixture.

This is the form of the Paris "*Codex*." It has a fine colour, rapidly cleans the teeth, and is said to be useful in spongy, foul, and scorbutic gums.

DYON'S TOOTH-PASTE. Vide "Charcoal Tooth-paste" (antè).

LLOYD'S TOOTH-PASTE. Vide "Areca-nut Tooth-paste" (antè).

MAGIC TOOTH-PASTE.—Take of

White marble-dust	2 ounces;
Pumice-stone (in impalpable pawder)	1½ „
Rose-pink	½ „
Honey	4 „ (or q. s.);
Otto of roses	7 or 8 drops;

mix as before. A favourite nostrum for rapidly cleaning and whitening the teeth, but one not adapted for free or frequent use.

PERUVIAN TOOTH-PASTE.—This is formed by adding about 1½ to 2 drachms of *Peruvian bark*, in very fine powder, to every ounce of the dry ingredients of any simple tooth-paste, before beating them up with *honey* or *syrup*. A useful tonic for tender, spongy, foul, or scorbutic gums, and said to fix loose teeth. A little *powdered myrrh* is sometimes added.

QUININE TOOTH-PASTE.—Take of

Red coral	3 ounces;
Cuttle-fish bone	1 „
Disulphate of quinine	½ drachm;

mix, triturate to very fine powder, add of

Narbonne-honey (white)	4 ounces;
Otto of roses, or *neroli*	a few drops,
(dissolved in—)	
Rectified spirit	3 fluid drachms;

and beat the whole to a paste. A little *powdered myrrh* (1 to 3 drachms) is sometimes added. A very fashionable and popular article. Use, &c., the same as "Peruvian Paste."

ROSE TOOTH-PASTE; PÂTE DENTIFRICE À LA ROSE.—This is generally "coral tooth-paste" strongly scented with roses. The following is another form:—

Prepared chalk	2 ounces;
Cuttle-fish bone	1 „
Cochineal	½ drachm;
Honey of roses	3 ounces (or q. s.);
Rectified spirit	2 fluid drachms;
Otto of roses	8 or 10 drops.

Sometimes part of the honey is replaced by *conserve of roses*. The product is an agreeable and effective dentifrice.

ROSEATE TOOTH-PASTE.—1. Most of the articles sold under this name resemble the last, being scented with *roses*, and tinged either with *red coral*, *cochineal*, or *rose-pink*.

2. (Winckler's "Roseate Dentifrice" or "Tooth-paste.")—Take of

Cuttle-fish bone	1 part;
Conserve of roses (red)	3 „
Otto of roses (per ounce) . . .	2 or 3 drops;

mix, as before. The 'otto' is dissolved in a little *rectified spirit* before adding it to the paste, or else rubbed up with the dry cuttle-fish bone. Cleans and whitens the teeth rapidly.

Soap Tooth-paste; Spanish Dentifrice; Castilian Tooth-cream.—Take of

Castile-soap (air-dried; in fine powder) . . } . . . *Cuttle-fish bone* . . . }	of each, 2 ounces;
Narbonne-honey	4 or 5 ounces;
Aromatics or *perfume* (at will) .	q. s.;

with or without the addition of a little *rectified spirit*.

A very excellent preparation, superior to all the other pastes for cleaning the teeth and removing tartar and animalcula from them, but inferior in blanching and preservative qualities to "areca-nut charcoal paste." A pink or rose colour may be given it by adding 1 drachm of finely powdered *cochineal* or a fluid drachm, or two, of the *tincture*. It is commonly ordered in books to be made with 'honey of roses,' but the alkali of the soap spoils the colour of this article.

Soluble Tooth-paste; Saline Dentifrice.—The articles sold under these names usually consist of *bitartrate of potassa* (cream of tartar), *biborate of soda* (borax), or *sulphate of potassa*, in very fine powder, made into a paste with *Narbonne-honey* or *honey of roses*, aromatics or scent being added. The 'bitartrate,' or 'biborate,' is the preferable salt for the purpose. Some persons like pastes of this kind because they can be entirely removed by rinsing the teeth with warm water, which acts by dissolving them.

Vanilla Tooth-paste; Opiat à la Vanille.—Take of

Vanilla (finest)	1 drachm;
Cloves	½ „
Lump-sugar . . . . } . . . *Cuttle-fish bone* . . . }	of each, ½ ounce;
Marble-dust (white)	1 „

mix, triturate them to an impalpable powder, and then beat them to a paste with

Syrup of saffron	2 ounces (or q. s.).

The product is much esteemed for rapidly whitening the teeth and deodorizing the breath. 5 or 6 drops of *essence of ambergris* or *musk*, dissolved in 1 fluid drachm of *rectified spirit*, are often added, and improve it. Another form of this paste is made by adding 1½ or 2 drachms of *Peruvian bark*, in very fine powder. The latter paste is a useful tonic in sponginess, foulness, and scurvy of the gums.

VIOLET TOOTH-PASTE.—Take of

Prepared chalk		3 ounces;
Cuttle-fish bone	(powdered)	of each,
White sugar	(do.)	2 ounces;
Orris-root	(do.)	1 „
Smalts		2 to 3 drachms;
Syrup of violets	(to mix)	q. s.

A fashionable tooth-paste, highly esteemed for its power of cleaning the teeth, and its delicate colour and odour.

WARD'S TOOTH-PASTE; ZIETER'S ANTISCORBUTIC DENTIFRICE.—Take of

Prepared chalk		2 ounces;
Myrrh		of each,
Rhatany-root		½ ounce;
Cuttle-fish bone		
Orris-root		¼ „
Honey		3 „ (or q. s.)

A very useful dentifrice in foul, spongy, and scorbutic gums, loose and rotten teeth, &c.

ODONTINE.—There are several dentifrices advertised under this name, two or three of which have acquired a very large sale in the fashionable world. That of a certain eminent West-end perfumery house appears to have the following composition :—

Cuttle-fish bone		equal
Castile-soap		parts;
Red coral		
Tincture of cochineal	(to colour)	q. s.;
Honey	(to mix)	„
Essential oil	(to aromatize)	„

Pellitier's "Odontine" is said to consist of pulverized *sepia-bone* (cuttle-fish bone), with a little *butter of cacao*, beaten up with *honey*, and aromatized or scented with *essential oils*.

Among "Liquid Preparations" for the teeth and mouth are the following:—

TOOTH AND MOUTH WASHES; COLLUTORIES; COLLUTORIA.—These are used to rinse the mouth, and particularly the teeth and gums, a few drops, more or less, of them being added to (say) a wine-glassful of *water* for the purpose. In some cases their action is promoted by the use of the tooth-brush:—

1. *Spirit, tincture,* or *essence of camphor,* or "spirit of wine and camphor" of the vulgar. Used to sweeten the breath and preserve the teeth, as noticed elsewhere. It cannot be employed too frequently. Strong "camphor-water" or "camphor-julep," without dilution, may be used in the same way, and is equally efficacious.

2. *A solution of chloride of lime,* either with, or without, an equal measure of *rectified spirit,* and about one-half its measure of *eau de rose* or *orange-flower water,* at will. It should be used very sparingly and cautiously, and only occasionally, and the mouth should be afterwards well rinsed out with tepid water. A favourite with smokers, and with persons troubled with a foul breath.*

3. Take of

Gum-mastic (in powder) . . .	2 drachms;
Balsam of Peru	½ ,,
Powdered gum-arabic	2½ ,,

form them into an emulsion with

Orange-flower water	¼ pint;

then, very gradually, and briskly shaking the liquid all the time, add of

Tincture of myrrh	3 fluid drachms.

Used in loose teeth, spongy and foul gums, &c., observing to shake it briskly each time before use.

4. Take of

Tannin (tannic acid)	½ drachm;
Tincture of tolu	2 fluid drachms;
,, *myrrh*	6 ,, ,,
Spirit of horse-radish	2 ,, ounces.

Agitate them together until solution be complete. Useful in loose teeth, foul and spongy gums, &c., particularly of a scorbutic kind.

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* *Vide* page 843 (*antè*).

5. Take of

Balsam of Peru	4 drachms;
Camphor (crushed fine)	1 „
Essence of musk	of each,
Liquor of ammonia	1 fluid drachm;
Tincture of myrrh	of each,
Rectified spirit	1 fluid ounce;
Spirit of horse-radish	3 „ „

mix, agitate occasionally for a week, and, after repose, decant the clear portion. To sweeten and perfume the breath, in any of the preceding cases.

6. (Swediaur.) Take of

Borax (powdered)	¼ ounce;
Rose-water	1 „
Honey of roses	2 „

mix, add of

Tincture of myrrh	1 fluid ounce;

and agitate the whole well together, and again before use. In tender or ulcerated gums, aphthæ, and tenderness of the mouth generally.*

Emulsions.—The method of preparing these has been noticed under "Skin Cosmetics."† The following are employed as "tooth" and "mouth cosmetics," and may be regarded as merely other forms of 'washes':—

Emulsion of Balsam of Peru; Milk of do.—Take of

Peruvian balsam	of each,
Powdered gum-arabic	½ ounce;
Lump-sugar	1 „
Rose-water	of each,
Distilled water	¼ pint;

make an emulsion, as before explained. Used, either alone or added to water, as a wash to preserve the teeth, and in foul and tender gums, rotten teeth, fœtid breath, &c.; also sometimes as a cosmetic for the skin and hair.

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* For other formulæ, *vide* "Emulsions," "Lotions," "Solutions," &c. (*infrà*); and for special references, the *Index*.

† *Vide* pp. 490-1 (*antè*).

Emulsion of Balsam of Tolu; Milk of Tolu.—As the last, but using a warm pestle and mortar, and substituting

Balsam of tolu . . . . . ¼ ounce,

for the 'Peruvian balsam' there ordered, with the 'distilled water' warm. Use, the same.

Emulsion of Camphor; Camphor-Milk.—Take of

Camphor . . . . . ½ drachm;
Lump-sugar . . . . . ½ ounce;

triturate to fine powder, add of

Blanched almonds (dry) . . . ½ ounce;

and beat and triturate the whole until reduced to a smooth pulverulent paste. Then form this into an emulsion with

Water . . . . . ½ pint;

very gradually added, as above. An excellent tooth-wash and rinsing liquid for the mouth.

Emulsion or Milk of Myrrh; Myrrh Mixture; Myrrh Water.—1. Take of

Myrrh . . . . . ¼ ounce;

powder it, add of

Mucilage (thick) . . . . . 2 fluid drachms;

triturate to a perfectly smooth paste, and, triturating all the time, add gradually, of

Water (warm) . . . . . ½ pint.

Agitate the whole till cold, and then strain the liquid through muslin.

2. Take of

Myrrh . . . . . 2 drachms;
Sal-ammoniac . . . . . 1 „
Water (cold) . . . . . ½ pint;

as the last.

3. Take of

Tincture of myrrh . . . . . 1½ fluid ounce;
Mucilage (thick) . . . . . ½ ounce;
Water (cold) . . . . . 8 „

mix by agitation. A fashionable and useful dentifrice and wash in foul and rotten teeth, spongy and ulcerated gums, &c.*

Essences.—On the general nature of "essences" vide "Skin

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* *Vide* "Lotions" (*infrà*).

Cosmetics" (antè). The following, which are used to make "tooth washes," may be mentioned here:*—

ESSENCE OF CAMPHOR; LIQUOR OF CAMPHOR; CONCENTRATED TINCTURE OF CAMPHOR; CAMPHOR-DROPS.—1. Take of

Camphor (clean) . . . . . 4½ drachms;
Rectified spirit . . . . . 1 pint;

dissolve. This forms the ordinary "Essence of Camphor" and the best "Spirit of Camphor" of the shops. Added to 15 times its bulk of pure *cold water*, it forms (by agitation) a transparent solution exactly resembling the *camphor-julep*, *camphor-water*, or *camphor-mixture*,† used in medicine, and, which either alone, or with a little more water, forms an excellent wash for the teeth and mouth, as noticed elsewhere. Made with somewhat weaker spirit, and less camphor, it forms the "Spirit of Wine and Camphor" of the shops.

2. Take of

Camphor . . . . . 1 ounce;
Rectified spirit . . . . . 10 „ (by weight);

dissolve. This forms the "Concentrated Essence of Camphor" of the druggists. 10 or 12 drops added to 1 fluid ounce of pure *cold water* form the transparent camphor-julep or camphor-water before noticed.

These are very elegant and convenient preparations for extemporaneous use, both in dispensing and the toilet. They are easily made, the process being no more difficult than dissolving so much sugar in water. The London houses do a very large trade in them, and charge enormous prices for them. The bottles containing them should be kept closely corked or stoppered.

ESSENCE OF QUININE.—Take of

Disulphate of quinine . . . . 1 drachm;
Rectified spirit . . . . . 1 fluid ounce;

mix, add of

Dilute sulphuric acid ‡ . . . . ½ fluid drachm;§

and agitate until solution is complete. A few drops added to water form an excellent wash for foul, spongy, and tender gums loose teeth, &c.; also for weak hair.

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* Others inserted elsewhere may be found by reference to the *Index*.

† The "aqua camphoræ" and "mistura camphoræ" of the Lond. and Br. Pharmacopœias.

‡ Sp. gr. 1·087–1·090.

§ Or less; on *no account* more.

Honeys (Medicated and Perfumed).—A few of these are used as cosmetics for the teeth and mouth, and particularly to make "washes" for the teeth, gums, &c.:*—

Honey of Borax; Mel Boracis.—Take of

Borax (in fine powder) . . . . 1 drachm;
Honey (pure) . . . . . 1 ounce;

rub them together until united.† A common application in sore gums, mouth, and lips, in aphthæ (thrush), salivation, &c.; also for sore nipples, excoriations, &c.; a little being applied on the tip of the finger. Diluted with *water* it forms an excellent skin and mouth wash or lotion.

Honey of Roses; Mel Rosæ.—Take of

Dried red-rose leaves . . . . 1 ounce;
Boiling water . . . . . ½ pint;

infuse for 2 or 3 hours, then press out and strain the liquor. After repose, decant the clear portion into a glass or porcelain vessel, add of

Clarified honey . . . . . ¾ pound;

evaporate, by the heat of a water-bath, to a proper consistence, and set it aside in a cool place. The next day, pour off the clear portion for use. Added to water, it makes an elegant astringent wash and gargle for foul and tender gums, sore mouth, sore-throat, relaxed uvula, &c.

Honey of Violets.—Take of

Expressed juice of violets (clear) . 1 fluid ounce;
Clarified honey . . . . . 2 ounces;

mix (without heat) in glass. Used chiefly as a mouth-wash, to perfume the breath, as the last.

The following "Infusions" are common and useful "Mouth Washes":—

Infusion of Cloves; Clove Tea.—Take of

Cloves (bruised or sliced) . . . 3 drachms;
Boiling water . . . . . 1 pint;

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* For other formulæ than those given below, *vide* "Skin Cosmetics" (*antè*); also Chap. XIX (*infrà*).

† *Clarified honey* is ordered by the colleges. If raw honey be used, sufficient heat should be applied to melt it. The above are the proportions of the Ph. L. The new British Ph. orders 64 grains of *borax* to the ounce of *honey*.

infuse for an hour in a covered vessel, and, when cold, decant or filter. An excellent wash or rinse in painful gums, toothache, and fœtid breath.

INFUSION OF HORSE-RADISH.—Take of

Horse-radish (sliced small) . .	1 ounce;
Boiling water	1 pint;

macerate for an hour, in a covered vessel. When cold, strain, and add a little *eau de Cologne*, or other scent. Used as a wash or rinse in scorbutic gums, &c. A like infusion, made with *cold milk*, forms an excellent skin-cosmetic, as noticed elsewhere.

INFUSION OF SASSAFRAS; SASSAFRAS-TEA.—Take of

Sassafras-chips	1 ounce;
Boiling water	1 pint;

infuse, with stirring, until cold. Used as a mouth-wash in scurvy, &c.; also a popular drink, ad libitum, in various skin-diseases, rheumatism, scrofula, scurvy, syphilis, &c., in which case it is generally sweetened.

The following "Medicated Lotions" are other useful forms of "Tooth" and "Mouth Washes":—

ALUM LOTION.—Vide "Skin Cosmetics" (antè).

LOTION OF BORAX.—This may be made by simply adding a little *honey of borax* to *water;* or in the way noticed under "Skin Cosmetics" (antè).

LOTION OF CHLORATE OF POTASSA; COSMETIC SOLUTION OF DO.—Take of

Chlorate of potassa (powdered) .	½ ounce;
Distilled water	12 „
Rose-water	2½ „

dissolve. Used as a wash in foul mouth, gums, &c., particularly where there is a scorbutic or syphilitic taint; also extensively by smokers, to deodorize the breath. Its daily use is said to give a rich healthy hue to the gums and lips.

CHLORINATED LOTIONS OR WASHES. — Vide "Skin Cosmetics" (antè).

LOTION OF MYRRH; DR. KIRKLAND'S LOTION.—1. Take of

Tincture of myrrh	1 ounce;
Water	2 „
Mucilage	½ „

agitate them well together, and again each time before use. As a wash in rotten and loose teeth, foul, spongy, and ulcerated gums, fœtid breath, &c. It is often very serviceable where there is a scorbutic taint.

2. (Dr. Kirkland.) Take of

Tincture of myrrh	}	{ equal
Lime-water	}	{ parts;

mix. Used as the last.

3. (Compound.) Take of

Tincture of myrrh	}	{ of each,
Honey of roses	}	{ ½ fluid ounce;
Lime-water		¼ pint;

mix. Used as No. 1. This is the formula of the "Pharmacopœia Chirurgica."

Lotion of Potassa.—Vide "Skin Cosmetics" (antè).

Tooth Tinctures (Cosmetic).—These are chiefly employed to medicate the gums, and, generally, diluted with twice or thrice to six times their bulk of *water*. More largely diluted with water, they are employed as the corresponding "washes" and "lotions" already noticed.

1. ("Tincture of Myrrh;" "Golden Tooth-drops.") Take of

Myrrh (in coarse powder)	2½ ounces;
Rectified spirit	1 pint;

macerate, with agitation, for 7 or 8 days, and filter, with expression. The British and Edin. Ph. order it to be prepared by 'percolation' or 'displacement.' This is stronger than the old pharmacopœial tincture.* Used, diluted with water, chiefly as a dentifrice and wash in ulcerated, foul, and spongy gums, loose teeth, &c.

2. (Greenhough's "Tooth Tincture.") Take of

Bitter-almonds (bruised)			2 ounces;
Brazil-wood (powdered)	}	{	of each,
Cinnamon (do.)	}	{	½ ounce;
Orris-root (do.)	}	{	

* The "tinctura myrrhæ" of the Lond. Ph. has 3 oz. (Troy) to the quart of *rectified spirit*; that of the Edin. Ph., 3½ oz. (Troy); that of the Dublin Ph., 4 oz. (Avoir.). The tincture of the shops is usually an inferior preparation made with a mixture of 2 measures of *rectified spirit* and 1 of *water*.

Alum (powdered) .
Cochineal (do.) } . . { of each, 1 drachm;
Salt of sorrel (do.)
Spirit of scurvy-grass . . . . 2 fluid ounces;
Proof spirit . . . . . 1½ pint;

macerate, with agitation, for a week. Used (diluted) as a dentifrice and wash in foul teeth and gums, &c.

2. (Hudson's "Tooth Tincture.") A mixture of about equal parts of *tincture of myrrh*, *tincture of cinchona*, *cinnamon-water*, and *eau d'arquebusade* (or other like aromatic spirit), to which a little *sugar* and *mucilage* are added. As the last; also to fix the teeth.

3. (Ruspini's "Tooth Tincture.") Take of

Orris-root (in coarse powder) . 2 ounces;
Cloves (do.) . . . . ¼ „
Ambergris . . . . . 5 grains;
Rectified spirit . . . . . ½ pint;

digest, with agitation, for a fortnight. Used as the above; and, particularly, to sweeten the breath. It has long been a popular and fashionable dentifrice, &c.

Tooth Waters.—Vide "Tooth Washes" (antè) in the present Chapter.

Camphor Water.—Vide "Camphor Julep," pages 446-7.

The following are other "Tooth Cosmetics" in frequent use, though less so than the three classes already noticed:—

Masticatories.—These are substances taken by slowly chewing them. They are employed as intoxicants, medicinals, and cosmetics, most of them with the first intention, but it is those chiefly that belong to the last class that call for notice here. The principal masticatory in these realms, and Europe generally, is *tobacco;* in Turkey, and in several other Eastern nations, *opium;* in India and its neighbouring Asiatic nations, *betel* or *betel-nut;** whilst, in some other parts of the world, preparations of *cacao* are employed. As "cosmetics," *orris-root*, *cassia*, *cinnamon*, *sandal-wood*, &c., are frequently chewed to scent the breath, or to disguise its foulness.

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* *Vide* page 320 (*antè*).

Among substances employed jointly as "cosmetics and medicinals," *mastic* and *myrrh* may be mentioned; the first being frequently chewed to strengthen and preserve the teeth and gums, to fix loose teeth, and to slightly perfume the breath; the second, in spongy, tender, and ulcerated gums, in toothache, in caries to arrest decay, &c. *Pellitory-root* is chewed to relieve toothache and face-ache, and, as noticed elsewhere, often proves invaluable when so employed.* Good *ginger* and *caraway-seeds* are also chewed with the same intention; but are much less useful. *Tobacco* (a favourite masticatory with the vulgar in such cases), on account of its narcotic properties and the nausea it generally induces in those unaccustomed to its use, and further, that unless employed to partial narcotism, it seldom relieves the pain, is now very seldom employed, and even less than formerly, among the middle and upper classes. Many pure "medicinals," *rhubarb*, *gentian*, *chamomiles*, and *ginger*, may be mentioned as being occasionally used as masticatories to relieve dyspepsia and to improve the appetite, and thus, indirectly, to remove toothache, foul breath and gums, &c., depending on disordered stomach and bowels.

The following are examples of masticatories from which others may be easily formed:—

1. Take of

Mastic (genuine, in powder)	. . .	equal parts;
Orris-root (in fine powder)		
White wax (perfectly pure)		

mix them thoroughly in a warm wedgwood-ware mortar, and form the mass into balls, pastilles, or lozenges, of 12 to 15 grains each. To fix and strengthen the teeth, and perfume the breath; one being slowly chewed, ad libitum.

2. (Augustin.) Take of

Mastic (in powder) .	. . .	of each, 1 drachm;
Pellitory (do.) . .		
White wax		

mix as before, and divide into 6 (preferably 12) balls. In toothache, loose teeth, &c., at will.

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* *Vide* pp. 340–1 (*antè*).

3. (W. Cooley.)—*a*. Take of

Mastic (in powder) .
Myrrh (do.) . .
Orris-root (do.) . .
White wax . . . .
} . . { equal parts;

and proceed as in No. 1 (above). In loose teeth, spongy gums, and foul breath.

b. Take of

Mastic (powdered) .
Myrrh (do.) . .
White wax (do.) . .
} . . { of each, 1 drachm;

Turkey rhubarb (powdered) . . . . .
Ginger (do.) . . . .
Extract of gentian .
} . . { of each, 2 drachms;

Oil of cassia . . .
„ *chamomile* . .
} . . { of each, 12 drops;

thoroughly beat them up with *tincture of tolu*, and divide into 10 or 12-grain boluses or lozenges. One or two to be slowly chewed an hour before dinner, and again once in the day, if necessary. In dyspepsia, flatulence, defective appetite, &c.; and in toothache, foul mouth, &c., depending on them. If acidity or heartburn be present, 1 or 2 drachms of *bicarbonate of soda* are to be added.

4. (De Quincy.) Take of

Mastic (powdered) . . . . . 3 ounces;
Pellitory (do.) . .
Stavesacre-seed (do.) .
} . . { of each, 2 drachms;
Cubebs (do.) . .
Nutmegs (do.) . .
} . . { of each, 1 drachm;
Angelica-root (do.) . . . . . ½ „
White wax (melted) . . . . . q. s.,

to make the whole into small balls. As a tonic and stimulant to the gums, and in toothache.

5. (Pieste's.) As No. 1, with the addition of ½ drachm of *disulphate of quinine* to each 7½ drachms of the mixture. As a general tonic for the mouth, gums, and teeth; also in toothache and faceache of a neuralgic or intermittent character.

6. (Ruspini.) Take of

Opium (powdered)		½ drachm;
Mastic (do.)		
Orris-root (do.)		of each,
Pellitory (do.)		1 drachm;
Turkey rhubarb (do.)		
Vanilla		10 grains;
Musk		of each,
Ambergris		1 grain;

(the last three rubbed to fine powder with)

Lump-sugar (dry)	20 grains;
Spermaceti (melted)	q. s. (to mix);

the whole to be beaten to a smooth, stiff mass, in a slightly warm mortar, and divided into 6-gr. balls or pastilles. As an anodyne and corrective in toothache, painful gums, foul breath, &c. *Not more* than 3 or 4 to be chewed in *one day*.

Tooth Cements; Stopping (for the Teeth).—These are preparations for filling up cavities, cracks, &c., in defective teeth, the object being either to restore or to preserve them, or to cure or prevent toothache. The following list includes some of the most valuable tooth-cements, with a few others in common use or vended as nostrums:—

1. (Amalgam of Gold; Dentist's Gold; Gold Stopping.) The dentists, in preparing and using this, commonly proceed as follows:—A little pure *grain-gold* is heated in a bright *iron-ladle* (or capsule), and enough pure *mercury* added to render it of a doughy consistence at the temperature of hot water. When it has become cold, the excess of mercury, if any, is removed by pressure in a piece of *chamois-leather*. In using it, a little of the amalgam, as hot as can be borne, is kneaded in the hand, and at once pressed into the cavity of the tooth, where it gradually hardens. It is an excellent and durable 'stopping,' and is, perhaps, preferable to all others, except No. 2 (below), for filling up cracks and cavities in the enamel, particularly of the front teeth, on account of its colour and the ease of its application.

Amalgam of silver is used in the same way as the last; but its colour is less natural, and it is apt to be blackened by the sulphur in the secretions of the mouth and the food.

The *amalgams* of *tin* and *zinc** are also employed as tooth-cement, but are inferior in colour to, darken sooner, and possess less durability, than that of silver.

2. Take of

Anhydrous phosphoric acid (in fine powder)	12 grains;
Pure caustic lime (fresh burnt; do.)	13 „

mix them rapidly, by trituration, in a porcelain or wedgwood-ware mortar, and apply the powder, in the dry state, as quickly as possible, as it soon becomes moist. The powder, after being well pressed in the crack or cavity of the tooth, is smoothed off with the finger moistened with a drop of *water*. It soon acquires great hardness, is white, very durable, and does not become discoloured by age. The compound that results from the combination of the ingredients almost exactly resembles the natural earthy matter of the teeth, and is, therefore, unobjectionable. Its colour closely resembles, and will soon become, that of the teeth to which it is applied, provided they possess ordinary whiteness. To cause it at once to imitate the colour of the teeth, the mixture may be rendered slightly "gray" by adding to it a mere trace of *carbon*.† A faint "yellowish" shade may be given to it by a trace of *sulphuret of cadmium* or a little *yellow ochre;* and a faint shade of "red" or "flesh-colour" by a trace of *jeweller's rouge* or *peroxide of iron*, or a very little *light-red* (burnt yellow-ochre). This 'stopping,' from its composition and other qualities, is, perhaps, superior, to all others; but, except in the case of hollow teeth, its use requires some degree of skill and expertness, which is, however, readily acquired.

3. (Gutta-percha Stopping.) This is pure, uncoloured, native gutta-percha. A small piece is softened in hot water, and at once applied. It answers well for filling hollow teeth with central cavities, and is efficient and durable.

4. (Arsenical Stopping; Arsenicated Tooth-cement.) This is commonly made by adding a very small quantity of *arsenious acid* (white arsenic), in fine powder, to any of the non-metallic cements noticed below. The objections to its use have been already given.‡

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* See "Zinc Stopping" (*infrà*).

† Holding the pestle, used to mix the powders, over the flame of a candle, lamp, or gas, for an instant, is sufficient for the purpose.

‡ *Vide* page 341 (*antè*).

5. (Bernotte's.) This is the same as "Taveare's Cement," noticed below.

6. (Brand's Enamel; Brand's Tooth Cement.) This nostrum is said to be the *zinc-amalgam* noticed below. Owing to being very extensively advertised and puffed, it at one time obtained a prodigious sale, but is now little heard of or used.

7. (Mr. Evans.) Take of

Pure grain-tin		2 parts;
Cadmium	} . .	of each,
Bees-wax		1 part;

melt them together in a porcelain-crucible at a heat not exceeding 600° Fahr., and 'cast' the alloy so as to form a small ingot, which, when cold, must be reduced to filings. For use, a small quantity of these 'filings' is formed into an amalgam with *quicksilver*, the excess of the latter is squeezed out through a piece of chamois-leather, and the amalgam at once applied to the tooth.* This cement is recommended by Mr. Evans as very durable and unobjectionable. Its colour is intermediate between that of silver and tin, but it is said not to darken so readily as the simple amalgam of those metals.

8. (Marmoratum.) This name was originaly given to a mixture of *marble-dust* and *levigated porcelain*, with a little *levigated quartz*, made into a stiff paste with thick *mastic-varnish*, or *quick-drying copal-varnish*, immediately before applying it. In modern dentistry, No. 1 (above), or Ostermaier's Cement, noticed below, is commonly known and used under the name of "marmoratum." The latter, from its whiteness, hardness, and durability, appears most to deserve the name.

9. (Mineral Marmoratum.) *Amalgam of gold*, with the addition of a little *quartz* or *very hard glass*, in impalpable powder. Its preparation and use requires some experience and skill. A commoner sort, vended in packets, is made with *amalgam of tin* and *levigated glass*.

10. (Mineral Metallic Cement.) This consists of *gold amalgam* mixed with some *levigated steel-filings*. It is dark coloured, and inferior to the so-called "mineral marmoratum."

11. (Mineral Succedaneum.) This is merely *amalgam of gold*, vended or used under a fancy name, to disguise its nature and attract customers and patients.

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* See No. 1 (*suprà*).

12. (Ostermaier.) The 'stopping' recommended by this eminent authority, and commonly known as "Ostermaier's Cement," resembles No. 2 (suprà).

13. (Poudre Métallique.) According to Mr. Redwood, the article sold in Paris under this name, is a *triple amalgam* of *mercury*, *silver*, and *ammonium*, with the latter in excess.* Part of the ammonium is said to escape under the form of 'gaseous ammonia' (?), whilst the rest of the ammonium, and the silver and mercury, remain as a firm alloy in the cavity of the tooth.

14. (Silica.) A mixture of *levigated porcelain*, *plaster of Paris*, and *steel-filings*, in equal proportion, made into a paste with thick *quick-drying copal-varnish*. It is only adapted to fill central cavities in the double-teeth, as its colour unfits it for the front ones.

15. (Sorel.) *Light oxide of zinc*† made into a soft paste with a *solution* of *chloride of zinc* (sp. gr. 1·9 to 2·0), and at once applied. Its inventor states that, in a few minutes, it acquires great hardness, which it preserves for years. It is white, and keeps its colour well, and has the advantage of cheapness and being easily applied. To bring it nearer the hue of the teeth, it may be slightly tinged "gray," with a trace of *carbon;* "yellow," with a trace of *sulphuret of cadmium;* and other shades, as noticed under No. 2 (suprà).

16. (Taveare's.) This is *powdered mastic* mixed with about one-half its weight of *ether*, and then with sufficient *powdered burnt-alum* to form a stiff paste. It must be kept in a closely stoppered bottle. It has little hardness and durability.

17. (Vienna Cement.) Powdered *asbestos* made into a paste with thick *mastic-varnish*. Neither hard nor durable.

18. (Wirth's Cement.) *Levigated quartz* made into a paste with very thick *mastic-varnish*. The colour is good, but it is not very durable.

19. (Zinc Amalgam; Dentist's Zinc.) Pure *zinc-filings* combined with twice their weight of *quicksilver*, a gentle heat being employed to render the union more complete. It is best applied as soon as made. Gray, and not very durable. Combined with a little powdered

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* How this "poudre" can have this composition, regard being had to its preparation and price, I cannot tell.

† This excellent 'stopping' has been recently brought out as a nostrum, by parties unconnected with M. Sorel.

porcelain or *quartz*, it forms "Marmor Métallique." "Brande's Enamel," and several other advertised nostrums, are either wholly or chiefly amalgam of zinc.

*** One of the most important points to attend to in 'filling' or 'stopping' teeth is, that each tooth must be thoroughly cleaned out, and wiped perfectly dry, before inserting or applying the cement, of whatever kind it be. Without careful attention to this matter, the cement will not adhere, or will soon become loose, and drop out or off, and the operation prove a failure. When a defective tooth is conveniently situate, it may often be 'stopped' by the party himself, by the exercise of a little skill and care, particularly if it be a hollow one with a clearly defined central cavity. When the reverse is the case, it is generally necessary that the operator should be a second party. A hollow tooth with a central and nearly circular hole in it may, in general, be effectively filled with a *plug* of *dry soft wood*,* or of *bone* or *ivory*. If the hole be not round, it may be made so. Such stopping will often last for years.

The remaining preparations noticed in this Chapter—Cachous, Lozenges, Pastilles—are often called "Breath Cosmetics;" but as all of them, as already mentioned, operate through the medium of the mouth, and many of them by their action on the teeth and gums, it does not appear necessary or convenient to regard them otherwise than belonging to our *third division* of cosmetics. Besides, some of them are used entirely, or chiefly, as cosmetics and medicaments for the teeth, gums, and membranes of the mouth, and have no direct or immediate action on the breath.

In what follows, I shall aim rather at comprehensiveness than minuteness of detail, for the reasons hereafter given:—

Cachou Aromatisé.—This name is now commonly given to the small lozenges or pastilles sucked by smokers and bacchanals to deodorize and perfume the breath. They are generally made up in the form of 1½-grain, or 2-grain pills, neatly coated with silver-leaf. Originally they were composed chiefly of *catechu* and *sugar* or *liquorice*, flavoured and perfumed with the *stronger aromatics;* but at the present day the catechu is sometimes omitted.†

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* *Elder-wood*, such as shoemakers' pegs are made of, is about the best for the purpose.

† For formulæ, *vide* "Pastilles" (*infrà*).

LOZENGES.—Lozenges of almost every description employed as cosmetics and perfumes can now be so easily obtained, of good quality, of respectable confectioners and lozenge-makers, that it is no longer worth the trouble and inconvenience of manufacturing them at home.

Among *lozenges* sucked to *scent* or *sweeten the breath*, the following may be mentioned as being in most esteem by ladies in the fashionable world :—

Lavender Lozenges,*	Orris-root Lozenges,§
Musk ,, †	Rose ,,
Orange-flower ,, ‡	Violet ,, ‖

Among the Lozenges most esteemed by *smokers* (after the mouth-pastilles and cachou aromatisé noticed elsewhere) are :—

Areca-nut Charcoal Lozenges, ¶	Musk Lozenges,
Catechu ,, **	Orange-oil ,,
Cinnamon ,,	Peppermint ,, ††
Clove ,,	Pine-apple ,, (and (drops),
Jargonelle ,, (and drops),	Vanilla Lozenges,

with a few others of like character.

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* The best should contain 1 to 1½ drachm of *Mitcham oil of lavender* to each lb. of *sugar*.

† ½ or even ¼ of a really good musk-lozenge is sufficient to scent the breath for some time.

‡ These should be made with 1½ to 2 drachms of pure *neroli* to each lb. of *sugar*, and beaten up with the finest *mucilage* of *gum-tragacanth* made with *orange-flower water*. They are the most delicately fragrant of all breath-lozenges.

§ Commonly made with 1 ounce of finely powdered *orris-root* to each lb. of *sugar* ; but better with the essence. They are the ordinary violet-lozenges of the shops.

‖ The finest of these are scented with *extrait de violette* ; the second quality with *essence of orris-root*. 'Orris-lozenges' are commonly sold for them, as noticed above.

¶ These, though usually scented like those next following, are better without anything being added to the charcoal except the "vehicle" to give them form.

** These are often strongly aromatized with *oil of cloves*, *cinnamon*, or *nutmeg*, or mixtures of them, *musk* or *ambergris* being also often added.

†† Made with *English oil of peppermint*, of which that distilled at Mitcham is the finest.

Among *tipplers*, to cover the fumes of liquor :—

Aniseed Lozenges,	Peppermint Lozenges,
Caraway ,,	Pine-apple ,,
Lemon (oil of) ,,	(and drops),

appear to be the favourites.*

The following Lozenges are occasionally employed as *cosmetics* and *medicaments* for the teeth, gums, &c. :—

Alum Lozenges. (See 'Astringent Lozenges,' *below*. Their frequent use is injurious to the teeth.)

Astringent Lozenges. (Vide those of catechu, alum, cinchona-bark, quinine, kino, rhatany, &c. Sucked in spongy, tender, and bleeding gums, looseness of the teeth, relaxed uvula, certain forms of sore throat, &c.)

Bark Lozenges. (Contain cinchona-bark, either in the form of powder or extract, and commonly a little cinnamon or nutmeg. Tonic and astringent. See *above*.)

Borax Lozenges. (Contain about 3 gr. of borax each. Used in sore gums, mouth, throat, &c., particularly of the aphthous kind.)

Camphor Lozenges. (Contain about $\frac{3}{4}$ gr. of camphor each. Anodyne and antiseptic. In toothache, foul gums, teeth, breath, &c. They should be kept in a bottle.)

Catechu Lozenges. (The best of the 'astringent lozenges.' See *above*.)

Cayenne Lozenges. (In toothache, sore throat, &c.; also in dyspepsia, foul stomach, to promote the digestion and appetite, &c.)

Chalk Lozenges. (In heartburn, diarrhœa, acidity of the mouth stomach, and bowels, &c.; 1 or 2 sucked, ad libitum, but not in number sufficient to restrain the natural evacuations.)

Charcoal Lozenges. (Those containing recently burnt areca-nut charcoal are the best. Sucked in caries, and to whiten and

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* In the gin-shops of London, and other large towns, the considerate (!) proprietors commonly provide a supply of *caraway-seeds* or scraps of *lemon-peel* for the truant wives, daughters, female-servants, and work-people of their neighbours, who kindly patronize their drams, a pinch or bit of one of them being taken after the indulgence, to disguise the fumes of liquor in the breath, which would otherwise lead to the detection of the delinquency.

preserve the teeth and deodorize the breath. They are also useful in diarrhœa, cholera, dyspepsia, &c. Those made with *chocolate* are also nutritious.)

Chlorate of Potassa Lozenges. (Each usually contains 1½ gr. of the chlorate. In spongy, tender, scorbutic gums; also to brighten the colour of the gums and lips; 1, 2, or 3 being sucked 5 or 6 times a day. They are great favourites with some smokers; but should not be too freely or frequently indulged in.)

Chloride of Lime Lozenges. (Usually contain ⅛ to ¼ gr. of the *dry chloride*, and are commonly tinged with carmine. Sucked to whiten the teeth and sweeten the breath, particularly by smokers. Their frequent use is very injurious to the teeth. The mouth should be well rinsed with tepid water after them, as noticed at page 343. They do not keep well.)

Ginger Lozenges. (If strong, are sometimes serviceable in slight toothache; also useful in flatulence, defective appetite, dyspepsia, &c.)

Magnesia Lozenges. (The best are made with heavy calcined magnesia. In acidity, heartburn, dyspepsia, &c., as chalk-lozenges, over which they have an advantage in not binding the bowels.)

Morphia Lozenges. (Those of the druggists usually contain about $\frac{1}{24}$ gr. of *hydrochlorate of morphia* each; those of the Edin. Ph., $\frac{1}{40}$ gr.; and those of the new British Ph., $\frac{1}{30}$ gr. each. Use, the same as 'opium lozenges,' 1 to 3 of the first, and 1 to 5 of the others, being slowly sucked, as required. A number containing more than ⅛ gr. of the hydrochlorate, or, at the very most, ⅙ gr., must, on no account, be taken at one time; and as a rule, should not be taken in a shorter space of time than about 6 hours, even by an adult, and then only, if necessary. Children cannot be safely trusted with them. They do not excite the pulse, nor confine the bowels, like 'opium lozenges.')

Myrrh Lozenges. (Used in tender, spongy, and ulcerated gums; also to fix loose teeth, &c.)

Nitre Lozenges. (Sucked in scurvy of the gums, incipient sore-throat, &c., as little of the saliva being swallowed as possible. Those containing a little camphor [½ gr. each] are anodyne, and are the most esteemed.)

Opium Lozenges. (Those of the new British Ph., and of the U. S. Ph., contain $\frac{1}{10}$ gr. of *opium* each; those of the E.

Ph., $\frac{1}{8}$ to $\frac{1}{7}$ gr.; those of the confectioners and druggists, usually about $\frac{1}{8}$ gr. Sucked as an anodyne and hypnotic, in toothache, face-ache, &c.; also to allay tickling and irritation. As a rule, in ordinary cases, not more than 6 to 10 of the above strength should be taken in a day, and this only occasionally. Their use should be avoided if any inflammatory symptoms be present, and their tendency to confine the bowels corrected by taking an aperient.)

Pellitory Lozenges. (Often very effective in ordinary toothache and face-ache, and not infrequently even in severe tic douloureux. They should be made with the *concentrated alcoholic tincture*, and of sufficient strength to cause slight tingling of the gums and skin of the mouth.)

Potash Lozenges. (Made with pure *bicarbonate of potassa*. Used as soda lozenges, *infrà*.)

Quinine Lozenges. (These should contain $\frac{1}{8}$ gr. each of genuine *disulphate of quinine*. Besides their value as a general tonic, stomachic, and antiperiodic, they are often of great service as a tonic and astringent in spongy, lax, and foul gums, loose teeth, &c., particularly in scorbutic and scrofulous subjects; as also in various other cases in which a tonic or astringent is indicated. They may be sucked almost ad libitum.)

Soda Lozenges. (Should contain *bicarbonate of soda*. Useful in acidity of the secretions of the mouth, heartburn, &c.; also in scurvy of the gums, but for this purpose greatly inferior to "potash lozenges," *antè*.)

Soda and Ginger Lozenges. (These are also stomachic.)

Soda and Peppermint Lozenges. (These are antacid and carminative, and, when really good, are also often serviceable in flatulence, nausea, and toothache.)

Vichy Lozenges; D'Arcet's Lozenges; Pastilles de Vichy. (These are merely 'soda lozenges.' Those of the Paris Codex weigh 20 grains, and contain 1 gr. of *bicorbonate of soda* each. M. D'Arcet slightly flavours his with *oil of peppermint*.)

Mouth Pastils; Cosmetic Pastils; Cachou Lozenges; Cachou Aromatisé, C. Aromatique, C. Cosmétique, C. de Boglogna, Grains de Cachou, Pastilles Cosmétiques; Pastilli Cosmetici.—These are said to have originated in Italy some centuries ago; but it is evident that articles of a similar kind were

known to, and employed by, the polished nations of antiquity. It was not, however, until the introduction of the habit of smoking tobacco that they took their present form in Western Europe. The original Italian formula was very complicated, and included *cascarilla*, *charcoal*, *liquorice*, *mastic*, *orris-root*, *oil of peppermint*, the *tinctures of ambergris* and *musk*, with other ingredients; but is now seldom or never employed in this country. The flavour of peppermint does not, indeed, appear to be relished by English smokers. At the present time almost every maker employs the formula, with certain limitations, which his own taste and caprice suggests for the article, and thus, as far as flavour and odour go, samples purchased at different shops often greatly vary. A rather powerful and persistent odour and flavour, and a degree of toughness sufficient to prevent their too rapid solution in the mouth, are qualities, however, which all are desirous that their mouth-pastils or cachous should possess.

Mouth-pastils are usually prepared in small spherical or pill-like masses of 1, 1½, or 2 grains each; but sometimes, instead of being made perfectly spherical, they are flattened a little, or they are egg-shaped or elliptical. They are always coated with either gold or silver leaf, generally the latter. As compactness is a necessary quality in them, and, owing to their small size, they are troublesome to 'turn out' by hand, they are usually moulded, on the large scale, in a machine similar to that which is used for pills, comfits, &c. In mixing the ingredients, similar precautions and a similar order should be observed to that pointed out under "fumigating pastils."

The 'gilding' or 'silvering' is effected in the way usually adopted for pills, viz.:—A *leaf*, or two, of *gold* or *silver* is placed in a *gallipot*, on this an appropriate number of pills or pastils, and then another leaf of the metal. The mouth of the gallipot is next covered with a piece of smooth *writing-paper*, and on this the palm of the hand is placed, when a sudden and rapid circular motion is given to the whole for a second or two. *Another method* is to shake them, in a similar manner, with a little gold-dust or silver-dust.* When pills are gilded or silvered immediately after being prepared, they are usually sufficiently moist or sticky to cause the leaf, or dust, to adhere; but should they be otherwise, they should be previously breathed on, or placed in damp air for a few minutes, or rubbed between the fingers

* That obtained by precipitation must be used, as if the metal be not in the form of impalpable powder, the coating will be thick, and hence too expensive. The leaf or dust of the *pure metal* should alone be used.

or the palms of the hands *very slightly* moistened with *thin mucilage*, so as to render them somewhat sticky, but not wet. 'Mouth pastils' are preferably not coated until they are dry and hard, and hence generally require one or other of these modes of treatment.

The products of the following formulæ are among those most highly esteemed :—

1. Take of

*Soft extract of liquorice**		3 ounces ;
Catechu (in fine powder)	}	of each,
White sugar (do.)	}	1 ounce ;
Gum-tragacanth (do.)		½ „
Oil of cloves		1 fluid drachm ;
„ *cassia*		½ „ „
„ *nutmeg*	}	of each,
Essence of ambergris (royale)	}	12 drops ;

mix, as before explained, beat the mixture to a firm uniform mass with

Eau de rose (or *eau de fleurs d'oranges*)	q. s. ;

and form it into 1-grain or 2-grain pills. Lastly, when dry, silver them. The stock of them should be kept in bottles or tin-canisters, and only a sufficient number of boxes for present sale filled at once.

2. Take of

Solazzi-juice† (powdered)		4 ounces ;
Lump-sugar	(do.)	3 „
Catechu	(do.)	2 „
Tragacanth	(do.)	1 „
Oil of cloves		2 fluid drachms ;
„ *cassia*		1 „ „
White of egg (to form the mass)		q. s. ;

as before. The preceding formulæ may be varied by the addition of some *cascarilla* (powder or essence), *vanilla* (do.), or *balsam of tolu*, or a little *oil of pimento*, *lavender* (English) or *peppermint* (English), or a few drops of *essence of musk*, other aromatics, or a portion of them, being left out, or not, at will.

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* This should have been recently prepared from the fresh root, and have a consistence nearly hard enough for forming pills.

† This should be genuine, and after being chopped small, and slowly and thoroughly dried in warm air, or by the heat of hot water, reduced to powder.

3. (M. Chevallier.) Take of

Fresh-roasted coffee (in fine powder) . .	}	{ of each,
Chocolate (do.) . .	} . .	{ 1½ ounce;
White sugar (do.) .	}	
Vanilla (do.) . .	}	{ of each,
Charcoal (recent; do.)	} . .	{ 1 ounce;
Mucilage of tragacanth (to mix) .		q. s.

The preceding, sucked ad libitum, are used to sweeten and perfume the breath; the last also acts by chemically deodorizing it. They are great favourites in the fashionable world among smokers.

4. Take of

Chloride of lime (good, dry) . .	1 drachm;
White sugar (powdered) . . .	3 ounces;
Gum tragacanth (do.)	1 „

mix; add of

Oil of cloves (or *peppermint*) .	½ fluid drachm;

mix thoroughly, and beat up the mass with *rose-water*. This acts chemically as a disinfectant, deodorizer, and bleacher, but should be only occasionally and sparingly used, as the chloride in them attacks the enamel of the teeth. One at a time is sufficient. The saliva should not be swallowed, and the mouth should be rinsed with water soon afterwards.

The mouth-pastils of the shops labelled—

Pastilles or Cachou à l'Ambre gris,
„ „ à la Canelle,
„ „ aux Fleurs d'Oranges,
„ „ Musqué,
„ „ à la Rose,
„ „ à la Vanille,
„ „ à la Violette,
&c., &c.,

are merely the ordinary pastilles or cachous in which the *essences* or *essential oils* of *ambergris, cinnamon, neroli, musk, rose, vanilla, violets*, &c., either wholly or in part, replace the other aromatics, but usually only to an extent sufficient to cause the former to markedly predominate.

Aromatized Conserves and Honeys are other, but less used, forms of "Breath Cosmetics." The latter are now seldom employed. The former are prepared as follows:—

CONSERVE OF LAVENDER.—Take of

Lavender-flowers (fresh) . . . 1 part;
Lump-sugar (powdered) . . . 3 „

beat them together, in a marble mortar, to a smooth paste. Similar 'conserves' are prepared from other fragrant flowers and leaves, particularly those having a sweet or agreeable taste, in which case only twice their weight of sugar is usually employed. They are used to sweeten the breath, but lozenges and pastilles are much more convenient for the purpose.

CHAPTER XVIII.

PERFUMES—PERFUMERY—FORMULÆ, DIRECTIONS, ETC.

PERFUME is volatile effluvium which, when diffused through the air, agreeably affects the organs of smelling.

Substances which emit or give off such effluvia, or which, in other words, possess an agreeable odour, or are sweet-scented or fragrant, are hence called "Perfumes."

The most fertile source of perfumes is the vegetable kingdom. Its flowers, seeds, woods, and barks, furnish a rich variety, from which the most fastidious connoisseur may select a favourite simple odour, or a complex bouquet. A few perfumes, as musk, ambergris, and civet, are obtained from the animal kingdom; but the aroma of none of these is comparable in sweetness and freshness to that of the rose, or in delicacy to that of the orange-blossom or the unpretending jasmine or violet. The inorganic world yields not a single perfume properly so called; nor has science yet been able to produce a single odoriferous compound from matter absolutely inorganic.

The term "perfumery" embraces perfumes in general, as also the art of preparing them. In its commercial application, the word embraces not merely

perfumes, but also cosmetics, and other articles of a closely allied character connected with the toilet, the manufacture and sale of which constitute the trade of the modern perfumer.

Fragrant substances in the state in which they are presented to us by nature, as also, though less correctly, their active principles — as for example, the essential oils—when extracted by art, are commonly known as "simple perfumes or aromatics." * In trade and popular language, preparations containing only one of them are also commonly called by the same general name, to distinguish them from others into the composition of which two, or more of them, enter, and which are hence called "compound perfumes."

The present Chapter will be devoted to "perfumes" as they are used, or preparations which, with a few exceptions, are employed entirely on account of their fragrance. The arrangement adopted will be one rather of convenience than of scientific accuracy. Preparations known in trade under similar general names, or bearing such in their 'labels,' will be placed together, and the classes thus formed will follow each other in alphabetical order.†

* Chemically speaking, the odorous principles of all perfumes and aromatics are compound bodies, and some of them of a very complex character. The imponderable odour of *musk* has hitherto defied the analysis of science. One grain of this substance will evolve its fragrance for ten or twelve years without perceptible loss of weight. Of what nature can be the volatile particles thus evolved?

† It is impossible, without waste of space, except in a few cases, to notice preparations bearing two or more names under each of them. Any difficulty in finding them may, however, be removed by reference to the *Index*. Articles of 'perfumery' not included in the present Chapter, will, in most cases, be found in the pre-

It may be useful here to warm the amateur operator against the promiscuous mingling of different scents in a single preparation, under the idea that, by bringing an increased number of agreeable perfumes together, the odour of the resulting compound will be richer. Some odours, like musical sounds, harmonize when blended, producing a compound odour combining the fragrance of each of its constituents, and fuller and richer, or more chaste and delicate, than either of them separately; whilst others appear mutually antagonistic or incompatible, and produce a contrary effect. Thus, the fragrant principle of cloves, in suitable proportion, combines with that of *lavender*, producing the delightful scent called "Rondeletia;" and the operator will often find a simple, or a compound perfume, particularly of a delicate kind, considerably injured, and sometimes utterly ruined, or converted into a disagreeable one, by the addition of a very small quantity of the nutty principle of bitter-almonds or peach-kernels. Yet there are many odours with which neither cloves nor lavender harmonize; and there are some which the odour of bitter-almonds supports and greatly improves. The truth is, that perfumes are organic compounds which, in some cases, chemically react on each other, and, in other cases, are neutral. But, beyond this, there are other causes that operate in rendering a compound perfume agreeable. A simple odour is agreeable, or disagreeable, according to the effect it produces on the organ of sense by which it is perceived. It is the same with a compound

ceding one. A notice of some of the leading articles used in the manufacture of 'perfumes' and 'cosmetics' will be found in Chapter XIX. (*infrà*).

perfume in which the odorous principles have not suffered decomposition from admixture. In the latter, it may be reasonably assumed that the effect of each odorous element on the olfactory nerves is coincident, and that the degree of perception of each depends on the relative energy or amount of these elements. Odours that produce similar or allied effects, coalesce or enforce each other; and, in some cases, these effects so blend as to lose their individual distinctness, and to affect the sense of smell with the same apparent unity of perception as a simple odour; just as the notes of an harmonic chord affect an ordinary ear, not singly, but as one sound. When the odorous elements are separately agreeable, but disagreeable, or less agreeable, when blended, it probably arises from their effects being more or less antagonistic or incompatible. Thus, figuratively, there are harmonies and discords in odours as well as in sounds. Refined perception, discrimination, and appreciation of odours, depend not less on natural taste, habit, and cultivation, than they do on the health and susceptibility of the organs of sense concerned. The skilled and experienced perfumer can generally analyze a compound odour, by smelling it, as easily as an accomplished musician can analyze a unison, or an orchestral concert into its instruments, by the ear.

Acetic Perfumes.—The stronger "aromatic" or "perfumed vinegars" fall under this class of preparations; as do also various 'esprits' and 'eaux' (alcoöliques) to which a marked acetic odour has been given by the addition of concentrated acetic acid. The latter may be conveniently prepared by simply adding 1 to 1½ fluid ounce of *glacial acetic acid* to each ½ pint of *scented spirit*. For

"Acetic Eau de Cologne," and other like perfumes, 1¼ to 2 ounces of *acid*, per pint, is generally sufficient.*

Ammoniated Perfumes.—These are prepared by either adding strong *liquor of ammonia* to the *liquid perfumes* (eaux, esprits, &c.), in sufficient quantity to impart to them a pungent ammoniacal odour, or by adding to the articles, before distillation, the ingredients that, by their mutual reaction, produce ammonia. In the former case, ½ to 1½ fluid ounce of liquor of ammonia (·880-·882), per pint, will be required, according to the nature of the preparation, and the degree of pungency desired; and, in general, when much 'essential oil' is present, a spirit of higher strength than usual should be employed for the esprit, to compensate for its subsequent dilution by the ammonia. In the other case, 4 to 5 drachms of *sal ammoniac*, and 7 to 8 drachms of *carbonate of potash* for each pint of the product intended to be drawn over, are mixed with the cold ingredients, just before distillation. For this use the liquor of ammonia must be perfectly free from tarry or empyreumatic matter, and have a purely ammoniacal odour.†

Ammoniated Eau de Cologne; Ammoniacal Cologne-water.—As a perfume, this is best prepared by either of the methods noticed under "Ammoniated Perfumes" (antè). In fashionable life, it is now very extensively employed as a substitute for "spirit of sal volatile." When intended for use in this way, a more agreeable and effective article may be produced by adding 1 ounce of *carbonate* (sesquicarbonate) *of ammonia*, and ½ fluid ounce of the *strong liquor of ammonia* to each pint of the *product*, or intended product, which will then have about the strength of the officinal 'spirit of sal volatile' (spiritus ammoniæ aromaticus) of the British Ph. That of the shops has usually only little more than half this strength.

Arquebusade. See "Eau d'Arquebusade."

Bouquets.‡—Highly concentrated compound odoriferous 'essences' and 'esprits,' adapted for the *handkerchief*, are commonly so named by the perfumers. Owing to the large quantity of essential

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* *Vide* "Acetic Acid," Chap. XIX.; also "Vinegars" (Perfumed), in the present Chapter (*infrà*).

† On "Liquor of Ammonia," &c., *vide* Chap. XIX.

‡ *Bouquet* (Fr.), a nosegay.

oil and other odorous substances which many of them contain, it is absolutely necessary to employ only highly rectified spirit in preparing them. In no case should a spirit of greater sp. gr. than ·8376-·838 (=56 p. c. overproof) be used for the best qualities; whilst some few of them require alcohol of the sp. gr. ·8175 (=66 o. p.) to retain their ingredients in permanent solution. Bouquets of excellent, though second quality, may be made with rectified spirit of the sp. gr. ·8565 (=45 o. p.). Coloured substances which produce stains, particularly permanent ones, should not enter into their composition.

The following are given here, as examples; but all the compound esprits and essences adapted for the handkerchief may be converted into 'bouquets' by proportionately increasing their strength, and are often sold under the name without it:—

Bouquet d'Amour.—Take of

Esprits de rose, jasmin, violette, and *cassie*	. . .	of each, 2 ounces;
Essences of musk and *ambergris*	. . .	of each, 1 ounce;

mix, and, if the liquid be not quite clear, add of *strong alcohol*, drop by drop, the least quantity sufficient to render it so. It may be filtered; but this should be avoided, as it occasions loss. A very agreeable perfume.

Bouquet de la Reine.—1. Take of

Essence (oil) of bergamot	. . .	2½ drachms;
Oil of lavender (Mitcham)	. . .	1 „
„ *cloves*	. . .	
Aromatic vinegar (glacial)	. . .	of each, ½ drachm;
Essence of musk	. .	
Alcohol	. . . . .	3 fluid ounces;

mix, with agitation, as before. Very fine.

2. Take of

Oil of bergamot	. . . . .	2½ drachms;
„ *lavender* (English)	. . .	2 „
Neroli	. . . . .	1 „
Oil of verbena	. . .	of each,
„ *cloves*	. . .	½ drachm;
Essences of ambergris and *musk*	. . .	of each, 2 fluid drachms;

Essence of jasmine . . . . . 3 fluid drachms;
Rectified spirit (strongest, scentless) . . . . . ½ pint;

mix, as before. Both are highly esteemed perfumes for the handkerchief.

Bouquet de Maréchale.—As "eau" or "extrait de maréchale," but made of triple strength, and with *alcohol* or the *strongest rectified spirit*.

Bouquet de Millefleurs.—"Eau" or "extrait de millefleurs" of triple strength, like the last.

Bouquet de Patchoulie; Bouquet de Pouchâ pât.—"Essence of patchouli" of the strongest and finest quality.

Bouquet de Suave.—As "esprit de suave" or "odeur suave," but of triple strength.

Bouquet Royal.—The same as "essence royale," but of extra strength.

Victoria Bouquet.—Bouquet de la reine.

Candles (*Scented* or *Aromatic*).—These are prepared by introducing a very small quantity of any appropriate aromatic into the material (*fat*, *wax*, or *wick*) of which they are made, whilst it is in the liquid state. *Camphor*, *gum-benzoin*, *balsam of Peru*, *cascarilla*, *essential oils*, &c., are generally the substances selected. Care must be taken not to overdo it, as then the candles will burn smoky and give little light.*

Cassolettes.—Vide "Scented Cassolettes," &c. (infrà).

Eaux, in *perfumery*, are either 'solutions' of the fragrant essential oils, in spirit, with or without the addition of other fragrant substances; or they are 'distilled waters' largely charged with the odorous principles of flowers. *Eau de Cologne*, *eau de lavande*, *eau de bouquet*, &c., are examples of the first; and *eau de rose*, *eau de fleurs d'oranges*, &c., of the second. The application of the term is usually restricted to articles of the kind imported from the South of France or Italy, and always so in reference to those of the latter class. English perfumers often give the name to perfumed spirits of their

* *Vide* "Pastils" (*infrà*).

own manufacture, which, though generally greatly inferior to those imported, they pass off as foreign, or as made by foreign houses here.

The *eaux* of the first class just referred to, resemble, for the most part, the other 'esprits' or perfumed spirits. They differ from 'extraits' and most of the 'essences' in being colourless, or nearly so; a quality which is secured either by distillation, or by the use of only pure and pale essential oils and essences in their preparation. They also generally, but not always, possess less alcoholic strength, and are less highly charged with odorous matter than those preparations.*

The following formulæ embrace the leading 'eaux' of the shops :†—

EAU D'AMBRE ROYALE; EAU ROYALE.—Take of

Essence of ambergris .	} . .	{ of each,
„ *musk* . .		{ 1 fluid drachm;
Esprit d'ambrette . .	} . .	{ of each,
Eau de fleurs d'oranges		{ 2½ fluid ounces;
Rectified spirit		5 „ „

mix. Very agreeable and durable.

EAU D'AMBRETTE; ESPRIT D'AMBRETTE.—Take of

Grains d'ambrette (musk-seed; bruised)	1 pound;
Rectified spirit	1 quart;
Water	¾ pint;

digest for 7 or 8 days, and distil off 1 quart. Very fine. Commonly sold as "Essence d'Ambrette." When used alone, a very few drops of *essence of ambergris* and *esprit de rose* improve it.

EAU D'ANGE; ESPRIT D'ANGE; EAU DE MYRTE.—Take of

Flowering tops of myrtle (bruised)	1½ to 2 pounds;
Rectified spirit	7 pints;
Water	3 „

digest a week, throw the whole into the still, add of

Common salt	2 pounds;

and draw over 1 gallon. A delicate and refreshing perfume. It is often supported with a slight dash of some other scent.

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* The distinction between "eaux" and "esprits" is not, however, very strictly observed in the labels, the same preparation being often veaded under both names, as may be perceived in the following pages.

† For the details of their manufacture, *vide* "Perfumed Spirits" (*infrà*).

EAU DE BEAUTÉ; EAU D'ELÉGANCE.—Take of

Esprit de jasmin		1 pint;
Spirit of hyacinth, *Tincture of styrax*, *Rectified spirit*		of each, ½ pint;
Spirit of star-anise, *Tincture of tolu*		of each, 2 fluid ounces;
Essence of vanilla		1 „ „
„ *ambergris*		½ „ drachm;

digest for a week, with agitation, and then, after repose, decant the clear portion. Used both as a cosmetic and a perfume.

EAU DE BOUQUET.—Take of

Spirit of rosemary (usual), *Essence of violets*, *Orange-flower water*		of each, 1 fluid ounce;
Oil of bergamot, „ *jasmine* (essential; E. I.)		of each, 1 fluid drachm;
Oil of lavender (Mitcham), *Oil of verbena*		of each, ½ fluid drachm;
Eau de rose		½ pint;
Rectified spirit		1½ „

mix. A delightful perfume, but weaker than "esprit de bouquet," for which it is often sold. Various other similar formulæ are employed.

EAU DE BOUQUET DE FLORE.—Take of

Spirit of roses, „ *rosemary*, *Essence of violets*		of each, ½ fluid ounce;
Oil of cedrat, *Essence of ambergris*		of each, 1 fluid drachm;
Orange-flower water		5 „ ounces;
Rectified spirit		1 pint;

mix. A very agreeable perfume.

EAU DE COLOGNE; COLOGNE WATER, NUN'S WATER; AQUA COLONIENSIS, SPIRITUS C.—Of this article two kinds—French and German—are kept in the shops. That prepared by Farina,* of

* Which Farina?—for there are now several Farinas at Cologne, each claiming to be the original one, or his descendant. (*Vide* Note [*] page 564.)

Cologne, is generally esteemed the best, and is preferred in the fashionable world, though that of some of the French houses is the most delicately fragrant. To produce 'eau de Cologne' of the finest quality, distillation should be had recourse to; but a very excellent article may be produced by the simple solution of the oils or essences in the spirit, provided they be new, pale, and perfectly pure, and the last of sufficient strength and perfectly scentless. English Cologne water, of which some samples are nearly equal to the best imported, is now generally made without distillation.

The formulæ for eau de Cologne are so numerous, that it is difficult to make a selection. Every manufacturer has generally his own; and hence the odour of that of different makers slightly varies, though in all of them it preserves the same generic character. The following are good examples of some in actual use:—

1. Take of

Oil of bergamot	of each, 2 fluid drachms;
„ *lemon*	
„ *orange*	1 „ „
Neroli	¾ „ „
Oil of rosemary	½ „ „
Essence of ambergris	of each, 3 or 4 drops;
„ *musk*	
Rectified spirit	1 pint;

mix. The product is better for distillation and being kept in a cool place for 2 or 3 months before sale or use; but is excellent without this. The essences may be omitted, but they improve it.

2. Take of

Oil of bergamot	1 fluid ounce;
„ *lemon*	1 „ drachm;
„ *cedrat*	¾ „ „
„ *rosemary*	of each, ½ fluid drachm;
Neroli	
Oil of balm	10 to 12 drops;
Rectified spirit	½ gallon;

mix, as the last. Very excellent.

3. Take of

Oil of bergamot	of each, 1 fluid drachm;
„ *orange*	
„ *rosemary*	
Neroli (or *ess. de petit grain*)	½ „ „
Rectified spirit	1 pint;

mix, as before. Very excellent.

By employing spirit of weaker strength than that ordered in the preceding formulæ, Eau de Cologne of second, third, or any lower quality, may be produced; but in doing so, the inferior solvent power of such spirit, as noticed elsewhere, should be remembered and acted on.* When the preceding are distilled, they may be varied or not, at will, by previous digestion on ¼ to ½ an ounce of the *flowers* or *tops* of *rosemary* or *balm*, and 1 to 2 drachms of *cardamom-seeds* (bruised), or one or more of them, at will.

4. (Farina.) Take of

Angelica-root	10 grains;
Camphor	15 „
Cassia-lignea, *Cloves*, *Mace*, *Nutmegs*, *Wormwood* (tops)	of each, 20 grains;
Calamus aromaticus, *Sage*, *Thyme*	of each, ½ drachm (Troy);
Orange-flowers	1 „ („)
Lavender-flowers	1½ „ („)
Rose-petals, *Violets*	of each, 3 drachms (Troy);
Balm-mint, *Spear-mint*	of each, 1 ounce (Troy);
Lemons (sliced), *Oranges* (do.)	of each, 2 in No.;
Rectified spirit	5 gallons;

bruise or slice the solids, and digest them in the spirit, with frequent agitation, for 2 or 3 days, then distil off 2-3rds. To the distillate add, of

Oil of bergamot, „ *jasmine* (essential)	of each, 1 fluid ounce;
„ *balm-mint*, „ *cedrat*, „ *lavender*, „ *lemon*	of each, 1 fluid drachm;

* *Vide* "Perfumed Spirits;" also "Eau de Lavande" (*infrà*).

Neroli (pure) . . .	}	{ of each,
Essence (oil) *of anthos-seed*	} . .	{ 20 drops;

agitate until solution is complete, and the next day, if necessary, filter.*

5. (Gassincourt.) Take of

Neroli	}	{ of each,
Oil of bergamot .	}	{ 24 drops (minims);
„ *cedrat* . .	}	{
„ *lemon* . .	}	{
„ *orange* . .	}	{
„ *rosemary* .	}	{
Lesser cardamom-seeds (bruised) .		¼ ounce;
Spirit, at 32° Baumé (say, 38 o.p.)		1 quart;

digest a few days, and then distil 1½ pint.

6. (Paris "Codex.") Take of

Oil of cinnamon		¾ ounce (Troy);
„ *lavender* . .	}	{ of each,
„ *rosemary* . .	} . .	{ 1½ ounce (Troy);
Neroli	}	{
Oil of bergamot . .	}	{ of each,
„ *cedrat* . . .	} . .	{ 3 ounces (Troy);
„ *lemon* . . .	}	{
Spirit of rosemary		1 quart;
Compound spirit of balm† . . .		3 pints;
Rectified spirit		3 gallons;

digest 8 days, and then distil 3 gallons. This is the officinal "Eau de Cologne" of the French Ph.

7. (Dr. A. T. Thomson.) As No. 3, but replacing the 'neroli' with 1 pint of *orange-flower water*, adding 1 drachm of *cardamom-seeds*, and after digestion, distilling over 1 pint.

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* This formula, many years since, was confidentially given by the celebrated original Jean Maria Farina, who lived opposite the Jülichs Platz, in Cologne, to a professional gentleman, now deceased, with a solemn assurance that it was the one used by the former in his laboratory. After keeping the secret some years, this gentleman disclosed it. It seems unnecessarily complicated. Some of the articles, as the herbs wormwood and mint, are either useless or better omitted. The version given above differs from the original simply in being intended for only 5 gallons instead of twelve times the quantity. I have personally tried it, and found the quality of the product splendid.

† *Eau de melisse des Carmes.*

8. (Trommsdorff.) As No. 5, but omitting the 'oil of lemon,' and using about double the quantity of *spirit* there ordered.

"Eau de Cologne" is a favourite and fashionable scent for personal use, and is, probably, of all others, the one now most extensively employed. It is also used as a cosmetic, to remove freckles, acne, &c. A very large quantity is likewise consumed by ladies, in high life, as a cordial and stimulant, to drive away the vapours, and to perfume the breath. For this purpose it is usually diluted, and sweetened with sugar, or taken on sugar. A piece of linen dipped in "eau de Cologne," and laid across the forehead, or on the temples, is a fashionable remedy for nervous headache. It then acts as an 'evaporating lotion.'

EAU DES CARMES; EAU DE MELISSE DES CARMES; COMPOUND SPIRIT OF BALM; BALM WATER.—Take of

Flowering tops of balm (fresh)	.	1½ pound;
Lemon-peel (do.)	. . . . .	4 ounces;
Cinnamon (bruised)	}	of each,
Cloves (do.)	} . .	2 ounces;
Nutmegs (do.)	}	
Coriander-seed (do.)	}	of each,
Angelica-root (dry; do.)	} . .	1 ounce;
Rectified spirit	. . . . .	5½ pints;

macerate 8 days, and distil to dryness by the heat of a water-bath. These are the proportions of the Paris "*Codex*." This spirit is highly esteemed in France as a cosmetic, stomachic, and stimulant.

EAU DES FRAMBOISES.—Take of

Strawberries (finest; crushed)	.	16 pounds;
Rectified spirit	. . . . .	1 gallon;

digest, and distil nearly to dryness in a salt-water or steam-bath. Agreeably fragrant. In high repute as a cosmetic; and also as a perfume, supported with a "dash" of some other scent.

EAU D'HÉLIOTROPE.—Take of

Essence of ambergris	. . . .	½ fluid drachm;
Vanilla (coarsely powdered)	. .	½ ounce;
Orange-flower water	. . . . .	½ pint;
Rectified spirit	. . . . .	1 quart;

digest for a week, and then decant or filter. 5 or 6 drops each of *oil of bitter almonds* and *cassia*, are sometimes added. Used both as a cosmetic and perfume.

EAU D'HONGRIE; EAU DE LA REINE D'HONGRIE; HUNGARY WATER; COMPOUND SPIRIT OF ROSEMARY; AQUA HUNGARICA.—1. Take of

Rosemary-tops (in blossom) . .	2 pounds;
Sage (fresh)	¼ „
Rectified spirit	3 quarts;
Water	1 „

digest for 10 days, throw the whole into a still, add of *common salt*, 1½ pound, and draw over 6 pints.

To the distillate add of

Jamaica-ginger (bruised) . . .	1 ounce;

digest a few days, and either decant or filter. The old plan of adding the ginger before distillation, is wrong, as the aromatic principle of the root does not pass over with the vapour of alcohol.

2. Take of

Oil of rosemary (pure)	1½ to 2 fluid drachms;
„ *lavender* (English) . . .	½ „ „
Orange-flower water	½ pint;
Rectified spirit	1½ „

mix. The first is the genuine formula. The second is that of the English perfumers. Spirit of rosemary is now commonly sold for it by the druggists.

'Hungary water' is fragrant and stimulant. It is highly esteemed both as a skin and hair cosmetic, particularly on the Continent. Sweetened with sugar, it is also used as a liqueur by ladies. The most extraordinary virtues were formerly attributed to it.

EAU INCOMPARABLE; UNPARALELLED WATER.—Take of

Oil of lemon	4 fluid drachms;
„ *bergamot*	3 „ „
„ *cedrat*	2 „ „
„ *rosemary*	1 „ „
„ *lavender* (English) . . .	½ „ „
Rectified spirit	2 quarts;

agitate them together, add of

Pure water	¾ pint;

again agitate, and distil ½ gallon. M. Guibourt's formula is nearly similar, except in substituting ½ pint of *Hungary-water* for the last two oils. Used in a similar way to Eau de Cologne; also to make liqueurs. It was formerly believed to possess the most extraordinary medicinal virtues, and was in great repute on the Continent.

EAU DE JASMIN.—Esprit de Jasmin.

EAU D'ISPAHAN.—Take of

Oil of bitter-orange	1 fluid ounce;
„ *rosemary*	1 „ drachm;
„ *cloves*, *Neroli* (or *ess. de petit grain*)	of each, ½ fluid drachm;
Oil of spearmint, „ *cassia*	of each, 15 drops;
Eau de rose	½ pint;
Rectified spirit	3½ „

mix. Used as 'Eau de Cologne,' and like it, is better for distillation.

EAU DE LAVANDE, EAU DE LAVANDE TRIPLE, ESPRIT DE LAVANDE; LAVENDER WATER, DOUBLE DISTILLED L. W.; SPIRIT OF LAVENDER; AQUA LAVANDULÆ, A. L. ODORIFERA, SPIRITUS L. O.—1. Take of

Flowering tops of lavender (fresh, and carefully picked)	10 pounds;
Rectified spirit	1 gallon;
Water	½ „

digest a week, throw it into a clean still, add 1½ pound of *common salt* dissolved in ½ gallon of *water*, and after stirring the whole together, draw over, rapidly, 1 gallon, by the heat of steam, or of a salt-water bath. To the distillate add of

Oil of bergamot	5 fluid drachms;
Essence of ambergris (finest)	2 „ „

and mix well. Very fine.

2. Take of

Oil of lavender (finest; Mitcham)	2 ounces;
Essence of musk (finest)	1 fluid ounce;
„ *ambergris* (do.), *Oil of bergamot* (recent; pure)	of each, ½ ounce;
Rectified spirit (56 o. p.; scentless)	½ gallon;

mix by agitation. Very fine without distillation; but better for it,

in which case the 'essences' should be added to the distillate. Delightfully and powerfully fragrant.*

3. (Smith's "British Lavender.") Take of

Oil of lavender (Mitcham) . . ½ ounce;
Essence of ambergris . . . . . ¼ „
Eau de Cologne (finest) . . . . ¼ pint;
Rectified spirit . . . . . ½ „

mix by agitation. Very fragrant, and much esteemed.

'Eau de lavande' is a most agreeable and fashionable perfume for personal use; but like most others of its class, it must not be used too freely. Its excessive use distinguishes the vulgar.

The ordinary "lavender-water," "double-distilled do.," "eau de lavande," or "eau de lavande triple," of the shops, is usually made with spirit at proof, or even much weaker; hence, its inferior quality to that of the higher class of perfumers. 1 ounce of true *English oil of lavender* is all that will perfectly combine with 1 gallon of *proof spirit* (or 1 dr. to the pint); any excess rendering it milky or cloudy.

The (simple) "Spirit of Lavender" of the London & Edin. Ph., is made by distilling off 1 gallon from a mixture of *fresh lavender*, 2½ pounds; *rectified spirit*, 1 gallon; *water*, 1 quart. This plan is hardly ever followed by the wholesale druggists, who make their 'first quality' by simply dissolving 3 ounces of the *oil* in 1 gallon of *rectified spirit*; and their 'second quality' with 1 ounce of *oil* to the gallon of *proof spirit*. The "Spiritus Lavandulæ" of the new British Ph. (which should be rather called "Essence of Lavender"), is made by simple solution of 1 fluid ounce of *English oil of lavender* in 9 fluid ounces of *rectified spirit*. It is chiefly intended for use in dispensing.

Eau de Lavande Ammoniacale; Ammoniacal Lavender Water.—1. To each pint of *eau de lavande* (see above), add of *liquor of ammonia* (·880-·882), ½ to 1 fluid ounce.

2. Take of

Oil of lavender (English) . . . 1 fluid ounce;
Spirit of ammonia (caustic) . . 1½ pint;

mix. The product is the officinal preparation of the French. Used as a stimulating pungent scent, in fainting, headaches, &c.

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* Eau de Lavande prepared by this formula, on the large scale, under my inspection, has received the commendation of Her Majesty the Queen, and many of the nobility and leaders of the haut ton.

EAU DE LAVANDE DE MILLEFLEURS.—Take of

Eau de lavande *	. . . . .	1 quart;
Oil of cloves	. . . . .	1½ fluid drachm;
„ *cassia*	. . . .	of each,
Essence of ambergris	. .	½ fluid drachm;

mix.

EAU DE MARÉCHALE.—The finest quality is made by a similar formula to that for "extrait de maréchale." The following produces a very good, though second quality:—Take of

Essence of violets	. . . . .	1 fluid ounce;
Oil of bergamot	. .	of each,
„ *cloves*	. . . .	¼ ounce;
Orange-flower water	. . . . .	½ pint;
Rectified spirit	. . . . .	1 „

mix. An agreeable and favourite perfume.

EAU DE MIEL; HONEY-WATER; SWEET-SCENTED HONEY-WATER, AQUA MELLIS ODORIFERA.—1. Take of

Esprit de rose (No. 3)	. . . .	1 pint;
„ *jasmin* (No. 2)		
Eau de fleurs d'oranges	. .	of each,
Rectified spirit	. . .	½ pint;
Essence of vanilla	. . . . .	1 fluid ounce;
„ *musk*	. . . . .	6 „ drachms;
„ *ambergris*	. . . . .	3 „ „
„ *Portugal* (oil)	. . .	2 „ „
Oil of rosemary	. .	of each,
„ *thyme*	. . . .	1 fluid drachm;
Flowers of benzoin	. . . . .	½ drachm;

mix, and agitate them well together for some minutes. Delightfully fragrant.

2. Take of

Oil of bergamot	. . . . .	1 fluid drachm;
„ *lemon*	. . . . .	½ „ „
„ *cloves*	. . . . .	10 drops;
„ *lavender*	. . .	of each,
„ *rosemary*	. . .	8 or 10 drops;

* *Vide* page 567 (*antè*).

Musk (finest; powdered*) . . 4 grains;
Ambergris (do.; do.) . . . . 3 „
Eau de fleurs d'oranges } . . { of each,
„ *rose* . . . . } . . { ½ pint;
Rectified spirit . . . . . 1 quart;

digest, with agitation, for 12 or 14 days, and then decant or filter. Very fragrant.

3. To the last, before digestion, add of

Narbonne-honey . . . . . 1½ to 2 ounces;
Hay-saffron (genuine) . . . . 7 or 8 grains;

and otherwise proceed as before. This last is commonly made into a 'ratifia' with *sugar*. The others are used as perfumes; and all of them as cosmetics.

Eau de Millefleurs.—The finest is "extrait de millefleurs," noticed below. The following formula produces a second quality:—Take of

Eau de lavande triple. } . { of each,
Essence of jasmine (not oil) . . . . . } . { 1 fluid ounce;
Oil of bergamot . . . . . 1½ fluid drachm;
„ *cassia* . . } . . { of each,
Essence royale . . . } . . { ½ fluid drachm;
Oil of sassafras . . } . . { of each,
„ *cloves*. . . . } . . { 12 drops;
„ *rhodium* . . . . . 4 or 5 drops;
Orange-flower water . . . . . 8 ounces;
Rectified spirit . . . . . 1 pint;

mix. It may be varied almost at the will of the operator.†

Eau de Mousseline.—Take of

Eau de fleurs d'oranges } . . { of each,
Esprit d'œillets ‡ } . . { ½ pint;
(No. 2) . . . .
Esprit de rose (No. 3.) } . . { of each,
„ *jasmin* (No. 4) } . . { ½ pint;
„ *fleurs d'oranges* (No. 4) . . }

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* *Vide* "Essences" (*infrà*).

† *Vide* "Essence of Millefleurs" (*infrà*); also "Extraits."

‡ Pinks, or clove-gilly flowers.

Essence of vanilla . . } . . { of each,
„ *musk* . . } . . { 1½ fluid drachm;
Sandal-wood (white; rasped) . . 1 drachm;

digest a week, and decant. A delicate and very agreeable perfume.

EAU ROMAINE.—Take of

Essence of ambergris . . . . . 1 fluid drachm;
Tincture of benzoin . . . . . 4 „ „
Spirit of tuberose . . . . . 1½ „ ounce;
Tincture of vanilla . . . . . 2 „ „
*Esprit de fleurs d'acacia** . . . 2½ „ „
„ *jasmin* . . . . . 7½ „ „
Essence de petit grain . . . . 8 or 10 drops;

mix. A delicate Italian perfume. The last 'essence' is often omitted, and the 'tincture of benzoin' reduced in quantity.

EAU DE ROSIÈRES.—Take of

Esprit de jasmin . . } . . { of each,
„ *fleurs d'oranges* . . . . . } . . { 1 fluid ounce;
Spirit of angelica-root } . . { of each,
„ *celery-seed* . } . . { 2 fluid ounces;
„ *cucumber* . }
Esprit de rose . . . . . 4 „ „
Tincture of benzoin . . . . . 3 „ drachms;

mix. A very agreeable perfume; also used as a cosmetic.

EAU ROYALE.—Vide "Eau d'ambre royale."

EAU SANS PAREILLE.—1. Take of

Grain-musk (finest) . . . . . 4 grains;
Ambergris (do.) . . . . . 5 „
Oil of sassafras . . . } . . { of each,
„ *origanum* . . } . . { 5 or 6 drops;
„ *cassia* . . . . }
„ *bergamot* . . . . . 1 fluid drachm;
„ *cloves* . . . . . 2 „ „
„ *lavender* (English) . . . 2½ „ „
Rectified spirit . . . . . 1 quart;

digest for 14 days, with frequent agitation. Very fine.

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* "Acacia farnesiana," Willd. Its flowers yield a delicious perfume, which is one of the most esteemed ingredients in Italian perfumery.

2. Take of

Essence royale		20 drops;
Oil of cedrat	}	of each,
„ *pimento*	}	½ fluid drachm;
„ *bergamot*		¾ „ „
„ *lemon*		1 „ „
Hungary-water (fragrant)		2½ „ ounces;
Rectified spirit		1¼ pint;

mix. Inferior to the last.

Eau de Violette.—Esprit de Violette.

Eaux Distillées; Aquæ Destillatæ; Distilled Waters.—These are correctly, and not merely technically, called 'eaux,' the vehicle, in all of them, being pure water. The simple fragrant 'distilled waters' are noticed under that head in a subsequent part of this Chapter. The "compound distilled waters," of the perfumers, are not very numerous. The methods of preparing them and the precautions to be taken, are, for the most part, similar to those for the simple distilled waters. The following are a few compound "eaux" (aqueuses) which may serve as examples for others:—

Eau d'Ange (simple).—This is 'myrtle-water' ("eau de myrte").

Eau d'Ange; Angel Water; Portugal Water.—Take of

Eau de rose	}	of each,
„ *fleurs d'oranges*	}	½ pint;
„ *myrte*		¼ „
Essence of ambergris		2 fluid drachms;
„ *musk*		1 „ „

agitate them briskly together for some hours, and again, frequently, for a few days, observing to keep the bottle (closely stopped) in a warm room the whole time. Lastly, after repose, decant the clear portion, and, if necessary, filter the liquid through white bibulous paper. Nearly colourless.

Eau d'Ange bouillée.—Take of

Eau de fleurs d'oranges	}	of each,
„ *rose*	}	1 pint;
Gum-benzoin (crushed small)		2½ ounces;
Liquid styrax		1¼ „
Cinnamon (well bruised)		2 drachms;
Cloves (do.)		1 „
Musk-pod (fresh-emptied)		1 in No.;

digest, with agitation, in a securely stopped bottle or can of tinned copper, at a little under the boiling heat (say 185°–195° Fahr.), for two hours. When the whole has become cold, pour off the clear portion, press the residue, mix the two liquids together, and otherwise proceed, as before.

EAU D'ANGE DISTILLÉE.—Take of

Gum-benzoin (crushed small) . .	4 ounces;
Liquid styrax	2 „
Cloves (bruised)	½ „
Calamus aromaticus (do.) }	} of each,
Cinnamon (do.)' . . } . .	} ¼ ounce;
Coriander-seed (do.)	1 drachm;
Water	7 pints;

distil ½ gallon.

EAU D'ANGE DISTILLÉE ET MUSQUÉE.—To the last, after distillation, add of *essence of musk*, q. s., and agitate the whole briskly for at least an hour.

The above are highly fragrant and agreeable waters.

EAU DE NAPHRE, EAU DE NAPHE, EAU DE FLEURS D'ORANGES TRIPLE; AQUA NAPHÆ; DOUBLE-DISTILLED ORANGE-FLOWER WATER, LANGUEDOC DO.—True "eau de naphre" is distilled, in Languedoc, from the *leaves* of the *bigarade* or *bitter-orange tree*. Its fragrance somewhat resembles that of 'essence de petit grain,' but is more delicate and weaker. The preparation commonly sold for it, particularly in England, is often prepared as follows:—

1. Take of

Orange-flowers	7 pounds;
Fresh thin yellow-peel of *bitter* or *Seville oranges*	6 to 8 ounces;
Water	2 gallons;

macerate 24 hours, and then distil 1 gallon. Or—

2. Take of

Oil of bitter orange	1 fluid drachm;
Rectified spirit (purest) . . .	1 „ ounce;

dissolve, and add the solution to

Orange-flower water	1 gallon;

agitate briskly for half an hour, or longer, and the next day decant, or filter through wetted paper. Ordinary orange-flower water is not infrequently sold for 'eau de naphre.'

ESPRITS.*—The name 'esprits' is commonly given by the perfumers to alcoholic solutions of the fragrant essential oils and other odorous and aromatic substances. As a rule, 'esprits' are less highly charged with odorous principles, and have less alcoholic strength than 'essences' and 'extraits,' as well as having little colour, if any; but the term is often very loosely and capriciously applied in trade, just as its synonym or analogue, *spirit*, is in English.

The following formulæ embrace the leading esprits of the shops:†—

ESPIRIT D'ACACIA.—Take of

Esprit de fleurs d'acacia‡ (simple)		7 fluid ounces;
„ *jasmin* .	} . .	{ of each,
„ *tuberose* .	}	{ 1½ fluid ounce;
Essence of ambergris (finest; pale)		1 „ drachm;
Eau de fleurs d'oranges . . .		3 „ ounces;
Rectified spirit		7½ „ „

mix. A favourite Italian perfume.

ESPRIT D'AMANDE; EXTRAIT D'AMANDE AMÈRE; ALMOND PERFUME; EXTRACT OF PEACH-KERNELS.—Take of

Essential oil of almonds . . .		2½ fluid drachms;
Oil of bergamot . .	}	{ of each,
„ *cassia* . .	} . .	{ ½ fluid drachm;
Essence royale . .	}	
Rectified spirit		1 pint;

mix.

ESPRIT DE BERGAMOTTE.—Take of

Oil of bergamot (finest, recent) .		5 fluid drachms;
„ *rose-geranium* .	} .	{ of each,
„ *verbena* . . .	}	{ ½ fluid drachm;
Essence of ambergris		2 „ „
„ *musk*		½ „ „
Rectified spirit		1 pint;

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* *Esprit* (Fr.), spirit.

† For the details of their preparation, *vide* "Perfumed Spirits" (*infrà*).

‡ *Vide* "Note," page 571 (*antè*).

mix. Very fine. For a 'second quality' (usually called best), 1 quart of *spirit* 25 p. c. over proof is used; for a 'third quality,' 3 to 4 pints at proof.

ESPRIT DE BOUQUET.—Take of

Oil of lavender (Mitcham)	. .	4 fluid drachms;
„ *bergamot*	} . .	of each,
„ *cloves*	}	1½ fluid drachm;
Essence of musk	} . .	of each,
Oil of verbena	}	½ fluid drachm;
Otto of roses	. . . . .	5 to 6 drops;
Rectified spirit	. . . . .	1 pint;

mix, and agitate frequently for a day or two. A very powerful and agreeable scent.

ESPRIT DE FLEURS; SPIRIT OF THE FLOWERS OF ITALY.—

1. Take of

Esprit de casse (No. 2)		
„ *jasmin* (No. 2)	} . .	of each,
„ *d'oranges* (No .3)	}	¼ pint;
„ *de rose* (No. 1)		
Eau de fleurs d'oranges	} . .	of each,
Rectified spirit	}	3½ fluid ounces;

mix. ½ fluid drachm of *essence of ambergris* is often added.

2. To the last add, of

Esprit de fleurs d'acacia	. . .	¼ pint;

the products of both are delicate and highly esteemed scents.

ESPRIT DE JASMIN; EAU DE JASMIN.—This is usually the simple 'esprit.'* It is difficult to interfere with its extremely delicate and chaste odour without injuring it.

ESPRIT DE JASMIN ODORANT.—Take of

Extrait de jasmin (No. 1)	} . .	of each,
Rectified spirit	}	½ pint;
Essence of ambergris	. . . . .	½ fluid drachm;
Neroli (finest)	. . . . .	8 or 10 drops;

mix. A delicate and favourite foreign scent.

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* *Vide* "Essences" and "Perfumed Spirits" (*infrà*).

ESPRIT DE JONQUILLE.—What is said above respecting "esprit de jasmin," also applies here.

ESPRIT DE JONQUILLE ODORANTE.—This is made in a similar way to the corresponding "esprit de jasmin."

ESPRIT DE MYRTE; ESPRIT D'ANGE.—"Essence de myrte," with or without the addition of a very slight 'dash' of *ambergris*.

ESPRIT D'ORANGE.—Take of

Oil of orange	2½ drachms;
„ *cedrat*	½ „
„ *cloves*	of each,
„ *lavender*	15 drops;
Essence of musk	8 or 10 drops;

mix.

ESPRIT DE FLEURS D'ORANGES.—The best is the "extrait," the qualities varying with the No. of the 'extraction.' When "extrait No. 1" is used, it is generally diluted with an equal weight of *spirit* not less than 35 p. c. over proof. *Essence of neroli* of half strength is commonly sold for it.*

ESPRIT DE PATCHOULIE.—This is commonly "essence of patchouli" of half strength.

ESPRIT DE PRIMEVÈRE; COWSLIP PERFUME; PRIMROSE DO.—Take of

Oil of bergamot	3 fluid drachms;
„ *lemon*	1 „
„ *jasmine* (essential)	of each,
Essence de petit grain	½ fluid drachm;
Oil of cloves	20 drops;
Essence of ambergris	12 to 15 drops;
Rectified spirit	1 pint;

mix. A fancy perfume, which almost every maker modifies to please his taste, there being no real preparation of the kind of either cowslips or primroses.

ESPRIT DE LA REINE.—As "bouquet de la reine," but using about four times the quantity of *rectified spirit* for the 'alcohol' and

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* *Vide* "Esprit de Jasmin," page 575 (*antè*).

'spirit' there ordered. The following is another formula much in use:—

Take of

Oil of bergamot	3½ fluid drachms;
Essence of ambergris	1 „ „
Oil of rose-geranium }	} of each,
Otto of roses }	} ½ fluid drachm;
Oil of cassia	15 drops;
Rectified spirit (warm)	1 pint;

agitate until solution is complete. This last, slightly modified or not, is often called 'Victoria Perfume," "Alexandra Bouquet," &c.

Esprit de Rondeletia.—Similar to "extrait" or "essence de rondeletia," but less richly loaded with perfume, and usually of less alcoholic strength.

Esprit de Rose.—The simple "esprit" is noticed elsewhere.* The compound perfume sold under this name is commonly made as follows:—

1. Take of

Esprit de rose (simple; finest)	1 pint;
Essence of ambergris }	} of each,
Oil of rose-geranium }	} ½ fluid drachm;

mix. Delicately fragrant.

2. Take of

Otto of roses (finest)	1½ drachm;
Neroli	½ „
Rectified spirit (56 o. p.; warm)	5 pints;

agitate them together, add of

Chloride of calcium (dry; powdered)	¾ pound;

and again well agitate. Next throw the whole into a still, and draw over rapidly by steam-heat, ½ gallon. Lastly, add to the distillate 1 fluid drachm of *essence royale*. Very fine. Both are delicate and favourite perfumes.

Esprit de Suave; Odeur Suave.—Take of

Oil of bergamot }	} of each,
„ *cloves* }	} ½ fluid drachm;
Neroli }	}

* *Vide* pp. 579-80, 590-2, &c.

Essence of musk . . . . . 3 fluid drachms;
Spirit of jasmine . . } . { of each,
„ *cassia* . . } . { ½ pint;
„ *tuberose* . . } . { of each,
Rectified spirit . . } . { ¼ pint;

mix; further add of

Eau de rose . . . . . ¼ pint;

and agitate the whole well. A fashionable and durable scent.

Esprit de Tain; Spirit of Lemon-thyme.—Take of

Tops of lemon-thyme . . . . . 3 pounds;
Proof spirit . . . . . 1 gallon;

distil 7 pints.

Esprit de Vénus.—The old name of "glacial acetic acid" obtained by the dry distillation of *verdigris*. It contains some fragrant pyroacetic spirit, and is hence preferred, by the perfumers, for making "aromatic vinegar."

Esprit de Violette; Spirit of Violets. — The genuine "esprit" is noticed further on.* Like that of 'jasmine,' owing to the delicacy of its odour, it can scarcely be improved by any addition. The ordinary "esprit de violette," and "violet perfume," of the shops, is merely "tincture" or "spirit of orris-root," and is prepared as follows:—Take of

Florentine orris-root (in coarse powder) . . . . . ¼ pound;
Rectified spirit . . . . . 1 pint;

macerate for a fortnight, with frequent agitation. The product has a very pleasant odour, but one less pure than that of the true 'esprit' of the flowers. A 'second quality' is made with *spirit* 25 to 30 o. p.; and a 'third quality,' with *proof spirit*, and only 2 ounces of *orris-root*.

Essences.—The general applications of the term "Essence" have been briefly explained under "Skin Cosmetics," to which the reader is referred. The following remarks and formulæ, though intended to have reference exclusively to the "Essences" of the perfumer, admit of more extensive application:—

Fragrant Essences; Essentiæ Odoratæ; &c.—Those Essences for which separate formulæ are not given in this Chapter may, for con-

* *Vide* p. 598-9; also the *Index*.

venience, be divided into two classes—those from "flowers" and other "organic substances" of which the fragrant principle is *volatile*, and—those from "substances" of which the fragrant principle is *fixed* or possesses *little volatility*. General formulæ for the preparation of the former are given under "Essences of Flowers" (infrà). The "essences" of "ambergris," "musk," and "vanilla," furnish examples of the latter. The *essences* of the fragrant and aromatic "*barks*, *seeds*, and *woods*," that derive their characteristic qualities from the presence of ordinary essential or volatile oil, are best prepared by the simple solution of such *oil* in *rectified spirit*, as noticed under "Essence of Almonds," "Essence of Flowers," &c. Such essences may also be prepared by the direct digestion of the substances in *rectified spirit*, or by 'infusion' from the respective pommades and oils; but the products, in the first way, without subsequent distillation, though often excellent as mere 'flavouring essences,' are, in most instances, too dark in colour, and too much loaded with organic matter, for use in first-class perfumery.* Essences of the "fragrant resins" and "balsams" are, like those of musk, ambergris, &c., prepared almost uniformly by simple digestion or solution; the colour, in such cases, being of little moment, as they are chiefly added, in small quantities only, to other preparations. It must be observed, in all cases, that the addition of non-volatile fragrant substances, and of their essences, to compound essences, and other spirits and waters, must be made to the 'distillate,' if distillation be employed; as, if they were added before distillation, no effect would be produced on the product by them.

Essences of Flowers.—The essences of those flowers which are not separately given in this work, may be made by one or other of the following general formulæ:—

1. Take of

Essential oil (of the respective flowers)	1 ounce;
Rectified spirit	1 pint;

dissolve, as directed for "essence of almonds."

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* *Vide* "Essence of Tuberose," "Extraits," &c.

2. Take of

The (respective) *flowers* . . . 3 to 5 pounds;*
Proof spirit . . . . . 2 gallons;

digest for a few days, and then draw over, by distillation, 1 gallon of 'essence.' For those flowers that are not strongly fragrant, the product may be distilled a second and a third time, or even oftener, from fresh flowers, as noticed under "Essence of Roses." The products obtained by distillation are always colourless; and hence flowers rich in colour may, in general, be advantageously so treated.

3. Proceed in either of the ways described under "Essence of Tuberose." This applies to most of those flowers that contain little fragrant oil, and of which the odour is of an extremely delicate description.

A small quantity of some other *odorous essence* or *volatile oil* is commonly added to the simple "essences of flowers," at will, to enrich or modify the fragrance, each manufacturer usually pursuing his own taste in the matter.

In some cases, spirit is impregnated with a combination of *essential oils* and other odorous substances, so as to produce, artificially, an odour resembling, or approaching, that of particular flowers, after which the products are named; although there may be none of the respective flowers employed in their preparation. This is particularly the case with flowers of which the odorous principle is difficult or troublesome to extract, or which possess very little of it. So also of the essences of many flowers having strange or attractive names, and no true fragrance. Hence arises the almost endless variety of 'fragrant essences,' 'esprits,' and similar preparations, vended by the perfumers of the present day, numbers of which are mere artificial combinations of other perfumes.

Essence of Almonds; Essence of Bitter Almonds; Essence of Peach-kernels; Almond-flavour.—1. Take of

Essential oil of almonds . . . 1 fluid ounce;
Rectified spirit (56 o. p.) . . . 19 „ „

mix, and agitate them together until united.

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* The *flowers* should be selected when in their state of highest fragrance; and should be picked to pieces, or crushed or bruised, as their nature may indicate. With many, the last is facilitated by the addition of some *clean sand* or *common salt*.

2. ("Concentrated Essence of Almonds;" "Double E. of A.") Take of

Essential oil of almonds . . . 1 fluid ounce;
Rectified spirit (strongest) . . 9 „ „

mix. Used chiefly to impart the nutty aroma and flavour of bitter-almonds and peach-kernels to other preparations. The first is the common essence of the shops. Essences of other essential oils may be prepared in a similar manner. Many of them are now much used by confectioners and cooks as well as in perfumery and cosmetics. It should be remembered that *Ess. of Almonds* is "poisonous."

Essence of Ambergris; Simple E. of A.; Concentrated Tincture of Ambergris:—1. Take of

Ambergris . . . . . 5 drachms;
Rectified spirit (63 to 66 o. p.) . 1 pint;

put them into a strong bottle or tin-can, secure the mouth perfectly and very firmly, and keep the vessel in a room exposed to the heat of the sun, or equally warm, for a month or two, observing to briskly agitate it daily during the whole time. Lastly, after repose, decant the clear portion, and, if necessary, filter it rapidly through bibulous paper. Very fine. It forms the strongest and finest *simple* "essence of ambergris" of the West-end (London) and Paris houses.

2. Take of

Ambergris . . . . . 2½ drachms;
Rectified spirit . . . . . 1 pint;

digest, with frequent agitation, for 2 or 3 weeks. Good. Chiefly used as an element in other perfumes and preparations. (Vide *infrà*.)

Essence of Ambergris; Compound E. of A.; Essence of Ambergris and Musk; Concentrated Tincture of ditto; Essentia Ambragriseæ, Essentia Regia; Essence d'Ambregris, Essence Royale.—1. Take of

Ambergris . . . . . 5 drachms;
Grain-musk (Tonquin or Chinese; pure) . . . . . 1½ „
Essence d'ambrette (or purple sweet-sultan) . . . . . 1 quart;*

proceed as for "essence of ambergris," No. 1 (above). This produces the finest quality of the West-end and Paris houses.

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* It must not be of less strength than 56 over proof, for this purpose.

2. Take of

Ambergris	½ ounce;
Grain-musk (finest)	45 grains;
Essence d'ambrette	1 quart;

as before. Very fine.

3. Take of

Ambergris	½ ounce;
Grain-musk	12 grains;*
Rectified spirit (56 o. p.) . . .	1 pint;
Liquor of ammonia (·880) . . .	½ fluid drachm;

proceed as for No. 1 (above). Good. It forms the ordinary "essence" of the shops.

4. As the last, but replacing the 'liquor of ammonia' with

Oil of cloves . . .	}	{ of each,
Balsam of Peru . .	} . .	{ 15 drops;
Neroli		20 „

or with

Essence of roses . .	}	{ of each,
Eau de fleurs d'oranges	} . .	{ ¼ pint;

at will.

The products of the four last formulæ form the "essence of ambergris" of the shops, a delightful perfume highly esteemed in the fashionable world. A very small quantity of any one of them added to eau de Cologne, lavender-water, tooth-powder, hair-powder, pommades, wash-balls, &c., communicates a delicious fragrance. A few drops added to sweet-scented spirits, liqueurs, wines, &c., improve their flavour and aroma. 1 or 1½ fluid drachm added to a hogshead of claret, imparts a flavour and bouquet to the wine which is regarded by many as delicious.†

The common practice, in making the "essence," is to cut the *ambergris* up small before digesting it; but a much better plan is to rub down both the *ambergris* and *musk* with a little *powdered glass*, clean *siliceous sand*, or dry *lump-sugar*, observing afterwards to rinse

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* A couple of fresh-emptied *musk-pods* are often substituted for the 'grain-musk' here ordered, but the quality of the essence then suffers.

† For this last purpose, connoisseurs generally prefer the simple to the compound essence. Others prefer the addition of 1 or 2 grains of *ambergris* (rubbed down with *lump-sugar*) to either of them, and speak of the resulting flavour and bouquet as "delectable."

the mortar out well, two or three times, with portions of the spirit, so that nothing may be lost.

ESSENCE D'AMBRETTE; ESSENCE DE GRAINS D'AMBRETTE; ESSENCE OF MUSK-SEED.—Take of

Musk-seed * (finest) . . . . . 1¼ pound;

grind it in a clean pepper-mill, and digest it for 3 or 4 weeks, in

Rectified spirit . . . . . 3 pints;

the vessel being closely stopped or corked, and kept in a warm room all the time. Lastly, decant, press, and filter.

ESSENCE OF BERGAMOT.—The popular name of oil of bergamot.† A spirituous essence may be made in a similar way to that of almonds.

ESSENCE OF CASSIA.—From *oil of cassia*, as "essence of almonds" (which see). Uses, &c., the same.

ESSENCE OF CINNAMON.—From *oil of cinnamon*, as "essence of almonds." Essence of cassia is commonly and fraudulently sold for it.

ESSENCE OF CIVET; ESSENTIA ZIBETHI.—Take of

Civet (cut very small) . . . . 1 ounce;

Rectified spirit . . . . . 1 pint;

proceed as for 'essence of ambergris' or 'musk.' Its odour is only agreeable when faint and combined with that of other substances, which it sustains and increases. It is hence seldom or never used alone.

ESSENCE OF CLOVES.—Its preparation and uses are similar to those of "essence of almonds," already noticed.

ESSENCE OF COLOGNE; COLOGNE-ESSENCE; CONCENTRATED EAU DE COLOGNE.—This is prepared from the same odorous ingredients as 'Eau de Cologne,' but taking 7 or 8 times the quantity, and using *alcohol* or the *strongest rectified spirit*, without which a permanent solution of the whole of them cannot be formed. Used as a condensed and convenient substitute for ordinary 'Eau de Cologne' by travellers, being less bulky. It is also kept in 'stock' by druggists and perfumers, to enable them to prepare that article extemporaneously, by simply diluting it with 8 times its bulk of spirit of the appropriate strength.

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* The seed of *hibiscus abelmoschus* (Linn.), or musk-mallow.

† *Vide* pp. 403-4.

CURIOUS ESSENCE.—Take of

Otto of roses	1 drachm;
Oil of rose-geranium	½ „
Essence of musk	3 fluid drachms;
„ *ambergris*	1 „ „
Rectified spirit (warm)	1 pint;

mix, closely cork the bottle, and agitate frequently until cold. A powerful, durable, and very agreeable perfume.

ESSENCE DE FRANGIPANE; EXTRAIT DE FRANGIPANE; FRANGIPANNI.—Take of

Neroli	1 fluid drachm;
Essence royale	3 „ „
Civet (powdered*)	10 grains;
Oil of lavender, „ *cloves*, „ *rhodium*	of each, 5 or 6 drops;
Rectified spirit	3½ to 4½ fluid ounces;

digest a week, and then decant the clear portion. Powerful, durable, and pleasant.

ESSENCES FOR THE HANDKERCHIEF.—Vide "Bouquets," "Essence of Rondoletia," "Essentia Odorata," "Essentia Odorifera," &c. All the stronger and more fragrant compound eaux, esprits, &c., come under this class.

ESSENCE OF JARGONELLE PEAR; PEAR-ESSENCE; ESPRIT DE JARGONELLE.—From *pear-oil* (birnöl, acetate of oxide of amyle), as "essence of almonds." Chiefly used to flavour confectionery and liqueurs; also in lozenges, pastilles, &c., to perfume the breath.

ESSENCE OF JASMINE; ESSENCE OF JESSAMINE; ESSENCE OF JONQUILLE.—See "Esprits," "Extraits," &c. The same names are also often loosely given to the respective essential oils.

ESSENCE OF LAVENDER.—1. Take of

Oil of lavender (Mitcham)	1 ounce;
Rectified spirit (strongest)	½ pint;

mix, with agitation; a few drops of the *essences of musk* and *ambergris* being added, at will. Very fine.

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* By means of a little clean dry sand.

2. "Eau de Lavande," of double strength, prepared with the strongest *rectified spirit*. Excellent.

3. Take of

Oil of lavender (English) . . 1 fluid ounce;
Rectified spirit . . . . . 9 „ „

dissolve. This is the "spiritus lavandulæ" of the new British Ph. That of the wholesale druggists is noticed under "Lavender-water." Used chiefly to impart fragrance to other articles, particularly in dispensing. As a medicine, it is reputed cordial, a few drops being taken on sugar. It is also taken in the same way to sweeten the breath.

Essence of Lemons. — From *oil of lemon*, as "essence of almonds." For this purpose the oil should have been recently expressed, and preserved from the air. A 'dash' of *essence of musk* improves it as a perfume, but not as a flavouring essence. 'Oil of lemon' is popularly called "essence of lemons," as noticed elsewhere.

Essence of Musk; Essentia Moschi.—1. Take of

Grain-musk (Tonquin or Chinese) 1 ounce;
Distilled water (boiling) . . . ½ pint;

digest them together, in a close vessel, with frequent agitation, until quite cold, then add, of

Rectified spirit (66 o. p.) . . . 3½ pints;
Liquor of ammonia (·880–·885) . ½ fluid ounce;

and, having closely corked or stopped the vessel and securely tied it over with bladder, digest the whole for 1 or 2 months, with frequent agitation, in a room exposed to the sun, in summer, or in an equally warm situation in winter. Lastly, after repose, decant the clear portion, and, if necessary, filter it. A little *essence of ambergris* is commonly added to the 'filtrate,' or, when this is not done, 1 to 2 drachms of *ambergris* are put into the vessel before closing it, and after adding the spirit. Very fine. The residuum is treated with *fresh spirit* for an inferior quality.

2. Take of

Grain-musk (finest) . . . . ¼ ounce;
Civet . . . . . } . . { of each,
*Ambergris** . . . . } . . { ½ drachm;
Essence d'ambrette (strongest) . ½ pint;

* Instead of this, 1 to 1½ fluid ounce of *essence of ambergris* may be added after decantation. The quantity of civet ordered should, on no account, be exceeded.

as before. This produces the finest quality of the Paris and West-end houses.

3. Take of

Grain-musk . . . . . ¼ ounce;
Rectified spirit (56 o. p.) . . . 1 quart;
Essence of ambergris (finest) . . 2 fluid ounces;

digest, &c., as before. Excellent; but greatly inferior to the others.

4. From *fresh-emptied musk-pods* digested in *rectified spirit*, with or without the addition of a few grains of true *musk* and *ambergris*. This forms the "essence of musk" of the wholesale druggists, and that ordinarily sold as such in the shops. A still commoner article is made with *proof spirit*.

"Essence of musk" is an agreeable and powerful perfume, and is greatly esteemed in the fashionable world. Its odour is so durable that articles scented with it will retain the fragrance for years. The product of each of the formulæ 1, 2, 3 (above), is of very fine quality; but that of No. 2 is the very finest that is made, and such as is seldom sold, except by the high-class perfumers, who obtain for it a very high price. It is powerfully and deliciously fragrant, and has received the approval of royalty itself, both here and on the Continent.

The best vessel for preparing 'essence of musk,' as well as of 'ambergris,' is a strong tin-bottle with a nicely rounded mouth and neck. Great care should be taken to cork it perfectly close, and, after this is done, to tie it over securely with wet bladder. The bottle should not be set in the full sunshine, but only in a position warmed by it; and in no case should the digestion be of shorter duration than three or four weeks, as otherwise much fragrant matter will escape solution. The addition of ½ to 1 fluid drachm, per pint, of *liquor of ammonia*, or of *liquor of potassa* (the first is greatly preferable), increases the solvent power of the spirit and vastly increases the fragrance of the essence. A few grains of 'salt of tartar' (carbonate of potash) are sometimes added with the same intention; but this addition is objectionable, as it does not effect the object in view, whilst it occasions partial decomposition of the mixture. To facilitate the action of the menstruum, and to make the most of the ingredients, it is best to rub down the musk, &c., with a little *powdered glass*, *sand*, or *lump-sugar*, as noticed under "essence of ambergris." Filtration and exposure to the air should, if possible, be avoided.

ESSENCE OF MUSK-ROOT; TINCTURE OF SUMBUL.—This is prepared from *musk-root, sumbul,* or *jatamansi* (a substance imported from the East), in a similar way to "essence of orris-root." The root itself has long been used in India and Persia as a medicine, a perfume, and incense. It has a pleasant musk-like odour, and acts as a powerful stimulant on the nervous system.

ESSENCE OF MUSK-SEED.—Vide "Essence d'Ambrette" (antè).

ESSENCE OF MYRTLE; ESSENCE OF MYRTLE-BLOSSOMS; ESSENCE DE MYRTE.—Take of

Myrtle-tops (in blossom) . . . 3 pounds;
Proof spirit . . . . . 9 pints;

digest in a close vessel, for 3 or 4 days, then distil off 1 gallon. A very delicate and pleasant perfume. A slight 'dash' of *ambergris,* or some other odour, is often added to it.

ESSENCE OF NEROLI; ESSENCE OF ORANGE-BLOSSOMS; ESSENCE DE FLEURS D'ORANGES.—1. Take of

Neroli (pure) . . . . . ½ ounce;
Rectified spirit . . . . . 1 pint;

dissolve. An ounce of *essence of jasmine, jonquille,* or *violets,* is often added. A delicate and delicious perfume. A spurious or compound article is often prepared as follows:—

2. Take of

Oil of orange-peel (recent) . . . 1 drachm;
Neroli . . . . . ½ „
Ambergris . . . . . 5 or 6 grains;
Orris-root (bruised) . . . . . ¼ ounce;
Rectified spirit . . . . . ½ pint;

digest 14 days. Strongly and agreeably fragrant; but less 'chaste' than the preceding, and, to a 'cultivated nose,' very different.

ESSENCE OF NOSEGAY; EXTRACT OF NOSEGAY.—The same as "Extrait de Bouquet."

ESSENCE OF NUTMEG.—1. From *oil of nutmeg,* as "essence of almonds."

2. Take of

Volatile oil of nutmeg . . . . 1 fluid ounce;
Rectified spirit . . . . . 9 „ „

dissolve. This is the "Spirit of Nutmeg" (spiritus myristicæ) of

the new British Ph.; and the "Essence of Nutmeg" (essentia myristicæ moschatæ) of the Dublin Ph. That of the wholesale druggists is usually made with the proportions noticed at page 580 (antè). Used, for convenience, in preparing compound perfumes and cosmetics; also as "Toothache Drops," and as a "flavouring essence" by cooks, liquoristes, and confectioners. Extemporaneous "Nutmeg Water," sometimes used as a wash for the hair and teeth, may be made by adding it, with agitation, drop by drop, to *water*, as long as it dissolves, observing not to add sufficient to render the latter milky, as it would then require filtering through bibulous paper.*

Essence of Rosemary ("essentia rosmarini") of the Dublin Ph., and Spirit of Rosemary (spiritus rosmarini) of the British Ph., is prepared in a similar manner. This contains about 33 times as much oil as the "spirit of rosemary" of the London Ph. Used as the last, particularly to make extemporaneous hair-washes.

Essence d'Œillets.—1. From *clove-pink flowers*, by the general process already referred to. Very fragrant.

2. Take of

Cinnamon (bruised)	. . . . .	1½ ounce;
Cloves (do.)	. . . . .	¾ „
Rectified spirit	. . . . .	1 pint;

digest, with agitation, for a week. A few drops shaken up with 2 or 3 spoonfuls of water form an excellent mouth-wash for use after cleaning the teeth. It is also used as a perfume and a flavouring ingredient.

Essence of Orange; Essence of Orange-peel.—'Oil of orange-peel' is popularly so called. The alcoholic essence is made from this oil like "essence of almonds" (which see).

Essence of Patchouli; Essence de Patchoulie; Essence de Pouchâ pât.—1. Take of

Indian patchouli (leaves or foliaceous tops)	. . . . .	3 pounds;
Rectified spirit	. . . . .	9 pints;

digest for a week, in a close vessel, add of

Oil of lavender (Mitcham)	. .	½ ounce;

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* *Vide* "Distilled Waters" (*infrà*).

and promote solution by agitation. Next throw the whole into a still, and further add of

Water . . . . . 1 gallon;
Common salt . . . . . 2 or 3 pounds;

agitate the whole briskly together, lute on the 'still-head,' and distil over (rapidly) 1 gallon. To the 'distillate' add of

Essence of musk (finest) . . . ½ fluid ounce;

and after 10 days' repose, bottle it. A very fashionable perfume, particularly for personal use. Essence of Patchouli thus prepared, under the direction of the author, has been largely used at Court and by the nobility generally.

2. Take of

Patchouli . . . . . 4 ounces;
Rectified spirit . . . . . 1 pint;
Water . . . . . ¼ „

digest for a week, press, and filter; to the filtrate add of

Eau de lavande . . . . . ½ fluid ounce.

This forms the ordinary "essence of the shops." A commoner kind is made with proof spirit. When distilled, it forms "esprit de Patchoulie."

Pear-essence.—Vide "Essence of Jargonelle" (antè).

Essence of Peach-blossoms; Extract of Peach-blossoms.—This name is fancifully given to the following preparation:—Take of

Oil of lemon (recent) . . . . 1 fluid drachm;
Balsam of Peru . . . . . 15 grains;
Essential oil of almonds . . . 8 „
Spirit of orange-flowers . . . . 2½ fluid ounces;
„ *jasmine* . . . . . 5 „ drachms;
Rectified spirit . . . . . 7 „ ounces;

agitate them together for a few days, and after another week pour off the clear portion. A refreshing and powerful perfume, much esteemed for personal use. A 'second quality' is made with *spirit* only 35 p. c. over-proof.

Essence of Pimento; Essence of Allspice.—Prepared from *oil of pimento*, as "essence of almonds." Sometimes used in compound perfumes and cosmetics, and for the toothache; but chiefly as a "flavouring essence."

Essence of Pine-apple.—From *pine-apple oil* (butyric ether), as the last. Sometimes taken on sugar, by smokers; but chiefly used by confectioners, liquoristes, &c.

ESSENCE OF RONDELETIA; EXTRAIT DE RONDELETIA.—Various formulæ are current for this exquisite perfume, of which scarcely any produce an article approaching in excellence the proprietary one. The following are exceptions:—1. Take of

Oil of lavender (Mitcham) . .	¾ ounce;
„ *cloves* (finest)	2½ drachms;
„ *bergamot*	2 „
Essence of musk (finest) } . . {	of each,
„ *ambergris* (do.) } . . {	½ drachm;
Rectified spirit (strongest) . . .	¾ pint;

agitate them together until completely united. Some persons add ½ drachm of *neroli*, or of *oil of verbena* (Indian lemon-grass), with or without 10 or 12 drops of *otto of roses*. Very fine.

2. Take of

Oil of lavender	1 ounce;
„ *cloves*	½ „
„ *bergamot* . . } . . {	of each,
„ *cedrat* . . . } . . {	1½ drachm;
Essence of ambergris . } . . {	of each,
„ *musk* . . } . . {	½ drachm;
Rectified spirit	1 pint;

as before.

Rondeletia is a fashionable and highly esteemed perfume for the handkerchief, and for personal use generally.

ESSENCE OF ROSEMARY.—From *oil of rosemary*, as "essence of almonds." Used chiefly as an ingredient in mixed perfumes and cosmetics; also to make extemporaneous rosemary-water.

ESSENCE OF ROSES.—1. Take of

Otto of roses (pure)	1¼ drachm (Troy);
Alcohol (·806)	1 pint;

mix, place the bottle in a vessel of warm water until its contents acquire the temperature of about 85° Fahr., then cork it close, and agitate it smartly until the whole is quite cold. Very fine.

2. Take of

Otto of roses	1 drachm;
Rectified spirit (66 o. p.) . . .	1 pint;

as before. Excellent.

3. Take of

Petals of roses * (fresh) . . . 3 pounds;
Rectified spirit (56 o. p.) . . . 5 quarts;

digest the petals (picked to pieces) in the spirit for 24 hours, then distil to dryness by the heat of a water-bath. Digest the 'distillate' on a fresh quantity of *rose-petals*, and re-distil, as before; and repeat the whole process of maceration and distillation a third, fourth, fifth, and sixth time, or oftener, the last time observing to conduct the distillation rapidly, and to draw over only 1 gallon, which is the "essence." Delicately and delightfully fragrant. It improves by age.

The product of each of the above formulæ is very superior; but that of the last has a peculiar delicacy of flavour, which distinguishes it from those prepared from the otto. Some makers add to each pint of the former 20 or 30 drops each of *oil of bergamot* and *neroli*, and 15 or 20 drops of *essence of musk*; but the product of the last formula is scarcely improved by any addition, unless it be a very little *neroli* or *essence d'ambrette*, or both, as the case may indicate.

Essence Royale.—This preparation is only used, in these realms, as a perfume, and is generally prepared by one or other of the formulæ given at pages 581-2. On the Continent, it is used both in perfumery and medicine, and is there highly popular as an antispasmodic, nervine, and aphrodisiac. The following is the formula given by Soubeiran. Take of

Ambergris . . . . . 40 grains;
Grain-musk (pure) . . . . . 20 „
Civet . . . . . } . . { of each,
Carbonate of potassa } . . { 10 grains;
Oil of cinnamon . . . . . 6 drops;
„ *rhodium* . . } . . { of each,
Otto of roses . . . } . . { 4 drops;
Rectified spirit . . . . . 4 fluid onnces;

digest, with agitation, for 10 or 12 days, or longer. Very fragrant. Dose, a few drops on sugar, or in syrup or capillaire.

Essence of Storax (or *Styrax*); Extract of Storax.—Take of

Liquid storax (finest; genuine) . 1 ounce;
Rectified spirit . . . . . ½ pint;

digest, with agitation, for a week, and then decant the clear portion.

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* *Rosa centifolia* (cabbage-rose, damask-rose) or *rosa sempervirens* (musk-rose), or mixtures of them.

Chiefly added to compound perfumes, to which it imparts a beautiful balsamic odour, which mixes well with cassia, cloves, ambergris, musk, vanilla, &c. Like the other resins and balsams, it possesses the disadvantage of being coloured, and stains produced by it do not easily wash out. Hence, it is seldom employed alone as a perfume for personal use.

Essence de Tuberose.—The 'extrait triple' of the flowers, or a still stronger 'extrait,' prepared with *rectified spirit*, or a *spirit* of much greater strength than that usually employed for 'extraits.' It is nearly colourless, but when required white, or of still greater strength, the 'extrait triple' is submitted to distillation by the heat of a water-bath, the process being conducted as rapidly as possible, and the first half, or two-thirds, that comes over, being separately collected as the essence. In general, however, unless the process be very skilfully conducted, the odour of the distilled essence, though stronger, is scarcely so chaste and delicate as that of the 'extrait' from which it has been prepared.

In a similar way to "essence de tuberose," the finer qualities of—

*Essence of Honeysuckle,**
„ *Jasmine or Jessamine,*
„ *Jonquille,*
„ *May-blossoms,**
„ *May-lily,*
„ *Myrtle-blossoms,*
„ *Narcissus,*
„ *Orange-flowers,*
„ *Roses,*
„ *Violets,*
„ *Wallflowers,**

and of *other flowers* of extremely delicate perfume, are usually obtained by the Continental manufacturing perfumers; as also of

Essence of Cassia,
„ *Vanilla,*
&c., &c.

except that the second is not distilled.

Essence of Vanilla; Essence de Vanille; Essentia Vanillæ.—1. Take of

Vanilla . . . . . 2 ounces;
Rectified spirit . . . . . 1 pint;

digest for a fortnight.

* *Vide* page 589 (*antè*); also pp. 617 (Note ‡), 620-1, &c. (*infrà*).

2. Take of

Vanilla (finest)	½ pound;
Rectified spirit	1 quart;

proceed as last, or, preferably, as for 'essence of musk.' Lastly, press and decant or filter. Very superior. It forms the best quality vended by the wholesale druggists, and is sold at exorbitant prices. This, as well as the preceding, is chiefly used for flavouring, and as an ingredient in compound perfumes and cosmetics.

3. ("Essence de Vanille double.") Take of

Vanilla (finest)	12 ounces;
Cloves	30 grains;
Ambergris . . . . }	of each,
Grain-musk . . . . } . .	7 grains;
Esprit d'ambrette . }	of each,
Rectified spirit . . } . .	1 pint;

proceed as last. Powerfully flavorous and fragrant, and much esteemed as a perfume. Some makers prefer using only 'esprit d'ambrette' (1 quart) as the menstruum.

"Essence of vanilla" is a favourite and useful addition to tooth-cosmetics, pommades, &c. In preparing it, the vanilla, &c., should be cut small with a sharp knife; or, what is better, rubbed down with a little *powdered glass, sand,* or *lump-sugar,* as noticed at page 582 (antè).

Essence of Violets; Essence de Violettes; Essentia Violæ Odorata.—

1. *Vide* "Essence of Tuberose" (antè).

2. (Factitious E. of V.; Essence of Orris.) Take of

Florentine orris-root (coarsely powdered)	1½ pound;
Rectified spirit	1 quart;

proceed by percolation or the 'method of displacement,' so as to obtain 1 quart of essence; or by digestion for a fortnight, followed by powerful pressure in a tincture-press. The former is the best and most economical method. This forms the best "essence of violets" of the wholesale druggists. That of the shops is commonly prepared with spirit only 25° over proof, and the commoner kinds even with proof-spirit. It may be, but is rarely, distilled.

ESSENCE OF VITTIE-VAYR; ESSENCE OF VETIVER; ESSENCE DE VITTIE VAYR DOUBLE.—1. Take of

Vittie-vayr or *cuscus**	1 pound;
Proof spirit	3 pints;

digest for a week, add of

Water	1½ pint;
Common salt	½ pound;

mix thoroughly, and the next day throw the whole into a still, and draw over one quart of 'essence.'

2. To the last, before distillation, add of

Otto of roses	10 or 12 drops;
Eau de mélisse†	2½ fluid ounces.

An agreeable perfume. In 1831, it was much esteemed in Paris as a prophylactic of cholera; but without sufficient reason.

VOLATILE ESSENCE; VOLATILE AMMONIACAL ESSENCE; ESSENTIA VOLATILIS, ESSENTIA VOLATILIS AROMATICA; &c.—This is the strongest 'liquor of ammonia' appropriately scented or aromatized. Nearly every maker has his own formula. The products of the following, which are given as examples, are highly esteemed in fashionable life:—1. Take of

Otto of roses	12 drops;
Oil of cinnamon	½ fluid drachm;
„ *cloves*	1 „ „
„ *bergamot*	2 „ „
„ *lavender* (Mitcham) . .	4 „ „
Essence of musk	5 „ „
Liquor of ammonia (sp. gr. ·882–·880)	1 pint;

put them into a 1½-pint bottle, and shake it well until they are combined, observing to do so also each time before use. The bottle should be kept in a cold place.

2. Take of

Oil of cinnamon	12 drops;
Neroli, *Otto of roses*, *Essential oil of jasmine* . . .	of each, ½ fluid drachm;

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* The root of "andropogon muricatus." It should be cut small and bruised.

† That is, 'spirit of balm.'

Essence of violets (strongest) . . . } . . . { of each,
Oil of lavender . . . } . . . { 1 fluid drachm;
„ *bergamot* . . . . . 2½ „ „
Essence royale (finest) . . . . 3 „ „
Liquor of ammonia (see above) . 1 pint;

proceed as before.

3. Take of

Oil of lemon . . . } . . . { of each,"
„ *bergamot* . . } . . . { 5 fluid drachms;
„ *lavender* (Mitcham) . . 2 „ „
„ *cloves* . . . } . . . { of each,
Otto of roses . . . } . . . { 1 fluid drachm;
Oil of cassia . . . } . . . { of each,
„ *cedrat* . . . } . . . { ½ drachm;
Neroli . . . . . }
Oil of sandal-wood . . . . . 15 drops;
Liquor of ammonia (see above) . 1 pint;

as before.

4. Take of

Oil of bergamot . . . . . 3 fluid drachms;
„ *lavender* (Mitcham) . . 2 „ „
„ *cloves* . . . . . 1½ „ „
„ *cassia* . . . } . . . { of each,
„ *verbena* . . . } . . . { ¾ fluid drachm;
„ *rhodium* . . . } . . . { of each,
„ *sandal-wood* . } . . . { ½ fluid drachm;
Liquor of ammonia (see above) . ½ pint;

as before.

5. Take of

Oil of bergamot . . . . . 3 drachms;
„ *lemon* . . . . . 2 „
„ *lavender* . . . } . . . { of each,
„ *jasmine* . . . } . . . { 1 drachm;
„ *sassafras* . . . . . ½ „
Neroli . . . . . } . . . { of each,
Otto of roses . . . } . . . { 15 drops;
Oil of origanum . . } . . . { 15 drops;

Essence of musk . . . . . 1 fluid ounce;
„ *ambergris* . . . . . ½ „ „
Liquor of ammonia (see above) . 12½ „ „
as before.

6. Take of
Oil of orange-peel . . . . . 2 drachms;
„ *lavender* . . . . . 1 „
„ *cloves* . . . } . . { of each,
„ *cassia* . . . } . . { ½ drachm;
„ *rhodium* . . . }
„ *sandal-wood* . } . . { of each,
„ *sassafras* . . } . . { 15 drops;
„ *verbena* . . . }
Liquor of ammonia (see above) . 5 fluid ounces;
as before.

Used to fill 'smelling bottles,' sufficient being dropped in to only saturate the contained lint, sponge, or fragments of glass. It is proper, in all cases, that the bottle containing the 'essence' should be well shaken before any is poured out. There appears to be an unnecessary number of ingredients in some of the above formulæ. The products of all of them are, however, excellent.

Volatile Acetic Essence.—This is "Aromatic Vinegar," noticed infrà.

Essentia Odorata:—1. Take of
Oil of lavender (Mitcham) . . 1½ drachm;
„ *cloves* . . . . . ¾ „
„ *cassia* . . . }
„ *bergamot* . . } . . { of each,
Neroli . . . . . } . . { ½ drachm;
Essence royale . . . . . 2 fluid drachms;
Rectified spirit . . . . . ½ pint;
mix. Very fine.

Mr. Redwood gives the following formula for this scent:—
2. Take of
Oil of lavender (English) . . . 48 drops;
„ *cloves* . . . . . 32 „
„ *orange-peel* . . . . . 16 „
„ *bergamot* . . } . . { of each,
Sweet spirit of nitre . } . . { 8 drops;

Oil of yellow sandal-wood	}	{ of each,
Otto of roses . . .	} . .	{ 2 drops;
Neroli	}	
Oil of cinnamon		1 „
Essence of ambergris .	}	{ of each,
„ *musk* . .	} . .	{ 1 ounce (Troy);
Rectified spirit . . .	}	
Honey-water (eau de miel) . . .		8 „ „

mix. Very fine; but the formula appears to be unnecessarily complicated and minute. Both are highly esteemed perfumes for personal use, particularly as "bouquets" for the handkerchief.

Essentia Odorifera.—1. Take of

Grain-musk (finest)	20 grains;
Civet	8 „
Salt of tartar *	1 drachm;

rub them down together in a mortar,† put the mixture into a bottle, and add, of

Balsam of Peru	30 grains;
Oil of cloves	12 drops;
„ *rhodium*	6 „
Rectified spirit (strongest) . . .	¼ pint;

digest, with agitation, for 14 days, then decant the clear portion. About ½ fluid drachm of liquor of ammonia (added after the spirit) may be substituted for the salt of tartar, and increases the odour of the product, as well as slightly diversifies it.

2. Take of

Oil of rhodium		30 grains;
Balsam of Peru		40 „
Oil of cloves		1 fluid drachm;
„ *cassia* . . .	}	{ of each,
„ *lavender* . . .	} . .	{ 15 drops;
„ *verbena* . . .	}	
Neroli	}	
Essence of civet.		2 fluid ounces;

* It should have been exposed to a dull-red heat, and cooled before weighing it

† *Vide* the "Essences of Ambergris" and "Musk" (*antè*).

Essence of vanilla . . . . . 3 fluid ounces;
„ *musk* . . . . . 5 „ „
mix, and further add of
Liquor of ammonia (·880) . . 1 „ drachm;
agitate the whole well together, and let it repose for a few days before use.

"Essentia odorifera" is a fashionable, powerful, and very durable perfume, and much esteemed for personal use. It is a delightful "bouquet" for the handkerchief.

EXTRACTS.—In *French perfumery*, this term appropriately represents a numerous and distinct class of preparations, embracing perfumes of the highest quality. It has hence, in this country, come to be often very loosely applied to articles, that neither by their mode of preparation nor by their quality deserve the name, in order to deceive purchasers and obtain higher prices.*

EXTRACT OF NOSEGAY.—Extrait de bouquet. "Eau de bouquet" and "esprit de bouquet," though weaker, are often sold under the name.

EXTRACT OF SWEET-FLAG; FLORENTINE ESSENCE. — This is "essence of orris-root," already noticed.

EXTRAITS; EXTRACTS.—In *French perfumery*, these are, appropriately, strong spirituous solutions, either simple or compound, of the essential oils and odorous principles of plants, and other substances, obtained by 'infusion' or 'digestion,' as distinguished from those that are obtained by distillation and direct solution. Under the term, however, are often classed many perfumes prepared with rectified spirit by the latter methods, and which are highly charged with the fragrant matter, or matters, which they represent.

The *preparation* of most of the 'extraits' is simple enough, the chief care necessary being that the *spirit* be absolutely scentless and of sufficient strength, and that the oils, and other materials, be recent and perfectly pure. With some *flowers* of extremely delicate perfume, highly perfumed spirit of the finest quality cannot well be obtained either by 'infusion' or 'distillation,' or by simple solution of the respective essential oils; or, at least, they are not usually so prepared by the Continental perfumers, who are undoubtedly the best

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* *Vide* "Extraits" (*infrà*).

judges in such matters. For these, an entirely different and a rather tedious and indirect method is pursued. Pure *rectified spirit* is digested, for three or four days, on half its weight of the *oils* or *pommades* obtained by 'infusion' or 'contact' from the respective flowers. The operation is performed in a securely closed vessel or 'digester' of porcelain or tinned copper, set in a water-bath, frequent agitation being employed during the whole time. After the whole has become quite cold, the vessel is opened, and the perfumed spirit carefully decanted into a *second* similar vessel or 'digester,' containing a like quantity of oil to the first one. The whole process is then repeated a *second* time; and again a *third* time, with fresh oil or pommade. Finally, the cold spirit, after sufficient repose, is very carefully decanted through a glass or porcelain funnel stopped with a small wad of cotton-wool, into the receiver or store-bottle. It now forms the most fragrant and choice odoriferous spirit, or "extrait" of the Continental perfumer, and is regarded as vastly superior in chasteness and delicacy of odour to any other preparation of the same flowers. It is called "extrait of the first infusion," or "extrait triple." The three portions of oil previously operated on are then treated again, in succession, with a like quantity of *fresh spirit*, and in a precisely similar manner, by which an 'extrait' of second quality is obtained. This is done a *third*, and a *fourth* time, and even oftener, fresh *spirit* being used in each, by which perfumed spirits of gradually decreasing qualities are obtained. The products are distinguished by the perfumers as No. 1, 2, 3, 4, &c.; or as "extraits" or "esprits" of the *first*, *second*, *third*, &c., 'infusion' or operation; the latter ones being commonly used in the manufacture of compound perfumes or sold as inferior qualities, or employed, in the place of rectified spirit, in preparing the next batch of 'extraits' from fresh pommade or oil. Seldom and only for special objects, and with a few of them, are these extracts subsequently distilled, and then only with injury to the exquisite delicacy of their fragrance.

In the above way are prepared the "extrait" or "extract" of—

*Honeysuckle,**
Jasmine,
Jonquille,
*May-blossoms,**
May-lily,
Myrtle-blossoms,
Narcissus,
Orange-flowers,
Violets,
*Wallflowers,**

* *Vide* Remarks, page 580 (*antè*)

and of several other flowers of extremely delicate perfume; as also the first quality "*extraits*" or "extracts" of

Cassia,
Vanilla,
&c.*

EXTRAIT DE BOUQUET; EXTRACT OF NOSEGAY.—1. Take of

Extrait de jasmin .	}	{ of each,
„ *violettes* .	} . .	{ 2½ fluid ounces;
Spirit of gilly-flowers (esprit)	}	{ of each,
Spirit of orange-flowers (do.)	} . .	{ 2¼ fluid ounces;
Spirit of roses (do.) .	}	
„ *cassia* (extrait)	2 „ „	
Essence of ambergris	2 „ drachms;	
Flowers of benzoin	10 grains;	

mix, and agitate until united.

2. To the last add, of

Essence of vanilla . . . . ½ fluid ounce.

A fashionable, delicate, and delightful perfume for the handkerchief, &c.

EXTRAIT DE MARÉCHALE.—Take of

Ambergris (finest) .	}	{ of each,
Grain-musk (do.) .	} . .	{ 6 grains;
Oil of bergamot . .	}	{ of each,
„ *cloves* . . .	} . .	{ 2 drachms;
„ *lavender* (English)	}	
„ *origanum* . .	}	{ of each,
„ *sassafras* . .	} . .	{ 12 drops (minims);
„ *rhodium*	6 to 8 drops („);	
Rectified spirit	1 pint;	

macerate, in a warm room, with agitation, for 14 days, or longer. Richly and powerfully fragrant.

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* On other matters connected with the manufacture of "Extraits," *vide* "Perfumed Spirits" (*infrà*).

EXTRAIT DE MILLEFLEURS.—1. Take of

Grain-musk (finest)	4 grains;
Ambergris (do.)	6 „
Oil of lemon	3 drachms;
„ *lavender* (English)	of each,
„ *cloves*	2 drachms;
Liquid styrax (genuine)	½ „
Oil of verbena	of each,
„ *pimento*	12 drops (minims);
Neroli	
Rectified spirit	1 pint;

macerate in a warm room, with frequent agitation, for a fortnight or three weeks. Very fine. The omission of the styrax renders it paler, and thus preferable to some persons. By substituting 1-3rd to half the weight of *styrole* (which is colourless) for the 'styrax,' and the use of *white oil of cloves*, the product will be nearly colourless.

2. Take of

Oil of bergamot	of each,
Essence of musk	2 drachms;
Balsam of Peru (finest)	
Oil of cloves	of each,
Essence of ambergris	1 drachm;
Oil of thyme	of each,
Neroli	½ drachm;
Orange-flower water	¼ pint;
Rectified spirit	1¼ „

mix well. Very fine. The "extraits" and "eaux de millefleurs" and "maréchale" have always been, and still are, much patronized by the higher classes for their powerful and durable odour.

EXTRAIT DE RONDELETIA.—Take of

Oil of lavender (Mitcham)	6 drachms;
„ *cloves*	2½ „
„ *bergamot*	2 „
„ *verbena* (or *neroli*)	½ „
Essence of ambergris	of each,
„ *musk*	½ fluid drachm;
Rectified spirit (56 o. p.)	1 pint;

mix. A rich and highly esteemed perfume. It is commonly sold for "Essence of Rondeletia."*

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* *Vide* "Esprits" and "Essences" (*antè*), and "Rondeletia," &c. (*infrà*).

EXTRAIT DE VANILLE.—Vide "Extract of Tuberose" (antè).

HAIR OILS.—Those in ordinary use as cosmetics, have been noticed in the preceding Chapter under "Hair Cosmetics." For others of a higher class, and belonging more exclusively to "perfumery," vide "Oils" (infrà).

HUILES.—Vide "Oils" (infrà).

INCENSE.—1. Take of

Olibanum (true)	7 parts;
Gum benzoin	2 „

mix.

2. To the last add of

Cascarilla	1 part.

The preceding, placed on a hot iron-plate, or burned in a 'censer,' were formerly used to perfume apartments. The incense used in the rites of the Roman-catholic Church, and in the temples of India, consists wholly, or chiefly, of olibanum.*

ODEURS; ODOURS.—In *French perfumery*, the word "odeur," like parfum, often enters into the name of compound perfumes, particulary spirits, as in the following examples †:—

ODEUR DÉLECTABLE.—Take of

Oil of bergamot . .	of each, ½ drachm;
„ *cloves* . . .	
„ *lavender* (English)	
„ *rose-geranium* .	
Essence of ambergris	10 drops;
Rectified spirit (strongest) . . .	¾ pint;

mix well; further add, of

Eau de rose	of each, 2½ ounces;
„ *fleurs d'oranges*	

and again agitate the whole for a few minutes. Very agreeable.

ODEUR SUAVE.—See "Esprits" (antè).

OILS; HUILES.—These, in *perfumery*, may be divided into two classes—"Scented Oils" and "Volatile" or "Essential Oils." The

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* *Vide* "Fumigating Pastils" (*infrà*).

† Others, scattered through this Chapter, under different synonyms, may be found by reference to the *Index*.

first are *fixed oils* enriched with scents or aromatics to render them more agreeable in use, or to increase their cosmetic qualities, or they are like oils employed as 'vehicles' for the extraction of perfumes, and their introduction into other preparations. The second, which embody the fragrance and active volatile principles of the flowers and other vegetable substances from which they are extracted, are only employed, in small proportions, to convey these properties to spirit, fixed oil, fat, powders, water, &c., in compound perfumes and cosmetics. The present section will be confined chiefly to a notice of the preparation of the "scented oils" referred to above, the consideration of the "fixed oils" which form their basis, and of the "volatile oils," which are scarcely ever used alone, or undiluted, either as perfumes or as cosmetics, being reserved for the following Chapter.

Scented Oils; Perfumed Oils; Olea Fixa Odorata; &c.—The *fixed oil* that usually forms the basis of the simple "scented oils" of the perfumer, is that of *almonds*, *ben*, or *olives*; but other bland vegetable oils are occasionally used, particularly for inferior qualities.* On the Continent, three different modes are adopted for imparting fragrance to these oils:—

§ 1. By the simple addition of a sufficient quantity of the *essential oil* of the plant, or of the *concentrated alcoholic essence* of the substance, if it does not furnish an oil, followed by agitation; the whole being then allowed to repose for a few days, and, if any sediment falls (which should not be the case if the ingredients be pure), the clear portion decanted or poured off into another bottle. In the case of 'alcoholic essences,' it is better that the fixed oil should be gently warmed, by placing the bottle or vessel† for a short time in a water-bath, before adding them, and then, after tightly and firmly securing cork, to agitate it until cold, or nearly so. In general, 1 to 1½ drachm of a pure *essential oil*, or 3 to 4 fl. drachms of a *concentrated essence*, is sufficient to render 1 pint of *fixed oil* agreeably fragrant; but, in some cases, and for the best quality, an additional ½ drachm, or more, of the one, and 1 to 2 fluid drachms of the other will be required. ½ dr. of pure *otto of roses*, owing to the very powerful character of its odour, is sufficient for the purpose.

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* *Vide* "Fixed Oils," Chapter XIX. (*infrà*).

† A well-tinned bottle or can with a suitable mouth and neck for corking, is the best and most convenient for the purpose.

In this way English druggists and perfumers usually prepare their—

Oil of Ambergris,	Oil of Musk,
„ Bergamot,	„ Neroli,
„ Cassia,	„ Nutmeg,
„ Cinnamon,	„ Orange-flowers,*
„ Cloves,	„ Orange,
„ Lavender,	„ Rondeletia,
„ Lemons,	„ Roses,
„ Millefleurs,	

and all other similar 'scented oils.'

The above are chiefly employed as hair-cosmetics, with, in most cases, trifling additions of other essential oils, or essences, to modify and improve their odour. Some of them are also coloured.† They are distinguished from the oils in the two following sections, in the way hereafter noticed, and also by being vended as "hair-oils."

§ 2. By Infusion. *Dry substances*, after being reduced to coarse powder (but free from dust), or sliced very small—*flowers* or *petals*, after being carefully selected, picked from the stems and other scentless portions, and pulled to pieces, and—*soft*, *unctuous*, and *resinous matters*, as ambergris, musk, civet, resins, and balsams, after being rubbed to a paste with a little of the oil, either with or without the addition of about twice or thrice their weight of clean *siliceous sand* or *powdered glass*, to facilitate the reduction, are digested in the *fixed oil*, for an hour or two, in a covered vessel, at a gentle heat obtained by means of a water-bath, frequent stirring or agitation being employed all the time. The vessel is then removed from the bath, and set aside (for flowers) until the next day, or (for other substances) for 5 to 7 days, to settle, when the clear portion is carefully decanted into into a clean bottle, or bottles.‡ When *flowers* are employed, the free oil is allowed to drain off, and the remainder is obtained by the action of a press. The two portions being mixed, *fresh flowers* are added to the oil, and the whole process is repeated; and this again, with *fresh flowers*, 5 or 6 times, or oftener, on as many successive days, until the oil is sufficiently fragrant.

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* From *neroli* or *essence de petit grain*.

† *Vide* "Huiles Antiques," page 449 (*antè*).

‡ With *ambergris*, *civet*, *musk*, and *vanilla*, the digestion, with frequent agitation, is usually continued for at least 3 weeks; and exposure of the vessel in the sun, or in some equally warm situation, is generally substituted for the heat of a water-bath. *Vide* "Essences," pp. 581-3, 585-6 (*antè*).

In this way the Continental perfumers commonly make their first quality of—

Oil of Ambergris,	Oil of Orange-blossoms,*
„ Balsam of Peru,	„ Orris,
„ Benzoin,	„ Roses,
„ Cassia,	„ Styrax,
„ Cinnamon,	„ Vanilla,
„ Civet,	&c.

These oils are chiefly used to impart their fragrance to the simple oils and pommades, and in preparing "extraits," &c. They are known in trade and commerce by their foreign names, and are always labelled—Huile à l'Ambre, Huile à la Fleurs d'Oranges, Huile à la Rose, Huile à la Vanille, &c., and must be distinguished from the crude scented oils of the English perfumers.

§ 3. By the Flowers; Enfleurage. A series of shallow iron-frames, adapted for piling on each other, and fitting close together, being provided, a piece of white, spongy *cotton-cloth* is stretched upon each, and is then freely moistened with *oil of almonds*, *olives*, or *ben*. On the cloth is next laid a thin layer of the *fresh-plucked flowers*, and each frame, as thus covered, is placed on the preceding one, until a compact pile of them is raised. In 24 to 30 hours the flowers are replaced by *fresh ones;* and this is repeated every day, or every other day, until 7 or 8 different lots of *flowers* have been consumed, or the oil has become sufficiently charged with their odour. The *cotton-cloths* are then carefully collected and submitted to powerful pressure, and the 'expressed oil' which flows from them is placed aside in corked bottles or jars, to settle. After some time it becomes perfectly clear, and is then ready to be decanted into other bottles for store or sale.

Sometimes trays with perforated bottoms, on which are laid thin layers of *cotton-wool* slightly moistened with the *oil*, are substituted for the 'frames' and 'cotton-cloth' above referred to. Sometimes also, *sheep's-wool* or *cotton-wool* impregnated with *oil*, is stratified with *flowers*, in a large earthen vessel, and this, after being closely covered up, is kept for 10 or 12 hours gently heated by means of a water-bath. The next day the 'old flowers' are replaced by *fresh ones*, and the whole process repeated again and again, as often as necessary. The oil is finally obtained by pressure from the wool, as before.

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* Also prepared by the process (§ 3) explained below.

In the above way the Continental perfumers usually prepare their—

Oil of Honeysuckle,	Oil of Narcissus,
„ Jasmine,	„ Orange-flowers,
„ Jonquille,	„ Tuberose,
„ May-blossom,	„ Violet,
„ Myrtle-blossom,	

and, in general, the oils of all the more delicate flowers.

When only a moderate degree of aroma is required in the oil, the *flowers* may be crushed in a mortar, or a mill, with one half their weight of *blanched sweet-almonds*, and the next day, or the second day after, according to the weather, the mass, after being slightly warmed, may be submitted to the press. After about a week's repose, the upper portion, which is the 'perfumed oil,' may be decanted, and, if necessary, filtered. This plan is occasionally adopted in this country for "oil of roses," and the oils of a few other flowers, intended for the hair.*

The oils obtained by enfleurage, like those of the last class, are chiefly employed to scent the 'simple oils' and 'pommades,' and to prepare 'extraits.' Numerous examples of their applications will be found in the preceding and following pages.† Like the last class, they are uniformly distinguished in trade and commerce by their foreign names—Huile au Jasmin, Huile à la Fleurs d'Oranges, Huile à la Tuberose, Huile à la Violette, &c.—and these names appear on the labels affixed to the bottles, large or small, in which they are imported. The genuine oils are never, as a rule, bottled from 'stock' in England.‡

The preceding, with the mixed 'huiles' noticed under "Hair-oils," form the four classes of oils of the Continental perfumers.

The native perfumers of India, who are celebrated for their 'scented oils,' prepare those of *bela*, *chumbul*, *jasmine*, and several other flowers, by a process of enfleurage of a ruder, but not less successful kind, than that just noticed. A layer of the *flowers*, 3 or 4

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* *Vide* "Hair-oils," page 448, et seq.

† *Vide* "Extraits," "Hair-oils," "Pommades," &c.; and for references to special formulæ, the *Index*. The reader may also refer to the Author's "*Cyclopædia*," where the subject of "Perfumed Oils," as well as all others, is treated of.

‡ Unfortunately, however, the conscientious English druggist and perfumer often obtains foreign labels and empty foreign bottles, or ones in imitation of them, and fills them with spurious, and generally nearly worthless oils, of his own preparation.

inches thick, is placed on a *stone-slab* 2 or 3 feet square, set upon the ground. On this is placed a layer, about 2 inches thick, of moistened *teel-seed* or *sesamum-seed;* and on this a layer of *flowers* similar to the first one. The arrangement is now complete, or a second like series of three layers is added. Over the whole a slightly damp *sheet* of *cotton-cloth* is thrown, which is kept down and around the pile by means of weights attached to its edges, the whole being surmounted by a thin and light *slab of stone.* After the lapse of about 24 hours, the 'flowers' are replaced by *fresh ones,* and the whole process is repeated a third, and even a fourth time, when a highly scented oil is desired. The 'swollen seeds' are next submitted to the press, when thin 'bland oil' is obtained strongly impregnated with the aroma of the flowers. This is set aside in 'duppers,'* to settle and fine-down.†

Oil of Ambergris; Huile d'Ambregris, Huile à l'Ambre.—Take of

Ambergris (finest)	2 to 3 drachms;
Oil (*almond*, *olive*, or *ben*) . .	1 pint;

and proceed by infusion (*vide* page 604). A 'second quality' is made by working the residuum with ½ pint of *fresh oil.*

Oil of Ambergris and Musk.—Vide "Huile Royale" (infrà).

Oil of Balsam of Peru.—Take of

Balsam of Peru (pure)	½ ounce;
Oil of almonds (hot)	¼ pint;

agitate them together until perfectly mixed, and for a short time afterwards; then set the bottle aside, and, in a few days, decant the clear portion. *Oil of nutmeg,* 20 or 30 drops, is commonly added to increase its action. Dr. Copland also adds a little *oil of lavender.*

Used to scent other oils, and fats; also, by itself, to improve and restore the hair, for which it is in high repute among many persons.

Oil of Benzoin.—Take of

Gum-benzoin (finest)	1 ounce;
Oil of almonds	1 pint;

and proceed by infusion. (*Vide* page 604.) Used to convey the scent of benzoin to other oils; and also to prevent rancidity.

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* Large bottles or carboys made of untanned hides.

† In this country, I have employed *poppy-seed* and *flowers,* by the Indian method, with much success.

OIL OF MUSK; HUILE MUSQUÉE; &c.—Take of

Grain-musk	1 drachm;
Ambergris	½ „
Oil (*almond*, *olive*, or *ben*)	1 pint;

proceed by infusion. (*Vide* page 604.) Some makers add about 20 or 30 drops of *oil of lavender* (English), 10 drops of *oil of cloves*, and 5 or 6 drops of *oil of cassia*, with the musk. A 'second quality' is made by working over the same ingredients with ¾ pint of *fresh oil*.

HUILE ROYALE; OIL OF AMBERGRIS AND MUSK.—Take of

Ambergris	2 drachms;
Grain-musk	½ „
Oil of lavender (English)	20 drops;
„ *cassia*	
„ *cloves*	of each, 10 drops;
„ *nutmeg*	
Neroli	

and proceed by infusion. (*Vide* page 604.) Very fine. The ingredients are worked over a second time, as with 'oil of musk.'

OIL OF STYRAX.—Take of

Liquid styrax (pure)	5 to 6 drachms;
Oil of nutmeg	12 to 15 drops;
Ambergris	5 or 6 grains;
Oil (*almond*, *olive*, or *ben*)	1 pint;

by infusion. (*Vide* page 604.) Highly fragrant. Use, &c., same as "Oil of Balsam of Peru."

OIL OF VANILLA; HUILE À LA VANILLE.—Take of

Vanilla (finest, in powder)	2½ ounces;
Oil of bergamot	1 fluid drachm;
Otto of roses	15 drops;
Ambergris	3 grains;
Oil (*almond* or *olive*)	1¼ pint;

by infusion. (*Vide* page 604.) Very fragrant. For the 'simple oil,' the bergamot, otto, and ambergris, are omitted.

VOLATILE OILS; ESSENTIAL OILS.—Vide pp. 602-3; also Chapter XIX. The following formulæ may be useful to the reader:—

MIXED ESSENTIAL OILS; MIXED SCENTS.—1. Take of

Oil of bergamot		of each,
„ *lemon*		1 ounce;
„ *lavender* (English)		of each,
„ *pimento*		½ ounce;

mix.

2. To the last, add of

Oil of orange-peel	2 drachms;
„ *cloves*	1 „

3. Take of

Oil of bergamot	of each,
„ *lemon*	3 drachms;
„ *orange-peel*	
Essence de petit grain	2 „
Oil of cloves	1½ „
„ *cassia*	1 „

mix.

The above are used as "extemporaneous scent" for *smelling-bottles, hair-oil, pommades, esprits, sal-volatile drops, &c.;* for which purpose one or other of them is commonly kept at hand by the druggists. 1 ounce of any one of them, added to a pint of *rectified spirit*, produces an agreeable 'esprit' or perfume for personal use.*

PARFUM DES ROIS.†—Same as "bouquet" and "esprit de la reine."

VICTORIA PERFUME.—Vide "Esprit de la Reine" (antè).

VIOLET PERFUME; ODEUR DE VIOLETTE.—Spirit or essence of *orris-root* is commonly sold under these names.‡

FUMIGATING PASTILS; INCENSE PASTILLES; PASTILLES ODORANTES, CLOUS FUMANS; PASTILLI FUMMANTI *or* ODORATI.—These are small masses essentially composed of *powdered charcoal* and *aromatic substances* that emit fragrant fumes during combustion, with the addition of sufficient *nitre* or *saltpetre* to cause them to slowly consume away, without flame, when kindled. Their common form is that of a small cone with a triangular or tripod base, of about ⅞ to

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* *Vide* "Pommade Scents," "Snuff Scents," &c. (*infrà*).

† *Vide* "Odeurs" (*antè*).

‡ *Vide* pp. 578, 593 (*antè*).

1 inch in height, and about ½ inch in diameter at the larger part. This form is most simply and conveniently given them by pressing the mass, whilst soft, into a mould of lead or porcelain. The 'dry ingredients' should be first reduced to fine powder, and the 'balsams' and 'essential oils' (if any) being added, the whole should be thoroughly and perfectly incorporated, after which the mixture should be beaten to the consistence of a stiff ductile mass or dough with the 'liquid' ordered for the purpose. When powdered gum is one of the ingredients, the mass should be beaten up with *water;* but otherwise *mucilage* must be employed.* *Gum-tragacanth*, owing to its greater thickening and binding powers, is here generally preferred to 'gum-arabic.'† The charcoal of the light woods, as the linden, willow, and alder, make the best pastils; that of the first being most esteemed for this purpose in France.

The following are examples of these articles, from which the operator will be able to devise others :—

1. Take of

Gum-benzoin (powdered)	. . .	4 ounces;
Cascarilla (do.)	. . .	1 „
Nitre (do.)	. . .	½ „
Gum-tragacanth (do.)	. . .	3 drachms;
Charcoal (do.)	. . .	½ pound;
Oil of nutmeg . .	. .	of each,
„ *cloves* . . .		½ fluid drachm;

beat them to a stiff, ductile mass, with

Cold water	. . . . .	q. s.;

mould it, and dry the pastils by exposure to the air. The product may be varied by omitting one, or both, the essential oils; or by the addition of a little *styrax* ('liquid' or 'in tears'), or *balsam of Peru*. Some persons add 1 to 2 drachms of *myrrh*.

2. Take of

Gum-benzoin	. . . . .	4 ounces;
Sandal-wood (white) .	. .	of each,
Balsam of tolu . .		1 ounce;
Gum-arabic . . .	. .	of each,
Nitre		½ ounce;

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* The mucilage should not be very thick; as if it be so, the pastils will not burn well.

† 1 part of *gum-tragacanth* forms as thick a mucilage with *cold water* as 24 parts of *gum-arabic*. It swells up and forms a semi-transparent jelly with cold water, but not a true solution. Boiling water entirely dissolves it.

Gum-tragacanth . . } { of each,
Labdanum (true) . . } . . { ¼ ounce;
Charcoal (linden) . . . . . 12 ounces;
Cinnamon-water (to mix) . . . 12 ounces (or q. s.);

and proceed as before. This is the formula of MM. Henry & Guibourt. That of the Paris "Codex" is similar, except that the 'powdered tragacanth' and 'gum-arabic' are omitted, and the mass beaten up with (thin) *mucilage of tragacanth*, instead of with 'cinnamon-water.'

3. Take of

Gum-benzoin . . . . . 2 ounces;
Olibanum (in tears) . . . . 1½ „
Styrax (in tears) . . . . . 1 „
Cascarilla . . . . } { of each,
Gum-tragacanth . . } . . { ¾ ounce;
Nitre . . . . . 2 „
Charcoal . . . . . 1¼ pound;

mix, and beat them up with *water* or *rose-water*.

4. Take of

Charcoal . . . . . 1½ pound;
Nitre . . . . . 2 ounces;
Gum-tragacanth . . . . . 1 „

mix in the dry state. It is used as a basis for the following French pastils, as well as many others:—

a. (Pastilles aux Fleurs d'Oranges.) To each pound of No. 3 or 4, add of

Orange-powder (genuine) . . . 2½ ounces;
Neroli . . . . . 1 fluid drachm;

and beat up the mass with *eau de fleurs d'oranges*.

b. (Pastilles à la Rose.) To each pound of No. 3 or 4, add of

Pale-rose powder . . . . . 3 ounces;
Essence of roses . . . . . 2 fluid drachms;

and beat up the mass with *eau de rose*.

c. (Pastilles à la Vanille.) To each pound of No. 3 or 4 (usually the first), add of

Vanilla (in fine powder) . . . 2 ounces;
Cloves (do.) . . . ½ „
Essence of vanilla . . . . . ½ fluid ounce;
Oil of cloves . . . } { of each,
„ *cassia* . . . } . . { ½ fluid drachm;

and beat up the mass with *cinnamon-water*.

The products of the preceding formulæ are of excellent quality. They may be varied, to please the fancy of the maker, by the omission of some of their aromatic ingredients, or by the addition or substitution of others. Cheaper articles are made by simply increasing the proportion of the *charcoal* and *saltpetre*. Good 'burning qualities' depend greatly on the completeness of the mixture, and the moderate compactness of the mass. If they burn too slowly, a little more *saltpetre* may be added; if too fast, the quantity of saltpetre should be slightly lessened. Musk and civet, though often ordered in books as ingredients in pastils, should be avoided, as they give out a disagreeable odour during combustion. Ambergris is also unsuited for an ingredient in them.

"Camphorated Pastils" are made by adding 3 to 5 drachms of *powdered camphor* to each pound of any one of the first four of the preceding; but, for the sick room, to No. 3 or 4 only, preferably the last, if the simple odour of camphor only be desired.

Pastils are burned in apartments either to diffuse a pleasant odour, or to disguise a disagreeable one. They possess no disinfecting power, and exert no chemical action on effluvia or foul air. They are kindled at the apex, after being set on an inverted saucer, or a penny-piece. Those who use them frequently, generally employ the small china or porcelain toy sold for the purpose, and commonly known as a "pastil-house."

Toilet Pastils; Pastilles de Toilette Odorantes.—Vide "Scent Balls" (infrà).

Orange Pearls; Orange Peas; Issue Peas; &c.—*Orange-berries*, or the small unripe fruit of the 'orange-tree,' dried and smoothed in a lathe. Fragrant. Use, same as "rose-pearls;" also in surgery, as "issue-peas."

Rose Pearls; Rose Beads; Rose Balls; Toilet Pearls; Rose Medals; &c.—These are commonly made of the *petals* of *red roses*, by beating them in an *iron-mortar*, for some hours, until they form a smooth, black, stiff paste, which is then rolled or moulded into "beads," small "balls," or "medallions," and dried in the air. To facilitate the process, a small portion of the petals are sometimes more or less air-dried. The addition of a few drops of *otto of roses*, toward the end of the process, improves them. The addition of a little *essence of musk* or *grain-musk*, converts them into "Musk-rose Pearls," or "Musk Pearls," according to the quantity added. When quite

dry they are very hard and fragrant, and take a fine polish. Sometimes they are turned in a lathe. Kept in dressing-cases, work-boxes, drawers, wardrobes, &c., to scent them.

POMAMBRA; POMANDER; POMUM AMBRA; &c.—A scent-ball.* Balls composed of *ambergris*, *musk*, and *civet*, beaten up with some of the stronger aromatics, as *cloves*, *cinnamon*, &c., and some excipient to give them form, were formerly used by embalmers to fill the vacant orbits of the eyes.

POMMADES; POMADES; POMATUMS.—The origin and applications of these terms, which are mere synonyms, or rather analogues, of each other, have been explained in the preceding Chapter,† and formulæ and directions for their preparation have been given under "Hair Cosmetics"‡ and "Skin Cosmetics."§ The present section will be devoted to the higher class of pommades that more exclusively belong to pure perfumery, and particularly to their manufacture as practised on the Continent.

France is pre-eminently the "land of pommades," and her manufacturers are as celebrated for their variety and excellence, as they are for almost all other articles connected with perfumery, the cosmetic arts, and the toilet. This arises from the care, skill, taste, and integrity, exercised in their preparation by all the respectable houses there. The superiority of French 'pommades' over the 'pomatums' of the English perfumers and druggists is so generally known and appreciated, that, of late years, the latter, in order to force the sale of their scented compounds of coarse, and often rancid, oils and fats, have adopted the practice of affixing spurious French labels to them.

The first object of consideration with the French perfumer is, to obtain the 'fatty basis' of his pommades from a young and healthy animal, and in as fresh and pure a state as possible. *Lard*, *beef-suet*, *mutton-suet*, *beef-marrow*, *veal-fat*, and *bear's-fat*, are those which, in a 'rendered' state, he chiefly employs, either singly or in mixtures of two or more of them. After selecting his *fat*, he carefully removes from it extraneous skin, fibre, and moisture, and then pounds it in a cold marble-mortar, until all the membranes are completely torn asunder. He next places it in a covered pan of porcelain or tinned

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* *Vide* "Orange" and "Rose Pearls" (*antè*), "Scent Balls" (*infrà*), &c.
† *Vide* pp. 423-4 (*antè*). ‡ *Vide* pp. 469-72. § *Vide* pp. 423-5.

copper, and submits it to the heat of a water-bath until its fatty portion is entirely liquefied, and all albuminous matter, fibres, water, and other foreign substances, have completely separated, and subsided. Then he carefully skims the liquid fat, and pouring off the clear portion from the sediment, passes it through a clean flannel-filter into a deep porcelain or stoneware pot furnished with a lip, or into a basin or other vessel of the like material, of which the bottom and sides are curvilinear and expanding upwards. The first is employed when he intends to aromatize or perfume the fat, and 'pot' it at once, as is the case with ordinary pommades; the second, when he desires to submit it to further treatment. In the latter case, the vessel, after being covered, to exclude dust and dirt, is set aside in a situation where its contents will cool slowly. The next day the basin or pan is placed, for a few minutes, in warm water, to the depth of its contained fat, and is then inverted, so that the mass of fat may fall bottom upwards on a sheet of white paper previously placed to receive it in a cool situation free from dust. In this way, any water that escaped removal in the first rendering, drains off. When the exterior portion of the mass has become cold, the operator removes adhering moisture (if any) by dabbing it with a soft spongy cloth, and any particles of dirt, fibre, &c., that passed the flannel-filter, by means of a bone palette-knife. He next chops up the fat, and again liquefies it, in a suitable vessel, by the heat of hot water. Lastly, he either adds the necessary matter to prevent the accession of rancidity, with the aromatics or perfume, and at once 'finishes off' and 'pots' the pommade, or he covers the vessel, and sets it aside, in a cool place, to preserve its contents as 'stock-fat' for future use.

In *adding* his *aromatics* or *perfumes* to the melted fat, the operator, as a rule, adapts its temperature to their relative degree of volatility. *Essential oils* and *alcoholic essences*, particularly the more delicate ones, he adds at the lowest possible temperature compatible with their perfect union with the fat; whilst substances, like the aromatic resins and balsams, he adds to the fat more fully liquefied by heat, and aids their solution and union by stirring the mass with a wooden, bone, or porcelain knife or spatula. With the latter, after the union is complete, it is often necessary to allow the mixture to repose for a short time, and to pour it off from the dregs, before adding the essential oils and essences, and concluding the work.

In 'finishing off' pommades, two methods are adopted, according to the appearance it is desired they should have. Those which it is intended should be *opaque* and *white*, the operator stirs or beats

assiduously with the knife or spatula until the fat begins to concrete, or has acquired considerable consistence, before 'potting' it; * but when it is desired that they should be *transparent* or *crystalline*, the clear liquid mass is poured into the pots or bottles, previously slightly warmed, and the whole is allowed to cool very slowly, without being disturbed, in a situation free from draughts of cold air.

For the ordinary pommades a mixture of *lard* and *suet* is generally employed; for the harder ones, *suet* chiefly or wholly; or a little pure *white wax* or *beeswax* (according to the intended colour of the product) is melted with the fat, to increase its solidity.

For "white pommades," *mutton-suet* is employed; for others, in general, beef-suet. In those which are artificially coloured, either may be used; but beef-suet is preferable when either clearness or a cystalline appearance is desired.

The "coloured pommades" derive their respective hues from tinctorial substances dissolved or steeped in the melted fat before scenting it, the process being similar to that adopted for the 'coloured oils':—†

'Green' is given by *powdered gum-guaiacum*, or the *green leaves* or *tops* of *parsley*, *spinach*, *lavender*, or *walnut*:—

'Red,' by *alkanet-root*; or by *carmine*, added with the perfumes:—

'Orange,' by *annotta*, or by *annotta* and *palm-oil* mixed:—

'Yellow,' chiefly by *palm-oil*. The suet and other fat of Guernsey oxen and cows possesses a rich pale yellow, sufficiently deep for many pommades without artificial colouring.

The *accession* of *rancidity* may be prevented, or greatly delayed, in the way subsequently pointed out.‡

Pomatums or pommades are usually 'put up' in ornamental porcelain or glazed earthenware pots furnished with covers, or in 'dumpy' wide-mouthed bottles.

The French perfumers commonly divide their pommades, like their oils, into *four* classes, according to the methods which they employ to scent them:—

§ 1. Pommades prepared by the addition of the essential oils, fragrant essences, and perfumed huiles, to the simple pommade §

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* Some English makers add to the melted fat or pommade a few grains, per ounce, of *citric acid*, in very fine powder, for the purpose of increasing its whiteness; but the addition is almost useless, and is not to be commended, as the acid exerts a somewhat injurious action on the hair.

† *Vide* page 449 (*antè*). ‡ *Vide* Chap. XIX. (*infrà*). § *Vide* page 618 (*infrà*).

liquefied by a gentle heat; or by dissolving the fragrant resins and balsams in it; each in the manner previously explained.—In this way are prepared—

Ambergris	Pommade,		Millefleur	Pommade,	
Bergamot	,,		Musk	,,	
Cassia	,,	(ordinary),	Neroli	,,	
Cedrat	,,		Nutmeg	,,	
Cinnamon	,,	(ordinary),	Orange-flower	,,	(ordinary),
Cloves	,,		Orange	,,	
Lavender	,,		Portugal	,,	
Lemon	,,		Rondeletia	,,	
Lemon-thyme	,,		Rose	,,	
Limettes	,,		Rosemary	,,	
Maréchale	,,		Thyme	,,	
Marjoram	,,		Verbena	,,	

and between 40 and 50 other "Pommades" kept by the Parisian perfumers, and all, or nearly all, those of the perfumers and druggists in this country.

§ 2. Pommades by Infusion.—These are prepared by digesting the odorous substances in the simple pommade,* at a very gentle heat, for 2 or 3, to 8 or 10 hours, according to their nature, in the way already noticed under "Oils"; † observing to stir the mixture frequently, and to keep the vessel covered as much as possible during the whole time. 1 part of *flowers*, carefully picked and pulled to pieces, to 3 or 4 parts of *pommade*, are the usual proportions. The next day the mixture is again greatly heated, and, after being stirred for a short time, is thrown into a strong canvas-bag, which is then securely tied, and at once submitted to the action of a powerful press.‡ The whole operation is then repeated, several times, with fresh flowers, or other bulky odorous substance, until the pommade be sufficiently fragrant. This will require 3 to 6 times its weight in flowers. Lastly, in the case of flowers, the pommade is liquefied in a covered vessel, at a gentle heat, as before; and after sufficient repose to allow it to deposit adhering moisture, is poured off for 'stock,' or is at once 'potted.' The mode of proceeding with the *aromatic barks*,

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* *Vide* page 618 (*infrà*). † *Vide* page 604 (*antè*).

‡ This should have been previously made moderately warm. This is effected either by means of a steam-jacket, or by filling it with hot water. In the latter case, care should be taken to perfectly free it from water before use.

seeds, resins, balsams, &c., the duration of the infusion, and the proportions taken, are, for the most part, similar to those of the corresponding 'huiles' or oils; but here the first two substances, and others of a like nature, are only bruised, ground, or sliced very small, and not reduced to actual powder, before digestion, as pommades, unlike oils, cannot be freed from fine powder or dust by filtration through fine media, or by repose in the cold.

In this way are prepared the "Pommades" of—

Balsam of Peru,	Orange-blossoms,
Benzoin,	Orris-root (violet),
Cassia,	Roses (coloured),
Cinnamon,	Styrax,
Lavender (green),	Vanilla,

and several others, kept by the Continental perfumers, and known and spoken of, in this country, by their French names; as "Pommade aux Fleurs d'Oranges," "à la Rose," "à la Vanille," &c.

§ 3. Pommades by the Flowers *or* Enfleurage.—These are prepared by a similar process to that adopted for the corresponding "huiles."* On the large scale, a *layer* of *simple pommade*† is spread, with a bone palette-knife, on *panes of glass*, to about the thickness of a finger, and the surface is closely stuck all over with the *newly-gathered flowers*. The 'panes' are then placed in shallow frames of wood, and these are closely piled one upon another, in stacks, in a moderately cool situation. In some of the great perfumeries of France, many thousands of these frames are employed at once. On the small scale, *porcelain* or *pewter plates* are generally used instead of 'panes of glass,' and are inverted over each other, in pairs, so as to fit close at the edges. In each case the flowers are renewed daily, and the fat stirred up and re-spread occasionally, for one, two, or even three months, or until the pommade has become sufficiently fragrant to render it of the quality intended by the manufacturer. It is now scraped off the panes or plates, into the 'store pots,' and is ready for use or sale.

In this way are prepared the finest qualities of—

Cowslip Pommade,‡	Jasmine Pommade,
Honeysuckle „ ‡	Jonquille „

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* *Vide* "Perfumed Oils," pp. 605-6 (*antè*). † *Vide* page 618 (*infrà*).

‡ The articles sold under these names, by the English perfumers, are usually factitious, and derive their odour from a fanciful admixture of several oils and essences, as noticed elsewhere.

May-blossom Pommade,*	Orange-flower Pommade,
Myrtle-blossom ,,	Tuberose ,,
Narcissus ,,	Violet ,,

as well as the "pommades" of several other delicate flowers that readily impart their odour to fat by simple proximity or contact. The imported pommades of this class, like those of the last one, are always distinguished, among the English perfumers, by their French names; as "Pommade au Jasmin," "Pommade aux Fleurs d'Oranges," "Pommade à la Violette," &c.

The stronger pommades of the two last classes are chiefly employed in the preparation of "extraits" and "essences," and are added to other pommades, to impart the fragrance of the respective flowers. The others are also used as hair-cosmetics.

§ 4. Mixed Pommades; Compound Pommades.—These are prepared either by the admixture of the different "fragrant pommades" already noticed, or by the addition of judicious combinations of the more esteemed *essential oils*, *essences*, and other *odorous substances*, to *simple pommade*, whilst in the liquid or semi-liquid state. The latter is the method almost exclusively adopted by English perfumers.

The usual fatty basis of the preceding pommades is one or other of the following:—

Plain Pomatum *or* Pommade; Pommade Simple.—1. Take of

Hog's lard (carefully 'rendered'†) 2 parts;
Beef-suet (do.) . . . 1 ,,

and melt them together by a very gentle heat. The product is of the proper consistence for temperate climates.

2. *Lard* . . . . . 5 parts;
Mutton-suet . . . . . 2 ,,

For white pommades, as the last.

3. *Lard* . . . . . } . . { equal
Suet . . . . . } . . { parts.

For warm climates. For tropical climates even more *suet* may be used, and ½ to 1 ounce of *pure wax*, per pound, may be added.‡

In pommades containing *bear's fat*, *marrow*, *oil*, &c., or *wax* or *spermaceti*, the proportions of the other ingredients are so adjusted that the product may be of the proper consistence. This chiefly occurs in hair cosmetics.

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* *Vide* Note (‡), page 617 (*antè*). † *Vide* pp. 613-4 (*antè*).
‡ *Vide* "East-India Pomatum," page 464.

POMMADE DE CASSE; CASSIA POMATUM.—Take of

Plain pommade	1 pound;
*Annotta** (finest)	½ drachm (or q. s.);

melt them together, and stir for some time. After repose, pour off the clear portion, add of

Oil of cassia (finest) . }	of each,
Huile au jasmin . . }	1½ drachm;
Neroli	½ „
Oil of verbena or *lemon-grass* . .	20 drops;
Otto of roses . . . }	of each,
Essence royale . . . }	8 or 10 drops;

and stir the mixture until it begins to cool. Delightfully fragrant. The common practice is to substitute 3 to 4 drachms of bright *palm-oil* for the 'annotta;' but the colour of the product is then not so rich.

POMMADE À LA MARÉCHALE; POMMADE DE MARÉCHALE.—This is *plain pommade* scented with the *odorous ingredients* of 'poudre à la maréchale' (by infusion), or with *essence* or *extrait de maréchale*.

MILLEFLEUR POMATUM; POMMADE DE MILLEFLEURS.—This much esteemed pommade is strongly scented with several perfumes of the kind noticed below, so proportioned to each other that none predominate. The following are common examples; but the scents, within certain limits, may be varied at will:—

1. Take of

Plain pommade	1½ pound;
Oil of lemon	1½ fluid drachm;
„ *lavender* (English) }	of each,
Balsam of Peru . . }	1 fluid drachm;
Essence royale . . . }	
Oil of cassia . . . }	of each,
„ *cloves* . . . }	½ fluid drachm;
Essence de petit grain . }	

2. *Plain pommade* . . . . . 1 pound;
Essence or *extrait de millefleurs* . 4 to 5 fluid drachms.

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* It should be rubbed down with a little of the *fat*, in a hot mortar, before adding it to the rest.

VANILLA POMATUM; POMMADE À LA VANILLE; POMMADE ROMAINE.—1. Take of

Plain pommade	. . . . .	1½ pound;
Vanilla (in coarse powder)	. .	1 to 1¼ ounce;
Cassia (do.) . *Cloves* (do.) .	. .	of each, 1½ drachm;

proceed by infusion * for 2 hours. To the clear decanted portion add, of

Huile à la rose	. . . . .	2½ ounces;
Oil of bergamot	. . . . .	1 fluid drachm;
Otto of roses	. . . . .	12 drops;

and let it cool slowly, and undisturbed after it begins to thicken. Very fine.

2. Take of

Plain pommade	. . . . .	1 pound;

melt, and add, of

Essence of vanilla (finest †)	. .	4 or 5 fluid drachms;
Otto of roses	. . . . .	8 or 10 drops;

as before. Very fine. The plain pommade may be previously slightly tinged with *annotta*.

POMMADE SCENTS.—1. (Cowslip.) Take of

Oil of bergamot	. . . . .	2 ounces;
„ *lemon*	. . . . .	1 „
Essential oil of jasmine (E. I.) . . . . *Essence de petit grain*	. .	of each, ¼ ounce;
Oil of rose-geranium	. . . . .	1½ drachm;
„ *cloves*	. . . . .	1 „
„ *rhodium*	. . . . .	½ „

mix by agitation.

2. (Jonquille.) Take of

Oil of bergamot . . „ *lemon*	. .	of each, 2 ounces;
„ *orange-peel*	. . . . .	5 drachms;
„ *cloves*	. . . . .	3 „

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* *Vide* pp. 616-7 (*antè*).

† An essence prepared by formula 3, page 593, or one like it, is the best for the purpose. If simple *essence of vanilla* be used, 15 drops of *essence royale*, and 8 or 10 drops, each, of the *oils of cassia* and *cloves*, may be added.

Oil of sassafras . . . . . 2 drachms;
Liquid storax . . . . . 1 „

put them into a bottle, cork it close, digest in the sun, or a very gentle heat, with agitation, for 2 hours, and, after repose for a week, decant the clear portion.

3. (Maréchale.) Take of

Oil of bergamot .
„ *cloves* . . . . } . . { of each,
„ *lavender* (English) } { 1 ounce;
Essence of ambergris . } . . { of each,
„ *musk* . . } { 1½ fluid drachm;
Oil of orris-root . .
„ *origanum* . . } . . { of each,
„ *sassafras* . . } { ½ drachm;

agitate them well together, and again each time before use.

4. (Millefleur.) Take of

Essence of ambergris (royale; finest) . . . . . 1 fluid ounce;
Oil of lemon . . . . . ¾ ounce;
„ *cloves* . . . } . . { of each,
„ *lavender* (English) } { ½ ounce;
„ *bergamot* . . . . . 3 drachms;
Essence de petit grain .
Balsam of Peru . . } . . { of each,
Oil of cassia . . . } { 2 drachms;

mix, and proceed as before. Or, instead of the 'balsam of Peru,' 1 drachm of *oil of bitter-almonds* may be added.

The above, and other like combinations, are commonly kept in stock by perfumers and druggists, to scent pommades, hair-oil, &c. 1 fluid ounce of any one of them, added to 1 pint of *rectified spirit*, produces a delicious perfume for the handkerchief; and, with half that quantity of spirit, a highly fragrant "essence," "bouquet," or "esprit."

Pot Pourri.—A 'hotch-potch.' In perfumery, a mélange of *odorous flowers, barks, roots, gums, woods, &c.*, varied according to the taste or caprice of the maker, either mixed together dry, or in the fresh state preserved with *salt*. The common mode of proceeding is to collect *roses, lavender*, and other *sweet-scented flowers*, as they bloom, and to stratify them in a jar, in alternate layers, with *common*

salt, until the desired quantity be obtained, when the dry odorous substances (see below) are added, and the whole mixed together.

The other method is, to thinly spread the fresh-collected *flowers* on *porous paper* placed in shallow trays, and to expose them to the sun or warm air, until sufficiently dry, then to lightly crumble them up small between the hands, and, the other dry odorous ingredients being added, with or without a little *essential oil* of the same kind as the dried flowers, to thoroughly mix the whole together. Sometimes *essential oils* only are added to the 'dry flowers'; but the fragrance of the product is then much less durable. As the basis of his finest dry pot-pourri, the Continental perfumer usually substitutes either *rein-deer moss* or *ragged hoary evernia*, in very coarse powder, for the dried flowers.*

Among the "dry odorous ingredients" above referred to are—*ambergris*, *gum-benzoin*, *root of calamus aromaticus* (sweet-flag), *cascarilla*, *cassia*, *cassia-buds*, *cinnamon*, *civet*, *cloves*, *musk*, *musk-seed*, *orange-berries*, *orange-flowers*, *orris-root*, *allspice* or *pimento*, *patchouli*, *puchá pát*, *styrax* (in tears), *vanilla*, *yellow sandal-wood*, &c.†

Among "soft and liquid additions," may be mentioned—the *fragrant essences* (ambergris, civet, musk, royale, vanilla, &c.), and *essential oils*, *balsam of Peru*, *liquid styrax*, &c.‡

Poudres.—Powders. The following are a few "poudres cosmétiques," "poudres odorantes," &c., which are either imported by our perfumers, or, if prepared by them, are usually sold as foreign, with French labels: §—

Cyprus Powder; Poudre de Cypre; Poudre de Chipre.—*Rein-deer moss*,‖ carefully picked over, and then reduced to powder. It has a very agreeable smell, and being very retentive of odours, is much used as a basis for the finest scent-powders, hair-powders, skin (dusting) powders, sachets, &c. *Ragged hoary evernia*¶ possesses nearly similar qualities, and is often substituted for rein-deer moss. *Oak-moss*, being very retentive of odours, though in itself lacking the agreeable smell of the others, is also often used to make Cyprus powder. The two first of the above, when intended for skin-

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* *Vide* "Cyprus Powder," "Poudre de Chipre," &c. (*infrà*).

† Ambergris, civet, musk, must be rubbed down as noticed under "Essences;" the others in coarse powder.

‡ *Vide* "Scent Bags," "Scent Powders," &c. (*infrà*).

§ Others are noticed under "Pastes," "Powders," &c., to which references will be found in the *Index*.

‖ "Lichen rangiferinus," Linn. ¶ "Lichen evernia prunastria."

cosmetics, are generally soaked, for a short time, in cold water, and then rinsed and dried, before being powdered. When required very pale or white, the soaking is continued longer. Oak-moss requires more soaking. The common practice is (for the best qualities) to place it loosely in a net, and to suspend it in running water, for one, two, and even three days.

Poudres Cosmétiques Odorantes; Scented Cosmetic Powders.—These are very numerous, their difference and names depending chiefly on the substances employed to scent them. The basis of the finest of them is usually "Poudre de Chipre" or "Cyprus powder," before noticed; that of others, the finest *starch* or *farina*; and, for some of them, a mixture of the two is used. The first is of a very pale ash-gray or grayish-white colour. For those that are required colourless, or of a pure white, the second alone is employed. In their simple or unscented state ("poudre de Chipre," "poudre cosmétique simple"), they correspond to the "plain powders" of our perfumers. The following are a few examples:—

Poudre de Chipre de Montpellier.—Take of

Cyprus powder	. . . . .	2 pounds;
Cloves (in fine powder)	. . . .	2 drachms;
Grain-musk (do.)	. . . . .	30 grains;
Civet (do.)	. . . . .	20 „

mix, as directed under scented powders. Very fine. A second quality is made by substituting the respective *essences* and *oil* for the solid scents.*

Poudre de Chipre aux Fleurs d'Oranges.—Take of

Cyprus powder	. . . . .	20 to 25 parts;
Orange-blossoms (picked to pieces)		1 part;

(both by weight;) mix them lightly together in a box, canister, or jar, furnished with a lid or cover, and stir them up twice or thrice during the day. The next day, sift out the 'flowers,' and repeat the whole process with *fresh flowers* a second, and a third time, or even oftener, if a very highly perfumed powder be desired. Instead of this, the plain powder is often scented by the simple addition of a little *neroli* or *essence de petit grain*. For a 'paler powder' a mixture of equal parts of *Cyprus powder* and *starch* or *farina*, is employed. The white powder ("poudre blanc de fleurs d'oranges") has a basis of the *purest starch* or *farina*.

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* These last are reduced to powder by trituration with a little *lump-sugar*.

In like manner are made—

Poudre au Jasmin,
„ à la Jonquille,
„ aux Roses communes (pale roses),
„ aux Roses musquées (musk-rose),
„ à la Violette,

and the 'poudres' of several other delicate flowers.

Poudre de Frangipane; Frangipanni Powder.—Take of

Poudre de Chipre . .	} . .	{ of each,
Poudre aux fleurs d'oranges	}	{ ¾ pound;
Essence of ambergris		1 fluid drachm;
Civet (in fine powder)		4 or 5 grains;

and proceed, as for "poudre de Montpellier" (antè).

Poudre à la Maréchale.—1. Take of

Cyprus powder		1 pound;
Starch or *farina*		½ „
Calamus aromaticus (root)	} . .	{ of each,
Cloves	}	{ 1 ounce;
Cyperus perennis or *rotundus*	}	

separately powdered and mixed, as before. Pale ash-gray.

2. Take of

Starch or *farina*	2 pounds;
Cloves	1 ounce;
Orris-root	¾ „
Essence of ambergris (or *royale*) .	20 drops;

as before. White.

Poudre de Millefleurs; Millefleur Powder.—Take of

Poudre de Chipre	1½ pound;
Eau or *extrait de millefleurs* . .	1½ fluid drachm;

and mix, as before. On the large scale, the solid and liquid scents employed to make the 'eau' or 'extrait,' are directly added to the powder, as in the "poudres de Montpellier," "Maréchale," &c.

POUDRE À LA MOUSSELINE.—Take of

Poudre de Chipre (or *starch*)			1½ pound;
Orris-root (in fine powder)			1 ounce;
Coriander-seed	(do.)	}	of each,
Violet ebony	(do.)	}	3 drachms;
Mace	(do.)		1 „
Cassia	(do.)	}	of each,
Cloves	(do.)	}	½ drachm;
Musk-seed	(do.)	}	
Yellow sandal-wood	(do.)	}	

as before.

In the "poudre à la mousseline," used as a scent-powder or sachet-powder, the 'plain powder' is omitted, the usual proportions then being—

Orris-root	16 parts;
Coriander-seed	6 „
Mace and *violet ebony*	of each, 2 parts;
Cassia, cloves, musk-seed, sandal-wood	of each, 1 „

POUDRE À L'ŒILLET.—Take of

Cyprus powder		2 pounds;
Orris-root	}	of each,
Petals of red roses (dried)	}	1 pound;
Cloves	}	of each,
Musk-seed	}	4 ounces;
Oil of bergamot		1 drachm;
Essence de petit grain		½ „

mix. Used both as a scent-powder, and a cosmetic powder; for the last, usually diluted with 'plain powder.'

POUDRE À LA VANILLE.—Take of

Cyprus powder		1½ pound;
Vanilla (in fine powder*)		1½ drachm;
Cloves	(do.)	½ „
Essence of ambergris		8 or 10 drops;

mix, as before. Or it may be made, like "poudre de millefleurs," by the simple addition of a little *essence of vanilla* to the *plain powder*.

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* Powdered by trituration with a little *lump-sugar*.

The above are used as cosmetic powders for the skin and hair; and, the last six, occasionally, as "scent-powders" for sachets, drawers, &c.*

Powders.—The general method of preparing both simple and compound powders has been explained in the preceding Chapter, where also formulæ for various "cosmetic powders" † will be found. The following, with those given under "Poudres" (antè), will complete the list.

Scented Powders.—Vide "Hair Powder," "Violet Powder," "Poudres," &c., in this and the preceding Chapter. In preparing these, and all other like powders, the 'scents' are best added to the mixed dry ingredients, separately reduced to powder; and, after being thoroughly incorporated, the whole should be passed through a fine sieve, to ensure perfect admixture.

Scent Powders; Sachet Powders; &c.—The following formulæ furnish examples from which others may be constructed:—

1. Take of *rein-deer moss*, in coarse powder, any quantity, and very strongly scent it with any of the *compound fragrant essences*, or with the *perfumes* of which they are made, or with mixed *essential oils*, at will.

2. Take of

Orris-root (in coarse powder)	.	2 ounces;
Cassia (do.)	. . . .	1½ „
Cloves (do.)	. . . .	1 „
Cedar-wood (rasped) . } *Yellow sandal-wood* (do.) }	. .	of each, ¼ ounce;
Ambergris (in fine powder ‡) . . . } *Musk* (do.) . . . . }	. .	of each, 5 or 6 grains

mix, add of

Oil of lavender (Mitcham) . . . } *Oil of bergamot* . . }	. .	of each, 1 drachm;
Otto of roses		10 to 15 drops;

and blend the whole thoroughly together.

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* *Vide* "Hair Powders," "Violet Powder," "Scented Powders," "Scent Powders," &c. (*infrà*, and in the last chapter).

† Hair, Hand, Skin, Tooth, and other Powders.

‡ Powdered by means of a little *lump-sugar*.

3. Take of

Coriander-seed . . .		
Orris-root		
Calamus aromaticus (root)	. .	of each, 4 ounces;
Rose-leaves (lightly air-dried)		
Lavender-flowers (do.)		8 ounces;
Rhodium-wood (rasped)		1½ to 2 drachms;
Musk (powdered)		15 to 20 grains;
Civet (do.)		10 or 12 „

as before.

4. As the last, but adding of

Allspice	1½ ounce;
Cloves	½ „
Mace	¼ „
Oil of lavender (Mitcham) . .	½ drachm.

5. To No. 3, add of *orange peas* or *berries*, 2 ounces.

6. Replace the 'musk' and 'civet,' in Nos. 3 and 4, by *essential oil of almonds*, 1 fluid drachm.

7. Take of

Patchouli		8 ounces;
Lavender-flowers (lightly dried) .		3 „
Orris-root		2 „
Cloves		1 „
Oil of bergamot		1 fluid drachm;
„ *lavender* (Mitcham)		
Essence of ambergris .	. .	of each, ½ fluid drachm.
„ *musk* . .		

The above are used, along with *cotton-wool*, to fill "scent bags," "cassolettes," &c., and as "scent-powders" for boxes, drawers, wardrobes, and the like. For the latter, besides their fragrance, they are useful in keeping away moths and other insects. They are also used, beaten up with mucilage, to form "scent-balls, "medallions, &c.*

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* For other formulæ *vide* "Pearls," "Pot Pourri," "Poudres," &c.; also the *Index*.

RONDELETIA.—The name given to a mixed perfume (essence, esprit, extrait, &c.) of which the basis, or predominant odour, is that of *lavender* qualified by that of *cloves*.

SACHETS; SCENT BAGS; SWEET BAGS.—These are little bags of muslin, or thin calico, containing mixed odorous substances; and are commonly used to communicate an agreeable perfume to work-boxes, dressing-cases, drawers, wardrobes, &c., and their contents. Small ones, elegantly got up, are also occasionally worn on the person. They may be filled with any of the dry mixtures noticed under "Scent Powders," "Pot Pourri," &c. These mixtures should be in the state of coarse powder, and used along with *cotton-wool* in filling the bags. These last are finally enclosed in others formed of *satin*, *silk*, or *velvet*, and of an ornamental character.*

SAVON; SAVONS.—See "Soaps" (infrà).

SCENT BAGS.—See "Sachets" (suprà).

SCENT BALLS; SWEET BALLS; PASTILLES DE TOILETTE ODORANTES.—These are made of any of the 'mixtures of odorous substances' noticed under "pot pourri," "scent-powders," "sachets," &c., beaten to a stiff paste or dough with *mucilage of gum-tragacanth*, and moulded into "balls," "beads," or any other desired form, as that of "medallions," &c. The common practice is to pierce the former, whilst still soft, in two or three places with a needle; and when they are quite dry and hard, to turn and polish them in a lathe. Medallions, and the like, are only polished.

The following is an additional and a common formula for "scent-balls":—Take of

Florentine orris-root	3 ounces;
Cassia	of each,
Lavender-flowers	1 ounce;
Cloves	of each,
Rhodium-wood	½ ounce;
Vanilla	1 drachm;
Ambergris	of each,
Musk	6 grains;
Otto of roses	

* *Vide* pp. 626-7. — Formerly, sachets ("sacculi") were employed, by the medical faculty, for the external medication of parts of the body; but, in these realms, their use, in this way, is now almost entirely confined to the vulgar.

Oil of verbena . . . . . 15 to 20 drops;
Mucilage of tragacanth (to mix) . q. s.

'Scent balls' are carried in the pocket, or about the person, for their odour. They are also placed in drawers, boxes, wardrobes, &c., to scent them. Some makers coat them with scented varnish; but that keeps in the smell, and is, therefore, objectionable.

Scented Cassolettes.—See "Pot Pourri," "Sachets," "Scent Balls," &c. (antè).

Scents (Mixed).—Vide "Mixed Essential Oils," "Pommade Scents," &c. (antè). The following are additional:—

Snuff Scents.—Of the substances used, singly and combined, to scent snuff, the following may be mentioned as the principal:—

Tonquin-beans, and their oil or essence;*
Ambergris, musk, civet, and their essences;
Leaves of orchis fusca;
Root and oil of calamus aromaticus;
Powder and essence of orris-root;
Cedar-wood, rhodium-wood, sandal-wood;
Essences, essential oils, or ottos, of bergamot, cassia, cedra, cinnamon, cloves, lavender, lemon, orange-flowers (neroli), petit grain (essence de),† rhodium, rose-geranium, roses (otto), &c.

In practice, a sufficient quantity of the powder, essence, or oil, having been well mixed with a little of the snuff, the perfumed mixture is added to the whole quantity of snuff to be scented, and the mass is well stirred up and turned over. It is, lastly, passed or rubbed through a sieve, to ensure the perfect diffusion of the scent through the whole mass.

The snuff known as "Tabac parfumé aux Fleurs" is prepared, by the French houses, by mixing the *snuff* and *flowers* and keeping them in a close chest or jar for 24 hours, and then sifting the flowers out, and repeating the infusion with *fresh flowers*, as often as necessary; the whole process resembling that adopted for scented powders (poudres), already noticed. Another way, is to lay paper, pricked all over with a large pin, between the flowers and the snuff, by which

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* This is 'par excellence' the 'scent of scents' for snuff. A single *Tonquin-bean*, kept in a box, will continue to impart its delicious aroma, for years, to all the snuff that comes into contact with it.

† *Oil of orange-leaf.* Oil of orange-berries, often sold under the name, is inferior, and does not keep well.

the trouble of sifting is avoided. In this way, the finer qualities of snuff are scented with orange-flowers, jasmines, roses, musk-roses, tuberoses, violets, and some other flowers of delicate perfume.

Among "mixed scents" commonly kept in 'stock,' for convenience, by the French and West-end snuff-dealers, are—

1. *Oil of lemon*, separately qualified with a little *oil of cassia, cloves, nutmegs*, &c.

2. *Oil of bergamot* . . . . . 2 ounces;
   Neroli . . . . . 1½ drachm;
   Otto of roses . . . } . . { of each,
   Oil of rhodium . . . } . . { ½ drachm.

3. *Oil of bergamot* . . . . . 2 ounces;
   „ *lemon* . . . . . 1 „
   „ *lavender* (English) . . . ½ „
   „ *verbena* . . . . . 1 drachm.

4. To the last add of
   Oil of cloves . . . . . ¾ ounce.

5. *Essence of Tonquin-bean* . . . 2 ounces;
   „ *vanilla* . . . . . ½ „
   Essence royale . . . } . . { of each,
   Oil of cinnamon . . } . . { 1 drachm;
   Otto of roses (or *oil of rhodium*) . a few drops.

6. *Essence of ambergris* . } . . { of each,
   „ *musk* . . } . . { 1½ ounce;
   Liquor of ammonia (·880-2) . . 1 fluid drachm.

Many other like combinations are kept. A few drops will scent several ounces of snuff. Diluted with 10 to 20 times their bulk of *rectified spirit*, they form delightful scents ("bouquets") for the handkerchief, &c.

Soaps; Savons.—Scented and other toilet soaps are important articles in modern perfumery. Their number and variety are very great, though less so in this country than on the Continent.

In *scenting* and *colouring* soap, the odoriferous and colorific ingredients are blended, on the *large scale*, with the newly-made soap, after removal from the 'boilers,' as soon as it becomes sufficiently cool, but whilst still soft enough to admit of their perfect admixture, and before the soap is poured into the 'frames.' On the *small scale*, the soap, previously reduced to shavings, or sliced small, is melted by a gentle

steam-heat, or that of a water-bath, with or without the addition of a very little water. If the soap has been recently made, and not too dry, no water will be required, provided the vessel it is melted in be kept covered.*

The *mottled* or *marble appearance* is usually given to soap, on the *large scale*, by watering the 'nearly finished soap' with a *strong lye* of *crude soda* (preferably one rich in sulphurets), by means of a watering-pot furnished with a rose-spout. In "Castile soap" it is given with a *solution* of *sulphate of iron*, used in the same way. On the *small scale*, with toilet-soaps, the 'mottle' is either given in the way noticed under "Savonettes," or, in a like manner, by combining some of the soap, coloured at the time of scenting it, with the remaining uncoloured portion.

The form of "cakes," "tablets," &c., may be given by either pouring the *semi-liquid soap* into a series of polished metal-moulds, or by cutting and moulding or stamping the soap in the solid state, it having been previously cut or formed into bars of suitable size and length.

It should be remembered that damp soap loses its perfume quicker than hard, compact, and moderately dry soap; also that all 'scented soaps' keep best in a cool, close place. Exposed to a dry, warm atmosphere, they not only soon lose their fragrance with their moisture, but an efflorescence of alkali is apt to form on their surface, to the utter destruction of their quality and beauty as toilet-soaps. They are, hence, best preserved in glass or earthen jars or cases, or, on the large scale, in chests placed in a cold cellar, but not a damp one.

In 'drying soap' for the purpose of subsequently 'grating' or 'powdering' it, it should be first reduced to shavings, and these should be exposed to a very gradually increasing heat, insufficient to melt them, and always much under that of boiling water. Long exposure to dry air (*air-drying*) is a still better method. In hasty drying at a heat of even about 200° Fahr., soap, in losing its free

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* The toilet-soaps which have a large sale, as "almond-soap," "glycerine-soap," "honey-soap," "Windsor-soap," &c., are now generally prepared at the soap-works, and not by the perfumer or druggist. The soap-boilers who include "fancy-soaps" in their business, generally make two or three qualities of each kind, from their own formulæ, on the cakes and bars of which they will, at order, stamp the name of any large customer. Some of the West-end perfumers who are very recherché in their soaps, send their own mixtures of *essential oils*, &c. to the soap-boiler, with their instructions in their use and other particulars.

waters, suffers partial decomposition; a portion of its alkali is liberated, and it becomes strong, caustic, and disagreeable in use. In this state it irritates the skin, and if it be employed as tooth-powder, it commonly occasions soreness and bleeding of the gums.

The *basis* of the "hard toilet-soaps" is generally a mixture of 8 or 9 parts of *suet*, and 1 part of *olive-oil*, saponified by *caustic soda;* or of *suet-soap* or the best *white curd-soap*, and *olive-oil soap* (white Castile-soap), in like proportions, which, however, are often deviated from. Such a mixture is found to lather better, and to be more agreeable in use, than either tallow-soap or oil-soap employed singly. *Almond-oil soap* and *palm-oil soap* are also employed, sometimes alone, but generally in a state of combination.

The *basis* of the "soft toilet-soaps" is *hog's lard* or *olive-oil*, generally the former, saponified by *caustic potash;* the products being respectively "white soft-soap" and "olive-oil soft-soap." A mixture of the two, in the proportions already mentioned, is also employed.*

The following are a few "scented" or "toilet soaps" connected with the subject of this volume: †—

ALMOND SOAP; BITTER-ALMOND SOAP; SAVON D'AMANDE, SAVON D'AMANDE AMÈRE. — The best quality is usually *white curd-soap*, with or without the addition of 1-9th to 1-7th of its weight of *olive-oil soap*, scented with *essential oil of almonds* in the proportion of about 1 ounce to each 4½ to 5 pounds, or 1½ pound to the cwt., on the large scale, at the soap-boilers'; on the small scale, as noticed under "rose soap." Very fine. The addition of a little *oil of cassia* (say, 4 or 5 ounces per cwt.) improves it. Second and inferior qualities are scented with *artificial oil of almonds* (nitrobenzole), instead of the genuine or natural oil.

BOUQUET SOAP; SAVON AU BOUQUET.—Take of

White curd-soap (finest)	. . .	7½ pounds;
Olive-oil soap	. . . . .	2½ „
Oil of bergamot	. . . . .	1 ounce;
„ *cassia*	. . .	of each, 1½ drachm;
„ *cloves*	. . .	
„ *sassafras*	. .	
„ *thyme*	. . .	

* *Vide* pp. 437-8 (*antè*); also the following formulæ, and Chapter XIX.

† Other formulæ, including several "medicated soaps," will be found under "Skin Cosmetics" (*antè*).

Neroli (or *essence de petit grain*) . 1 drachm;
Ochre (brown; levigated) . . . 2 ounces (or q. s.);

and proceed as for "almond-soap" (antè). Highly and agreeably fragrant. It may be varied by substituting *English oil of lavender* for the 'neroli.' Some makers colour it with *burnt-sugar*, instead of 'ochre.'

CINNAMON SOAP.—This is usually a mixture of *tallow* and *oil soaps*, like that of "savon au bouquet," coloured with about ¼ pound of *yellow ochre*, and scented with 1 ounce of *oil of cinnamon* (supported with a little *oil of bergamot* and *sassafras*), to each 7 pounds. The following is the form of a certain celebrated maker of this soap:—Take of

White curd-soap (finest) . . . 6 pounds;
Palm-oil soap (do.) . . . . 3½ „
Olive-oil soap . . . . . 1 „
Oil of cinnamon . . . . . 1½ ounce;
„ *bergamot* . . } . . { of each,
„ *sassafras* . . } . . { ¼ ounce;
„ *lavender* (English) . . . 1 drachm;
Yellow ochre (levigated) . . . ¼ pound (or q. s.).

Very fine. *Oil of cassia* is commonly substituted for the 'oil of cinnamon'; and always so in 'second' and 'inferior' qualities.

COWSLIP SOAP.—Resembles "Primrose Soap" (infrà).

FLOATING SOAP.—Take of

Olive-oil or *almond-oil soap* . . 5 pounds;
Soft water . . . . . 1¼ pint;

expose them, in a bright copper-pan, to a steam or water heat, and assiduously beat and agitate the mixture until it has more than doubled its volume; then pour it into a cold frame,* cool it quickly, and, when hard, cut it into bars or cakes. It may be coloured and scented at will. Floats on water, and lathers freely, but will not bear soaking or much wet, as it rapidly softens.

GLYCERINE SOAP; GLYCERINATED SOAP.—Any mild *toilet-soap* (as the basis of bouquet, rose, or Windsor soap) with which about 1-25th to 1-20th of its weight of *Price's glycerine* has been intimately

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* *Vide* "Rose Soap" (*infrà*).

incorporated whilst in the melted state. It is generally tinged of a 'red' or 'rose colour,' with a little *tincture of archil* or of *dragon's blood;* or 'orange-yellow,' with a little *annotta.* It is variously scented; but *oil of bergamot*, or *rose-geranium* (ginger-grass), supported with a little *oil of cassia*, or of *cassia* supported with *essential oil of almonds*, appear to be its favourite perfumes. The greater portion of the so-called 'glycerine-soap,' of the shops, contains not a particle of glycerine. Genuine glycerine-soap is superior to all other toilet-soaps for its genial action on the skin.* In using it, it should not be dipped in the water.

Honey Soap; Savon au Miel.—The ordinary "honey soap" of the shops is merely the finest *bright-coloured yellow-soap*, tinged by the addition of a little *palm-oil* or *palm-oil soap*, and scented with *oil of rose-geranium*, or *oil of ginger-grass*, supported, or not, with a little *oil of bergamot* or *verbena.* Some of the finer kinds are made of—

Olive-oil soap . . .	}	of each,
Palm-oil soap (bright)	} . .	1 part;
White curd-soap		3 „

deepened in colour, whilst in the liquid state, with a little *palm-oil* or *annotta* (or its tincture), and scented with 1 to 1½ ounce of *essential oils*† per 7 pounds, or 1 to 1½ pound per cwt.

Lavender Soap.—The basis of 'Windsor-soap' scented with *English oil of lavender* (1 to 1½ fl. oz. per 7 lb.), supported with a little *oil of bergamot* and the *essences of musk* and ambergris. It is often coloured with a little *tincture of litmus* or *levigated smalts* or *indigo.*

Musk Soap; Savon Musqué.—The basis is generally the same as that of 'cinnamon-soap' or 'Windsor-soap'; the scent, *essence of musk*, or *oil of musk* (huile), supported with a little of the *oils of bergamot, cinnamon* (cassia), and *cloves.* The quantity of the essence used depends on the intended quality (fragrance) of the product. The colouring matter is usually *burnt-sugar.* This soap, when sufficiently scented, imparts a faint but persistent odour to the skin, which is very agreeable. "Ambergris Soap" is prepared in a similar way.

Naples Soap.—Vide Chapter XIX. (infrà).

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* *Vide* "Glycerine," Chapter XIX. (*infrà*).

† These are noticed above. The odour is often slightly modified and enriched by the addition of a little *oil of cassia* or *oil of bitter almonds.* Sometimes it includes a little of *oil of rosemary*, probably with a view to somewhat assimilate its odour to that of Narbonne-honey.

ORANGE-FLOWER SOAP; SAVON AUX FLEURS D'ORANGES.—As "savon à la rose," but using pure *neroli*, supported with a 'dash' of the *essences of ambergris* and *Portugal*, instead of otto of roses, as scent. A delicate yellow tinge is sometimes given it.

PALM SOAP; PALM-OIL SOAP.—Vide page 632; also "Violet Soap" (infrà), for which it is often sold.

PEARL SOAP; CREAM SOAP; ALMOND CREAM; CRÊME D'AMANDES.—Take *white soft-soap* (lard potash-soap) recent, but moderately firm, and beat it, in small portions at a time, in a marble-mortar, until it forms a white homogeneous mass, and "pearls," as it is technically called; *essential oil of almonds*, q.s., supported with a little *oil of bergamot*, or of *cassia*, being added during the pounding.

PRIMROSE SOAP; SAVON À LA PRIMEVÈRE.—This has usually a similar *basis* to "honey-soap," and is faintly scented with *mixed oils* similar to those used as "cowslip perfume," and coloured of a pale yellow, or greenish yellow.

RONDELETIA SOAP.—The *basis* of *cinnamon*, *rose*, or *Windsor-soap*, scented with 1 to 1½ ounce of the *mixed oils* and *essences* used for "essence" or "esprit de Rondeletia," to each 7 pounds. It is kept both white and slightly coloured. The appropriate colours are those used for bouquet, cinnamon, honey, and brown Windsor-soap. Some times it is tinged like rose-soap.

ROSE SOAP; SAVON À LA ROSE.—Take of

Olive-oil soap (new; in shavings) 3 pounds;
White curd-soap (finest; do.) . 2 „
Soft water . . . . . ¼ pint;

melt them together in a bright copper-pan, set in a water-bath, add of

Vermilion (levigated) . . . . ¼ ounce;

and, when the mixture has cooled a little, stir in, of

Otto of roses (finest) . . . . 2 drachms;
Oil of bergamot . . . . . 1½ „
„ *cinnamon* . . } . . { of each,
„ *cloves* . . . } . . { ¾ drachm;
„ *rose-geranium* . . . . ½ „

mix well, and pour the mass into an open-bottomed 'wooden frame' set on a polished marble-slab. Very fine. It is sometimes coloured with *tincture of dragon's blood*, or of *archil*, instead of 'vermilion.'

TRANSPARENT SOAP.—Take of

Soap (perfectly dry; in fine shavings) . . } . . { equal parts;
Rectified spirit . . }

place them in a close bottle, or other suitable vessel,* set it in warm water, and digest, with agitation, for several hours, or until solution be complete. After repose for 2 or 3 hours, pour the clear portion into moulds or frames. Two or three weeks' exposure to a moderately dry atmosphere generally renders the cakes or pieces fit to be 'trimmed up' and stamped, as desired. It may be scented and coloured, at will, by adding the ingredients to the liquid mass. A 'red colour' may be given with *tincture of dragon's blood* or *liquid carmine*:—'Rose,' with *tincture of carthamine* or of *archil*:—'Yellow' and 'Orange,' with *tincture of annotta* or *saffron*:—'Blue' and 'Violet,' with *tincture of litmus*, or of *alkanet-root*, or with *soluble Prussian-blue* (basic), or a very little *pure indigo*, in impalpable powder:—'Green,' by a mixture of *blue* and *yellow*. Still finer colours may be given by *alcoholic solutions* of some of the new *aniline-dyes*.† The scents chosen should be of a durable and the least volatile kind. *Almond*, *olive-oil*, and *white curd-soap*, or a mixture of them, are the ones usually employed; but *soft-soap* is also used.

'Transparent soap,' though beautiful to the eye, does not lather well, and being expensive, has little sale. Wet destroys its beauty.

VIOLET SOAP; SAVON À LA VIOLETTE.—1. Any *white toilet-soap* strongly scented with *essence of orris-root*, and coloured, or not, with *tincture of litmus*, or a little *levigated smalts* or *indigo*. Very fine.

2. *White curd-soap* . . . . . 3 pounds;
Olive-oil soap . . . . . 1 „
Palm-oil soap . . . . . 3 „

melted together, and further scented with a little *essence of orris-root*, and coloured, or not, at will. Very fragrant; but it does not take colour so well as the preceding.

3. *Palm-oil soap*, coloured or not, at will. This is the common "violet-soap" of the shops.‡

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* *Vide* "Essence of Musk," page 585 (*antè*).

† All the 'neutral soaps' may be coloured in the same way.

‡ *Vide* "Palm-oil Soap," pp. 632, 635; also "Soap," Chapter XIX.

WINDSOR SOAP; SAPO VINDESORÆ, SAPO VINDESORIENSIS; SAVON DE WINDSOR.—1. (White.) The best English "Windsor soap" is made of a mixture of

Olive-oil	1 part;
Ox-suet or *tallow*	8 or 9 parts;

saponified with a *lye of caustic soda*, and scented after removal from the boiler, but before being poured into the 'frames.' That of the shops, in general, is merely ordinary *curd-soap* scented, whilst semi-liquid, with *oil of caraway*, supported with a little *oil of bergamot*, *lavender*, or *origanum*. To the finer qualities of the West-end perfumers, a very little *oil of cassia* or *of almonds*, or of the *essences of musk* and *ambergris*, is also commonly added. The usual proportion of the 'mixed oils' for good qualities, is 1½ pound per cwt.; and 2 pounds, at the least, for the finer ones, exclusive of the alcoholic essences, if any be employed.

The fatty basis of "French Windsor Soap" is usually *hog's lard*, with the addition of a little *palm-oil*.

2. (Brown.) Originally, this was the white variety that had become mellow and brown by age. It now merely differs from the preceding in being coloured with a little *burnt-sugar*, or (less frequently) with *umber* or *brown ochre*.*

SPIRITS (Perfumed or Odoriferous); ESPRITS ODORANTES; SPIRITUS ODORIFERI, ODORES SPIRITUOSI.—The 'scented spirits' of the perfumer are merely alcoholic solutions of the aromatic and odorous principles of the substances they represent, obtained in one or other of the following ways:—

1. By simply adding *essential oil*, or other odoriferous matter, to the *spirit*, and agitating them together until solution is complete. Occasionally, the resulting 'alcoholic solution' is distilled.

2. By macerating or digesting the *ingredients* (previously bruised or comminuted) in the *spirit*, with frequent agitation, for a few days, when the resulting 'tincture' is either decanted and filtered (if necessary), or the whole is thrown into a still, and submitted to distillation by a gentle heat. In the former case, the spirit retained in the pores of the solid ingredients, and which, consequently, cannot be drawn off, is obtained by powerful pressure.

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* For a succinct notice of Soaps (ordinary, toilet, and medicinal), their manufacture, properties, uses, assay, &c., *vide* the Author's "*Cyclopædia*," 3rd ed., pp. 1146–50, &c.

3. By digesting the spirit, with frequent agitation on *highly scented pommade* or *oil*, in a close vessel, at a gentle heat for some hours, and the next day decanting the perfumed spirit.

Distillation is only applicable to substances of which the fragrant principles are volatile, and readily pass over with the spirit during the process. Thus, *flowers*, *flowering tops*, *herbs*, *seeds*, &c., may, in general, be so treated; but not musk, ambergris, vanilla, and a few other substances, of which the odour is of a more fixed nature.

In proceeding by 'distillation,' one of the first points to be attended to is, to see that the 'still,' 'condensing-worm' or 'refrigerator,' and the 'receiver,' be perfectly clean and sweet, and absolutely free from the odour of any previous distillation. The 'lute' employed to secure the 'still-head' or 'capital' to the 'still,' must also be of a simple character, incapable of conveying any taint to the hot vapour that comes in contact with it.* The most convenient and manageable 'source of heat' is high-pressure steam supplied from an adjacent boiler, the 'body' of the 'still' being enclosed in a 'steam-jacket' for the purpose. A water-bath, the boiling point of which should be raised by the addition of (say) 1-4th its weight of common salt, comes next in point of convenience and effect. When the still is exposed to the heat of a naked fire, or that of dry flues, a little water must be put into it along with the spirit and other ingredients, to prevent empyreuma; and the greatest care must be taken to stop the process, and to remove the receiver, as soon as the proper quantity of distillate is obtained. If this be neglected, the odour of the whole may be vitiated. Moderately rapid distillation is favourable to the odour of the product, as is also the elevation of the 'boiling-point' in the liquid operated on.† To raise the latter, the addition of 1 to 1½ pound of common salt per gallon is often advantageously made.

By one or other of the above methods, or a combination of them, are, in general, prepared all the "eaux," "esprits," and "extraits," of the perfumers. As a rule, *extraits* and *essences* are preferred to eaux and esprits as the basis of good perfumery, when the colour is not objectionable.

By whatever process we proceed, the utmost care must be taken in

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* *Linseed-meal*, or equal weights of *linseed-meal* and *whiting*, made into a stiff paste or dough with *water*, is a good lute for the purpose. *Sweet almond-cake meal* is still better.

† Spirit distilled from aromatics decreases in odour with the 'boiling-point' of the ingredients in the still.

the selection of the 'spirit' used as the vehicle. Only spirit that is absolutely pure, flavourless, and scentless, must be employed, if we desire the product to be of fine quality. Malt-spirit or corn-spirit contaminated even in the very slightest degree with fusel-oil or corn-oil, or a whiskey-odour, is utterly unfit for the purpose. So also the refined 'methylated spirit' now so commonly and fraudulently sold as spirit of wine. The extreme purity of the spirit employed by the French manufacturing perfumers—it being actually *spirit of wine*, and not merely so in name—is one of the reasons why their 'odoriferous spirits' are so much superior to those of the English houses.

Great care must also be taken in the selection of the *essential oils* intended to be employed in making perfumed spirits. These should be pure or genuine, and should be pale and recent, or of the last season's distillation. If they be old, or have been much exposed to the air, they will contain more or less resin, and their 'alcoholic solution' will be defective in fragrance, and be liable to permanently stain delicate articles of clothing to which it may be applied.

The odoriferous spirits of the Continental perfumers are the "Bouquets," "Eaux," "Esprits" "Essences," "Extraits," &c., noticed elsewhere, under each of which 'heads' directions and formulæ are given.

The *strength* of the *spirit* used for "concentrated essences," as a rule, should not be less than 56 per cent. over proof, or of the sp. gr. ·8376. A few require a spirit of even greater strength than this. The 'first quality' of "extraits," particularly those prepared from pommades and oils, and many of the "eaux" and "esprits," also require spirit 56 over proof. The strength of the spirit for the others, and for 'second qualities' of the last three (commonly sold as the best in the shops), must be fully 35 p. c. over proof, or of the sp. gr. ·8723; that of the 'third quality,' fully 20 p. c. over proof, or sp. gr. ·8937; and that of the 'fourth quality,' fully proof, or sp. gr. ·918 to ·920. The last is the lowest quality, and the weakest, of any kind made by respectable perfumers; but the "double distilled lavender-water," "eau de Cologne," and other scents, vended in little showy bottles, by the druggists and in fancy-shops, are commonly much weaker than even this, being often 20 to 25, or more, under proof. The capacity of spirit, at this strength, of dissolving essential oil and other odorous matter is, however, very little. The solvent power of spirit decreases with its strength, but much more rapidly.*

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* On the strength, &c., of spirit, *vide* Chapter XIX. (*infrà*).

The "simple perfumed spirits" (*esprits*) and "odoriferous tinctures" are principally used in making compound eaux, esprits, &c. Their common strength, per pint, is, of—

Otto of roses	½ fluid drachm;
Neroli . . . . . } Essence de petit grain } . .	1½ to 2 fluid drachms;
Essential oils (ordinary) . . .	½ fluid ounce.
Concentrated essences . . .	2 to 2½ fluid ounces.

The spirit of wine employed for them should, in no case, be weaker than 35 p. c. over proof; and for "spirit of roses" ("esprit de rose"), it should be, at the least, 56 o. p., or else little of the otto will be dissolved. These proportions may be adopted for all the 'simple spirits' of the perfumer for which separate formulæ are not given in this work, and even in place of those so given, at the convenience of the operator, when intended for the use just mentioned.

When *flowers*, *leaves*, *seeds*, &c., are employed, the proportions may be 1½ to 3, or even 5, pounds to the gallon of the distillate or product, according to their nature; and, with certain flowers, the process must be repeated with *fresh flowers*, as often as necessary.*

To *mature* and *bring out* the full fragrance of "distilled spirits," they should be kept for some time in a cellar, or other cool situation, previously to being used or offered for sale. The same applies, though in a less degree, to perfumed spirits prepared by the other methods.

The following formulæ, in addition to those already given under the 'heads' referred to above, must conclude our notice of the subject:—

SPIRIT OF CYTHEREA.—Take of

Spirit of clove-gillyflower }	
,, *jasmine* (No. 2)	
,, *Portugal* .	
,, *roses* (No. 2) } . .	of each, ¼ pint;
,, *tuberose* . .	
,, *violets* . .	
Orange-flower water . }	

mix, and if milky, add *rectified spirit*, drop by drop, with brisk agitation, until the liquid becomes quite clear. A delicate and very agreeable scent.

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* *Vide* pp. 579-80 (*antè*).

SPIRIT OF THE FLOWERS OF ITALY.— The same as "Esprit de Fleurs" (antè).

SPIRIT OF HAWTHORN BLOSSOMS; HAWTHORN PERFUME.—The article sold under this name is formed by adding *esprits de jasmin, tuberose,* and *rose, essence de petit grain,* and *oils of rose-geranium* and *bergamot,* to *rectified spirit,* about 35 o. p., in descending proportions corresponding to the order in which the names are here printed, with a very slight 'dash' of *essence of ambergris* to mellow the whole.

SPIRIT OF LAVENDER.—This was formerly prepared by distillation from the *flowers* or *flowering-tops.* It is now usually made by simple solution of the *sessential oil* in *pirit.* The best quality of that of the wholesale druggists is noticed under "Lavender-water"; that of the new British Ph., under "Essences."

SPIRIT OF NUTMEG.—This is commonly prepared from *essential oil of nutmeg,* like "spirit of rosemary." For uses, &c., vide "Essence of Nutmeg" (antè).

SPIRIT OF ROSEMARY.—1. Take of

Rosemary-tops	2½ to 3 pounds;
Rectified spirit	5 pints;
Water	4 „

digest 24 hours, and distil 1 gallon.

2. Take of

Oil of rosemary (recent) . . .	1½ ounce;
Proof spirit	1 gallon;

dissolve by agitation. Both are in high repute as hair-cosmetics; also used to make extemporaneous "Rosemary Water,"* and in compound perfumes.

SWEET BAGS.—Vide "Sachets" (antè).

SWEET BALLS.—Vide "Scent Balls" (antè).

SCENTED VINEGARS; PERFUMED V.; TOILET V.; VINAIGRES ODORANTES; ACETA ODORIFERA.—These possess an agreeable and refreshing fragrance, but one comparatively weak, owing to the little strength, and consequently little solvent power of the

* *Vide* "Essence of Nutmeg."

vinegar employed in their preparation. They may be prepared in one or other of the following ways :—

1. Digest 3 or 4 ounces of the *fresh flowers, tops, leaves,* or other aromatic substance, or 1½ to 2 ounces of the same in the *dry state,* (preferably the former,) in 1 pint of the strongest *distilled wine-vinegar*, with agitation, for a week, and then strain with expression. The process may be repeated with *fresh flowers*, if necessary. The products are more or less coloured. "Culinary vinegars," or those used as flavouring, are also commonly prepared in this way.

2. To each pint of the *vinegar* add 15 to 20 drops of the particular *essential oil*, and briskly agitate the mixture for some time, and again, occasionally, for two or three hours. Lastly, if necessary, filter the 'scented vinegar' through bibulous paper.* White; superior to the preceding.

3. Digest the *fresh flowers* or *herbs* in (say) thrice their weight of the strongest French *white-wine vinegar*, for a few days, and then draw over, by rapid distillation, a quantity equal to (say) only half or 2-3rds that of the vinegar employed.† Colourless, and very fine.

Among "scented" and "toilet vinegars" may be named—

Clove-gillyflower	Vinegar,	Vinaigre de	Giroflée;
Clove-pink	,,	,,	d'Œillets;
Cowslip and Primrose	,,	,,	de Primevère, &c.;
Elder-flower	,,	,,	
Jasmine	,,	,,	de Jasmin;
Jonquil	,,	,,	,, Jonquille;
Lilac-flower	,,	,,	,, Lilas;
Lavender-flower	,,	,,	,, Lavande;

* 5 or 6 fluid drachms of the respective *esprits* or *spirits*, or 2 or 3 fl. dr. of the *essences*, may be substituted for the 'essential oil.'

† On the 'small scale,' the distillation should be performed in *glass* or *glazed stoneware*; on the 'large scale,' either a *glazed earthenware* or a *tin* or *well-tinned copper still* may be employed; but the 'head,' and the 'worm' or condenser, in all cases, if possible, should be of *glazed earthenware* or *glass*. In their absence, a 'head' and 'worm' of *solid tin* may be used; but not one of pewter, as the product will then be more or less contaminated with lead. So also in filtering any of these, or other vinegars, a funnel of *glass*, *stoneware*, or *gutta-percha*, should be used. 'Pickled flowers' are preferable to the fresh-gathered ones when distillation is had recourse to. A larger quantity of some flowers is required than of others, as will be evident to the operator.

Musk-rose Vinegar, Vinaigre de Rose Musquée;
Myrtle-blossom „ „ „ Myrte;
Orange-flower „ „ „ Fleurs d'Oranges;
Rosemary „ „ „ Rosmarin;
Tarragon (flowers) „ &c.

Also—

Vinegar of Roses, Vinaigre de Rose, Acetum Rosatum;*
„ „ „ „ blanche;†
„ Violets, „ Violettes;
&c., &c.‡

The following, though popularly called "vinegars," are concentrated preparations distinct from those just noticed:—

AROMATIC VINEGAR; AROMATIC ACETIC ACID; VINAIGRE AROMATIQUE, ACIDE ACÉTIQUE AROMATIQUE; ACETUM AROMATICUM, ACIDUM A. A.—The following are approved formulæ for this article:—

1. Take of

Glacial acetic acid	1 pound;
Rectified spirit	2 fluid ounces;
Camphor (pure; crushed small)	2½ ounces;
Oil of cloves (finest)	1½ drachm;
„ *rosemary*	1 „
„ *bergamot*, „ *cinnamon*, „ *lavender*, „ *pimento*, *Neroli* (or *ess. de petit grain*)	of each, ½ drachm;

mix (in a stoppered bottle), and agitate until the whole of the camphor is dissolved. Very fine, and highly esteemed.

2. Take of

Camphor	1 ounce;
Oil of cloves	1 drachm;
„ *cedrat*, „ *lavender* (Mitcham)	of each, 40 grains;

* From the *Provins* or *red rose*. By infusion. Red.
† From the *pale* or *cabbage-rose*.
‡ A few other "aromatized vinegars" will be found in the preceding Chapter.

Oil of bergamot . . .	} . .	{ of each,
„ *thyme*	}	{ 20 grains;
„ *cinnamon*		10 „
Glacial acetic acid		½ pound;

mix, as before. Very fine.

3. (Henry's.) This resembles the preceding, except in being strongly scented with the *oils* of *cloves*, *lavender*, *rosemary*, and *calamus aromaticus* only. This is the formula which was formerly, and I believe still is, employed at Apothecaries' Hall (London).

4. (Paris "*Codex*," 1839.) Take of

Camphor	1 ounce;
Oil of cloves	15 grains;
„ *cinnamon*	10 „
„ *lavender* (English) . . .	5 or 6 grains;
Glacial acetic acid	½ pint.

As the last. It is improved by doubling the quantities of the essential oils.

5. (Ph. Bor., 1847; Cod. Med. Hamb., 1845.) This resembles No. 2 (suprà), except in the omission of the 'camphor,' and the use of only 1 ounce of 'glacial acid.' It is of a yellow-brown colour, and is highly fragrant and refreshing; but it is improved by the addition of a little camphor.

6. (Extemporaneous.) Take of

Acetate of potash (dry; in powder)	1 drachm;
Oil of vitriol	20 drops;

mix; add of

Oil of lemon	}	{ of each,
„ *cloves*	}	{ 3 or 4 drops;

and, if at hand, also a single drop each of the *oils of bergamot* and *cassia;* and 2 or 3 grains of *crushed camphor*.

'Aromatic vinegar' is used as a pungent and refreshing nasal stimulant in languor, faintness, nervous headaches, dimness of sight, &c. For this purpose it is generally dropped on a small piece of sponge placed in a stoppered bottle, or a 'vinaigrette,' which is only smelt at. Sometimes a few drops are placed on a hot plate, or sprinkled about a sick room, to sweeten the air. It forms a useful caustic for warts and corns.* As it is highly corrosive, it should be kept from contact with the skin and clothes.

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* *Vide* pp. 372-3, 383-4 (*antè*).

To produce the finer qualities of aromatic vinegar, *glacial acetic acid* must alone be employed. The extravagantly high prices charged by the perfumers and druggists for it—prices unjustified by the cost of its ingredients and the trouble of its preparation—leave them no excuse for employing a weaker acid.*

The Edinburgh Ph. of 1839 contained a formula for preparing 'aromatic vinegar' by digesting the aromatic herbs, flowers, &c., in the acid, instead of adding their oils to it; but this formula was omitted in Edin. Ph. of 1841.

Camphorated Vinegar; Camphorated Acetic Acid; Acidum Aceticum Camphoratum.—This is simply a solution of about 2 ounces of *camphor* in each pound of *glacial* (or nearly glacial) *acetic acid*. The following are pharmacopœial formulæ:—

1. (Edin. Ph.) Take of

Camphor	½ ounce (troy);
Rectified spirit (to powder) . .	a few drops;
Acetic acid (E. Ph.†)	6½ fluid ounces;

dissolve.

2. (Dubl. Ph.) Take of

Camphor	1 ounce (avoir.);
Rectified spirit	1 fluid drachm;

pulverize, and dissolve the powder in

Strong acetic acid (D. Ph.‡) . .	10 fluid ounces.

These preparations were intended to supersede the 'aromatic vinegar' of the shops, and the 'aromatic acetic acid' of former pharmacopœias. Though highly pungent and refreshing, they are less agreeable than true 'aromatic vinegar,' and lack its delightful fragrance. They are often used as fumigations, in fevers, &c., and as an extemporaneous vesicant.

Waters.—The "aromatized or perfumed spirits" (*eaux*), and the "compound waters" (aqueous) of the perfumer, have been already noticed in the present Chapter. The following form a distinct class of preparations:—

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* *Vide* "Camphorated Vinegar," "Marseilles Vinegar," &c.

† This has the sp. gr. 1·065-8, and contains about 95 per cent. of the hydrated or glacial acid.

‡ The "acidum aceticum forte," D.Ph., has the sp. gr. 1·066, and contains about 59 p. c. of hydrated or glacial acid.

DISTILLED WATERS; AROMATIC, ODORIFEROUS, or PERFUMED WATERS; AQUÆ DESTILLATÆ (ODORIFERÆ); EAUX DISTILLÉES, EAUX PARFUMÉES; &c.—These are strictly pure water charged by distillation with the volatile, aromatic, and odorous principles of plants; or they are solutions of these principles, chiefly the essential oils, in distilled water. The simple fragrant waters of the perfumers are of the former kind; those of the wholesale druggists and of pharmacy belong to either class, according to the mode of their preparation.

In the distillation of their "odoriferous waters" the manufacturing perfumers employ their utmost care, in order to produce a highly-fragrant article, free from any contamination that can vitiate the purity of their odour, or lessen their 'keeping' qualities. The 'still' may be of *copper*, but the 'head' and 'worm' should be formed of *solid tin*. It should be furnished with a high and narrow neck to prevent the liquor in it spirting over into the neck and condensing-worm. A still furnished with a 'steam-jacket' is the most convenient for the purpose, as the heat of steam, or of a salt-water bath, can alone be safely employed. The common plan is to reject the first two or three fl. ounces that pass over, and to collect the remainder of the 'runnings' until the proper quantity be obtained. The whole product is then agitated together, and stored, loosely covered, in a cool cellar for some weeks, or even months, in order that it may lose its herbaceous odour and the rawness from recent 'stillage.' As soon as it has acquired its full odour, or reached maturity, it is carefully decanted into bottles, which are then well corked or stopped, and stored in a moderately cool place.* So particular are some of the leading manufacturing perfumers, that they keep a separate still for each of their more delicate distilled waters, and thoroughly clean them out and dry them after each distillation; as it is extremely difficult to remove any odour or taint that adheres to the still, still-head, and worm. Even blowing steam through them for some hours will not always sufficiently purify them for this species of distillation.

In the preparation of "distilled waters" for *medicinal purposes*, a clean, sweet still, still-head, and worm, must also be employed. The

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* "Eau de rose," "Eau de fleurs d'oranges," &c., are commonly imported in bottles or cases, formed of thin sheet copper, tinned copper, or even pewter, by which they frequently receive a metallic contamination which unfits them for use as medicinal vehicles. This is always the case when these waters are not decanted into glass bottles or carboys soon after the metallic cases are opened.

two last should be of tin or glazed stoneware; and the receivers should be of glass or stoneware, and not a two-gallon or four-gallon copper-measure, as is common with the wholesale druggists. Indeed the utmost care should be taken to prevent contamination of distilled waters by contact with copper, lead, or zinc, since they slowly oxidize and dissolve these metals.

In almost all cases, *salted* or *pickled flowers, herbs, &c.*, are greatly superior to the fresh vegetables for the preparation of fragrant distilled waters, as noticed elsewhere.* When the former are employed, the product has little or none of the herbaceous and raw odour which is always present when the latter are used, besides which they keep better, and reach maturity, or the full development of their odour, in a much shorter time.

The finest "distilled waters" are those prepared in the South of France, and imported into England under their French names. "Eau de rose," "Eau de fleurs d'oranges," &c., are immensely superior to the best English rose-water and orange-flower water. This partly depends on the superior fragrance of the flowers, and the larger proportion in which they are employed; and partly on the great skill and care taken in the distillation and everything connected with it.

The following are the general *instructions* of the *British Colleges* on the preparation of "distilled" or "aromatic waters":—

1. (By distillation.) The *vegetable matter* (bruised, if necessary) in the quantity ordered, is to be put into the still along with 2 gallons of *pure water*, but only 1 gallon drawn over.† In this way the finest fragrant 'distilled waters' may be produced from all flowers, and other aromatic vegetable substances.

2. (From the essential oils.) Take of the

Essential oil (of the plant) . . 2 fluid drachms;
Powdered silex (levigated)‡ . . 2 drachms;

triturate them diligently together, and then with

Distilled water . . . . . 1 gallon;

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* *Vide* page 679 (*infrà*).

† London Ph., 1851, continued in the new British Ph., with one or two exceptions, hereafter noticed. The directions of the Edin. Ph. are similar, but with the addition of 3 fl. oz. of *rectified spirit* to be put into the still (before distillation) for each gallon of the intended product. In the London Ph., 1836, 7 fl. oz. of *proof spirit* are ordered to be used in the same way. (On this addition, vide *infrà*.)

‡ Finely powdered or levigated *glass* may be used when 'silex' (quartz) is unobtainable. *Magnesia* and *sugar* were each formerly used for the purpose, but are objectionable, and are now never employed but by ignorant or careless operators.

very gradually added. Lastly (after brisk agitation of the whole for some time), filter the solution (through filtering-paper previously wetted with pure water). This was given as a second or alternative formula for some of the "aquæ" in the London Ph., 1851. It is often convenient for their extemporaneous preparation, but, without great care in manipulating, the products are inferior in strength to those obtained by distillation.

3. Take of the

*Respective essences** . . . . . 2 fluid ounces;
Distilled water . . . . . 1 gallon;†

agitate them (briskly) together (for some time), and then filter the liquid through (wet) filtering-paper. This is the formula given in the Dublin Ph. of 1850. An excellent formula for extemporaneous waters. This and the last formula are seldom employed for ordinary "rose-water" and "elder-flower water," which are generally, and the latter almost universally, obtained by distillation; but they may be so employed. The great strength and comparatively little solubility of otto of roses in both spirit and water should, however, be recollected, and a proportionately smaller quantity used.

The following list includes some of the leading "distilled waters" of the perfumers, druggists, and domestic medicine. The quantities given are for a 'product' of *one gallon*, where not otherewise indicated:—

Acacia-flower Water.—As rose or orange-flower water. Delightfully fragrant. Highly esteemed in Italy and some other parts of the South.

Angel Water.—See "Eaux."

Aniseed Water; Aqua Anisi.—From the *bruised fruit* or *seed*, 1¼ pound; or (Ph. D.) by general formula, No. 3 (and so of others).

Balm Water; Aqua Melissæ; Eau de Melisse.—From the *fresh tops*, 12 pounds (Troy). (Paris "*Codex.*")

The first, as it not only decomposes a portion of the 'essential oil,' but the water is apt to dissolve a little of it, and is thus rendered unfit to be used as a solvent of metallic salts, more particularly for bichloride of mercury and nitrate of silver; whilst the presence of 'sugar' causes the water to ferment and acetify, and thus destroys its 'keeping' qualities.

* These *essences* (D. Ph.) are ordered to be made by dissolving 1 fluid ounce of the respective *essential oils* in 9 fl. oz. of *rectified spirit*.

† That is, 2 *fl. dr.* to the *pint*.

Bitter-Almond Water; Aqua Amygdalæ Amaræ.—From *bitter-almond cake*, 5 pounds (Troy; P. C.); macerate in the water for 24 hours, filter the distillate through wetted paper, and preserve it in a stoppered bottle, away from the light. *Poisonous.* It is chiefly employed in lotions and mixtures as a substitute for prussic acid. Dose, 10 to 60 drops.

Camphor Water; Aqua Camphoræ.—From *camphor* (bruised), 3¼ drachms. Usually prepared without distillation, as noticed elsewhere.

Caraway Water; Aqua Carui.—From the *fruit* or *seed*, 1¼ pound. (L. Ph.)

Cascarilla Water; Aqua Cascarillæ.—From *cascarilla* (bruised), 3 pounds (Troy; P. C.).

Cassia Water; Aqua Cassiæ.—From *cassia* (bruised), 1½ pound (Troy; E. Ph.).

Cherry-laurel Water; Laurel Water; Aqua Laurocerasi.—From the *fresh leaves* of the *common* or *cherry-laurel* (crushed in a mortar), 1 pound; *water*, 2½ pints; macerate for 24 hours, and distil 1 pint (using a Liebig's condenser). Shake the product (briskly), filter (through wetted paper), and preserve it in a stoppered bottle, in the shade. (Br. Ph.) *Poisonous.* Uses and dose similar to those of 'bitter-almond water.' It is commonly imitated, in trade, by dissolving 75 drops (minims) of *essential oil of almonds*, in 2½ fluid ounces of *rectified spirit*, and briskly agitating the solution, for some time, with 1 gallon of *tepid distilled water*. When cold, the whole is again agitated, and then filtered, as before. The product forms the "Bitter-almond Water," and the "Cherry-laurel Water" of the wholesale druggists; but its substitution for the pharmacopœial preparation is evidently a fraud.

Clove Water; Aqua Caryophylli.—From *cloves* (bruised), 3 pounds (Troy; P. C.).

Dill Water; Aqua Anethi.—From the *fruit* or *seed* (bruised), 1¼ pound (Br. Ph.); or the *essential oil*, 2 fluid drachms (L. and E. Ph.).

Elder-flower Water; Aqua Sambuci.—From the *fresh flowers* picked from the stalks (or an equiv. of 'pickled ones'), 10 pounds (Br. Ph.; 10 pounds Troy, L. and E. Ph.).

FENNEL WATER, SWEET-FENNEL WATER; AQUA FŒNICULI.—As 'dill-water.'

LAVENDER WATER; AQUA LAVANDULÆ; EAU DE LAVANDE.—From the *flowering-tops*, 3 pounds (Troy; P. C.). Has little rich fragrance; chiefly used in foreign dispensing.*

LETTUCE WATER; AQUA LACTUCÆ.—From *fresh lettuces* (crushed), 12 pounds (Troy; P. C.). Poisonous, internally. Like "bitter-almond" and "cherry-laurel water," it is often used as a cosmetic lotion to allay irritation.

MINT WATER; SPEARMINT WATER; AQUA MENTHÆ VIRIDIS.—From the *fresh herb*, 4 pounds (Troy), or the *essential oil*, 2 fluid drachms. (L., E., and D. Ph.) *Essential oil*, 1½ fl. dr.; *water*, 1½ gallon; distil 1 gallon. (Br. Ph.)

MYRTLE WATER; AQUA MYRTI; EAU DE MYRTE.—From *myrtle-flowers*, 3½ pounds. A delicate and pleasant perfume.

ORANGE-FLOWER WATER; EAU DE FLEURS D'ORANGES;† AQUA FLORUM AURANTII, A. A. FLORIS, A. AURANTII (Br. Ph.).—*Orange-flowers*, 10 pounds (Troy; L. Ph. 1836). The L. Ph. 1851, and the new Br. Ph. refer to the imported article, "prepared mostly in France." "Not coloured by sulphuretted hydrogen." (Br. Ph.) If it be coloured, it contains lead or some other metal.‡ The imported article is one of the most delightfully fragrant of all the odoriferous distilled waters.

DOUBLED-DISTILLED ORANGE-FLOWER WATER.—See "Eau de Naphre" (pp. 573–4).

ORANGE-PEEL WATER; AQUA CORTICIS AURANTII.—From the *thin yellow rind*, 5 ounces (Troy; L. Ph. 1746). Very agreeable; but chiefly used to flavour liqueurs.

ORIGANUM WATER; AQUA ORIGANI.—From the *flowering tops* or *herb*,§ 5 or 6 pounds; 3 pounds (Troy) of the *dried flowers* (P. C.). Highly esteemed for the hair.

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* *Vide* "Eaux" and "Esprits" for the fragrant "Lavender-water" of the perfumers.

† In England, this is only applied to the imported article, as noticed elsewhere.

‡ This discoloration by sulphuretted hydrogen also applies to other distilled waters.

§ *Vide* page 647 (*antè*).

PEACH WATER; AQUA PERSICÆ.—From the *fresh leaves*, 12 pounds (Troy; P. C.), as "cherry-laurel water," which it resembles in quality. Poisonous.

PENNYROYAL WATER; AQUA PULEGII, A. MENTHÆ PULEGII.—From *pennyroyal*, as "mint water" (antè).

PEPPERMINT WATER; AQUA MENTHÆ PIPERITÆ.—As "mint water." (L., E., and D. Ph.) *English oil of peppermint*, 1½ fluid drachm; *water*, 1½ gallon; distil 1 gallon. (Br. Ph.)

PIMENTO WATER; AQUA PIMENTÆ.—From *pimento* (allspice) bruised, 14 ounces. (Br. Ph.) *Pimento*, 1 pound (Troy), or *essential oil*, 2 fl. drachms. (L. Ph.)

ROSE WATER; AQUA ROSÆ; EAU DE ROSE.*—From the *fresh petals* of the *hundred-leaved* or *cabbage-rose*, 10 pounds. (Br. Ph.) 10 pounds (Troy; L. and E.); *otto*, 40 drops (minims; D. Ph.).

The ordinary "best rose-water" of the shops, particularly of the wholesale druggists, who do largely in the article, is generally made as follows:—Take of

Otto of roses . . . . . 3 drachms;
Rectified spirit (strongest; hot) . 1 pint;

dissolve, throw the solution into a 12-gallon carboy, and add of

Pure distilled-water (hot; say, at 180° to 185° Fahr.) . . . 10 gallons;

at once cork the carboy (at first loosely), and agitate the whole briskly (at first cautiously), until quite cold. The product is really excellent, answers well as a vehicle, and keeps well. It is superior to much of the trash carelessly distilled from a scanty quantity of rose-leaves, and sold as "rose-water."

This is usually labelled "Aqua Rosæ Opt.," "Double-distilled Rose-water," &c., by the wholesale druggists.

PORTUGAL WATER.—See "EAUX."

SAGE WATER; AQUA SALVIÆ.—As "lavender water." (P. C.)

THYME WATER; AQUA THYMI.—From the *flowering-tops*, 6 pounds (Troy; P. C.).

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* In England, the French name is only applied to the water imported from the South of France, as noticed elsewhere.

VANILLA WATER; AQUA VANILLÆ; EAU DE VANILLE.—Take of

Vanilla (in coarse powder) . .	1 pound;
Salt	5 „
Water	2½ gallons;

macerate for 24 hours, and then distil over (rapidly) 1 gallon.

The proportions given above will be some guide to the operator both in respect of the "distilled waters" referred to, and others not included in the list. In general, the *druggists* draw over 2 *gallons* of *water*, and this carelessly, from the 'respective quantities' of flowers, herbs, bark, or seeds, ordered in the pharmacopœias. Hence the inferior quality of their 'distilled waters,' which are more fitted for vehicles, than as perfumes, or to exert an independent medicinal action. The *manufacturing perfumers*, on the contrary, either use an excess of flowers for their finer 'odoriferous waters,' or they preserve only the first and stronger portion of the water that distils over; the remainder being separately collected and used for a second distillation with fresh flowers. In some cases, where a very superior quality is desired, they re-distil the water of the 'first distillation' and preserve only the first 2-3rds, or even only the first half, that passes over.

Carefully prepared distilled waters keep well, and are not liable to any change; but when the reverse is the case, particularly when the liquor in the still has 'spirted' over the neck of the still-head into the 'condensing-worm,' they are apt to acetify, and even to become "ropy" and "viscid." A common but very objectionable plan, in such cases, is to agitate them with a little *magnesia*, and to filter them through paper.* The only safe remedy is to re-distil them on the first indication of such change. The "burnt smell" of waters, arising from careless 'stilling,' is usually lost, or greatly lessened, by freezing, or by exposure to a temperature approaching the freezing point; but if the water be highly charged with essential oil, part of the latter will separate, and thus the water will lose some of its fragrance. To prevent carelessly prepared distilled waters "acetifying" or "turning sour," and to recover those which have begun to spoil, a common plan is to shake them up with a little *calcined magnesia*, or to dissolve in each pint of them 1 grain each of *powdered borax* and *alum*. This

* Objectionable, for the reasons stated in Note (‡), pp. 647-8. It also weakens them. Indeed *all* their essential oil and fragrance may be removed by increasing the quantity of it. If 'magnesia,' in any form, be used for filtering distilled waters, it should be the carbonate; but a little of even that will be dissolved if the water be ever so slightly acidulous.

doctoring, however, is not to be recommended, as it unfits the waters for use as vehicles. Whenever it is unavoidably had recourse to, the best plan is to re-distil the water a few days afterwards.

Distilled waters are chiefly employed as vehicles or perfumes. Some of them are favourites in domestic medicine, particularly in the provinces, though less so than formerly. A few, as "bitter-almond," "cherry-laurel," "lettuce," and "peach water," are POISONOUS in larger doses than a few drops, and hence require to be employed, even in cosmetics and toilet-articles, with the greatest care.

The *dose* of the "simple aromatic" or "carminative waters," as those of *caraway*, *dill*, *pennyroyal*, *peppermint*, *spearmint*, &c., is a wine-glassful, almost ad libitum.*

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* Notices of other "distilled" and "fragrant waters," scattered through this work, may be found by reference to the *Index*. A succinct but comprehensive notice of "Water," and "Waters" (including most of those employed in medicine, perfumery, and the arts generally), will be found in the Author's "*Cyclopædia*," pp. 1285-95, and in the articles "Solutions," "Liquors," &c., of the same work, 3rd or subseq. ed. The "compound spirits" and "waters" of the perfumers, are chiefly noticed, in the present work, under "Eaux" and "Perfumed Spirits."

CHAPTER XIX.

CERTAIN SUBSTANCES EMPLOYED IN COSMETICS, PERFUMES, ETC.—SUPPLEMENTAL NOTICES, AND FORMULÆ PREVIOUSLY REFERRED TO—MISCELLANEOUS FORMULÆ, ETC.—CONCLUSION.

THE present Chapter is chiefly, but not entirely, supplemental to the preceding ones, as may be gathered from the heading. It embraces several subjects and formulæ which could not be conveniently included in the body of the work, as well as additional remarks and information which the author subsequently conceived might be useful to the reader. It also includes a brief notice of a few select medicines, and other articles, which have been referred to in the preceding pages, with others likely to be serviceable to the reader in connection with his toilet-duties and personal treatment, and in slight affections and cases of indisposition in which professional assistance is not usually called in, or which may be useful when it is not obtainable. Among the formulæ are included many nostrums and proprietary articles.—

ACETIC ACID.—Of this article three kinds, differing in properties with their respective strengths, are used in cosmetics, perfumes, and medicine.

GLACIAL ACETIC ACID, which, in its purest form, is a colourless liquid at 62° Fahr.; at 55° to 50°, crystallizes in transparent needles

and plates, and even at 60° if a crystal of the acid be dropped into it; at 40° it is a solid, crystalline mass. It is intensely pungent and corrosive. Camphor, resins, and essential oils, are readily soluble in it; and it is miscible, in all proportions, with alcohol, ether, and water. It is used in *medicine* only externally, and chiefly as an escharotic; and in *pharmacy* and *perfumery*, in the preparation of "camphorated acetic acid" and "aromatic vinegar." For the best qualities of these last, an acid that refuses to crystallize at 45° Fahr. is too weak to take up the requisite quantity of camphor and volatile oil. The acid obtained by the dry distillation of acetate of copper,* from its superior fragrance, is preferred by the perfumers.

Acetic Acid (strong), Acidum Aceticum, L. & Br. Ph.—That of the former has the sp. gr. 1·048, and contains nearly 31 per cent. of real acid, or about 36 p. c. of the pure hydrated or glacial acid. For this the pure 'pyroligneous' or acetic acid of commerce, commonly known as 'Beaufoy's acetic acid,' which has usually the sp. gr. 1·044, and contains only about 28 p. c. of real acid, or 32 to 33 p. c. of the pure glacial acid, is commonly substituted in trade. A knowledge of this fact has led the compilers of the new Br. Ph. to order an acid of the latter strength (1·044) in their work. It is highly antiseptic and rubefacient; and is also escharotic and vesicant; but it is too weak to dissolve resin, or even camphor or essential oils, in any quantity. It is an excellent caustic to remove *warts* and *corns*, and forms a useful *extemporaneous blister*. For the last purpose, a piece of lint or blotting-paper is wetted with it, and then applied to the skin, evaporation being at the same time prevented by covering the part with a watch-glass, or a piece of oil-skin, oiled-silk, or thin sheet gutta-percha. It is also used as a fumigation, to remove the unpleasant smell of the sick room and crowded assemblies, a little being sprinkled on a hot plate or shovel, or about the floor. It forms a refreshing scent in faintings, nervous headaches, &c.; and enters into the composition of many medicinal preparations and perfumes. One part of it (Beaufoy's) added to about six parts of water, forms ordinary "dilute acetic acid."

Dilute Acetic Acid.—The "acidum aceticum dilutum" of the L. Ph. has the sp. gr. 1·008, and contains about 6 per cent. of pure hydrated acetic acid. That of the new Br., and the D. Ph., has the sp. gr.

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* The *radical vinegar*, *spiritus veneris* (L.), of old pharmacy; *esprit de Vénus* Fr.

1·006, and contains about 4 p. c. of the hydrated acid. That of the shops usually ranges between the two. It is used in a few pharmaceutical preparations and common perfumes; and as a cosmetic to remove stains and freckles. It is commonly sold and used for "distilled vinegar." *

Aromatic Acetic Acid.—Vide "Aromatic Vinegar," Chapter XVIII. (antè).

Camphorated Acetic Acid.—Vide "Camphorated Vinegar," Chapter XVIII. (antè).

Alcohol.—Vide "Spirit" (infrà).

Almonds.—*Jordan-almonds* are the finest and most agreeable, and are those ordered in the pharmacopœias. The next in quality are *Valentia-almonds*, which, being excellent, and cheaper than the preceding, are commonly substituted for them in preparations. The other varieties of "sweet almonds" are inferior.

Bitter almonds is a variety imported from Mogadore, characterized by their bitter nutty flavour, and possessing, when rubbed with water, the odour of peach-kernels. They are chiefly used to relieve the flavour of 'sweet almonds,' to flavour confectionery and liqueurs, &c. Their 'essential oil' is used in perfumery, particularly toilet-soaps. In quantity, not large, bitter-almonds are *poisonous*.

Oil of almonds is obtained, by expression, from both bitter and sweet-almonds, the expressed oil of each being equally bland and sweet. The *essential oil of almonds* is obtained from bitter-almonds, by distillation. It is highly poisonous.

Blanched Almonds.—*Almonds* from which the 'husk' or 'seed-coat' has been removed. This is effected by soaking them in *warm water* until the skin can be easily removed by pressure between the thumb and forefinger. They are then peeled, rinsed in *cold water*, drained, and dried. The last is done by either wiping them with a soft towel, or by exposure to the air or sun. Unblanched almonds are scarcely ever used in preparations.

Alumina.†—This is the pure earth or plastic principle of clay, in which it exists as a hydrated silicate. It possesses a remarkable

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* *Vide* the preceding paragraph.

† *Oxide* or *sesquioxide of aluminium, argil, alum-earth*, &c.

affinity for vegetable colouring-matter, and is highly detersive. It has hence recently been advantageously employed as an addition to soaps and some other cosmetics, and as a basis for tooth-powders. It may be prepared by either of the following formulæ:—

1. Dissolve *alum* in 6 times its weight of *boiling water*, add a *solution of carbonate of potassa*, in slight excess, agitate the mixture for a few minutes, and then allow it to repose. After a time pour the clear supernatant liquor from the 'precipitate' or 'sediment,' and wash the latter three or four times with *tepid distilled* or *soft water*. Next collect the precipitate on a fine calico-filter, and again wash it with *tepid water*. When it has drained, press it between 'bibulous paper,' and, lastly, dry it either without heat, or at a temperature not higher than 120° to 130° Fahr. The product is a soft white powder.*

2. Add a cold *saturated solution of alum* slowly to a *solution of sesquicarbonate of ammonia*, avoiding excess, and treat the resulting precipitate as before.

"Kaolin" or "porcelain-clay," and the other pure white clays, possess similar properties to alumina, but in a less degree; and are frequently substituted for it in soaps, &c.†

Ammonia.—Pure "ammonia" is a colourless, invisible gas, intensely pungent, acrid, irritating, and alkaline. It is freely absorbed by water and spirit, forming, with the first, solution or "Liquor of Ammonia" or "Ammonia-water," and with the other, (caustic) "Spirit of Ammonia," which then assume, to a greater or less degree, its leading properties. It also carries these properties, in a diminished form, into its "carbonates," those least carbonated, or containing the least proportion of carbonic acid, exhibiting them the most. The *carbonate* or *monocarbonate of ammonia*, the most pungent of these, is the basis of all the more popular and esteemed "Smelling Salts" of the shops. *Sesquicarbonate of ammonia*, which is somewhat less pungent and volatile, is the "carbonate of ammonia," and the "volatile salt," "smelling salts," &c., of the shops. The "spirit of hartshorn" of the vulgar (originally distilled from harts' horns), is properly an impure solution of the first-mentioned carbonate; but weak liquor of

* It forms the "hydrate of alumina" of chemists.

† See "Soaps" (*infrà*).

ammonia is now generally sold for it. "*Aromatic Spirit of Ammonia*," or "*Spirit of sal volatile*," is spirit holding carbonate of ammonia in solution, and slightly aromatized.

The stronger *Liquor of Ammonia* of the shops and the Pharmacopœia ("liquor ammoniæ fortior," L. Ph.), has the sp. gr. ·882 to ·880, and contains from about 30 to 33 per cent., by weight, of pure ammonia, that with the lowest sp. gr. being the strongest. The ordinary *liquor of ammonia* ("liquor ammoniæ," L. Ph.) has the sp. gr. ·960, and contains only about 10 p. c. of real ammonia. Those of the new "*British Ph.*" have nearly similar strengths.

"Ammonia" and its carbonates are extensively used in *medicine*, *perfumery*, and *cosmetics*. They are antacid, rubefacient, stimulant, and counter-irritant. Their vapour, as evolved by the "smelling-bottle," is a common nasal stimulant in faintings, &c.; and small doses of them are common remedies in acidity of the stomach, heartburn, dyspepsia, flatulent colic, nervous headaches, lowness of spirits, hysteria, &c.; and especially in the nervousness and exhaustion often experienced in a morning, by free livers and hard drinkers and smokers, and as a 'refresher' after fatigue. "Liquor of ammonia" forms an excellent and rapid extemporaneous blister, and is superior to either cantharides or acetic acid.* It also forms an excellent caustic in the bites of rabid animals and serpents; and (somewhat dilute) it seldom fails to give immediate relief when applied to the bites of insects.

The *dose* of the common *carbonate of ammonia* may be 5 to 10 or 12 grains; of ordinary *liquor of ammonia*, 5 to 15 drops; of *spirit of sal volatile*, ½ to 1 teaspoonful; each dissolved in a glass of cold water, or any bland liquid.

Hydrosulphate or Hydrosulphuret of Ammonia,† used as a 'mordant' in 'dyeing the hair' with either 'silver' or 'lead,' is a substance wholly distinct from the preceding preparations. It is properly the "bihydrosulphate" or "bihydrosulphuret of ammonia," if it be not even a still higher sulphuret. It is a very fœtid liquid, white when recent, but acquiring a yellow colour by age, in which state it is to be preferred. It may be prepared as follows:—

1. Pass *sulphuretted hydrogen-gas*, to complete saturation, in the cold, through a mixture composed of

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* It is applied in the way described at page 655 (*ante*).

† Also called *sulphuret* or *sulphide of ammonium*.

Stronger liquor of ammonia . . 1 part;
Distilled water . . . . . 4 „

and preserve the product in a stoppered bottle, away from the light, in a cool place.

2. Take of

Sulphur . . . . . 1 part;
Hydrate of lime (fresh, dry) . . 2 „
Water . . . . . q. s.;

boil, to dissolve the sulphur, filter, and to the filtered liquid add, for every 8 parts of 'sulphur' used, 33 parts of *sulphate of ammonia*. After agitation, and repose, the clear supernatant liquid must be decanted, and preserved as before. The product contains traces of lime, which do not, however, unfit it for use in the cosmetic art.*

When a 'salt of antimony' is used to dye the hair, the (neutral) *hydrosulphuret of ammonia* should be employed, as if the liquid contain more sulphur than is necessary to neutralize the ammonia, and it be used in excess, the colour at first produced is dissolved out and washed away. But, if this excess be avoided, the bisulphuret gives the brightest colour. The "neutral hydrosulphuret" is prepared by saturating *strong liquor of ammonia* with *sulphuretted hydrogen*, and then adding a second portion of *liquor of ammonia* equal to that first used.

Tincture of Cantharides.—Take of

Spanish flies (in coarse powder) . ¼ ounce;
Proof spirit . . . . . 1 pint;

macerate, with agitation, for a week, and then filter, with expression.† Added to pommades, oils, and washes, to promote the growth of the hair; but it is inconveniently weak for the purpose.‡ It is poisonous if swallowed.

Cantharidine; Vesicatorine.—This is the pure blistering principle of Spanish flies. As it is only obtainable at a few houses in London, it may be useful to insert formulæ for its preparation:—

1. Exhaust *powdered cantharides* with *alcohol*, by the method of displacement or percolation; distil off most of the 'spirit' from the resulting tincture, and leave the residuum to deposit crystals by

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* This is Mr. Wooley's process. (Vide "*Pharm. Journ.*," v. ii, 655.)

† In the new British and the Edin. Ph it is ordered to be prepared by displacement or percolation. (*Vide* page 505.)

‡ *Vide* Note (‡), page 505 (*antè*).

cooling and spontaneous evaporation. Re-dissolve the crystals, thus obtained, in *boiling alcohol*, add a little pure *animal charcoal*, digest for a short time, and filter whilst hot. Crystals will be deposited as the 'alcoholic solution' cools, and the remainder by spontaneous evaporation. A similar formula is in the Paris "*Codex*."

2. (M. Thierry.) Macerate *cantharides* (in coarse powder) for several days in *ether*, in a closely-stoppered 'displacement apparatus'; then, after the whole of the soluble matter has been extracted by the addition of fresh *ether*, pour on sufficient *distilled water* to displace the 'ether' retained in the cantharides. Next remove the ether by distillation, dissolve the residual extract or crystals in *boiling alcohol*, filter the resulting tincture whilst hot, and abandon the filtrate to spontaneous evaporation. The crystals thus obtained may be, lastly, slightly washed with a little cold *alcohol*. The product is 5 per cent. of the cantharides operated on.

Pure "cantharidine" occurs in small micaceous plates somewhat resembling spermaceti. It is fusible, volatile, insoluble in water, freely soluble in ether, hot alcohol, oils, melted fat, and acetic acid, and is powerfully rubefacient, vesicant, and poisonous. 1-100th of a grain, when applied to the lip, will raise small blisters in about 15 minutes; and these, if rubbed with a little fat or oil, will extend over both lips. Even its vapour, at ordinary atmospheric temperatures, is capable of producing temporary blindness. It must, therefore, be treated with great caution.

Cantharidine is added to oils and pommades intended to promote the growth of the hair; for which purpose it is more convenient than using either the "flies" in substance, or an alcoholic or acetic extract of them. The proportions are 1 to 2 grains to 1 ounce of oil or fat. It is advisable to begin with the lesser quantity, as the proper proportion depends on the degree of sensibility in the scalp, a point that can be only determined by trials.*

CHALK.—Two kinds of "chalk" are used in cosmetics and medicine:—

PREPARED CHALK; CRETA PRÆPARATA.—This is prepared from natural *chalk*, by rubbing or grinding it with *water*, added gradually, until it forms a smooth cream. This is thrown into, and agitated with, a large quantity of pure water, and after a short interval,† to

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* *Vide* page 276 (*antè*).

† "Fifteen seconds." (Br. Ph.)

allow the coarser particles to subside, the supernatant milky liquid is poured off into another vessel, where the suspended powder is gradually deposited. Lastly, the water, being allowed to drain off, the chalk, so prepared, is collected and dried.* It is not so white and velvety as the next preparation; but is better fitted for tooth-powders.

Precipitated Chalk; Creta Præcipitata.—This is prepared by adding a *solution of carbonate of soda* to a *solution of chloride of calcium* (both cold), as long as a precipitate forms. This last is well washed with *pure water*, and dried out of the dust, as the last. The refuse, 'sulphate of lime' of the soda-water makers, which is poisonous in quantity, is often sold for it by the druggists. Pure chalk is wholly soluble in vinegar, and in dilute acetic, hydrochloric, and nitric acid, with effervescence. Sulphate of lime is insoluble in these menstrua.†

Charcoal.—This article varies greatly in its qualities, as a dentifrice, according to the substance from which it is prepared. The powdered charcoal of the druggists is usually that of the 'willow,' and from being often carelessly prepared, and afterwards still more carelessly kept, is of little value. The best kind of this charcoal is that which is known as "cylinder charcoal" (of the gunpowder manufacturers), from being burnt in close iron-cylinders, at a low-red heat. That from the 'hard woods,' prepared in the same manner, is, however, greatly preferable. Superior to the whole of these as a dentifrice, is *areca-nut charcoal*, but, unfortunately, the honest (!) druggists usually sell willow-charcoal or boxwood-charcoal for it.

To prepare charcoal of the highest quality, as a dentifrice, requires considerable skill and care. The substance, whether wood or nut, should not be in larger than one-inch pieces; the carbonization should be effected in covered crucibles, at a low-red heat—in no case exceeding a dull cherry-red,—and the whole shall be cooled out of contact with the air. On opening the crucible, only those pieces should be selected for use which are properly burnt, and have a uniform dark colour and a dull surface. If the heat employed be much higher than that named, the charcoal acquires a brilliant surface, and is greatly deteriorated in quality. The pieces selected should be kept in close vessels for further use or operation.

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* "At a temperature of 212°." (Br. Ph.)

† *Vide* "Prepared Chalk" (above); also "Tooth Powders," Chapter XVII.

It must be recollected that, in all cases, to exercise its highest powers as a disinfectant, deodorizer, and bleacher, charcoal should be both fresh-burnt and fresh-powdered, and carefully preserved out of contact with the air, until about to be employed. If the last be not done, it rapidly loses its valuable qualities.

The areca-nut is the fruit of a slender palm-tree growing in Java, Malacca, Penang, and other parts of the East. It resembles a nutmeg in shape, colour, and internal structure, but is harder and larger. It is astringent, sialogogue, stomachic, and narcotic. The nut and its husk are employed, in some form or other, by all classes of the natives as a masticatory. (*Vide* pp. 320, 537.) So used it sweetens the breath, fixes and preserves the teeth, and gives the gums and lips an attractive red colour, which is esteemed a mark of beauty according to its depth. It carries these qualities in a great degree into its charcoal, which also possesses higher detersive and antiseptic properties than any other vegetable charcoal. Besides this, its peculiar hardness, without grittiness, peculiarly fits it for acting mechanically on the teeth.

Areca-nut charcoal is very extensively used, and highly esteemed as a dentifrice, throughout the East. It is recommended by the most eminent surgeon-dentists for whitening and preserving the teeth, removing the tartar, and sweetening the breath; whilst doing this it medicates the mouth, and gradually removes soreness, scurvy, and bleeding of the gums. By its regular use, loose teeth are said to become again firm, and the whole set preserved to a late period of life. Dr. Lind, an eminent physician, formerly of Bengal, states, that by its means he preserved all his teeth, perfectly sound, to the age of eighty. Other old residents in the East Indies assert that they also found it to be a great preservative of the teeth, and an infallible preventive of toothache. Prof. Hertz, the celebrated Prussian dentist, says, that those who regularly use areca-nut charcoal as a dentifrice, will never require the assistance of himself or any of his fraternity. We have also the testimony of many eminent medical men, dentists, and professional chemists, of these realms, in favour of the great value of the areca-nut as a dentifrice and odontalgic; to which I may add my own, derived from personal experience and observations.

Areca-nut charcoal is prepared and kept by only a few houses; four-fifths of that sold for it by the druggists is spurious. The genuine powder is heavier and harder than common charcoal, and has a peculiar appearance and feel, when pressed with the fingers, which is readily distinguishable by the connoisseur.

Freshly *carbonized bread*, obtained by submitting thin slices to the action of a quick fire, as in toasting, forms a charcoal of considerable power, and is esteemed by some persons as a dentifrice.

Recently prepared charcoal forms, perhaps, one of the best tooth-powders known, as it both whitens the teeth and deodorizes the breath by its chemical action, at the same time that it acts mechanically under the brush to an extent equal to that of the other powders.*

FATS.—The selection and 'rendering' of these have been referred to in the preceding chapters. The mode of imparting to them 'keeping qualities' is noticed under "Rancidity" (infrà).

GLYCERINE; SUGAR OR SWEET PRINCIPLE OF OILS.—This is a sweet, bland, syrupy liquid, formed during the saponification of the fixed oils and fats, and by their decomposition under the action of super-heated steam in stills, from which it passes over. When pure, it is perfectly colourless and odourless, neutral to test-paper, and has the specific gravity 1·26. It possesses most useful and remarkable properties. It mixes in all proportions with water and other aqueous liquids, and with alcohol. It is far more emollient than oil, and softens bodies without greasing them. It does not evaporate, nor even change in the air at ordinary temperatures, and is not susceptible of rancidity nor spontaneous fermentation. It dissolves many substances that are insoluble in either syrup or oil, is easily charged with the aroma of the essential oils and other fragrant substances, and may be combined with soap, and with a wide range of other substances, without either suffering or causing decomposition.

Glycerine is extensively used in medicine and the cosmetic arts. In the former, it is employed in lotions, baths, &c., as an emollient, and to allay itching and irritation of the skin, in which it often succeeds when all other means fail. It is added to poultices and dressings, instead of oil, to prevent their hardening, and is often employed alone, either as an emollient dressing, or one to promote the healthy action of the part. As a *cosmetic*, or an ingredient in cosmetics, it is uniformly invaluable. Made into a lotion or wash, or added to soap, or even used in small quantities along with the water employed in washing, it imparts a healthy clearness to the skin, and a

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* *Vide* pp. 331, 516, 519, &c. (*antè*).

sensation of softness and coolness which is very agreeable and refreshing. It is the best remedy known for chapped hands, lips, nipples, &c., chafings, excoriations, roughness and hardness of the skin, and for all the unpleasant effects on the skin of a like character, produced by cold, drying winds, and vivid sunshine; all of which may also be prevented by its daily use, in one or other of its forms, as an article of the toilet.*

Honey.—This substance is employed both in domestic medicine and cosmetics. It is found to cover the taste of nauseous medicines much better than ordinary sugar. Pure honey is a natural mixture of small crystalline saccharine grains with syrup of uncrystallizable sugar, and possesses considerable consistence, so as to permit of its being taken up on a knife. It is pale-coloured, has more or less of an aromatic combined with a somewhat heavy odour, has a very sweet and rather luscious taste, and is entirely soluble in cold water, forming a nearly clear solution.

Clarified Honey; Refined H.; Strained H.; Mel Depuratum, Mel Præparatum, &c.—*Honey* melted, in a glass or porcelain vessel, by the heat of a water-bath, and strained, whilst hot, through flannel previously moistened with warm water. It has now the form of a thick syrup, and does not resume its previous crystalline character. It is less agreeable to the palate than raw honey; but it is less liable to ferment and gripe.

Oils; Huiles; Olea.—These appear naturally to divide themselves into two great classes—*Fixed*, *fatty*, or *unctuous oils*, and *Essential* or *volatile oils*. To the former belong all those that are bland and emollient; to the latter, those that are aromatic or fragrant. The *first* are uniformly lighter than water, their specific gravities ranging between ·865 and ·970, water being 1·000. The density of the *latter* fluctuates a little on either side of water, most of them being lighter, but some of them heavier than that fluid. The lightest of them is probably that of 'citrons,' which has the sp. gr. ·847; the heaviest that of 'sassafras,' of which the sp. gr. is

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* The only *pure glycerine* obtainable, that I know of, is the "distilled glycerine" of "Price's Patent Candle Company." It is prepared by means of super-heated steam, and is sold in capsuled bottles at 6*d*. and 1*s*. each, and upwards, according to size. It is perfectly pure. It is the only glycerine out of hundreds of samples which I have chemically examined, that I have found free from either lead or lime. (For references to "Preparations," vide *Index*.)

1·096. The "fixed oils" are wholly insoluble in water, and are even mechanically immiscible with it without the intervention of some medium; but they mix in all proportions with the fats and the volatile oils, and are freely soluble in ether.* The "volatile oils" are freely soluble in alcohol and ether, less so in ordinary rectified spirit, and only soluble to a small extent in proof spirit.† They are very sparingly soluble in water, but sufficiently so to impart to it their characteristic flavour and odour, producing "perfumed," "aromatic," and "medicated waters."

Fixed Oils; Expressed Oils; Olea Fixa, Olea Expressa; Huiles Grasses; &c.—The fixed oils used in 'cosmetics' and 'perfumery' are few in number, and properly those only of the blandest kind, little disposed to rancidity, and that do not at all thicken or become glutinous by exposure to the air. From possessing these properties in a marked degree, *almond-oil*, *olive-oil*, or *salad-oil*, and *oil of ben* or *behen*,‡ are those most esteemed and generally employed. The first and last are particularly limpid, are pale, little affected by cold, and congeal with difficulty. The second, when 'virgin' or quite pure, congeals into a granular mass of a pale yellow colour, resembling a collection of small round seed, when cooled to 36° Fahr. The former are preferred as the basis of hair-oils that it is desired shall maintain their clearness and fluidity in all climates and seasons.§ *Castor-oil* also is now very extensively used

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* *Castor-oil*, unlike the other fixed oils, is soluble in alcohol, as noticed elsewhere; also, to a certain extent, in rectified spirit; but a portion separates on standing. Camphor and benzoic acid increase this solubility.

† A few of the essential oils are only sparingly soluble in alcohol. Thus, alcohol of ·806, or 96 p. c., dissolves only ·7, or less than ¾ per cent. of *otto of roses*, at 57° Fahr., and only 3·3 per cent. at 72° Fahr.; the excess separating at lower temperatures. At 48°-50° not more than about ·6, or ⅗rds of 1 p.c. remain in solution. Its solubility in spirit of lower strength is proportionately less. The absurdity of ordering large quantities of otto in the preparation of perfumes will, therefore, be evident.

‡ Obtained from *ben-nuts*, the seeds or nuts of 'moringa aptera' and 'm. pterygosperma.' It is scentless, all but colourless, does not thicken at common temperatures, and will keep for many years in a close vessel without growing rank. By long repose it separates into two portions, one of which freezes only at a very low temperature, and is particularly mobile, and is hence preferred, in first-class perfumery, to the ordinary oil.

§ These oils are commonly and extensively adulterated. *Almond-oil* is very generally lowered with poppy, nut, teel, and even with refined rape and colza oil; *olive-oil*, with nut, poppy, rape, and lard oil, and the cheaper kinds even with refined tallow-oleine, including that obtained from the knackers' yards; *ben-oil*, with teel, poppy, and nut oil, and sometimes teel-oil or poppy-oil is sold for it.

for the hair, although in many points objectionable. It is the most consistent of all the fixed oils, and imparts a rich dark gloss to the hair, properties which overrule all objections to it in the minds of those who use it.

These and other fixed oils for use in cosmetics, perfumery, and medicine, or as food, should be obtained from the seed or fruit by cold pressure, or by what is technically and popularly known as "cold drawn"; and for the first two applications, with the exception of olive-oil, they should be filtered in cold weather, or be what is called "winter-strained," by which the subsequent separation or deposit of stearine will be prevented, and their permanent clearness and fluidity insured. They should also be obtained as recently expressed as possible, and, in all cases, should be kept in bottles or other vessels, excluded from the air.

The blandness, sweetness, and emollient properties of the fixed oils are more or less deteriorated by submitting them to any process of 'refining' beyond that of simple filtration, conducted with as little exposure to the air as possible; and even this may frequently be avoided by simply allowing them to repose for some time, and then decantiug the clear portion. The desire, however, to 'bleach' or decolorize them, to please the eye, particularly for certain uses, and, in other cases, to give to oils of inferior quality the appearance of better ones, has led the oilmen, druggists, and perfumers, to torture them in a variety of ways. Thus, of the oils previously mentioned, the—

Olive-oil intended for 'huiles antiques,' and other like uses, is commonly 'refined' by violently agitating it, in glass or stoneware, with about 1½ to 2 per cent. of its weight of *concentrated sulphuric*

When *pure olive-oil* is shaken in a phial, only half filled, the 'bead' or bubbles formed very rapidly disappear, but with the adulterated oil they remain much onger before they burst.—If olive-oil contains 1-4th part of poppy-oil, part of it remains liquid at 36°, its proper freezing temperature; and, it it contains 1-3rd of poppy-oil, it does not solidify at all, unless cooled much below the freezing-point of water.—Pure olive-oil well agitated for some time with 1-12th of its volume of *nitric solution of mercury* (see *below*), becomes quite solid in 3 or 4 hours, without any separation of liquid oil. (The mercurial solution is made by dissolving 1 ounce of *mercury* in 2 fluid ounces 1½ drachm of *nitric acid* sp. gr. 1·500.)—According to M. Boudet, 1 grain of *hyponitrous acid* (hyponitric?) mixed with 3 gr. of *nitric acid*, will cause the perfect solidification of 200 gr. of pure 'olive-oil' in 75 to 78 minutes.

The reader will find a qualitative and chemical examination of the articles sold in London and its neighbourhood under the name of "olive-oil" or "salad-oil," in one of the author's sanitary reports in the "*Medical Circular*," i, 350-2.

acid (oil of vitriol). This renders it opaque, and causes it to assume a greenish colour. After about a fortnight's repose, it deposits much colouring matter, and is then found to have acquired greater fluidity, to have become much paler, to be more emollient and glossy as a lubricator, and to burn with greater brilliancy. The clear portion is now decanted, well washed with *steam* or *hot water*, and, after sufficient repose, in a close vessel, at a temperature about 60° Fahr., again decanted, and, if necessary, filtered through *Canton-flannel* or *bibulous paper*. This plan is also applied to other fixed oils, and answers well for most of the recently expressed vegetable oils.

Almond, *ben*, *castor*, *colza*, *linseed*, *nut*, *olive*, *poppy*, *rape*, *teel*, and other like vegetable oils, are readily bleached by one or other of the following methods:—

1. Exposure, in glass-bottles, to the light. For this purpose, 2-quart to 4-quart pale green-glass or blue-glass bottles filled with the oil, and covered with white gallipots inverted over them, are suitably placed, a small distance apart, in vast numbers, on the "leads" or roofs of houses or sheds, or in any other suitable position, fully exposed to the sun during the greater portion of the day, or at all events to the south-east and south. 14 to 21 days' exposure to the sun, in clear weather, during summer, is usually sufficient to decolour castor-oil and almond-oil; but 4, 5, or even 6 weeks, is commonly required to render linseed-oil very pale. This is the common plan adopted by the wholesale druggists to whiten their "castor-oil," by some of the perfumers for their "almond-oil" and "olive-oil," and by the oilmen for their "pale linseed-oil" for artists. A better plan, however, when this method is adopted, is to cork the bottles loosely air-tight, but not firmly down,* and to do so when the sun has been on them two or three hours, and whilst they are still heated with it. In this way the oil suffers less from the exposure than by the loose gallipot-system in common use. Almond, olive, and the other sweet oils, thus treated, are apt to lose some of their blandness, and to acquire a slight sulphurous smell, and smoky flavour, whilst castor-oil loses its original blandness,

* If the bottles are corked whilst cold, the subsequent rarefaction and expansion of the air will either blow out the corks or burst them. They should be so corked that the expanded air, as well as the gases given off during the bleaching, may be able to force their way out, without difficulty, and without admission, or at least, free admission, of the external air. Small gallipots, as covers, are, at the same time, useful.

and assumes the strong, nauseous flavour characteristic of the white castor-oil of the shops. These qualities may be removed by agitation with a little fresh animal-charcoal, dry freshly-prepared alumina, or calcined magnesia, and subsequent filtration; or, and what is even better, though more troublesome, by well 'washing' the oil with *hot water*, and subsequent repose out of contact with the air, and decantation. But 'castor-oil' is not often so treated after being bleached, as it reduces its activity as a medicine. The oil should be filtered before exposing it to the light, as if in only a slight degree opaque, it does not blanch well.

2. The *oil* is placed in a porcelain, stone-ware, or well-tinned vessel, along with some dry *filtering-powder*,* or some dry and recently prepared *hydrated alumina*,† and the heat of steam or boiling water being applied, is vigorously stirred, with a clean wooden or stoneware spatula, for about an hour. It is then thrown into a Canton-flannel oil-bag, and filtered, in the usual manner, observing to return the 'runnings' until they become quite white and clear. This is the way the West-end perfumers, and the wholesale druggists, usually prepare their "white almond-oil" (oleum amygdalæ album), their "white olive-oil" (oleum olivæ album), and their "white oil of ben." Formerly freshburnt animal charcoal was chiefly used for the purpose, and is still so employed by some houses; but the other substances answer better and are more convenient.

3. The *oils* previously referred to, as well as all other oils and fats, may be rendered perfectly colourless by agitating them with a little *chromic acid*; or, what is the same, and cheaper and more convenient, with a *mixed solution* of *bichromate of potassa* and sufficient *sulphuric acid* to seize on the alkali of the bichromate and to liberate its chromic acid. 1 to 2 drachms of the *bichromate* mixed with three times its weight of *oil of vitriol* (previously diluted with about twice its volume of *water*, and allowed to cool), is ordinarily sufficient, when skilfully used, to perfectly bleach 2 or 3 pints of oil. It should be added gradually to the oil, with continued violent agitation, and this should be kept up for some considerable time after the last portion is added. The mixture must be made in a vessel of glass, porcelain, stoneware, or wood, and nothing metallic must touch it.

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* 1 to 2 *lb.* to each *gallon* of *oil*.

† ¼ to ½ *lb.*, per *gallon* of *oil*; but much less is often sufficient if the article be of proper quality.

In some cases, a few drops of strong *nitric acid* (diluted with about twice its bulk of water), if added towards the end of the agitation, will facilitate the process; or, with colza, linseed, nut, and rape oil, instead of it, a few drops of hydrochloric acid, without dilution. After the final agitation, the oil must be allowed to repose at a temperature of about 60° Fahr. When it has settled, the clear portion should be decanted, thoroughly 'washed' with *hot water*, again allowed to repose for some time, and then finally decanted for use. If necessary, it may, lastly, be filtered.*

The "accession of rancidity" in 'oils' and 'fats' may be prevented, or greatly retarded, by artificial means. One of the simplest methods is to dissolve about 2 per cent. of *gum-benzoin* (in fine powder), or about 1 p. c. of *benzoic acid*, in the *oil* or *fat*, by the aid of a gentle heat. This addition renders oils, pommades, ointments, &c., peculiarly soothing to an irritable or highly sensitive skin. It should be made prior to the addition of the scents. When the preparations are intended for exportation to hot climates, the per-centage of the gum or acid should be somewhat increased.

Dr. Griesler recommends *nitric ether*, or its *alcoholic solution*, as a most effective preventive of rancidity. It is said that a few drops of this ether will effect this object, and will even remove the disagreeable odour of rancidity when present. Oil so treated, after being heated to remove the alcohol, when the solution has been used, is quite bright, clear, and scentless, if it were originally so.

Poplar-buds, crushed and digested, at a gentle heat, in oil or fat, will also remove, or greatly retard, its tendency to become rancid.

The first is the plan generally adopted by the manufacturing perfumers and druggists. In the wholesale trade, carefully rendered lard, suet, &c.; simple pommades and oils, so prepared, are now common articles of stock and sale.

Rancid oil and fat may be 'recovered' by agitating them, at a

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* The reader must recollect that none of the preceding processes of chemical bleaching are proper for "medicinal oils," and that even those intended to be used as cosmetics are more or less injured by them, however much the results may please the eye. The only treatment that castor-oil, cod-liver oil, and the like, should be submitted to, is simple filtration through Canton flannel bags. The wholesale druggists use filtering powder for the purpose, but the practice is objectionable. They also sun-bleach their castor-oil in the way noticed in the Text; but they never go further than this; and even this is much too far. Surely castor-oil, of its natural pale yellowish colour, and bland and sweet, is preferable to 'white castor-oil,' which has been deprived of its colour at the cost of being rendered rank and nauseous.

gentle heat, with *fresh-burnt* and *coarsely powdered charcoal* (which has been thoroughly freed from dust by sifting and fanning), followed by filtration through flannel; or by simple filtration through charcoal in bags of Canton-flannel, according to the common method.

Another method is to thoroughly 'wash' them with *hot water*, frequently renewed, or to blow *steam* through them, until the desired effect be produced. *Air* freely employed for some time, instead of steam, succeeds admirably with many oils, and its use has the advantage of not introducing moisture into the article.

Another method is to boil the *oil* or *fat*, for 15 to 30 minutes, with a little *water* and *calcined magnesia*.

"Rancid butter" may be recovered and sweetened by well washing it first with *new milk*, and next with pure *cold spring-water*. Butyric acid, on which the rancidity of butter depends, is freely soluble in fresh milk.*

Essential Oils; Volatile Oils; Olea Essentialia, Olea Volatilia, Olea Destillata†; Huiles Volatiles, &c.—The "essential" or "volatile oils" are an extensive and important class of bodies derived from the vegetable kingdom, and found in almost every part of the larger number of the plants which produce them, except the cotyledons of the seeds, which, in general, form the exclusive repository of the fixed oils. It is the volatile oils which confer upon flowers, leaves, fruit, seeds, roots, barks, and woods, their peculiar and characteristic odours; but among these they are not equally distributed in the same individual, and are often altogether absent from some of them. To them we are indebted for our most delightful perfumes, and our choicest aromatics and spices. Some of them possess valuable medicinal properties, and others are invested with the highest possible interest on account of their peculiar chemical constitution and reactions. All the more fragrant ones—a numerous body—are, or may be, used in perfumery; whilst many of them, in addition to their odour, are esteemed as ingredients in cosmetics, on account of their aromatic and stimulating properties, or other virtues assigned to them by experience or popular repute.

The "essential oils" being mostly rather expensive articles, and

* For a comprehensive notice of the "Fixed Oils," their manufacture, products, refining, properties, uses, adulteration, tests, &c., *vide* the Author's "*Cyclopædia*," 3rd ed., pp. 840-55, *et seq.*

† All the volatile oils either are, or may be, obtained by distillation; but some few, as the oil of lemon, orange, and cedrat, are usually obtained by expression from the yellow rind of the fruit, as the product is then more fragrant.

some few of them extremely costly, are very generally *adulterated*. In some cases this is with essential oils of a cheaper or a lower grade, or with chemical compounds (artificial oils) that bear some resemblance to them; and in others, with alcohol or rectified spirit, the fixed oils, resin, spermaceti, and the like. In not a few cases, the oil of one plant is entirely substituted for another of a more expensive kind, which it somewhat resembles; or some cheap and worthless chemical compound (artificial oil) is sold for the natural one.

The *presence* of *fatty oil*, *resin*, or *spermaceti*, may be readily detected by placing a single drop of the 'suspected oil' on a piece of white paper, and exposing it for a short time to heat. If the oil under examination be *pure*, it will entirely evaporate; but if it be *adulterated* with one of these substances, a greasy or translucent spot will be left on the paper. These substances also remain undissolved when the oil is agitated with three or four times its volume of strong rectified spirit.

The *presence* of *alcohol* or *rectified spirit* my be detected by agitating with the 'oil' a few small fragments of *dried chloride of calcium*. These will remain unaltered if the oil be *pure*, but will dissolve in one containing alcohol, and the resulting solution will form a distinct stratum at the bottom of the vessel. The 'milkiness' and 'loss of volume' when such an oil is agitated with a little water is another test of the presence of spirit.*

The *admixture* of an *inferior essential oil* with another more costly, is readily detected by a connoisseur or expert, by placing a drop or two on a piece of clean blotting-paper, shaking it in the air, and smelling it occasionally. The difference of the odour at the beginning and towards the end of the evaporation will show the adulteration, especially if the adulterant be *oil of turpentine*. The last may also be detected by remaining undissolved when the 'oil' is agitated with about thrice its volume of strong rectified spirit.†

The *identification* and *purity* of the *essential oils* may generally be

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* This species of adulteration is very common. It is a very general practice of the druggists to add strong *rectified spirit* to their essential oils, to render them transparent, especially in cold weather. Oil of cassia and oil of cinnamon are nearly always so treated by them.

† Highly rectified oil of turpentine is very largely used to adulterate the stronger scented essential oils. *Foreign oil of lavender* and *oil of peppermint*, for example, are usually compounds of 1 ounce of the 'genuine oil' with 9 ounces of 'oil of turpentine.' Even *English oil of peppermint* is generally adulterated with fully 1-3rd part of rectified spirit, besides a considerable quantity of oil of rosemary, spearmint, and often turpentine.

determined by taking their 'specific gravity,' and by observing their 'chemical reaction'; or, and with still greater accuracy and convenience, as suggested by Dr. Wollaston, by measuring their index of refraction. For the application of the last method, a single drop of the oil is sufficient. Unfortunately, however, these methods require the possession of instruments, and a certain amount of technical knowledge for their successful application.

The *adulteration* of a *heavy oil* with a 'light one' may be detected by agitating the suspected sample with water, when, in general, the two will separate and form distinct layers.

Among the fragrant essential oils which, owing to their costliness, are almost universally adulterated, are the following:—

Essential Oil of Almonds is very generally adulterated with cheaper oils, particularly nitrobenzole (artificial oil of bitter-almonds), and in nearly every case with alcohol or rectified spirit. The *pure oil*, when mixed with *oil of vitriol*, turns of a clear 'crimson-red colour,' without visible decomposition:—mixed with *alcoholic solution* of *potassa*, 'crystals' are eliminated:—*iodine* dissolves only partially and slowly in it, without further visible results:—*chromate of potassa* does not affect it:—*nitric acid* of the sp. gr. 1·42 causes no immediate reaction, but 'crystals of benzoic acid' begin to form in 3 or 4 days; if only 7 or 8 per cent. of alcohol be present, violent effervescence speedily commences, and 'coloured nitrous fumes' are evolved. *Nitric acid* of sp. gr. 1·5 produces the same effects in a marked degree, even when the smallest quantity only of alcohol is present.—The sp. gr. of the pure oil, when recent, is 'never less' than 1·052; and when old, 'never greater' than 1·081; that of trade averages about 1·075.—'Nitrobenzole' has the sp. gr. 1·209, and its boiling point is 415° Fahr., or fully 100° higher than that of essential oil of almonds.

Oil of Bergamot is very frequently adulterated with rectified spirit, or with the oil of lemon, orange-peel, and turpentine. These may be detected in the way previously noticed. The presence of the foreign oils, particularly the last, lessens its solubility in rectified spirit. The *pure oil* is 'freely soluble' in liquor of potassa, forming a clear solution. Its sp. gr. is ·875 to ·885.

Oil of Cinnamon.—The common adulterants are highly rectified spirit and oil of cassia. When *pure*, its specific gravity is 1·035. Oil of cassia, of which the sp. gr. is 1·071 to 1·073, and when old, even 1·078 to 1·090, increases it; but before trying it, it must be tested for spirit, which has a contrary effect.

Oil of Lavender.—Alcohol is here also the common adulterant.

The finest quality—that from the flowers, has the sp. gr. ·877 to ·905. The lightest is esteemed the best. *Santoline* is 'insoluble,' or very nearly so, in the *pure oil*, but is 'freely soluble' in that adulterated with alcohol. The presence of oil of turpentine, and other inferior oils, may be detected by the blotting-paper test, noticed above.

Oil of Orange-flowers; Neroli.—This is commonly adulterated with alcohol, or with the oil of orange-leaf (essence de petit grain), and generally with both. The presence of the first is easily determined (see *above*); that of the second only by comparing the odour of a drop of the suspected oil, placed on a piece of paper, with a drop of pure neroli similarly treated.

Otto of Roses.—The common adulterants are the oils of rhodium, sandal-wood, and geranium, with camphor, and occasionally with spermaceti, to give the spurious article the usual crystalline appearance. *Pure otto* has a bland, sweet taste; if it be 'bitter,' it contains oil of rhodium or sandal-wood; if it be 'pungent' or 'bite the palate,' it contains either oil of geranium or camphor, and, most probably, both; if it imparts an 'unctuous sensation' to the palate, or if it leaves a 'greasy stain' on paper, it contains spermaceti.

A single drop of *pure otto* of roses exposed for some hours under a bell-glass, in the cold, to the vapour of a few grains of *iodine*, remains 'white,' and 'continues so' on subsequent exposure to the air. A sample adulterated with foreign oil, on the contrary, becomes 'yellow' or 'yellowish-brown,' and continues subsequently to darken, until it becomes of a 'deep-brown colour,' or even perfectly 'black,' according to the extent of the adulteration.

A single drop of *pure otto* placed on a watch-glass with one drop of concentrated sulphuric acid (oil of vitriol), and stirred with a glass rod, 'retains' the 'purity of its colour' and 'odour'; but a sample adulterated with other oil becomes more or less brown, and evolves peculiar odours—that from 'oil of geranium' being strong and disagreeable; that from 'oil of rhodium' being increased and rendered unctuous and cubeb-like; that from 'camphor,' characteristic and combined with acidity; that from 'spermaceti,' unctuous and clearly perceptible.

Oil of Rose-geranium.—This is usually very largely adulterated with 'oil of ginger-grass,' which is even often sold for it by the druggists.

"Essential oils" should be *chosen* of the current season's distillation; and they should be preserved in full bottles, closely stoppered or corked, and in the dark or a dull light, to prevent access

of air, and their consequent gradual decrease in odour, darkening, and resinification. Old oils dissolve with difficulty in spirit, and their solutions leave a stain, on evaporation, which is not easily washed out. The common practice of the wholesale dealers, on receiving some of their essential oils (particularly those of lavender and peppermint) from the distillers, is to leave them on the floor or shelves of the store-room 'uncorked' for a few weeks, under the idea that they lose the smell of the 'still,' and thus improve in odour and general quality. The reverse is, however, the case, all essential oils being deteriorated, even by short exposure, and the more delicate ones very materially so. In like manner, a small quantity of oil kept in a large bottle, however tightly corked, will rapidly deteriorate, and, in two or three years, will have lost much of its odour, have increased in colour, consistence, and specific gravity, hold much resin in solution, and probably have deposited crystals of stearopténe or volatile-oil camphor.

The *oils of cloves* and *origanum* of commerce, from age or careless 'stilling,' are often very dark coloured. When *pure*, they should be 'nearly colourless.'*

Soap; Sapo; Savon.—Soap varies in its action on the skin chiefly according to the relative proportions of the greasy or oily matter and the alkali which enter into its composition. Soap containing a full proportion of 'caustic alkali' exercises a marked detergent and solvent action on the cuticle, which it attenuates and hardens by dissolving a minute portion of it, as well as much of the secretions that impart to it its softness and suppleness. Soaps containing a preponderance of 'oily matter,' as most of the milder toilet-soaps now do, on the other hand, mechanically soften the skin and promote its smoothness, at the same time that they cleanse it. The former possesses greater cleansing power than the latter, but its frequent use is injurious to the health and beauty of the skin, rendering it rough, harsh, disposed to crack, and easily affected by exposure to wind and cold.

Soaps are divided into—

"Hard soaps" or *soda-soaps*, and

"Soft soaps" or *potash-soaps*,

according to the caustic alkali that enters into their composition.

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* For a comprehensive notice of the "Volatile Oils" (natural and artificial), their distillation, products, properties, uses, adulterations, tests, &c., *vide* the Author's "*Cyclopædia*," 3rd ed. pp. 862-82, &c.

Of these the principal varieties are—

ALMOND SOAP:—a toilet-soap made of *almond-oil* and *soda*.

CASTILE SOAP, SPANISH SOAP, MARSEILLES SOAP:—Soap chiefly imported, made of *olive-oil* and *soda*. It occurs both in the white and mottled state; the former being said to be the purest; the latter the strongest. It is the "hard soap" (*sapo; sapo durus*) of the pharmacopœias. It is chiefly used in medicine and the toilet.

CURD SOAP:—made of *tallow* or *suet* (chiefly) and *soda*.

MOTTLED SOAP (commercial):—made of refuse *kitchen-fat* (chiefly) and *soda*.

NAPLES SOAP:—made of *olive-oil* and *potash*.*

OLIVE-OIL SOAP:—Castile soap (vide suprà).

PALM SOAP; PALM-OIL SOAP; VIOLET SOAP (commercial):—made of *palm-oil* and *soda*. It has an agreeable odour of violets.

SOFT SOAP:—1. (Commercial.) A dark, strong, fœtid soap, made of *whale, seal,* or *cod-oil, tallow,* and *potash*.

2. (Soft Olive-oil Soap; Medicinal or Toilet Soft-soap):—Soap made of *olive-oil* and *potash*. It is yellowish-white, inodorous, and of the consistence of thick honey. It is the "soft soap" (*sapo mollis*) of the pharmacopœias.

3. (White Soft-soap):—Soap made of *lard* and *potash*. Only used in cosmetics and as a toilet-soap.

TOILET SOAPS:—Any of the preceding milder soaps, taken singly or mixed, and variously scented and coloured.†

YELLOW SOAP; ROSIN SOAP:—made of *tallow, rosin,* and *soda*. Palm-oil, when cheap, often replaces the tallow, or a portion of it.

M. Bonnamy, in a paper recently published in one of the scientific journals of the Continent, asserts, that *pure alumina* (hydrate) added to *neutral soap* renders it more powerfully detersive than the

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* *Vide* "Soft Soap" (No. 2; *infrà*).

† For formulæ, &c., *vide* pp. 437-45, 630-7 (*antè*).

most highly alkaline soap, without interfering with its mildness in other respects. It also imparts to the soap powerful blanching or whitening properties. The 'alumina' may either be added to the 'soap' in the soft state, or may be indirectly introduced into it during the process of manufacture. For the latter purpose, M. Bonnamy substitutes *aluminate of soda*, or of *potash*, in appropriate proportions, for the 'caustic alkaline-lye' now employed by the soap-maker. During saponification, the caustic alkali in the 'aluminate' unites itself with the 'oil' or 'fat'; whilst the *alumina*, simultaneously set free from its previous combination, in the state of impalpable powder, is thus equally diffused through the whole body of the newly-formed soap. Soap containing alumina is particularly suitable for toilet-use.*

Spirit.—*Pure spirit*, perfectly free from water, is the "alcohol" of chemistry, and is only employed in chemical analysis and research. Combined with more or less water, it forms the 'alcohol' and other 'spirits' of commerce, as shown in the following Table :—†

	Sp. Gr. at 60° Fahr.	Real Alcohol per cent.		Excise Strength, per cent.
		By Weight.	By Volume.	
Alcohol	·7938[1]	100·	100·	75½ over proof.
,, ...	·795[2]	99·5	99·6 } (say)	74½ ,,
,, ...	·796[3]	99·3	99·4 }	
,,	·810[4]	94·5	94·7	70 ,,
,, { Commercial }	·815[5]	92·7	95·5	68 ,,
,,	·818[6]	91·5	94·2	66 ,,
,, Excise	·825[7]	89·3	92·6	62½ ,,
Rectified Spirit[8]	·838[9]	84·2	88·5	56 ,,
,, ...	·840[10]	83·	87·7	54¾ ,,
,, (dilute)....	·872[11]	70·	76·5	35 ,,
,, (,,)....	·894[12]	60·5	68·2	20 ,,
,, (,,)....	·906[13]	55·6	63·2	11½ ,,
Proof Spirit	·920[14]	49·	57·	*Proof spirit.*
Spirit (of).....	·945[15]	37·5	44·	22 under proof.
Spirituous Liquors :—				
French Brandy (strongest retail)	·932[16]	43·7	50·7	10 ,,
Rum (strongest retail)..	·933[17]	43·	50·2	11 ,,
Gin (strongest)	·939[18]	40·	46·7	17 ,,
,, (best ordinary)	·945[19]	37·5	44·	22 ,,
,, (Gin-shop)[20]	·948 to ·960	35· to 28·	41· to 33·	25 to 35 or 40 ,,

* M. Bonnamy also recommends the addition of alumina to skin-cosmetics; and says that, as a "base for tooth-powders," it is preferable to all other substances. (*Vide* pp. 656-7, *antè*.)

† For *Notes* see next page.

SPIRIT OF AMMONIA.—Of this the trade varieties are—

1. SPIRIT OF AMMONIA (Caustic), DZOND'S C. S. OF A.; AMMONIATED ALCOHOL; SPIRITUS AMMONIÆ CAUSTICÆ; ALCOHOL AMMONIATUM.—This is prepared by passing *gaseous ammonia* into *rectified*

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[1] Not obtainable in trade.

[2] The "alcohol" or "absolute alcohol" of the British and Dublin Pharmacopœias.

[3] The "alcohol" of the Edin. Ph.

[4] The strongest "alcohol" of the shops; also that of the Dublin Ph. 1826.

[5] The ordinary "alcohol" of the shops; also that of the London Ph. 1836.

[6] The strongest "rectified spirit," or the "alcohol" of the varnish-makers, and commonly fraudulently sold for the last two. It is the "stronger spirit" (spiritus fortior) of the D. Ph.

[7] The "standard alcohol" of the Revenue Authorities, and that on which the Revenue Tables are based.

[8] Or "Rectified Spirit of Wine." All spirits of 43 p. c. overproof, and upwards, are called "Spirit of Wine" by the Revenue Authorities, and marked "S. W."

[9] This is the "Rectified Spirit" (spiritus rectificatus) of the Br., L., and E. Ph., and the *proper* and *intended strength* to be employed when "rectified spirit" or "rectified spirit of wine" is ordered.

[10] This is the "rectified spirit" of the D. Ph. That of the shops is seldom stronger than 54 overproof, and often much weaker. Hence the frequent failure of processes in which it is employed.

[11] A mixture of 7 pints of *rectified spirit* (56 o. p.) and 2 pints of *pure water*, will produce a spirit of this strength.

[12] 11 pints of *rectified spirit*, and 5 pints of *water*, produce it.

[13] 5 pints of *rectified spirit*, and 2 pints of *water*, produce it.

[14] This is the "proof spirit" of the Revenue Authorities and commerce, and (spiritus tenuior) of the Br., L., and D. Ph. 5 pints of *rectified spirit*, and 3 pints of *water*, produce it.

[15] Spirit of this strength is generally used by the druggists in preparing those tinctures in which 'proof spirit' is ordered, always to the serious injury, and often to the destruction of the medicinal value of the product. Equal measures of *rectified spirit* and *water* produce it.

[16] 10 to 12 u. p. is the common strength at which French Brandy and Rum are sent out by the wholesale dealers to the retailers, when bulk is broken; but besides the former being reduced in quality by the addition of 'British brandy' or 'plain-spirit,' and the latter with 'crude corn-spirit,' they are liberally dashed with *water* before reaching the small consumer. It is almost impossible to obtain pure French brandy by retail.

[17] *Vide* Note 16 (*antè*).

[18] Gin can scarcely be obtained, of this strength, except from the wholesale dealers. It is the strongest gin made.

[19] This is the strongest gin ordinarily sent out. The so-called "best unsweetened gin" is more commonly 24 to 28 u. p., and often weaker.

[20] These are commonly mere 'gin-and-water,' the dilution being covered by addition of *capsicum* or *red-pepper*, to give fire or apparent strength and pungency, and *caustic potash*, or, and now more frequently, *white vitriol* (sulphate of zinc), to make it bite the palate and throat, the whole being disguised with *corianders* and *caraway*, and a plentiful addition of *lump-sugar* or *syrup*. It is the presence

spirit. The formula commonly adopted in trade resembles that of the Edin. Ph. :—Take of

Quick-lime . . . . . 12 ounces (Troy) ;*
Water (to slake) . . . . . 6¼ fluid ounces ;

to the 'slaked lime' add of

Sal-ammoniac (in fine powder) . 8 ounces (Troy) ;†

put the mixture into a glass-retort furnished with a tube reaching nearly to the bottom of a bottle (surrounded with ice or very cold water) containing

Rectified spirit . . . . . 1 quart ;

and distil, by the heat of a sand-bath, as long as gas passes over. The product must be kept in a well-stopped bottle, and in a cool place. Sp. gr., about ·845. Very pungent and caustic ; chiefly employed, in perfumery, to make other preparations, particularly ammoniated perfumes, &c.

2. Take of

Carbonate of ammonia . . . . 1½ ounce ;
Rectified spirit . . . . . 1 pint ;

dissolve. Less caustic and pungent than the preceding, owing to the ammonia being in the carbonated state.

3. The "Spiritus Ammoniæ" of the London Ph. of 1836, was made from—

Sal-ammoniac . . . . . 10 ounces (Troy) ;
Carbonate of potash . . . . . 16 „ („) ;
Rectified spirit . . . } . . { of each,
Water . . . . . } . . { 3 pints ;

three pints only being drawn over by distillation.

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of 'white vitriol' in "Gin-shop gin" that causes it so frequently, when drunk with warm water, to produce nausea and even vomiting. It is this drug too that is the chief cause of the pale faces so general among gin-drinkers. The so-called "*Old Tom*," of the London shops, is particularly rich in it. But if the common gin be only "grog," and weak grog too, what must we call "Peppermint," "Cloves," "Caraway," and the other popular cordials? I have examined several samples that did not contain 10 per cent. of real spirit ; and two or three that had not a drop of spirit in them ; the spurious compound being merely *syrup* rendered somewhat 'fiery' with *capsicum* and *grains of paradise*, and somewhat 'caustic' and 'biting' with *alum* and *white vitriol* or *caustic potassa*, the whole being disguised by the strong flavour of *oil of peppermint*, or of *cloves*, &c., as the case might be. Healthful, stomachic stuff, certainly! No wonder that London, with its 'doctored' beer and gin, its brandied wines, its alumed bread, its chicoried coffee, and its butcher's meat at almost prohibition prices to the masses, has been sneered at by provincials and foreigners as a "city of pale-faced dyspeptics."

* Equal to nearly 13¼ ounces avoirdupois.

† Equal to about 8¾ ounces avoirdupois.

VEGETABLE SUBSTANCES.—"Flowers," "herbs," and other like vegetable substances, are now generally preserved, for distillation, by means of common salt. The process simply consists in intimately mixing the *flowers, &c.*, with about 1-4th their weight of good *dry salt*, and ramming down the mixture, as tightly as possible, in strong casks or jars. The casks or jars are then placed in a cellar, or other cold place, and covered with boards, on which heavy weights are put, to keep the mass tight and close. In this state they may be preserved from season to season, or even for two or three years. The 'flowers,' &c., should be recently gathered, and free from dew or moisture; and the 'salt' should be quite dry, to ensure which it may be exposed for 2 or 3 hours in an oven.

The above is the method now generally followed, by our manufacturing perfumers and wholesale druggists, for preserving fresh aromatic vegetable substances for subsequent distillation. It is found that the odour of distilled waters, oils, &c., obtained from flowers, &c., thus preserved, is superior to that of those from either the recent or dried vegetables; whilst the products keep better, and are quite free from the peculiar rawness found in those from fresh herbs and flowers, and which nothing but age, or redistillation, will remove. Besides this, the inconvenience of being compelled to prepare one's stock of distilled waters, &c., whilst the flowers are in season, is obviated, and other advantages gained which must be obvious to every operator. The 'distilled water' prepared from pickled roses, and some other flowers, may be produced, by careful 'stillage,' of a quality little inferior to that which is imported.

VINEGAR; ACETUM; VINAIGRE.—The only vinegars (of common strength) used in cosmetics and perfumery are—*dilute acetic acid* (vide p. 655), *distilled vinegar*, and French *wine-vinegar*. The last two only are employed for perfumed vinegars. The 'second' should be that obtained by the distillation of *French wine;* and the 'last,' that prepared from white wine ("white-wine vinegar"), and known as the best "vinaigre d'Orléans." They should never contain less than about 6 per cent. of real acetic acid.*

WATER; EAU (Fr.); AQUA (L.). In the preparation of medicines, perfumes, and cosmetics, *distilled water*, when obtainable, should alone be employed. When this is unobtainable, or not at hand, the purer forms only of natural water (rain-water, snow-water)

* *Vide* "Perfumed Vinegars," &c. (*antè*).

should be used in its stead. When we are driven by necessity to employ river, spring, or well or pump water, it should be boiled, and allowed to cool and settle, before we use it.

The following, as far as our subject is concerned, are the *principal varieties* of *water*, arranged in the order of their purity:—

Distilled Water:—Obtained by the distillation of common water in a clean apparatus, observing to reject the first and last portions that come over.

Snow Water:—Clean snow melted. The purest form of natural water.

Rain Water; Soft Water:—When collected at a distance from any large town, only slightly less pure than the last; but it contains minute quantities of air, carbonic acid, nitric acid, and ammonia, absorbed from the atmosphere. In towns, it also contains minute quantities of sulphuric acid, and is more or less contaminated with smoky fumes, soot, &c. It should then be boiled for a short time, and purified either by repose or filtration, before use.

Spring Water:—This almost always contains more or less mineral impurities, though often only a minute quantity. In the Edinburgh Ph. it is stated that if it does not "possess the quality of 'hardness,' or contain above 1-6000th part of solid matter," it may be used (in the absence of distilled water).

River Water:—Less pure than good 'spring water.' Besides the mineral matters dissolved in it, it generally contains impurities mechanically suspended. When flowing by large towns, or when fed by marsh-water, it is also more or less contaminated with organic matter in a state of decomposition. Thames water contains about 1-3500th part of fixed impurities, or on the average 21 to 22 grains per gallon, independent of mechanical impurities, which are variable. It is the water that forms the common supply provided by the water-companies.

Well Water; Pump Water:—It usually contains more mineral impurities than even river-water, and, in large towns, is always liable to be, and is very frequently, contaminated with organic matter derived from sewers.

The last three varieties come under the denomination of "hard water." The degree of this "hardness" is exhibited by their power

of curdling soap, and by the amount of impurity left on a watch-glass when a little of the water is evaporated on it. When this hardness is 'removed' by boiling, or by exposure, it depends on the presence of *carbonate of lime* (chalk) held in solution by the free carbonic acid present in the water, and is then called "temporary hardness." When 'irremovable' by this treatment, *sulphate of lime* is usually present, and it is called "permanent hardness." Water 'permanently hard,' even after being boiled, is unfit for use in the preparation of medicines, perfumes, and cosmetics, or for toilet and culinary purposes, and is unwholesome as a beverage. As a beverage, or as the vehicle in those we daily take, it is apt to disorder the stomach and bowels, and interfere with the natural processes of digestion and nutrition; whilst its frequent use in the toilet renders the skin hard, rough, and liable to crack, and soon destroys its delicacy and beauty.*

The following formulæ, &c., have reference chiefly to Chapters XIII, XIV, XVI:—

Bunions (Popular Remedies for).—See "Corns" (infrà).

Chaps (Lotions for).—1. Take of

Glycerine (Price's)	1 ounce;
Hydrochlorate of morphia . . .	8 or 10 grains;
Rose-water†	½ pint.

2. As the last, but substituting ¼ ounce of *borax* (crushed small) for the 'morphia.' Both are very useful in chaps, excoriations, &c.

3. Liebert's celebrated nostrum for *cracked* or *chapped nipples*—"Cosmétique infaillible et prompte contre les gerçures ou crevasse aux seins et autres"—is a lotion formed of

Nitrate of lead (cryst.) . . .	10 grains;

dissolved in

Rose-water	1 ounce;

and slightly tinged with

Tincture of cochineal	q. s.

The parts affected are moistened with the liquid, and are then

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* *Vide* Chapters XIII–XIV. (*antè*).

† *Orange-flower water* or *elder-flower water*, or even *distilled water*, may be used instead.

covered with thin *leaden nipple-shields*, two of which are provided for the purpose, and sold with the nostrum. The application is repeated soon after each time the infant is removed from the breast; and the nipples are carefully washed with a soft sponge and lukewarm water, and dabbed dry with a soft towel, before the infant is again applied to it. This mode of treatment generally proves successful, and hence Liebert's nostrum has acquired great popularity and patronage among the middle and upper classes of the Continent. Its use, like that of other remedies containing lead, requires the utmost care to avoid danger to the infant, as noticed elsewhere.*

4. Another still more successful foreign nostrum, with the same pretensions as the last, is formed of

Nitrate of lead (cryst.) . . .	1 drachm;
Glycerine.	3 „
Rectified spirit	5 fluid drachms;
Eau de rose	¼ pint;

coloured with two or three drops of *tincture of cochineal*. It is recommended as "infallible" for chapped nipples, lips, and hands, excoriations, &c.; and as an "Eau incomparable" for beautifying the face. For the latter purpose it may be regarded as a more elegant form of "German Milk of roses."

Chilblains.—The treatment of 'chilblains' is noticed in Chapter XVI.† The following are mostly additional preventives and remedies. Some are nostrums.‡—

Balsams for Chilblains.—

1. ("Camphor Balsam.") See "Balsams" (*antè*).
2. ("Glycerinated Balsam." See "Balsams" (*antè*), also "Lotions" (*infrà*).
3. (Lejeune's.) See "Liniments" (*infrà*).

Liniments for Chilblains.—1. Take of

Soap-liniment	2 ounces;
Tincture of cantharides . . .	1 „
Oil of cajeput	1½ drachm;

agitate them well together. Useful for unbroken chilblains. To be applied twice or thrice daily, with friction.

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* On the subject of "sore nipples," and the effects of preparations of lead, *vide* pp. 340-1 (*antè*).

† *Vide* pp. 360-71, 382-3, &c. (*antè*).

‡ Other formulæ for preparations used for 'chilblains' will be found in this and other Chapters, for which vide *Index*.

2. Take of

Oil of turpentine (best) . . . ¼ pint;
Camphor (crushed small) . . . 1 ounce;
Oil of cajeput . . . . . 2 drachms;

mix, and agitate till solution is complete. Use, &c., as the last.

3. (Lejeune's "Liniment"; Lejeune's "Chilblain Balsam.") Take of

Camphor (small) . . . . . 1 drachm;
Iodide of potassium . . . . . 5 „
Tincture of benzoin . . . . . ¾ fluid ounce;
Solution of diacetate of lead * . 1 „ „
Proof spirit (made with *rose-water*) . . . . . 2½ ounces;

mix, dissolve, and add a warm solution of

Curd-soap . . . . . 1¼ ounce;

made with

Proof spirit (as above) . . . . 2½ ounces;

and at once bottle it. Use, &c., as No. 1.

4. (Morton's "Chilblain Liniment.") Take of

Calomel . . . . . } . . . { of each,
Camphor (powdered) } . . . { 1 drachm;
Oil of turpentine . . } . . . { of each,
Cocoa-nut oil . . . } . . . { 2 drachms;
Spermaceti-ointment . . . . . 4 „

mix in a warm mortar, and triturate until cold. Use, &c., as No. 1.

5. (Vance's "Chilblain Cream.") Take of

Ointment of nitrate of mercury † . 1 ounce;
Camphor (powdered) . . . . 1 drachm;
Oil of turpentine . . . . . 2 „
Olive-oil . . . . . 5 „

mix, with a gentle heat, in a wedgwood-ware mortar, and triturate until cold. Use, &c., as No. 1.

6. The *liniments of ammonia, camphor, opium, soap,* and *turpentine,* as well as the *compound camphor-liniment* of the pharmacopœia, are often used and sold as "chilblain liniments," and, used in the same way, are all useful for unbroken chilblains.

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* "Goulard's Extract" of the vulgar.

† "Citrine ointment."

LOTIONS FOR CHILBLAINS.—1. Take of

Sal-ammoniac (crushed small) .	1 ounce;
Glycerine (Price's)	1½ „
Rose-water	8 „

agitate them together until solution is complete. An elegant and effective preventive of 'chaps' and 'chilblains,' as well as a remedy for the last before they break; also for roughness of the hands produced by cold. The affected or exposed parts are moistened with the lotion night and morning. *Elder-flower water, camphor-julep,* or even *distilled* or clean *soft water,* may be substituted for the 'rose-water,' at will.

2. Take of

Sal-ammoniac . . . } . . . {	of each,
Glycerine . . . . . }	1 ounce;
Rum (good, strong)	½ pint;
Camphor (powdered)	1 drachm;

agitate them together frequently for some hours. Very serviceable; used as the last.

3. Take of

Sal-ammoniac	1½ ounce;
Vinegar (good, strong)	½ pint;

dissolve. Serviceable for unbroken chilblains; used as No. 1. Its efficacy is increased by subsequently rubbing the parts, when dry, with a little simple ointment or oil, or cold-cream, or pomatum.

4. Take of

Tincture of catechu	2 fluid ounces;
Honey (best)	1½ ounce;
Water	7 „

mix. Used for chaps and chilblains, whether the latter be broken or not; as No. 1.

5. (Dr. Grave's "Chilblain Preventive.") Take of

Sulphate of copper	1 drachm;
Water	3 ounces;

dissolve.

6. (Linnæus's "Remedy for Chilblains.") Take of

Hydrochloric acid (sp. gr. 1·16) .	1 ounce;
Water	11 „

mix. For unbroken chilblains; as No. 1 or 3.

OINTMENTS FOR CHILBLAINS.—1. Take of

Made-mustard (best, very thick) . 2 drachms;
Glycerine (Price's) . . . . . 1 „
Spermaceti-cerate . . . . . 1½ „

mix in a slightly-warmed mortar, and triturate until cold. For unbroken chilblains; to be applied night and morning.

2. Take of

Gall-nuts (in very fine powder) . 1 drachm;
Spermaceti-cerate . . . . . 7 „

mix, add of

Glycerine (Price's) . . . . . 2 drachms;

and rub the whole to a uniform mass. An excellent application to obstinate broken chilblains, particularly when used as a dressing. When the parts are very painful, 1 ounce of *compound ointment of galls* ("unguentum gallæ compositum," L. Ph.) may be advantageously substituted for the galls and cerate ordered above.

3. (Cottereau.) Take of

Acetate of lead . . .
Camphor (in powder) . } . . { of each, 1 drachm;
Cherry-laurel water .
Tar . . . . . 1½ „
Lard . . . . . 1 ounce;

mix, as before.

4. (Devergie.) Take of

Creasote . . . . . } . . { of each, 12 drops;
Goulard's extract . .
Extract of opium . . . . . 2 grains;
Lard . . . . . 1 ounce;

mix.

5. (Giacomini's.) Take of

Sugar of lead . . . . . 2 drachms;
Cherry-laurel water (distilled) . 2 fluid drachms;
Lard (hard) . . . . . 1 ounce;

mix.

6. (Linnæus.) Take of

Spermaceti-ointment . . . . . 2½ ounces;
Balsam of Peru . . . . . 1 drachm;

mix, with a gentle heat; when cooled a little, add of

Hydrochloric acid . . . . . 2 fluid drachms;

and triturate until cold. For unbroken chilblains.

7. (Wahler's "Ointment for Chilblains.") Take of

Black oxide of iron (in impalpable powder), *Armenian bole*, *Oil of turpentine* . . . of each, 1 drachm;

Resin-cerate . . . . . 1 ounce;

mix. An advertised nostrum for broken chilblains.

PASTES FOR CHILBLAINS.—

1. *Aleppo-galls* (in fine powder) . . 1 part;
Made-mustard (thick) . . . . 2 „
Honey . . . . . 3 „

beat them together, then add of

Oil of turpentine . . . . . 2 parts;

and mix the whole to a smooth paste. For unbroken chilblains; spread over them night and morning, and allowed to remain for 12 or 15 minutes, and then washed off, the part being afterwards, when dry, rubbed with a little cold-cream or simple pommade.

2. (Swediaur's "Paste for Chilblains.") Take of

Bitter-almonds (blanched) . . 8 ounces;

beat them to a perfectly smooth mass, then add, gradually, of

Honey . . . . . 6 ounces;
Flour of mustard (best) . . . 1 „
Powdered camphor . . . . . ½ „
Burnt alum, *Olibanum* . . . of each, ¼ ounce;
Yelks of eggs . . . . . 3 in no.;

and beat the whole to a smooth paste. As the last.

RUSSIAN REMEDY FOR CHILBLAINS.—Slices of the *rind* of *fully-ripe cucumbers*, dried with the soft parts attached. Previous to use they are softened by soaking them in warm water, and are then bound on the sore parts with the inner side next them, and left on all night. This treatment is said to be adopted for both broken and unbroken chilblains.

CORNS.—Their treatment is noticed in Chapter XVI.* The

* *Vide* pp. 383-7 (*antè*).

following additional formulæ include most of the popular remedies and advertised nostrums: *—

CAUSTICS FOR CORNS.—1. Take of

Liquid terchloride of antimony † . . .	}	{ of each,
Tincture of iodine . .	}	{ 2 drachms;
Protiodide of iron		7 grains;

mix, and preserve it in a well-stoppered phial. Applied, with care, as noticed at page 384. Two to four applications are *said* to effect a cure.

2. (Canquoin's.)—*a*. Take of

Chloride of zinc (powdered) . .	1 drachm;
Flour (well-dried)	3 „

mix, and keep it in a stoppered bottle. For use, a little is made into a dough with a drop or two of *warm water*, which is then formed into a thin cake of the proper size and the thickness of a letter-wafer and bound on the corn, where it is kept for 3 to 6 hours. After its removal, a *poultice*, or a dressing of *simple cerate*, should be applied. Its employment requires caution, as if left on too long it is apt to produce painful eschars.

b. As the last, but substituting recently-baked *plaster of Paris* for the flour. A very little, made into a paste with *water*, is spread over the corn, and, as soon as it has hardened, bound on with a piece of rag.

LOTIONS FOR CORNS.—1. Take of

Sal-ammoniac (crushed small) .	¼ ounce;
Proof spirit	1 fluid ounce;
Essence of musk	2 or three drops;

mix. The corns are to be moistened with it night and morning.

2. A *concentrated solution* of *sulphate of copper*, ‡ scented. Used as the last.

PLASTERS FOR CORNS; CORN-PLASTERS.—The advertised corn-

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* The maker or vender, having selected a formula from some book, usually attaches his name to the article, and puffs it off as an original discovery or invention of his own, possessing the most fabulous virtues.

† The "butter of antimony" of the shops.

‡ "Blue vitriol" of the shops.

plasters commonly consist of *resin-plaster*, *galbanum-plaster*, or *pitch-plaster*,* with or without the addition of *verdigris* or *sal-ammonia*, or both of them, spread on linen, leather, or paper; the spread-plaster being afterwards cut into pieces of appropriate size, and 'put up' in small flat boxes. The following are a few examples:—

1. Take of
   Resin-plaster† . . . . . 5 parts;
melt it by a gentle heat, stir in of
   Sal-ammoniac (in very fine powder) . . . . . 1 part;
and at once spread it on linen or white sheepskin.

2. *Galbanum-plaster* . . . . . 1 ounce;
   Verdigris (in fine powder) . . 1 drachm;
as the last.

3. Take of
   Resin-plaster . . . . . 2 ounces;
   Black pitch . . . . . 1 „
   Verdigris . . . . } . . { of each,
   Sal-ammoniac . . . } . . { 1 drachm.

4. ("Argentine Corn-plaster.")—Take of
   Resin-plaster . . . . . 7 parts;
   Fused nitrate of silver (in fine powder) . . . . . 1 „
as before. Intended as a substitute for the direct application of lunar caustic, and to be applied to the corn only.‡

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* *Common resin*, or *resin-plaster*, melted up with about 1-3rd its weight of *tar* or *pitch*.

† *Emplastrum resinæ*, L. Ph.

‡ A much more convenient and effective plaster may be prepared as follows:—Place a piece of *spread adhesive-plaster* (good, recent) on a table, and lay on it a piece of *card-paper* perforated, at suitable distances, with round holes, corresponding in size to the prominent portion of the corn, or corns. The surface of the plaster exposed by the perforations is then softened and made sticky by holding a heated *flat-iron*, for two or three seconds, near it, and *nitrate of silver*, in fine powder, is then at once sprinkled over it. As soon as the whole has become quite cold, the loose powder is shaken off, and the card-paper removed. It may now be cut into pieces, observing to leave a broad margin of the 'adhesive-plaster' round each prepared portion of the surface; or it may be preserved as it is in the sheet, care being taken, in either case, to avoid friction, which might remove some of the powder. In application, the prepared surface is placed exactly over the corn, and on slight pressure with the warm hand, the margin adheres firmly, and holds the

5. ("Anodyne Corn-plaster.")—*Galbanum-plaster* or *resin-plaster*, or the product of either Nos. 1 or 2 (antè), to each ounce of which 1 drachm of *opium*, in fine powder, has been added. Recommended for painful corns and bunions.

6. (Beamish's "Corn-plaster.")—Said to consist of about equal parts of *resin-plaster* and *galbanum-plaster*, melted together by a gentle heat.

7. (De Gros' "Corn-plaster.")—Take of

Resin-plaster (recent) . . . . . 5 drachms;

melt it by a gentle heat, stir in of

Sal-ammoniac (in fine powder) . 1 drachm;

and at once spread it on linen or soft leather. The next day, lightly brush over the surface with strong *tincture of benzoin*.

8. (Dupret's "Corn-plaster.")—Take of

Resin-plaster (recent) . . . . . 2 ounces;
Bees' wax (genuine) . } . . . { of each,
Olive-oil . . . . . } { ½ ounce;

melt, stir in of

Croton-oil . . . . . ¼ ounce;

and spread it before it cools.

9. ("French Corn-plaster;" "Verdigris Plaster.")—Take of

Bees' wax . . . . . 4 parts;
Burgundy-pitch . . . . . 2 „

melt, add of

Venice-turpentine . .
Verdigris (in fine } . . { of each,
powder) . . . . } { 1 part;

and stir the mass until nearly cold. This is the old form of 'verdigris-plaster' (*emplastrum æruginis*) of the Paris "*Codex*." For use, it is spread on leather.

10. ("German Corn-plaster.")—Take of

Galbanum-plaster . . . . . 2 ounces;
Pitch . . . . . 1 „

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plaster in its place. This plaster was originally suggested by the author's late father, and was a great favourite among his patients, to whom he was in the habit of recommending it when the subject of corns was mentioned. It is remarkably cleanly and convenient. Two or three applications seldom fail to cure an ordinary corn, provided the plaster be properly made.

*Lead-plaster** . . . . . ½ ounce;
Verdigris (in fine powder) . . . . } . . { of each, ¼ ounce;
Sal-ammoniac (do.) . }

and proceed as before.

11. (Kennedy's "Corn-plaster.")—Take of
Bees' wax . . . . . 3 ounces;
melt, add of
Venice-turpentine . . . . . 1 ounce;
Verdigris (in fine powder) . . . 3 drachms;
and spread it on cloth. After a few hours the spread-plaster is cut into pieces, and polished. Of these pieces, 1 dozen is put into each box.

12. (Le Foret's "Corn-plaster.")—Take of
Galbanum-plaster . . . . . 2 ounces;
melt by a gentle heat, add of
Camphor (powdered) . . . . 2 „
Sal-ammoniac (in fine powder) . . . . } . . { of each, ½ ounce;
Saffron (do.) . . . }
mix thoroughly, and, when nearly cold, stir in of
Liquor of ammonia . . . . . 2 fluid ounces;
and at once put it into bottles. It is applied, spread on leather, to the corn only, as it will blister the thin skin surrounding its base. This is the original formula. It is an improvement to use another 1 or 1½ oz. of *galbanum-plaster*, or to add to it 1 oz. of *olive-oil*; and also to omit one half of the 'camphor.'

13. ("Mechanical Corn-plasters.")—These are noticed at pages 385-7.

14. ("Mineral Corn-plaster.")—Take of
Resin-cerate (dry) . . . . . 7 drachms;
Chloride of zinc (in fine powder) 1 „
mix, spread, and preserve the spread-plasters from the air and damp. To be applied to the corn only.

15. ("Saxon Corn-plaster.")—Take of
Galbanum-plaster . . . . . 1 ounce;
Pitch . . . . . ½ „

* "Emplastrum plumbi," Ph. L.; the "white diachylon" of old pharmacy and the vulgar.

Lead-plaster . . . . . ¼ ounce;

melt, by a gentle heat, stir in of

Verdigris (in fine powder) . . . . } . . { of each, 1 drachm;
Sal-ammoniac (do.) . }

and at once spread the mass on linen or soft leather, or form it into a 'roll' ready for future use. This is the formula of the "*Saxon Ph.*"

Pommades for Corns; Corn-salves.—1. Take of

Savine-ointment . . . . . 1¾ ounce;
Verdigris (in fine powder) . . . ¼ „

mix.

2. Take of

Dried carbonate of soda . . . ½ ounce;
Lard . . . . . 1 „
Smalts (to colour) . . . . . q. s.;

mix. The above are applied on a piece of rag, and renewed night and morning. They are sold under various names.

Solvents for Corns; Corn-solvents.—

a. (Liquid.)—1. A *saturated solution* of *salt of tartar* or *pearlash*. It is commonly obtained by exposing the article, contained in a jar or wide-mouthed bottle, in a damp place, until it forms an oil-like liquid.*

2. Take of

Caustic potassa † . . . . . 1 drachm;
Rectified spirit . . . . . 1 fluid ounce;

mix, in a stoppered phial, and agitate until solution is complete. The corns are either moistened with the above, in the manner noticed at page 384, or a small piece of lint, or rag, of the size of the corn, is moistened with them, and then bound on, care being taken, particularly with the last one, that the liquid does not touch the surrounding parts.

b. (Pulverulent.)—1. Reduce *salt of tartar* (that has been dried

* The "oil of tartar" of old pharmacy.
† That is, solid *hydrate of potassa*.

by exposure to a strong heat in an iron-crucible) to fine powder, adding sufficient *smalts* to impart a faint-blue tinge. It must be kept in a closely stoppered or corked bottle, away from the air and damp.

2. (Sir H. Davy's.)—*Binoxalate of potassa** mixed with twice its weight of *salt of tartar*, both being perfectly dry and in fine powder. A small portion of either of the above is placed on the corn and bound on with a piece of rag, the application being repeated for four or five successive nights.

3. See "Wart Powders" (infrà).

*** Before applying the above, or any other similar remedies, the corns, as noticed in a preceding chapter, should be pared moderately close; but in *no case should the powder or liquid be applied* to a *raw surface*, or be allowed to spread to the soft thin skin around their base. If pain or inconvenience results, the application should be at once removed, and the part soaked or washed in warm water.

The Eyes; Vision.—In addition to what has been said on the eyes and defective vision, in a previous chapter,† it may be useful to insert here, the statement of Prof. Nascar, of Naples, that in enfeebled sight requiring convex glasses, particularly the weak vision of the aged, when no nervous lesion exists, great advantage is derived from 'painting' or moistening, every evening, the eyelids and brow with *tincture of opium* (laudanum), and allowing it to remain on all night. This is also very serviceable in ophthalmia, and weak and irritable eyes; and often remarkably so. The officinal solution of *hydrochlorate* (or acetate) *of morphia*, employed in the same way, is even more effective, and, being colourless, is unobjectionable for use both by day and night, which is necessary in ophthalmia.‡

Eye Waters; Collyria.§—The following simple formulæ may prove useful to the reader. Their products are perfectly safe applications in the cases indicated.

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* "Salt of sorrel" of the shops.

† *Vide* pp. 294-307.

‡ I can speak from personal observation and experience of the great value of the above safe and simple treatment in the cases named, having known several persons, as well as myself, who have been greatly benefited by it.

§ Latin; sing., *collyrium*.

1. Take of

*Distilled vinegar**	1 fluid ounce;
Distilled water†	9 „

mix. In simple chronic ophthalmia, weak and blear eyes, &c.; also to remove minute particles of lime from the eyes. ½ fl. oz. of *rectified spirit*, or 1 fl. oz. of good *brandy* is often added, and improves it when there is laxness of the membranes.

2. Take of

Sulphate of zinc	20 grains;
Distilled water	½ pint;

dissolve. An excellent astringent eye-water, in chronic ophthalmia and in ordinary ophthalmia, as soon as the inflammatory symptoms subside; also in weak, lax, watery, irritable eyes, &c. If there be much pain and irritability, 5 or 6 grains of *acetate of morphia* (not 'hydrochlorate'), or 2 fl. dr. of *wine of opium*, may be added.

3. Take of

Alum (crushed small) }	{ of each,
Sulphate of zinc . . } . .	{ 10 grains;
Distilled water	½ pint;

dissolve. Use, &c., as the last. Made of eight times this strength, it forms "Bate's Alum Water" of old pharmacy, and "Liquor Aluminis Compositus" of the London Ph. 1851; a preparation only used as an eye-water when diluted.

4. Take of

Acetate (sugar) *of lead*	10 to 12 grains;
Distilled vinegar	1 tea-spoonful;
Distilled water	½ pint;

dissolve. Uses, &c., as No. 2, particularly for children.

5. Take of

Sulphate of copper	8 to 10 grains;
Camphor-julep	½ pint;

dissolve. In the purulent ophthalmia of infants and early childhood. The nostrum, "Bate's Eye Water," has a similar composition, but is weaker.

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* When 'distilled vinegar' is unobtainable, good *household vinegar* may be substituted.

† In the absence of 'distilled water,' pure *soft water*, or other water that has been boiled, may be used; and so in the other formulæ.

6. Take of

Chloride of barium . . . . . 30 grains;
Distilled water . . . . . ½ pint;

dissolve. In the ophthalmia of scrofulous and syphilitic patients. It often affords relief when other washes fail. When the eyes are very irritable, 5 or 6, or even 8 grains of *hydrochlorate of morphia* may be added with advantage.

7. Take of

Sal-ammoniac (pure) . . . . 1 drachm;
Distilled water . . . . . ½ pint;

dissolve. In similar cases to Nos. 1 and 2; also to arrest the progress and prevent the accession of 'styes,' &c. 1 fl. oz. of *distilled vinegar*, or ½ fl. oz. of *rectified spirit* (or both), is sometimes added to it, and renders it more active. When there is much pain and irritation, 5 or 6 grains of *hydrochlorate of morphia*, or 2 or 3 fl. dr. of *wine of opium*, is a useful addition.

8. Take of

Solution of acetate of ammonia, *Rose-water* . . . . . each, 2½ fluid ounces;
Camphor-julep . . . . . 5 „ „

mix. A grateful and useful application to weak and swollen eyes, particularly after ophthalmia.

9. Take of

Hydrochlorate (or 'acetate') *of morphia* . . . . 5 to 8 grains;
Distilled water . . . . . 5 fluid ounces;

dissolve. In pain and extreme irritability of the organ, even during the acute stages of ophthalmia. *Camphor-julep* is often used instead of water. When 'morphia' is unobtainable, 2 or 3 fl. dr. of *wine of opium*, or 3 or 4 fl. dr. of *laudanum*, may be substituted, though inferior to it.

10. Take of

Opium (Turkey; pure) . . . 10 to 15 grains;
Distilled water (boiling) . . ¼ pint;

dissolve.* In the same cases as the last. ½ to 1 fl. oz. of *solution of acetate of ammonia* is often added.

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* A similar eye-water is ordered in the Paris "*Codex*" to be prepared by dissolving 4 gr. of *extract of opium* in 4 fl. oz. of *rose-water*.

11. (Goulard's "Eye Water.")—Take of

Solution of diacetate of lead (Goulard's extract) . . 15 or 16 drops (minims);
Distilled water (none other) . ½ pint;

mix. Uses, &c., similar to No. 4.

12. (Krimer.)—Take of

Hydrochloric acid . . . . . 1 fluid drachm;
Mucilage . . . . . 3 or 4 „
Water . . . . . 6 ounces;

mix. Used to remove minute particles of lime, mortar, or iron, from the eye, which it effects by its solvent action.

Observe.—Eye-waters should be perfectly clear, and free from any floating matter, however trifling. To secure this, it is in general necessary either to filter them through 'bibulous paper,' or a piece of 'clean fine calico,' or to carefully decant them after sufficient repose to allow the impurities to subside. When pure distilled water is used in their preparation, only some of them will require this. In using them, a little of the liquid should be poured into a clean cup, gallipot, or glass, or into the clean palm of the left hand, when the eyes should be thoroughly wetted with it, either by means of a small piece of clean sponge or soft white rag, or the clean tips of the fingers of the right hand. In *all* cases it is advisable to bathe or wash the eyes in *tepid water*, and to wipe them dry, before the application of the eye-water; and, in most cases, this is absolutely necessary to ensure benefit from their use.

Eye Ointments; Eye Salves.—These preparations, even those that are used as cosmetics, or that fall within the range of domestic medicine, in general require such care in their preparation, as to render them unfit articles of domestic manufacture. Slight errors in the proportions of the ingredients, or neglect to reduce the hard or gritty substances which enter into their composition to impalpable powder, has often been followed by very serious consequences, and even blindness. The following are a few advertised proprietary articles of the class, which, like all other nostrums, as a rule, should be avoided by the reader:—

1. (Regent's "Eye-ointment.")—Take of

Sugar of lead . . . } . . . } of each,
Red precipitate . . . } . . . } 1 drachm;
Camphor . . . . . 6 grains;
Fresh butter (washed) . . . . 2½ ounces;

triturate the first two, in a wedgwood-ware mortar, until reduced to impalpable powder; add the camphor, and again triturate. Lastly, add the butter, and mix the whole thoroughly together. Use, &c., as "Marshall's Cerate" (infrà).

2. (Singleton's "Golden Eye-ointment.")—This celebrated and costly nostrum was said, by Dr. Paris, to consist of "lard medicated with orpiment." It has, however, nearly the same composition as the ointment of "nitric oxide of mercury" of the pharmacopœia. Use, &c., as "Marshall's Cerate" (infrà).

3. (Smellome's "Eye-ointment.")—Take of

Verdigris (levigated)	½ drachm;
Olive-oil	1 fluid drachm;

triturate them together, and then add, of

Yellow basilicon	1 ounce.

A popular nostrum in the cases noticed under No. 4 (infrà) especially in those of a scrofulous nature.

4. (Marshall's "Eye-cerate.")—Take of

Sugar of lead	½ drachm;
Calomel	1 ,,
Citrine ointment *.	2 ,,
Palm-oil	5 ,,

and carefully triturate them together, in a wedgwood-ware mortar, as in No. 1. In excoriations of the eyelids, chronic inflammations and ulcerations, blear-eyes, &c.; in each largely diluted, to be safe.

Ointments for the Itch.—The usual treatment of 'Itch' has been noticed elsewhere,† and various lotions, ointments,‡ and pommades, of more or less value in its treatment, will be found under the names of their leading ingredients. Here are a few additional formulæ:—

1. (French Hospital.)—Take of

Chloride of lime	1 drachm;
Rectified spirit	2 fluid drachms;

rub them together, add of

Sweet-oil	½ fluid ounce;

* Ointment of nitrate of mercury.

† *Vide* pp. 216-7 (*antè*).

‡ By "itch-ointment" is commonly understood *sulphur-ointment*.

Soft-soap . . . . . 2 ounces;
Oil of lemon . . . . . ½ fluid drachm;
mix perfectly, and then further add, of
Common salt . . . } . . . { of each,
Sulphur . . . . . } . . . { 1 ounce.
Cheap, very effective, and much less offensive than sulphur-ointment.

2. (Le Gros.)—Take of
Iodide of potassium . . . . . ½ drachm;
Lard . . . . . 1 ounce;
mix. Cleanly, harmless, and effective.

3. (Robertson).—Take of
Soft-soap . . . . . 1 ounce;
Rum or (*proof-spirit*) . . . . 1 tablespoonful;
Chloride of lime (dry and good) . ¼ ounce;
mix, and add of
Lard . . . . . 2 ounces.
Said to be a very effective and cleanly remedy.

3. (Swediaur.)—Take of
Staves acre-seed (powdered) . . 1 ounce;
Lard . . . . . 3 „ *
digest by the heat of a water-bath, and strain, with expression. The formula of the Brunswick Ph. is similar. Cleanly, free from offensive odour, and said to be infallible. It is also very effective in destroying pediculi; but, for both purposes, an infusion of the seeds, used as a lotion (or a hand-bath), is preferable.

4. (Voght.)—Take of
Chloride of lime (dry) . . . . 2 drachms;
Burnt alum (in fine powder) . . 3 „
Lard . . . . . 9 „
mix thoroughly. Before use, further mix it with an equal quantity of soft-soap.

The above, as well as other itch-ointments, are used by well rubbing them into the part affected every night, or night and morning. Their efficacy, and consequently the number of applications required, depend greatly on the manner in which this is done. They should only be applied to a limited portion of the body at once. Even with

* Preferably, 4 ounces.

sulphur-ointment, "not more than one-fourth part of the body should be covered with it at a time."* No. 3 had better be diluted with its own weight of *lard* before use. The following formulæ are those of well-known *Quack* (or proprietary) *medicines*:—

5. (Bailey's "Itch Ointment.")—Take of

Alum (in very fine powder)	}	{ of each, 1½ ounce;
Nitre (do.)	} . .	
Sulphate of zinc (do.)	}	
Vermilion		½ ounce;
Sweet oil		¼ pint;

triturate them until perfectly mixed, then add, of

Lard (softened by heat)		1 pound;
Oils of aniseed, lavender, and origanum	. .	q. s. to perfume.

6. (Bateman's "Itch Ointment.")—The nostrum vended under this name is composed of—

Pearlash	1 ounce;
Rose-water	3 „
Sulphur	1 pound;
Vermilion	3 drachms;
Lard	1½ pound;
Oil of bergamot	1½ fluid drachm.

The true formula of Dr. Bateman is, however, as follows:—

Carbonate of potash		½ ounce (Troy);
Rose-water		1 fluid ounce;
Red sulphuret of mercury		1 drachm (Troy);
Sublimed sulphur	}	{ of each,
Lard	} . .	11 ounces (Troy);
Oil of bergamot		1 fluid drachm.

7. (Jackson's "Itch Ointment.")—Take of

Palm-oil	}	{ of each, 1 ounce;
Sulphur	} . .	
White hellebore	}	
Lard		2 „

mix. Should be used with caution.

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* Dr. A. T. Thomson.

8. (Nugent's "Itch Ointment.")—Take of

Corrosive sublimate (in very fine powder)	½ drachm;
Orris-root (do.)	1 „
White lead (genuine)	¼ ounce;
Palm-oil	½ „
Lard	2½ „

mix by careful trituration. Should be used with caution.

Itch Lotions.—

1. (Chlorinated.) See "Lotion of Chloride of lime" (antè).
2. (Sulphuretted.) See "Sulphuretted Lotions" (antè).
3. (Righini.)—Take of

Chloride of lime	½ ounce;
Water	1 pint;

to the filtered solution (vide pp. 411-2) add of

Tincture of iodine	1 to 2 fluid drachms.

The above, used twice or thrice daily, are effective remedies for itch; the last particularly so. They have the advantage of being cleanly, leaving little or no smell behind, and not staining the linen.

Itch Powder.—1. *Sulphur*, or equal parts of *sulphur* and *potato-farina*, strongly scented with *oil of bergamot*. Used as a 'dusting-powder' in itch and some other like skin-diseases, being more cleanly than ointments. It seldom fails to cure slight cases. Other like compounds may be made.

2. ("Poudre de Pihorel.")—Take of

Sulphuret of calcium (in fine powder)	2 ounces;
Potato-farina	3 „

mix, and keep it in a corked bottle. An effective dusting-powder in itch. It should be used with care, and not too freely; and, if it produces irritation, it should be diluted with some more farina.

Moles; Mother-marks; Nævi.—As an addendum to the incidental remarks on these at page 217, it is proper to mention, that what is said there merely refers to those of a superficial and trivial nature, of which the vascularity does not materially differ from that of other portions of the surface, and which exhibit no disposition to increase, and cause no personal inconvenience beyond that which may arise from their appearance. Such are the stains and slight elevations called "currant," "grape," and "port-wine marks," and

included under the general terms, "mother-marks" and "moles" by the vulgar. Vascular nævi that, soon after their appearance, exhibit a disposition to spread, sometimes degenerate into bloody tumours, or, at length, even without this, give way, and jeopardize the safety of the patient by the rapid hæmorrhage which ensues.

"When," observes a certain eminent surgeon, "nævi are of very small size, and stationary, they are best left alone; when they produce deformity, however, and especially when they show an inclination to grow, they immediately become objects of medical, or rather, surgical interference. Mr. Abernethy found that the gentle, continuous pressure of a *bandage*, and the application of a *cold lotion*, sufficed in certain cases for the cure of nævus." "The application of a point of *lunar caustic* to the centre of a small nævus, in the earliest stage of its growth, often suffices to make it disappear; and painting the surface over with a *solution* of *lunar caustic*, or of *iodine*, sometimes" does the same. "When the growth is of larger size these means become inapplicable, and other and more active measures" are had recourse to. "The old plan was to remove them with the knife. The chief objection to this" is the "formidable hæmorrhage which is so apt to attend the operation. The *ligature* appears to be the means relied on most generally at the present day." "Nævi have sometimes been successfully treated by being repeatedly, and in different directions, transfixed with a couching needle;" and also "by being injected with some stimulating fluid—weak aqueous *solutions* of *ammonia*, *iodine*, or *nitric acid*, but fatal accidents from this procedure having happened, in one or two cases, it has fallen into discredit." The common 'mole' often yields to a small *blister* when other applications fail; but this must not be attempted with vascular nævi, even though of a small and trivial character.

Croton-oil, under the form of pommade or ointment,* and *potassio-tartrate of antimony*, under the form of paste or plaster, have each recently been successfully employed, on the Continent, for the removal of ordinary moles and nævi. The following is the mode of using the latter adopted by an eminent French surgeon:—Take of

Tartar-emetic (in impalpable powder)	15 grains;
Soap-plaster (emplastrum saponis)	1 drachm;

* *Vide* pp. 507-8 (*antè*).

and beat them to a paste. Apply this paste to nearly a line in thickness (not more), and cover the whole with strips of gummed paper. In four or five days eruption or suppuration will set in, and, in a few days after, leave, in place of the nævus, only a very slight scar.* Croton-oil ointment effects the same, but less completely unless repeated, by producing a pustular eruption, which, however, does not permanently mark the skin.†

Insects (Parasitic), &c.—A few words in reference to some of these that trouble man, will probably be useful to some of my readers.—

The presence of "pediculi" about the person, or the clothes, is almost a certain indication of either dirty habits and laziness, or of contact with persons infested with them. Those who attend to the duties of the toilet with ordinary care, and who change their linen and under-clothing sufficiently often, are utter strangers to them. It is only on the dirty and degraded, or the helpless, or those that mix with them, that they are ever seen.

Three species of these parasites infest the human body :—

1. "Pediculus humanus capitis," or head-louse. Its habitat is the hairy scalp, beyond which it does not voluntarily extend its ravages. The daily use of a clean, stiff hair-brush, and the occasional application of soap-and-water, are incompatible with its existence. Oily and fatty matter, particularly under the form of scented hair-oil and pommade, not merely destroy it, if present, but prevent its approach.‡

2. "Pediculus humanus corporis," or body-louse. It resides on the surface of the body, and is distinguished from the last by being white and nearly immaculate. The occasional use of the bath, or

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* Vide "*Journ. of Prac. Med. and Surg.*," also "*Med. Circ.*," 1862.

† Formerly 'Moles' must have been regarded as ornamental, rather than otherwise, for Shakespeare says :—

" On her left breast
" A *mole* cinque-spotted, like the crimson drops
" I' the bottom of the cowslip." (Cymbeline, a. i., s. 2.)

And again :—

" Under her breast
" (Worthy the pressing,) lies a *mole*, right proud
" Of that most delicate lodging." (Cymb., i. 4.)

‡ So well is this known, that, in many of our large boarding-schools, the free use of soap and-water to the head, once a week, followed by the rather liberal application of pommade, or oil, by each pupil, is a rule of the establishment which is rigorously enforced, and with perfect success.

the free application of soap-and-water, with frequent change of the linen,—or, in other words, the exercise of ordinary personal cleanliness—is all that is necessary to prevent the formation of these parasites, or to remove them when caught by contact with those infested with them.*

3. "Pediculus pubis," or crab-louse, the latter name having been given to it on account of the cheliform structure of its legs. Its habitat is the pubis, but, when not checked, it rapidly extends itself to the arm-pits, and other hairy parts, until it reaches the scalp. It exists only on the most dirty, permanently degraded, and vicious, from whom it occasionally extends to others who come into immediate contact with them. It is the most malignant of the three species, and frequently burrows so deeply into the skin as to cause intense irritation and annoyance, and to be with difficulty dislodged. A wash formed by dissolving 20 to 30 grains, each, of *corrosive sublimate* and *sal-ammoniac*, in 1 pint of *distilled* or pure *soft-water*, used freely twice or thrice daily, is a cleanly and most effective application for dislodging and destroying this species of pediculi.†

During illness, and also shortly before its accession, a solitary pediculus, or even two or three, or more, will sometimes suddenly make their appearance, in the most unaccountable way, on the person of even the most cleanly. An occurrence of the kind has hence come to be regarded by the weak-minded and superstitious as a prognostic of the approach of sickness, or of its increase, if already present.

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* When these pediculi obtain a footing in the clothing, it is often very difficult to eradicate them. Like the "acari" (ticks, mites, &c.), they are so tenacious of life, as to resist, for some time, the action of boiling water, and to live, with comparative impunity, in alcohol. The 'nits' (eggs) possess even greater powers of vitality than the developed animal, and are so securely cemented to the hair or fibres on which they are deposited, that even boiling soap-and-water often fails to remove them. Hence it is that they often reappear in a week or two, on the same articles of clothing, after they were, apparently, completely removed. A dry heat, somewhat above the boiling point of water, however, effectually destroys them. Aware of this, the officials in many of our workhouses expose the infested clothes of paupers, for some time, in a heated oven, provided for the purpose. Among the vulgar, the same object is sometimes effected in a less delicate manner; the garment being placed in a pie-dish, covered with a thin crust of flour-and-water, and then sent to the bakehouse. Improbable as this may appear, it is an actual fact.

† *Tobacco-water*, the *decoctions* of *staves-acre-seeds* and *white hellebore*, the *ointments* of *mercury* (mercurial ointment, blue o.), *sulphur*, and *white precipitate*, &c., are frequently employed to destroy common pediculi, but they should be used with caution. The common remedy of the vulgar—*white precipitate* mixed up with a little *butter* or *fat*—and so freely applied to the heads of young children, often produces serious consequences, and is always far from safe.

There is a disease—the 'phthiriasis' and 'morbus pediculosus' of nosologists—in which lice breed on the body, puncture and burrow in the skin, and produce small but irritating ulcers, notwithstanding every effort be made by the nurse and physician to exterminate them. It is regarded as symptomatic of a bad state of body, or of other diseases to which the attention should be directed. In addition to extreme cleanliness, the best local treatment appears to be warm sea-water baths.

That agile and sometimes troublesome little insect the "pulex irritans" (Linn.), or common flea, like many others, is exterminated, or driven away, by strong fumes and odours, be they agreeable or disagreeable to man. Aromatics and perfumes are particularly offensive and destructive to it, and tobacco-smoke is highly so. It appears to be a dainty little animal, as it prefers clean linen and woollens as a residence, and the pure blood of females and children for food. Smokers and chewers, whose clothes and blood are tainted with tobacco, it carefully avoids. Its occasional presence on the person must, therefore, not be regarded as a sign of personal uncleanliness, although it undoubtedly is so of the domestics who attend to our bedrooms. Nor is it remarkable for its respect of persons, since it has the audacity to occasionally frolic amid the rich silks, velvet, and lace of rank, and even royalty, with as much agility and freedom as it does in the humbler calicoes and woollens of plebeians.* The personal use of eau de Cologne, lavender-water, or other scent, and keeping a little of any of the stronger aromatics in one's wardrobe and drawers,† will, in general, effectually banish the "pulex irritans" from our presence, and preserve us from the annoyance of all except an occasional importunate intruder.

Smoke, and *strong fumes* of any kind, effectually drive away "gnats" and "musquitoes" from any space within their influence. Merely burning a piece of brown paper in a room in which they are, will cause them soon afterwards to 'settle,' and remain in an inactive or dormant state for some time. In those parts of the New World where musquitoes abound, tobacco-smoke is commonly had recourse

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* I could relate some amusing illustrative anecdotes. Probably the reader may remember that of a collection of "learned fleas," one of which escaped during a private exhibition, and the subsequent incidents. It is, however, right to mention, that the court where this occurred was a German one.

† A few cloves or allspice, or some shavings of Russia-leather, are particularly effective in keeping away 'moths' and 'other insects.' Books bound in genuine Russia-leather, unlike others, are never attacked by insects.

to, in-doors; and large fires made of brushwood or underwood, out of doors. Old travellers compelled to bivouac during the season in which they are troublesome, are very careful to keep close on the 'lee' of these fires. In the houses of the wealthy, and in large hotels, the beds, at the same period, are surrounded with what are called "musquito-nettings." Smearing the face, and other exposed portions of the body, with *oil* or *fat*, is another effectual method commonly practised to keep off musquitoes.*

The "cimex lectularius" (Linn.) or bed-bug, now a common pest in the close, crowded, and old and dirty houses of our larger towns, is noticeable here chiefly on account of the annoyance and disfigurement its bites inflict. The latter, if accompanied by much irritation, may be wetted with *vinegar*, to which a little *sal ammoniac* may be added, or not, at will; or with *weak Goulard-water*, or *Gowland's lotion*. 'Cimices,' like the preceding insects, though less so, have a great aversion to strong odours and narcotics, and particularly to tobacco and its fumes.† The only certain course of action, however, is either the avoidance of houses and rooms in which they exist, or their thorough extermination by any of the means now familiar to every practical housewife.‡

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* An untravelled Englishman would scarcely believe the annoyance and consequences the attacks of these insects often produce. I have seen persons after a night passed, without the usual precautions, in some moist or low-lying district, in summer, who have risen with the face enormously swollen, the features almost indistinguishable, sick, giddy, and blind, or nearly blind; the symptoms greatly resembling those of poisoning with mussels or other shell-fish. This state gradually subsides during several hours. Musquitoes seem particularly patronizing to new arrivals from England.

† During my surveys among the dwellings of the poor, I have frequently noticed that the husband, who "smoked hard," and consequently had a blood taint of tobacco, was not attacked by these "disturbers of sleep;" whilst the wife and children sleeping in the same bed, or room, who were guiltless of tobacco in any form, were marked, and even disfigured by them.

‡ Among these, nothing is more cleanly and effective for floors, bedsteads, and other pieces of furniture to which it is applicable, than *boiling water* poured immediately from the spout of the kettle. The large furniture-brokers now often use *steam* for the purpose. Dumont's Patent "Insecticide" or "Vermin Killer," as sold in small India-rubber balls or balloons, is also very cleanly, effective, and inexpensive, and is applicable to even the most delicate papered walls and pieces of furniture. It consists of the powdered *inner petals* of the *red chamomile*. Finely powdered *capsicum*, *squills*, *sulphur*, and *black-pepper*, may be used in the same way, their power decreasing in the order here given. *Coal-tar naphtha*, *paraffine-oil*, and *oil of turpentine*, used as washes, are also effective. The proper time to attack these pests is early in March, before they are revived from the dormant state by the warm weather.

The following is one of many popular remedies for pediculi in use on the Continent :—

Poudre des Capuchins.—A mixture of equal parts of *cevadilla-seed*,* *parsley-seed*, *stavesacre-seed*, and *tobacco*, each in fine powder. Used as a dusting-powder to destroy pediculi. It should never be applied to the denuded or ulcerated scalp; and, to be safe, should be always more or less diluted with hair-powder, or starch-powder.

Small-pox; Pock-marks; Pitting.—In addition to what has been said at pp. 220–4, it may be new and interesting to some of my readers to be informed, that the prevention of "pock-marks," or "pitting" in small-pox, has engaged the attention of some of the leading physicians and surgeons of Europe and America, during the past few years. The following is the treatment adopted and recommended by several of these authorities :—

Bell (Dr. Joseph), applies *lime-water liniment* † to the pustules, a plan also approved of by the "*Amer. Med. Journ.*," and the "*Presse Méd. Belge.*"

Bretonneau adopts the plan of Serres and Velpeau.

Briquet (M.) employs *mercurial ointment* mixed with 1-4th part of *powdered starch*, either in the form of ointment or plaster.

Debout (Dr.) covers each pustule, separately, by means of a camel-hair pencil or feather, with *collodion*, in each 5 drachms of which, 8 grains of *bichloride of mercury* have been previously dissolved. This is also approved of by the Editor of the "*Journ. de Chimie Méd.*"

Midavene applies *sulphur-ointment*.

Nélaton forms a mask over the face with imbricated strips of *mercurial plaster*.

"*Presse Méd. Belge*" remarks that *collodion* and *glycerine*, *mercurial ointment*, and *tincture of iodine*, are each occasionally successful, but "we (the Editor) prefer Dr. Bell's treatment with *lime-water liniment*."

Serres and *Velpeau* puncture the pustules and cauterize them with *fused nitrate of silver* (lunar caustic).

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* The "sabadilla" of the Edin. Ph., also spelled cebadilla, cevadilla.

† This is formed of *lime-water* and *olive-oil*, equal parts, shaken briskly together until they are thoroughly mixed.

Tourrière (M.) applies, either as ointment or plaster, a mixture of

Iodide of potassium (in fine powder)	1 part;
Expressed oil of mace	2 „
Black resin	4 „
Mercurial ointment	8 „

Walkey uses, as "unguentum ectroticum," in a similar way to the last, a mixture formed of

Mercurial ointment	1½ ounce;
Bees' wax . . . . } . . . {	of each,
Black pitch . . . . } . . . {	½ ounce;
Expressed oil of mace	¼ „

mixed together by a very gentle heat.

To *remove* 'pitting' and old 'pock-marks,' simple oil, pommade, or ointment, medicated with *croton-oil*, and of a strength just sufficient to raise a *very slight* pustular eruption,* is probably the safest and most effective and convenient of all the preparations that are employed for the purpose. It has for some years been successfully employed on the Continent, and has there received medical approval. I have myself seen it perfectly succeed, and that to admiration, when every other method has failed. It should be applied at intervals extending over several weeks, as the feelings, experience, and convenience of the party concerned, may indicate, due care and caution being observed the whole time.†

Styptics; Hæmostatics. — Substances which arrest local bleeding. *Creasote*, *tannin* or *tannic-acid*, *strong spirit*, *alum*, *sulphate of iron*, and most of the *astringent salts* and other *astringent substances*, belong to this class. The following are a few preparations of this kind:—

Hæmostatic Powder; Styptic Powder.—1. Take of

Alum (in fine powder) }	
Gall-nuts (do.) . }	equal
Gum-arabic (do.) . } . . .	parts;
Gum-benzoin (do.) . }	

mix.

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* *Vide* "Baldness," &c., pp. 507-8 (*antè*).

† Various interesting notices and extracts on the above subject have, from time to time, appeared in the "*Journ. of Prac. Med. and Surg.*," particularly during 1862; as also, at different times, in the "*Lancet*," "*Med. Times and Gaz.*," "*Med. Circ.*," &c.

2. (Guibourt.) Take of

Charcoal (in fine powder)	. .	of each, 1 part;
Gum-arabic (do.)		
Resin (do.)	. . .	4 parts.

3. (Mialhe.) Take of

Alum (powdered) . .	. .	equal parts.
Gum-tragacanth . .		
Tannin (tannic acid) .		

Used to stop local bleeding, a little being sprinkled or pressed on the part.

The following are nostrums:—

4. (Brocchieri's "Styptic Water.")—*Water* distilled from *pine-tops*. Useless.

5. (Eaton's "Styptic.")—A disguised *solution* of *sulphate of iron*. His "styptic powder" is the same as Helvetius's Styptic. Both were once popular nostrums.

6. (Faynard's "Styptic Powder.")—*Beech-wood charcoal* reduced to fine powder. It was formerly in great repute as an astringent and styptic, in piles, hæmorrhages, &c.

7. (Helvetius's "Styptic.")—This nostrum was originally a mixture of *iron-filings*, in very fine powder, and *cream of tartar*, with sufficient *dragon's blood* to disguise them. It is ordered to be mixed, to a paste, with *French brandy*, before application. Dr. Paris examined a sample sold as "Helvetius's Styptic Powder," and found it to consist of equal parts of *powdered alum* and *dragon's blood*.

Toothache; Odontalgia.—This has been noticed at pages 339-44 (antè). The following formulæ embrace those referred to there, as well as many others, including several "patent medicines" and other nostrums:—

Odontalgic Drops; Toothache-drops; Guttæ Odontalgicæ.*—Preparations of this kind are very numerous. A few of them only can be given here as examples. They are also called *Essences*, and some of them *Balsams*, for the toothache. All of them are applied

* In *empirical* and *domestic medicine*, "drops" are liquid preparations that are taken, or applied, in small quantities that are, or may be, measured by drops. Their number is legion.

to the tooth either with a camel-hair pencil or a feather, or a little wad or folded piece of lint, soft linen-rag, or cotton-wool, which, after being moistened with them, is placed in the tooth, or against it and the immediately adjacent portion of the gum. As nearly all of them contain highly volatile ingredients, as ether, alcohol, &c., they should be kept in closely stoppered or corked bottles, and the mouth should be closed immediately on their application, and kept so for some time. As many of them contain active ingredients, care should also be taken not to swallow them.—

1. Take of

Liquor of ammonia (·880–·885) . 1 part;
Alcohol or *highly rectified spirit* . 3 or 4 parts;

mix. A little *oil of cloves* or of *cajeput*, or of both, is sometimes added. Very effective, if properly applied.

2. Take of

Ether . . . . . } . . { of each,
Alcohol . . . . . } . . { 1½ fluid drachm;
Camphor . . . . . 1 drachm;

dissolve, and add, of

Liquor of ammonia (·880–·885) . ½ fluid drachm;

Very serviceable.

3. Take of

Creasote . . . . . } . . { of each,
Rectified spirit . . . } . . { 1 drachm;
Oil of cloves . . . . . ½ „

mix. Excellent for rotten or decayed teeth.

4. (Dr. Blake.)—Take of

Alum (in fine powder) . . . . 1 drachm;
Sweet spirit of nitre . . . . . 1 fluid ounce;

agitate them together occasionally for an hour. An unchemical mixture, of little value, since the alum is nearly insoluble in the intended menstruum.

5. (Boerhaave's "Odontalgic.")—Take of

Opium . . . . . ½ drachm (Troy);
Camphor (powdered) . . . . 4 or 5 „ („);
Oil of cloves . . . . . 2 fluid drachms;
Rectified spirit (strongest) . . . 1½ fluid ounce;

agitate the mixture occasionally for a week, and, after repose, pour off the clear portion. Often serviceable, and much esteemed by some persons, as toothache-drops.

6. (Dr. Copland.)—Take of

Powdered opium . .	}	{ of each,
Camphor	} . .	{ 10 grains;
Oil of cloves	}	{ of each,
Oil of cajeput . . .	} . .	{ 1 drachm;
Rectified spirit (strongest) . . .	}	{ of each,
Ether	} . .	{ ½ fluid ounce;

mix, and agitate the bottle occasionally for a day or two; as the last.

7. (Cottereau.)—A nearly saturated *ethereal solution of camphor* to which as much of the strongest *liquor of ammonia* is added as can be without 'clouding' the liquid. If the latter occurs, the addition of a few drops of *alcohol* will restore it. A useful remedy.

8. (Dr. R. E. Griffith.)—Take of

Wine of opium * . .	}	
Hoffman's anodyne liquor †	} . .	{ equal parts;
Oil of peppermint (English)	}	

mix. It must be well shaken before use. It is applied as a friction on the gum and cheek, as well as in the common way.

9. (Perry's "Toothache Drops.")—See "Essences" (infrà).

10. (Righini.)—Take of

Creasote	5 drachms;
Rectified spirit	5 fluid drachms;
Tincture of cochineal (strong) .	2 „ „
Oil of peppermint (English) . .	½ drachm;

mix. Resembles No. 3.

11. As "Odontalgic Balsam," No. 1 (infrà), but substituting *highly rectified spirit* for the 'oil of turpentine' there ordered.

Odontalgic Balsams; Toothache-balsams; Balsamic Odontalgic Drops.—These, for the most part resemble, and are applied like, the "odontalgic drops" previously noticed.‡—

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* *Tincture of opium* may here be advantageously substituted for 'wine of opium.'

† *Compound spirit of ether.*

‡ *Vide* page 707 (*antè*).

1. (Smith's "Odontalgic Balsam.") Take of

Rectified oil of turpentine . . .	1½ fluid ounce;
Balsam of Peru	1 ounce;
Oil of cloves . . . }	} of each,
Oil of cajeput . . . }	} 2 drachms;
Opium (in fine powder)	1½ „

digest, with frequent agitation, for a fortnight, and, after repose for a few days, pour off the clear portion.

2. (Van Mons.) Take of

Opium (powdered) . }	} of each,
Camphor . . . . . }	} 4 grains;
Alcohol	3 fluid drachms;

digest, add of

Oil of cloves	1 drachm;
Oil of guaiacum (empyreumatic)	2 „
Oil of nutmeg	6 „

digest, &c., as before.

Odontalgic Elixirs; Tooth-elixirs.—These, when employed to relieve toothache, are applied like the "drops" previously noticed. When used to medicate the gums, they are commonly applied with the tip of the finger, or the brush, either alone, or diluted with an equal bulk, or twice or thrice their bulk, of water. When intended to correct or disguise foulness of the breath, or to perfume it, they are either applied in the way last mentioned, or are diluted with 6 or 8 times their bulk of water, the mixture being then used as a 'rinse' or 'wash' for the teeth and mouth. The following are chiefly nostrums of the first class referred to :—*

1. Take of

Cinnamon . . . . }	} of each,
Cloves . . . . . }	} 1½ drachm;
Nutmeg (grated) . . }	
Vanilla	½ „
Camphor	15 grains;
Lump-sugar (hard, dry)	1½ ounce;

pound and rub them together in a mortar until reduced to powder, put this into a bottle, add of

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* Those used as pure cosmetics, will be found under "Tooth Cosmetics" (*ante*).

Tincture of pellitory . . . . . 2 fluid ounces;
Proof spirit, or *French brandy* (strongest) . . . . . ½ pint;

digest, with agitation, for 8 or 10 days, and, after repose, decant or filter. For toothache, foul breath, sore and scorbutic gums, &c.

2. (Desforges.) Take of

Gum-guaiacum (in coarse powder) 2½ ounces;
Cinchona-bark (bruised), *Pellitory-root* (do.), of each, 1½ ounce;
Cloves . . . . . ¼ „
Yellow rind of oranges, *Gum-benzoin*, *Hay-saffron*, of each, 1 drachm;
Rectified spirit . . . . . ½ pint;
French brandy . . . . . ¼ „

mix, &c., as the last. Uses, the same.

3. (Lefandinière's "Elixir for the Teeth and Gums.") Take of

Guaiacum-raspings, *Cloves*, of each, ¼ ounce;
Pellitory-root (bruised) . . . . 1 drachm;
Nutmegs (grated) . . . . . ½ „
Oil of rosemary, *Oil of bergamot*, of each, 6 or 7 drops;
Brandy . . . . . ½ pint;

digest for a week, with agitation, and then decant or filter. In toothache, scorbutic gums, fœtid breath, &c.

4. ("Elixir of Roses.") Take of

Eau de rose . . . . . 2 fluid ounces;
Spirit of horse-radish, *Spirit of scurvy-grass*, of each, 1 ounce;
Camphor (powdered), *Cochineal* (do.), of each, 12 grains;
Otto of roses . . . . . 3 or 4 drops;
Sugar-candy (powdered) . . . ½ ounce;

digest for a week, decant, and strain through muslin. In scurvy of the gums, and to perfume the breath.

5. (Vining's "Tooth-elixir.") Take of

Cinnamon (crushed) . . . . . ¾ ounce;
Unbleached Jamaica-ginger (grated) ½ „

Cloves	}	{ of each,
Hay-saffron	{ · ·	{ 1 drachm;
Oil of peppermint . .	}	{ of each,
Oil of orange-peel . .	{ · ·	{ ½ drachm;
Otto of roses		10 drops;
Rectified spirit		½ pint;

digest 15 days, as before. For toothache, foul breath, &c.

Odontalgic Essence; Toothache-essence; Essentia Odontalgica.—1. Take of

Hydrochlorate of morphia . . .		30 grains;
Concentrated tincture of pellitory (made with rectified spirit). .		2½ fluid ounces;
Oil of cloves	}	{ of each,
Chloroform	{ · ·	{ ½ fluid ounce;

agitate them together until mixed. Used as "toothache-drops," observing to shake the bottle well before use, and to keep it closely corked or stoppered, and in a cool place. An excellent remedy.

2. (Redwood.) Take of

Pellitory (bruised)	6 ounces (Troy);
Extract of belladonna	2 drachms („);
Rectified spirit	1 pint;

digest for 14 days, press, filter, and add of

Hyponitrous ether (pure) . . .	1 ounce (Troy);
*Oil of wine**	½ „ („);
Oil of cloves	2 drachms („);

mix well, and preserve it, &c., as the last. An excellent remedy.

3. (Blake's "Toothache Essence.") — This is said to be composed of 1 part of *alum* (in very fine powder), and 5 parts of *sweet spirit of nitre;* but how they are combined appears a mystery.†

4. (Cottereau's "Odontalgic Essence.") — A nearly saturated *ethereal solution of camphor*, mixed with $\frac{1}{10}$th to $\frac{1}{12}$th of its volume of *liquor of ammonia* (sp. gr. ·880–·882). A very useful preparation.

5. (Lamazurier's "Odontalgic Essence.") — *Cherry-laurel water* holding in solution 1 grain of *acetate of morphia* per ounce. A teaspoonful is added to half a wine-glassful of warm or tepid water, and the mouth well rinsed with the mixture.

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* Otherwise called "Sweet Oil of Wine," "Ethereal Oil," and "Sulphatic Ether."

† *Vide* "Blake's Toothache Drops," page 708 (*antè*).

6. (Perry's "Essence for the Toothache.") — A *concentrated tincture of pellitory* (made with about equal parts of *ether* and *rectified spirit*) largely charged with *camphor*. Though a nostrum, it is an excellent preparation.

7. (Pieste's "Toothache Essence.")—This is *laudanum* mixed with about twice its volume of *liquor of ammonia* (·960). Applied on lint, like other toothache-drops, it often rapidly relieves the pain.

PASTES FOR THE TOOTHACHE; ODONTALGIC PASTES; PASTÆ ODONTALGICÆ; PÂTES ODONTALGIQUES.—1. Take of

Root-bark of pellitory	1 drachm;
Hydrochlorate of morphia . . .	5 grains;

triturate until reduced to fine powder, then add, of

Honey (finest, thick)	3 drachms;
Oil of cloves (or of *cajeput*) . .	20 drops;
Concentrated tincture of pellitory.	q. s.;

and form the whole into a smooth paste. Very effective.

2. Take of

Pellitory-root (in fine powder) . . .	equal parts;
Mastic (do.)	
White sugar (do.)	
Chloroform	q. s.;

make them into a paste, and at once put it in a stoppered bottle. It must be kept in a cool place.

3. (De Handel's.) Take of

Powdered opium	½ drachm;
Camphor (powdered) .	of each,
Extract of belladonna . .	1 drachm;
Extract of henbane .	
Oil of cajeput . . .	of each,
Tincture of cantharides . .	15 drops;

mix, adding distilled *lettuce-water*, q. s. to form a paste.

4. (Rust's.) Take of

Powdered opium . .	of each,
Extract of henbane . .	10 grains;
Powdered pellitory-root	of each,
Extract of belladonna . .	20 grains;
Oil of cloves	15 drops;

mix thoroughly.

5. (Turton's.) Take of

Pellitory-root (powdered)	}	of each,
Lump sugar (do.)	}	1 drachm;
Camphor (do.)		30 grains;
Concentrated tincture of pellitory		q. s.

to form a paste.

6. (Vohler's.) Take of

Dragon's blood (powdered)		1 drachm;
Opium (do.)		2 „
Gum-mastic (do.)	}	of each,
Gum-sandarach (do.)	}	4 drachms;
Oil of rosemary		25 drops;
Tincture of opium		q. s.

to form a paste.

A small quantity of one of the preceding is inserted in the hollow of the aching tooth, or placed against the corresponding gum. They must on no account be swallowed.

Odontalgic Tinctures; Toothache Tinctures; Tincturæ Odontalgicæ.—These are applied in the same way as the "tooth-ache-drops" previously noticed. They are also often called "Essences," &c. The following are a few examples:—

1. (Tincture of Pellitory.)—Take of

Pellitory root (bruised)	1 ounce;
Rectified spirit	¼ pint;

digest a week, with frequent agitation, then express the tincture, and, after repose, decant or filter it. Excellent as "toothache-drops"; also, diluted, as a mouth-wash in toothache and face-ache.

2. (Ethereo-alcoholic Tincture of Pellitory.)—Take of

Pellitory (bruised)	1 ounce;
Ether (pure)	2 fluid ounces;
Rectified spirit (strongest)	3 „ „

digest them together, in a stoppered bottle, in a cool place, as before, but avoid filtration. Some persons use equal parts of ether and spirit, but the product does not then keep so well. An excellent remedy for toothache and face-ache, more active than the preceding, often giving almost immediate relief in the former. Two similar tinctures are in the Paris "Codex." The addition of a little *oil of cloves* or of *cajeput* is sometimes made to them.

3. (Ethereal Tincture of Pellitory.)—Take of

Pellitory (bruised) . . . . . 1 ounce;
Ether (pure) . . . . . 5½ fluid ounces;

and proceed as before. Very active, but not so convenient as the last, from its extreme volatility. It must be kept in a well-stoppered bottle, and in a cool place.

4. (Compound Tincture of Pellitory.)—Take of

Pellitory (bruised) . . . . . 4 drachms;
Camphor . . . . . 3 „
Oil of cloves . . . . . 2 „
Opium (powdered) . . . . . 1 „
Rectified spirit (strongest). . . 6 fluid ounces;

digest for 8 days. This is nearly similar to Prof. Brande's formula given below. The product is a most serviceable form of 'toothache-drops.'

5. Take of

Tincture of opium . . . . . 2 fluid drachms;
Ether . . . . . 4 „ „
Oil of cloves . . . . . ½ „ „

mix, with agitation, and shake it each time before use. The product is a favourite form of toothache-drops with many persons, and represents the composition of several odontalgic nostrums.

6. Take of

Creasote . . . . . 1 drachm;
Chloroform . . . . . 2 „
Rectified spirit . . . . . 3 fluid drachms;

mix, &c., as the last. Very serviceable in toothache arising from caries.

7. (Brande's "Tooth Tincture"; Brande's "Odontalgic Essence.")—1. Take of

Pellitory of Spain (bruised) . . 1 ounce (Troy);
Camphor . . . . . ¾ „ („);
Opium . . . . . ¼ „ („);
Oil of cloves . . . . . 2 fluid drachms;
Rectified spirit . . . . . ½ pint;

digest, with agitation, for 10 days, then decant the clear portion, express and filter the rest, and mix the two together. (Vide No. 4.)

8. (Dr. Collier.)—Take of

Pellitory (bruised small) . . .	2 drachms;
Camphor	1½ „
Opium (powdered)	½ „
Oil of cloves	1 fluid drachm;
Rectified spirit	¼ pint;

digest a week.* As the last. It must not be swallowed.

9. (Niemann.)—Take of

Lady-birds †	60 to 80 in no.;
Rectified spirit	1 fluid ounce;

rub them together, digest 7 or 8 days, and filter.‡

10. ("Paraguay Roux"; Compound Essence of Para Cress Compound Tincture of P. C.)—Take of

Pellitory-root (bruised small)	}	{ of each,
Leaves and flowers of Italian elecampane§	} . .	{ 1¼ ounce;
Flowers of Para-cress ‖		5 ounces;
Rectified spirit		½ pint;

macerate for a fortnight, then press out the tincture, and let it either 'fine down' by repose, or filter it. Exceedingly stimulant. A fashionable and excellent application in toothache, &c.; used as the other drops and essences.

11. (Vicat's "Anodyne Odontalgic.")—Take of

Powdered opium	1 drachm (Troy);
Powdered camphor	½ „
Ammoniated alcohol (caustic) . .	¾ fluid ounce;
Spirit (fully proof)	1½ „

digest in a stoppered bottle, with agitation, for some days, and, after repose, decant the clear portion. Used as "drops" in toothache,

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* Dr. Collier orders 8 fl. oz. of spirit, instead of 5, as given above; but the product is then too weak to be effective.

† The beautiful little winged bug, with reddish spotted elytra, sometimes seen in our gardens. It is the "coccinella septimpunctata" of Linnæus.

‡ Lady-birds were formerly in great repute as an odontalgic, and still are so in some parts of Europe. One of these insects crushed and placed in the hollow of a tooth, or against the gum in other cases, was formerly a common remedy in toothache.

§ "Inula bifrons" (Linn.).

‖ "Spilanthes oleracea" (Jacq.).

in which it is often very serviceable, particularly when it arises from caries; also as a lotion in face-ache, and to the temples and forehead in headache.

WART POWDER; CORN POWDER; COSMETIC VEGETABLE CAUSTIC; &c.—1. *Ivy-leaves* dried and ground to fine powder. A popular and useful remedy for warts and soft corns. The part having been moistened with strong *vinegar*, a 'pinch' of the powder is sprinkled on it, and then bound on with a strip of rag.

2. (Hunter's "Wart and Corn Powder.")—This is a mixture of equal parts of *savine* and *verdigris*, each in fine powder. Used dry, as the last (without vinegar), for either warts or corns (soft or hard).*

The following remarks and formulæ relate chiefly to articles and preparations already referred to in the body of this work:—

ABERNETHY MEDICINES.—The popular name of a mild *mercurial pill*,† to be taken overnight, followed by an *aromatized black-draught*‡ in the morning. The proper quantity of the former, for an adult, is 3 to 6 grains; that of the latter, 1 to 1½ fluid ounce. It has, however, long been the practice to replace a portion of the 'mercurial pill' with a little *compound extract of colocynth*,§ or *compound colocynth-pill*,‖ by which the action of the medicine is rendered more certain, and also improved. The proportions generally adopted as the best by those who prepare and sell the pills, are—

Mercurial pill		3 grains;
Comp. extract of colocynth or *Comp. colocynth-pill* .	. .	2 to 3 grains;

for a dose.

The formulæ adopted by the druggists for "black-draught" somewhat vary. It is essentially an infusion of *senna-leaves*, in each

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* *Vide* pp. 372-4, 383-7.

† "Pilula hydrargyri," Br., L., E., and D. Ph., popularly called *blue-pill*.

‡ "Compound senna-mixture" (*Mistura sennæ composita*, *Mistura aperiens*, Lat.).

§ "Extractum colocynthidis compositum," Br. Ph., and L. Ph. 1836.

‖ "Pilulæ colocynthidis compositæ," Ph. L. 1851; "Pilula colocynthidis composita," Br. Ph. This is the article popularly known as "pill of Cochia." The last two preparations are (extract and pill) nearly similar in composition, and possess the same medicinal properties. They are both excellent aperients.

ounce of which about 3 drachms of *Epsom-salt* have been dissolved. It cannot be conveniently prepared in a very small quantity at a time. One of the best formulæ at present used by the West-end houses, is—

Tinnevelly senna (best Indian) . 4 ounces;
Boiling distilled-water . . . . 1 pint;

place them in a covered vessel, and digest for three or four hours in a hot place, frequently stirring; next press out the liquor by means of a tincture-press, and dissolve in the 'expressed liquor,' whilst hot, of

Sulphate of magnesia (Epsom-salt) 5 ounces.

When the whole has become cold, pour off the clear portion (or strain through flannel), and add to it, of

Compound tincture of senna . . 4 fluid ounces;
*Aromatic spirit of ammonia** . . 1 „ „

mix, and keep it well-corked in a cold place.†

Mr. Abernethy's formula is—

Sulphate of magnesia . . . . 1 ounce;
Manna . . . . . ½ „
Distilled water (boiling) . . . 4 fluid ounces;

mix. To the solution, when cold, add of

Infusion of senna . . . . . 1½ fluid ounces;
Tincture of senna . . . . . ½ „ „
Mint-water . . . . . 2 „ „

This produces the true "Abernethy Black-draught," which is now never met with in the shops. The 'manna' and 'mint-water' make it apt to produce nausea, and to 'rise in the stomach.'

The "black-draught" of our hospitals, where it is usually prescribed and talked of as "*house-medicine*," is commonly prepared as follows:—

Senna . . . . . } . . { of each,
Mint . . . . . } { 1½ ounce;

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* That is, 'spirit of sal volatile.' Instead of this, 1 drachm of *sesquicarbonate of ammonia*, may be used; but the product is scarcely so pleasant.

† I have reduced the quantities in the formula, for the convenience of the reader. The product is far from disagreeable, and produces none of the unpleasant effects often following the use of the common black-draught. The addition of two or three *cloves*, and a pinch of *mustard-seed* (bruised), will increase its keeping qualities. Mr. Squire recommends the addition of 1 gr. of *nitrate of potassa* to each ounce, for the same object.

Boiling water . . . . . 1 quart;
Epsom-salt . . . . . 8 ounces;

digest.*

The *occasional use* of these so-called "Abernethy Medicines" seldom fails to prove highly beneficial to the plethoric, bilious, and dyspeptic, and to free-livers and smokers generally. In nearly all ordinary cases of constipation, headache, nervousness, &c., arising from deranged stomach or liver, they will be found of great service. Persons who object to take 'black draught' will find a dose of *castor-oil, Seidlitz-powder*, or any other mild purgative medicine that may be more agreeable to them, equally efficacious. Indeed, if none be taken in the morning, the overnight pill will generally, of itself, act slightly on the bowels. One precaution only is necessary in the use of the pills, and which applies equally to all 'mercurials.' That is — old or sour liquor, vinegar, pickles, fruit, and other articles containing acid, should be avoided on the night on which one of the pills is taken. If this be not done slight uneasiness and griping may ensue.†

Aperients.—Under this head are commonly classed all those substances and agents which, in moderate doses, gently, but completely, open the bowels; and which, in this respect, rank between simple 'laxatives' on the one hand, and the stronger 'purgatives' and 'cathartics' on the other. Among these may be named, as useful examples,—

Aloes‡ . . . . in doses of 2 to 7 grains;[P]

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* The product, like that of the last formula, is very apt to produce nausea, and to offend the stomach; and from this, coupled with its rough action, owing to the large doses in which the nurses commonly administer it, the patients seldom willingly take it a second time.

† For the history and further particulars respecting the above medicines, *vide* the Author's "*Cyclopædia*," 4th ed., p. 2; also the articles *Infusions, Mixtures, Pills*, &c., in the same work.

‡ It should be combined with a little *Castile-soap* or *aromatics*, and preferably with both. 'Socotrine' and 'hepatic aloes' are the kinds which alone should be employed. Barbados aloes, and the other kinds, are stronger, apt to gripe, and, by frequent use, to occasion hæmorrhoids ('piles').—*Aloes* is more frequently taken than, perhaps, any known purgative. It enters into the composition of the majority of the aperient medicines prescribed by the faculty, and it forms the principal ingredient of nearly all the advertised and most popular 'purgative,' 'antibilious,' 'stomachic,' 'vegetable,' and 'universal pills,' of the nostrum-mongers. The fact of *aloetic pills* not acting until 8 or 10 hours after being swallowed—so that, if taken

Castile-soap * . .	in doses of	5	to 25 grains;	P
Compound extract of colocynth .	,,	3½ ,,	12 ,,	P
Compound colocynth-pill †. . . .	,,	3½ ,,	12 ,,	P
Compound rhubarb-pill ‡	,,	5 ,,	15 ,,	P
Pill of aloes with myrrh § . . .	,,	5 ,,	15 ,,	P
Castor-oil . . .	,,	¼ ,,	1 ounce;	
Salad-oil or *olive-oil*	,,	½ ,,	2 ,,	
Confection of senna ‖	,,	1 ,,	4 drachms;	
Cream of tartar ¶	,,	1 ,,	3 ,,	W
Epsom-salt ** . .	,,	1 dr. to	1 ounce;	W
Glauber's salt ††.	,,	¼ to	1 ,,	W
Rochelle-salt ‡‡ .	,,	¼ ,,	1 ,,	W
Tasteless purging salt §§ . . .	,,	½ ,,	1 ,,	W

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on retiring to rest at night, they do not generally disturb the patient before the usual time of rising in the morning—has contributed more than any thing else to make them favourites with parties whose habits, or business engagements, would be otherwise interfered with. (*Vide* the Author's "*Cyclopædia*," 4th ed., pp. 114-6.)

* A little *aloes* or *rhubarb* may be advantageously added to the smaller doses.

† This is the "*pill of Cochia*" of the old pharmacopœias, and the vulgar.

‡ Formerly called "*balsamic laxative pills*," "*Edinburgh pills*," "*stomachic pills*," &c.

§ The "*pilula Rufi*" of old pharmacy, and the "*pil. Rufi*" and "*Rufus's pills*" of the vulgar.

‖ Formerly called "*lenitive electuary*," "*electuary of senna*," &c. It is an excellent laxative and aperient in pregnancy, as are also the oils previously named.

¶ That is *bitartrate of potassa*. It may be taken in sugar or honey, or dissolved in water.

** *Sulphate of magnesia*.

†† *Sulphate of soda*. It has been little used since 'Epsom-salt' became cheap.

‡‡ *Potassio-tartrate of soda*.

§§ *Phosphate of soda*. It has a purely saline taste, like that of culinary salt, and is commonly taken in broth, soup, or milk-and-water.

P The articles thus marked are made up into pills. All of them, except the second, are stomachic and antibilious, and, in small doses, form excellent *dinner-pills*.

W The quantity for a dose of all those thus marked should be dissolved in a considerable quantity of water. A 'small dose' largely diluted with water, proves as effective as a 'large dose' taken in little water.

*Seidlitz-powders ;**
Seidlitz-water ;
Sulphur (pure) † in doses of ½ to 2 drachms ;
Cold-water compress (over the abdomen) ;
&c., &c.

Several of the above substances, in large doses, are 'active purgatives,' or 'cathartics ;' and most of them, in small doses, are gentle laxatives.‡

ANTISCORBUTICS.—Antiscorbutic substances are those that tend to prevent scurvy, or that act as remedies in that disease. *Lemon-juice, oranges* and their *juice, ripe fruit* generally, *milk*, unadulterated, *new* or *mild ale* and *porter, green vegetables, potatoes, fresh meat, eggs* (raw or lightly boiled), and the *salts of potassa*,§ belong to this class.‖ All these substances, moderately taken, tend to promote the health of the skin and the beauty of the complexion.

FERRUGINOUS PREPARATIONS; CHALYBEATES. — The value of the milder preparations of iron, as 'tonics,' has been noticed elsewhere, but there are other preparations of this metal which are of a very active character, and entirely unsafe for use except under professional advice. Such, for instance, is the "Tincture of Sesquichloride" or "perchloride of iron," commonly called "Tincture of Steel" and "Steel Drops" by the vulgar. This also is a useful preparation in small doses, and in appropriate cases, but *only* in these. I allude to the subject here in consequence of several cases of severe and permanent injury to the health, and more than one fatal case, having come under my cognizance, traceable to the frequent and continued use of large doses of these so-called 'steel-drops,' by the direction of the conductor of a certain penny weekly, (of which each impression is said to be above half a million,) who, in its pages, com-

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* These commonly consist of—*potassio-tartrat of soda*, 2 drachms ; *bicarbonate of soda*, 40 grains ; mix, and put the mixture in '*blue*' paper ; *tartaric acid*, 35 grains, to be put in a '*white*' paper. They are taken like soda-powders, whilst effervescing, about ½ pint of water being used.

† Taken in milk, or mixed with a little honey, treacle, or sugar. It is an excellent aperient in piles, prolapsus ani, rheumatism, &c. So also, in the two first, are confection of senna and the oils named in the *Table*.

‡ *Vide* "Abernethy Medicines" (*antè*).

§ As the *citrate, bicarbonate, tartrate*, and *bitartrate*, in doses of a few grains, taken soon after meals. These salts are also highly serviceable in rheumatism and rheumatic gout.

‖ *Vide* pp. 217, 220, &c. (*antè*).

bines the offices of literary Editor (?) and quack-doctor in one, and prescribes for his correspondents (—? patients) with a degree of recklessness and assurance which would be absolutely amusing in anything less serious. Not content with poisoning the minds of his readers with the most demoralizing sensational tales and romances, he attacks their bodies by prescriptions and doses utterly incompatible with health, or its restoration when impaired. Enormous doses —30 minims, or more, for instance, of "steel-drops," thrice or oftener daily—will *not* restore the "nervous patient to health," nor the "broken-down constitution to soundness," nor render those who take them "beautiful for ever"! On the contrary, the victims of such charlatanism gradually lose whatever of health and beauty they possess, and if they do not then abandon the use of this literary quack's prescriptions, soon sink into that deplorable state of health popularly known as "a decline." The idea that "steel-drops" will impart or restore the bloom of health to the complexion, and give strength to shattered nerves, is absolutely fallacious, and cannot be too widely contradicted. The fact is, the use of this medicine, as prescribed in the periodical referred to, soon permanently darkens and ultimately causes the decay, and even the loss of the front teeth, at the same time that the eyes lose their lustre, and the complexion its natural hue, whilst an unnatural expression of feverishness, anxiety, and indisposition, takes possession of the features. Nor is this all, for it is only the indication of ferric poisoning which exists within. Even sulphate of iron—a much less active preparation than the tincture—injudiciously taken, will often produce very serious consequences. It was only last week that I saw a strong man attacked with distressing languor and fainting fits, and most violent vomiting and diarrhœa, which lasted between two and three days, simply from taking two doses of this salt prescribed in the columns of his favourite penny journal. We can understand the intention of quacks prescribing such medicines for females; but let those interested learn the fatal truth, that the intended result never happens except by the commission of a double murder, in which the party who takes the doses is one of the victims! I implore my readers never to follow the advice of non-professional editors and quacks, and still less to swallow the drugs prescribed or sold by them.

Hypophosphite of Soda.—In a previous Chapter, the internal use of this salt has been noticed as favourable to the growth of the hair.* Although a very harmless preparation under ordinary circum-

* *Vide* page 278 (*antè*).

stances, it sometimes, when taken injudiciously, or in excess, owing to its apparently invigorating and nutritive powers, induces slight plethora or fulness of blood, and hence should be avoided by persons labouring under inflammatory affections, or who are predisposed to brain or heart disease. 5 or 6 grains, twice or thrice daily, will be a sufficient dose for a continuance, particularly for females. If larger doses be taken, it is better to intermit its use for a week, every fourth or fifth week; and at once, for a time, should slight symptoms of plethora or fulness of the head arise.*

Purgatives; Purges.—Vide "Aperients" (antè).

Nauseous Medicines.—To disguise or lessen the disagreeable taste of medicines, or to deprive them of their nauseating qualities, is often an object of great importance, since with many persons, particularly females and children, the repugnance to them is so great as to render their administration difficult, and often to neutralize their action when taken. Dr. Pollio suggests the well-known physiological fact, that a strong impression on the nerves of sense (whether of vision, hearing, taste, or smell) renders that which follows less perceptible than usual, as furnishing a means of removing the difficulty referred to. Instead of sucking or swallowing agreeable substances after taking nauseous medicines, he tells us that we should prepare the mouth beforehand, in order that the taste of the medicine may not be perceived. Strongly aromatic substances, as *fresh orange-peel* or *lemon-peel*, chewed just before taking 'castor-oil,' 'cod-liver oil,' &c., effectually prevent these articles tasting disagreeably. In like

* I cannot here resist the opportunity of cautioning the reader against an infamous work which is now exposed for sale in the windows of nearly all the petty booksellers and newsmen of England. Its price is 'one penny,' although, if its matter were worth anything, its price ought to be sixpence, or more. It professes to unfold the means by which every one may permanently secure to themselves the vivacity, vigour, and beauty of youth, or restore them when lost, and live a hundred or one hundred and fifty years, or longer, if they please—a century or two being of little moment to the author. The means are *very simple*—merely swallowing *enough*—yes! enough of the doctor's quack medicine, which he benevolently vends at 11*s*. per bottle. The work is full of dangerous misstatements and quotations given as scientific facts. There is much said about "hypo-phosphorus" (!), and the Doctor's marvellous preparation of it, "phosphoridyne," which we are told is the "elixir vitæ" itself, capable of bestowing youth, beauty, and longevity, on all who swallow it liberally. Happily, the grossly deceptive, immoral, and dangerous character of this work, has been fully exposed before the police magistrates at Bow Street, as the reader may have noticed in the *Times* and other newspapers. If he has not done so, the perusal of this note may be a warning to him.

manner *liquorice* prepares the mouth for 'bitters,' and it is the only sweet or luscious substance that will do so; as others create a peculiarly disagreeable compound taste in the mouth.* I have found *orange-peel*, and *oil of orange-peel*, not only succeed with the 'oils' before mentioned, but also with 'copaiba,' when used in the same way. Indeed, so powerful is the neutralizing effect of the essential oil of orange on copaiba, that 1 drachm of it, or less, added to an ounce of the balsam, will entirely correct its disagreeable taste and nauseating qualities. Chewing a *bitter-almond* before taking 'castor-oil' or 'cod-liver oil' is even a more powerful preparative than orange-peel or orange-oil. The flavour of the two are so antagonistic that a single drop of *essential oil of almonds* will impart an agreeable taste and smell to fully one ounce of 'castor-oil,' without in the slightest degree affecting its medicinal action. In like manner, I find a really biting pinch of *cayenne pepper*, or of *powdered capsicum*, will prepare the mouth for nearly anything. Under its influence 'salts-and-senna' (black-draught), 'decoction of aloes,' &c., become almost tasteless, particularly if swallowed boldly and rapidly, and without diffusing them over the surface of the palate and fauces.

The "medical spoon," or even a baby's "feeding-bottle" with a long projecting neck or lip, offers another method of taking nauseous medicines without tasting them, provided it be used adroitly.

Of the following "miscellaneous formulæ," &c., it may be remarked, that some of them are referred to in the body of this work, and others are supplemental to them.

ARQUEBUSADE, EAU D'ARQUEBUSADE, EAU VULNÉRAIRE; VULNERARY SPIRIT; VULNERARY WATER.—Take of

Dried tops of balm, calamint, fennel, hyssop, marjoram, peppermint, rosemary, sage, savory, scordium, thyme, and *wormwood*	of each, 4 ounces;
Fresh leaves of angelica and basil	
Fresh lavender-flowers	
Proof spirit	2 gallons;

digest for 14 days, and then distil 1½ gallon.

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* "*Revue Médicale.*"

Another and a simpler formula is—

Rosemary-leaves	1½ pound;
Leaves of thyme . .)	(of each,
Summits of millefoil .) . .	(½ pound;
Juniper-berries	3 ounces;
Proof spirit	2 gallons;

distil over 5 quarts. More of each is drawn over for inferior qualities.

This spirit is stimulant, and is popularly regarded as vulnerary. It is in great repute, on the Continent, as a cosmetic and cordial, and was formerly held to possess extraordinary virtue in sprains, bruises, wounds, &c.

Confection of Almonds; Conserve of Almonds.—Take of

Jordan-almonds (blanched and dried)	8 ounces;

beat them gently in a marble or wedgwood-ware mortar until reduced to a homogeneous paste (powder), carefully observing not to cause them to 'oil'; then add of

Loaf-sugar (in powder)	4 ounces;
Gum-arabic (do.)	1 „

and lightly beat and stir the whole together until reduced to a smooth confection (powder), which must be kept from the air in a stoppered or corked bottle. This is the "confectio amygdalæ" of the L. Ph., and the "pulvis amygdalæ compositus" of the new Br. Ph. It keeps well, and is a very useful and convenient preparation. A little of the *confection* or *powder* triturated with a proportionate quantity of *water*, and then strained through a piece of calico or muslin, forms the *emulsion* or *milk of almonds* used in cosmetics and medicine.

Calorific (Dr. Davis's).—The 'liquid' is ordinary commercial *acetic acid* (sp. gr. 1·044), diluted with about half its volume of *water*, and tinged with a little *burnt sugar* or *spirit-colouring*. The 'shield' consists of a piece of *red flannel* backed with *oil-skin*, to prevent evaporation. A few drops of the nostrum are sprinkled on the flannel, which is then bound on the part. Strongly counter-irritant. It often affords relief in local pains, as those of the joints, headache, face-ache, rheumatism, &c.

Eau d'Arquebusade.—Vide "Arquebusade" (antè).

EAU DE LUCE; AQUA LUCIÆ.—Take of

Mastic (powdered)	2 drachms;
Rectified spirit	9 fluid drachms;

digest until dissolved; then decant the clear portion, add of

Liquor of ammonia (·882) . . .	1 pint;
Oil of lavender	14 or 15 drops;
„ *amber*	4 or 5 „

and mix well. This is the "Compound Tincture of Ammonia" and the "Succinated Spirit of Ammonia" of the old pharmacopœias. In the "tinctura ammoniæ composita" of the London Ph. of 1851, the *oil of amber* is omitted. This preparation is not included in the new Br. Ph.

Eau de Luce is reputed antacid, antispasmodic, and stimulant, properties which it owes chiefly to its ammonia. In the East Indies, applied to the wound and taken internally, it is regarded as almost a specific for the bite of the cobra di capello, and other venomous reptiles and insects. The dose is 10 to 20 or even 30 drops, in water.

EAU DE MAGNANIMITÉ.—This nostrum is an *aromatized tincture of ants*. Internally, aphrodisiac; externally, diluted with water, to increase the glow of the complexion.

ESSENCE OF MINT.—From *oil of spearmint*, as 'essence of peppermint' (infrà), the formula and uses being similar.

ESSENCE OF MUSTARD.—

1. Mustard-liniment of double strength.
2. (Whitehead's.) Take of

Black-mustard seed (bruised)* .	2½ ounces;
Tepid water	2 fluid ounces;

mix, and in a few hours, add of

Oil of turpentine	1 pint;

digest, with strong agitation, for 48 hours, then decant and filter. In the 'filtrate' dissolve, by digestion and agitation, of

Camphor (small)	2 ounces;
Oil of rosemary	3 drachms;
Balsam of tolu	1 „
Annotta	½ „

Lastly, after repose, decant the clear portion. Stimulant and

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* The best way is to grind it fine in a pepper-mill, with the teeth closely set.

rubefacient. A popular nostrum, sometimes useful as an application in neuralgic and rheumatic pains, face-ache, lumbago, colic, chilblains, &c.

ESSENCE OF PEPPERMINT.—1. Take of

Oil of peppermint (Mitcham) . . 1 fluid ounce;
Rectified spirit . . . . . 1 pint;

mix by agitation. White. This is the usual strength of that sold in the shops. The corresponding preparation of the new Br. Ph., "spiritus menthæ piperitæ," has more than double this strength, being made with 1 fl. oz. of *oil* to 9 fl. oz. of *rectified spirit*.

2. To the product of No. 1 (above), add about ½ ounce of *herb-peppermint*, *parsley-leaves*, or *spinach-leaves*, and digest for a week, or until sufficiently tinged; or agitate the essence with 10 or 12 grains of *sap-green*, previously rubbed down with about a teaspoonful of *hot water*. A delicate light green. The ignorant do not conceive it to be good and pure unless it has a pale-greenish tint.

Used in toothache and to disguise foulness of the breath; but chiefly as a flavouring ingredient by confectioners, cooks, and druggists. Peppermint (essence, water) is a great favourite in domestic and popular medicine, as a remedy in flatulence, colic, nausea, sickness, &c., and to disguise the flavour of nauseous substances. The dose of the 'essence' is 10 to 30 drops on sugar, or mixed up with a little water or wine; of the 'water' a teacupful, or more, at will. A few drops of the 'essence' well agitated with half a pint of cold water, form an extemporaneous "peppermint-water" equal to that obtained by distillation. This water is an excellent mouth-wash for smokers.

ESSENCE OF RATAFIA.—Essence of almonds or peach-kernels is often called by this name.

ESSENCE OF SPEARMINT.—This is prepared in a similar way to 'Essence of Peppermint" (antè), but is seldom coloured.

JEWELLER'S ROUGE.—Calcine *sulphate of iron* at a strong heat, to drive off its acid; next thoroughly wash it, and, lastly, levigate it. Used to clean and polish articles of jewelry formed of gold, &c.

LINIMENT OF AMMONIA; VOLATILE LINIMENT; HARTSHORN AND OIL.—Take of

Liquor of ammonia (·960) . . . 1 fluid ounce;
Olive-oil . . . . . 3 „ „

shake them together until mixed. A popular and useful friction in sprains, bruises, sore-throat, neuralgic and rheumatic pains, &c.

CAMPHORATED LINIMENT OF AMMONIA.—1. Take of

Olive-oil . . . . . 3 fluid ounces;
Camphor (cut small) . . . . . ½ ounce;

dissolve by a gentle heat, and when cold, add of

Liquor of ammonia (·960) . . . 1 fluid ounce;

as before. Preferred in painful sprains, bruises, chilblains, &c., to the simple liniment. Another good formula is—

2. Take of

Soap-liniment . . . . . 2 fluid ounces;
Olive-oil . . . . . } . . { of each,
Liquor of ammonia (·960) } . . { 2 fluid drachms;

mix.

CAMPHOR LINIMENT; CAMPHORATED OIL; LINIMENTUM CAMPHORÆ (Br. Ph.).—Take of

Camphor . . . . . 1 ounce;
Olive-oil . . . . . 4 fluid ounces;

dissolve by a gentle heat. As a 'friction,' stimulant, anodyne, and resolvent; in sprains, bruises, chilblains, rheumatic pains, glandular enlargements, &c.

COMPOUND CAMPHOR LINIMENT; LINIMENTUM CAMPHORÆ COMPOSITUM.—Take of

Camphor . . . . . 2½ ounces;
Oil of lavender (English) . . . 1 fluid drachm;
Rectified spirit . . . . . 17 fluid ounces;

dissolve, then add of

Liquor of ammonia (·882–·880) . 3 fluid ounces;

and shake them until mixed. It is powerfully stimulant, rubefacient, and counter-irritant. A piece of folded linen wetted with it applied to the part, and then covered with a towel, and pressed with the hand, will generally relieve superficial pains. It is commonly sold for Ward's "Essence for the Headache." *

HYDROCHLORIC ACID LINIMENT.—Take of

Olive-oil . . . . . ¼ pint;
Spermaceti (pure) . . } . . { of each,
Camphor . . . . . } . . { ½ ounce;
Balsam of Peru . . . . . ¼ „

mix by a gentle heat, add of

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* In the new "Br. Ph.," 5 fluid ounces of *liquor of ammonia*, and 15 fluid ounce of *rectified spirit*, are ordered, forming a still stronger preparation.

Hydrochloric acid . . . . . ½ fluid ounce;

and stir until quite cold. An excellent friction for chilblains before they break. The 'balsam of Peru' may be omitted, if the cost be an object.*

Soap Liniment; Opodeldoc; Linimentum Saponis.—Take of

Castile-soap (white; cut small) . 2½ ounces;
Camphor (small) . . . . . 1¼ „
Oil of rosemary (English) . . . 3 fluid drachms;
Rectified spirit . . . . . 18 fluid ounces;
Distilled water . . . . . 2 „ „

mix, and digest with occasional agitation, at a temperature not exceeding 70° Fahr., until all are dissolved. The above proportions are those of the new Br. Ph. The product is a very beautiful article. That of the shops is usually very weak and inferior, being generally made with 'crude soft-soap,' and a mixture of equal parts of 'rectified spirit' and 'water.'

Soap-liniment is a popular frictional application to bruises, sprains, chilblains, swellings, &c.; also in rheumatism, local pains, &c. When mixed with *tincture of opium*, it forms "Anodyne Liniment" or "Liniment of Opium" (*linimentum opii*, of the pharmacopœias), the present proportions (Br. Ph.) being equal parts of each.† It is preferred to the former to allay pain.

Liquor of Potassa; Solution of Potassa; Potash Water; Caustic-potash Water; Potash Soap-lye (pure); Soft-soap Lye; &c.‡—Take of

Carbonate of potash (salt of tartar) 1 pound;

put it into a green-glass or stoneware carboy or jar, and add (cautiously) of

Water (boiling) . . . . . 1 gallon.

To the resulting solution further add, of

Fresh-slaked lime (dry) . . . . ¾ pound.

Next put in the stopper or bung, and shake the vessel very frequently,§ until the whole has become cold. After repose, decant the clear supernatant portion into clean green-glass, well-stoppered

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* This article was extensively employed, among the seamen of the Royal Navy, by the author's father, during the long war, and with almost uniform success.

† In the L. Ph., the proportions were 1 of *tincture of opium*, to 3 of *soap-liniment*.

‡ "Liquor Potassæ," Br. and L. Ph.; "Aqua Potassæ," E. Ph.

§ Cautiously at first.

bottles. This has long been the usual formula of the wholesale druggists, and the proportions are those adopted in the new "British Pharmacopœia." They differ from those of the London Ph. chiefly in the quantity of lime, which does not, however, affect the strength of the product.

In the Br. Ph. the potash-solution is ordered to be heated, in a clean iron-vessel, to the boiling-point, when the lime is to be added gradually, and the whole boiled for ten minutes, with constant stirring. The vessel is then to be removed from the fire, and when, by subsidence, the supernatant liquor has become perfectly clear, it is to be 'siphoned off' into bottles, as before.

The sp. gr. of the "Liquor Potassæ" L. Ph. is 1·063; that of the Br. Ph., though evidently rather greater, is stated to be 1·058 (?—1·068).* It contains 6·7 to 6·75 per cent. of pure caustic potassa.

Liquor of potassa enters into the composition of a few cosmetics, &c., as is noticed elsewhere; and is also used in medicine. It is powerfully caustic, and is poisonous, unless in doses of a few drops, very largely diluted with some bland vehicle. When pure, it does 'not effervesce' with acids, 'nor give a precipitate' with lime-water, or with a solution of oxalate of ammonia.

Liquor of Soda; Solution of Soda; Caustic-soda Water; Soda Soap-lye (pure); Hard-soap Lye; &c.† In the London Ph. the proportions are—

Carbonate of soda (cryst.)	. . .	32 ounces (Troy);
Quick lime (recent)	. . . . .	9 „ („)
Boiling water	. . . . .	1 gallon;

the lime being slaked with a little of the water. The product is stated to have the sp. gr. 1·061, and to contain about 5 per cent. of pure caustic soda.

The "Liquor Sodæ" of the Br. Ph. is prepared with—

Carbonate of soda (cryst.)	. . .	1¾ pound (avoir.);
Slaked lime (recent)	. . . . .	12 ounces;
Distilled water	. . . . .	1 gallon.

The product is said to have the sp. gr. 1·047.

The processes by which the above are made, are similar to those noticed under "Liquor of Potassa." The tests of their purity, and their uses, are also the same.

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* Probably an error of the press.

† "Liquor Sodæ," Br. and L. Ph.; "Liquor Sodæ Causticæ," D. Ph.

ACETIC LOTION.—Take of

Good strong vinegar . . . . . 1 part;
Water . . . . . 2 or 3 parts;

mix. In bruises, contusions, sprains, &c., and as a general refrigerant wash or lotion to sound parts; also to remove freckles.

LOTION OF ACETATE OF LEAD.—Take of

Sugar of lead . . . . . ¼ ounce;
Distilled or soft water . . . . 1 pint;

dissolve. Sometimes a little *vinegar* is added, a like quantity of 'water' being omitted. Used in excoriations, burns, sprains, contusions, &c.; also as an occasional cosmetic wash by persons troubled with eruptions.

EVAPORATING LOTIONS.—These are very numerous, and may be modified at will, or as convenience or circumstances direct. They all consist essentially of *spirit;* sometimes of *rectified spirit*, but usually of spirit more or less diluted with water. The stronger the spirit, the more marked is the effect. The proportions in common use, are—

Rectified spirit . . . . . 1 part;
Water . . . . . 1 to 5 parts;

about three parts of water forming the most generally employed strength. Sometimes the 'lotion' is "camphorated," in which case about ½ drachm of *camphor* is dissolved in each 3 or 4 fluid ounces of the *rectified spirit*, and *water* gradually added to the solution until the milkiness produced by the addition ceases to disappear on agitation. Occasionally a portion of strong *vinegar*, or a little *Goulard's extract*, enters into its composition; and more rarely, a little *ether* or *chloroform*, as noticed below. In fashionable life, *rose-water* or *orange-flower water*, is often substituted, either wholly or in part, for 'distilled water,' or a little *eau de Cologne* is added to it, by which it is rendered fragrant, but not more efficacious.

The celebrated Dr. Copland employed the following formula when he was desirous of producing very marked effects:—Take of

Ether, *Rectified spirit*, *Solution of acetate of ammonia* . . . . of each, 1½ fluid ounce;
Rose-water . . . . . 3½ „ „

agitate them together, and again every time before use.

Eau de Cologne, diluted with about an equal quantity of water, forms a very agreeable and useful evaporating lotion, frequently adopted in fashionable life. *Brandy* (or other commercial spirit), either alone, or mixed with a little water, is also often so employed.

Evaporating lotions are popular and serviceable applications in nervous headaches, anxiety, restlessness, itching and irritability of the skin, &c. They are used by wetting a *piece* of *linen*, three or four times folded, and applying it to the part. Evaporation then commences, and a soothing and refrigerant effect is produced. If the evaporation be prevented by covering the part with the hand, or with a piece of oil-silk or thin sheet gutta-percha, the action is stimulant, and a sensation of heat is produced. The preparation then ceases to be an evaporating lotion, but nevertheless often proves serviceable by a contrary action. When used in the latter way, the addition of a little *liquor of ammonia* or *spirit of hartshorn* renders them 'counter-irritant,' and greatly increases their action. They are also used to remove "freckles" and natural discolorations of the skin.

Lotion of Hydrochlorate of Ammonia.—1. Take of

Sal-ammoniac (in coarse powder) 1 to 4 drachms;
Water . . . . . 1 pint;

dissolve. A useful wash in itch, old ulcers, tender feet, sweaty feet and hands, swelled joints, &c.

2. Take of

Sal-ammoniac . . . . . 1 to 2 ounces;
Water . . . . . 1 pint;

dissolve. In bruises and contusions, extravasations, glandular swellings and indurations, chilblains, &c., when the skin is not broken. *Vinegar* is often substituted for the whole or a part of the water; and sometimes 1-5th or 1-6th part of *rectified spirit*, or some *brandy* or *rum*, is added.

Lotion of Hydrochloric Acid.—Take of

Hydrochloric acid (sp. gr. 1·16) . 1 fluid ounce;
Water . . . . . 19 „ „

mix. For unbroken chilblains. Diluted with an equal bulk of *water*, it forms a useful lotion in lepra and other scaly skin-diseases.

Lotion of Nitrate of Silver.—1. Take of

Nitrate of silver (cryst.) . . . 1 to 2 drachms;
Nitric acid (concentrated) . . 20 drops;
Distilled water . . . . . 1 ounce;

dissolve. Used as a 'liquid caustic' to touch corns and warts.

2. Take of

Nitrate of silver	1 drachm;
Distilled water	2 ounces.

Used for soft corns, &c.; also highly recommended, by Shreider, as an application to unbroken chilblains.

Preventive Lotions.—These are washes intended to prevent infection from personal contact with those labouring under contagious diseases. Most of the nostrums of this character vended by the 'quacks,' or as 'patent medicines,' are mere weak solutions of chloride of lime, corrosive sublimate, potassa, or acetate or diacetate of lead.

1. "Lotion of chloride of lime." (Vide antè.)

2. (Curtis's.) This notorious article is composed of—

Solution of chloride of lime (Beaufoy's)	2 fluid ounces;
Cold soft-water	8 „ „

For use, 1 or 2 tablespoonfuls are added to a wine-glassful of water, so as to form a 'wash.'

3. (Hannay's.) *Water* slightly alkalized with *liquor of potassa*. Used as the last.

4. (Perry's.) Another notorious nostrum, said to be composed of

Corrosive sublimate . } . . *Sal-ammoniac* . . . }	of each, 1 drachm;

dissolved in

Soft water	1 pint.

For use, it is diluted with 3 to 5 times its bulk of water.

5. ("Royal Preventive.") Same as "White Lotion" (infrà).

6. ("White Lotion;" "Royal Preventive.") The quack lotions or washes vended under these names, consist of *distilled water*, to every pint of which 1 ounce each of *solution of diacetate of lead* (Goulard's extract) and *rectified spirit* have been added.

Oil of Eggs; Egg-oil.—1. Expose the *yelks of eggs* to a gentle heat until coagulated and the moisture has evaporated, and then submit them to very powerful pressure, to extract the oil; or crumble up the dried yelks very small, digest in *boiling rectified spirit*, decant or filter whilst hot, and distil off the 'alcohol.' The residuum is the oil, which must be kept from the air.

Egg-oil is remarkably bland and emollient. It was formerly

believed to possess the most extraordinary virtues both as a medicament and skin-cosmetic, and is still highly esteemed in some parts of England, and on the Continent, in chapped lips, sore nipples, excoriations, roughness of the skin, &c., and as a general 'softener' and 'beautifier.' The Paris "*Codex*" orders the *dried yelks* to be exhausted with *ether*. The plan among the vulgar, is to 'fry' the *yelks* hard before pressing them; but the oil so obtained is darker coloured and stronger. 10 to 12 *yelks* yield about 1 fluid ounce of 'oil.'

Neat's-foot Oil; Nerve-oil; Trotter-oil.—This is obtained from *neats' feet* (ox or cow heels) and *tripe* (preferably the first), by boiling them in *water*, and skimming off the oil. For nice purposes the oil so obtained is kept gently heated by means of *warm water* until the whole of the water has subsided from it, when the clear portion is poured off, and, if necessary, filtered. It is extremely emollient, and does not thicken by age. The 'pure oil' is highly esteemed for chaps, excoriations, &c., and, when scented, to make the hair grow; the ordinary oil is chiefly used to fry fritters, and to soften leather.

Ointment of White Wax; Simple Ointment or Dressing.—1. Take of

White wax (pure)	2 ounces;
Prepared lard	3 „
Almond-oil	3 fluid ounces;

melt them together, and stir the mixture until it solidifies. This is the "unguentum simplex" of the new British Pharmacopœia.

2. Take of

White wax	2 ounces;
Olive-oil	5½ fluid ounces;

as before. This is the "unguentum simplex" of the Ed. Ph.

A mild emollient, in various applications, but chiefly as a basis for other ointments and medicated pommades. On the Continent, it is regarded as more healing when made with 'yellow wax.'

Spermaceti Ointment; Simple Ointment; Emollient Dressing; &c.—1. Take of

Spermaceti	5 ounces;
White wax (pure)	2 „
Almond-oil	1 pint;

melt them together, by a gentle heat, and stir constantly until the whole solidifies. This is the "spermaceti-ointment" ("unguentum cetacei") of the new Br. Ph.

2. Take of

White wax	1 part;
Spermaceti	2 „
Prepared lard	6 „

as before. This is the formula of the Dublin Ph. The ointment of the shops has usually double this quantity of lard, and is softer, and inferior.

A favourite emollient and healing application and dressing, for abrasions, excoriations, blistered or raw surfaces, healthy wounds and ulcers, chaps, broken chilblains, &c. It is also much used as the basis of other ointments.

Ointment of Creasote; Creasote Pommade.—Take of

Creasote	1 fluid drachm;
Spermaceti-ointment	1 ounce;

triturate them together, in a slightly warmed mortar, until perfectly united, and subsequently until nearly cold. These are the proportions of the new Br. Ph., and nearly those of the D. Ph. The ointment of the L. Ph. has only half, and that of the E. Ph. only one-third this strength. It is used as a dressing for scalds and burns, chilblains, &c. It is very useful in ringworm, and some other skin-diseases; also as a friction in facial neuralgia or tic douloureux.

Ointment of Yelk of Eggs; Egg-ointment.—Take of

Yelk of egg (large)	1 in no.;
Honey	½ ounce;
Balsam of Peru	½ drachm;
Spermaceti-ointment	1½ ounce;

triturate them together, in a very slightly warmed mortar, until cold. The balsam is often omitted. Emollient and soothing. A popular dressing and application to chaps, excoriations, abrasions, broken chilblains, irritable ulcers, sore nipples, &c. Glycerine, or the balsam or ointment containing it, is, however, much more efficient, and has the advantage of keeping well.

Elder-leaf Ointment; Elder Ointment; Green Ointment.—Take of

Lard (good)	7 pounds;
Fresh elder-leaves	4 „

simmer them together, by a gentle heat, till the leaves are crisp. Next strain off the fat, put it over a slow fire, add of

Clarified mutton-suet (hard) . .	1 pound;

and gently stir the whole until it acquires a bright-green colour. Lastly, pour it into warm pots, and allow it to cool very slowly. It

should not be stirred after it begins to slightly thicken, in order that it may "grain" well, a granular appearance being much admired. The conscientious druggists commonly add a little powdered *verdigris* to the liquid ointment, to deepen the colour, which is the reason their ointment does not keep well. This fraudulent addition renders it poisonous.

This preparation has always been a great favourite, with the common people, as an emollient and cooling ointment, holding the same place among them that cold-cream, spermaceti-ointment, lip-salve, &c., do among the middle and upper classes.

MUSTARD OINTMENT.—Take of

Flour of mustard (finest) . . .	3 ounces;
*Lemon-juice** (to make a stiff paste)	q. s.;
Oil of almonds	½ fluid ounce;

mix. This is Frank's formula for sun-burns, freckles, &c.

SULPHUR OINTMENT; ITCH-OINTMENT.—Take of

Sublimed sulphur	1 ounce:
Lard	4 „

mix thoroughly, by trituration. These are the proportions of the new Br., and the E. and D. Ph. In the last London Ph. a larger quantity of sulphur is ordered.

The "compound sulphur-ointment" of the London Ph. consists of—

Nitrate of potassa (in fine powder)	40 grains;
White hellebore (in fine powder) .	10 drachms (Troy);
Sulphur	of each,
Soft-soap	4 ounces (Troy);
Lard	1 pound („).

It is said to be more efficacious than the simple ointment; but is apt to irritate a delicate skin. In the L. Ph., 1836, a little *oil of bergamot* was ordered in both these ointments.†

OINTMENT OF OXIDE OF ZINC; ZINC-OINTMENT.—Take of

Oxide of zinc (in very fine powder)	1 part;
Simple ointment	6 „

mix by trituration in a marble or wedgwood-ware mortar. Astrin-

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* If 'lemon-juice' be not obtainable, *vinegar* may be used instead.

† See "Itch," pp. 216-17; also the *Index*.

gent, desiccative, and stimulant. An excellent application in excoriations, chaps, sore nipples, moist eruptions, burns and scalds, chronic ophthalmia depending on relaxation of the vessels of the eye, &c. It is an article which it is very convenient to have always at hand in the dressing-case.

IODINE PAINT; IODINE-CAUSTIC.—Take of

Iodide of potassium	½ ounce;
Iodine	¼ „
Water (or better, *proof-spirit*) .	3 „

dissolve by agitation. Used as a "paint" in cases in which it is desired to apply iodine, in a strong form, locally; also as a caustic for corns, warts, &c. These are the proportions recommended by Soubeiran, with water as the solvent. The 'tincture of iodine' of the pharmacopœia is, however, more generally employed; but it is only of about one-third the strength of the above. To compensate for this, the greater volatility of the menstruum admits of more frequent application of the tincture in a short space of time.

MUSTARD PLASTER.—This is simply the best *flour of mustard* made into a paste with *lukewarm water*, or with *vinegar*, and then spread on a *piece of calico* or *linen* previously folded two or three times. Over the surface of the mustard is placed a *piece of gauze* or *thin muslin*, when the plaster is ready for application to any part of the body which it is intended to medicate. It is powerfully stimulant, rubefacient, and counter-irritant, and its effects are often apparently wonderful. Severe cases of facial neuralgia, nervous headache, sore-throat, painful joints, rheumatic pains, &c., are often relieved by it in a few minutes. Applied across the forehead, or to the temples, it is often highly serviceable in short-sight, and some other optical defects and visual affections of the eyes. Its application should not be continued very long, except in extreme cases, and never long enough to raise a blister; from 8 or 10, to 20 or 30 minutes being usually sufficient for all useful purposes. In this, however, the feelings of the patient will generally furnish a safe guide. Courtezans and ladies of the demi-monde are said to occasionally apply small mustard plasters or poultices to the cheeks, to give them an artificial bloom.*

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* *Vide* "Poultices" (*infrà*).

POULTICES; CATAPLASMS; CATAPLASMATA.*—These are well-known external applications, generally extemporaneous, intended to promote suppuration, allay pain and inflammation, resolve tumours, &c. They are applied spread on a piece of linen; and should not be heavy, nor inconveniently bulky, but sufficiently large to more than completely cover the part. They should be frequently renewed, and this, in all cases, before they become even partially dry or hard; and they should be lightly, but securely bandaged on, to prevent displacement. The addition of a little lard, sweet-oil, or (and preferably) glycerine, to a common poultice, tends greatly to promote its emollient action, and to retard its hardening. A very little may be also advantageously smeared over the surface. Two or three folds of lint or soft linen soaked in hot water, and, after application, covered with a piece of India-rubber cloth or oilskin, to prevent evaporation, often forms a cleanly, light, and effective substitute for a poultice. The "spongio-piline," sold by the druggists, is an elegant and very convenient substitute of this kind.

The following may prove useful to the reader:—

ALUM POULTICE.—Take of

Alum (in fine powder) . . . . 1 drachm;
Whites of eggs . . . . . 2 in no.;

shake them together until they form a coagulum. Formerly much used in broken chilblains, chaps, sore nipples, chronic inflammation of the eyes, &c., applied on linen, and covered with a piece of fine muslin. This is the formula of the old Dublin Ph.; as also of the London Ph. of 1788.

ANODYNE POULTICE.—A "linseed-meal" or a "bread-poultice" made with a strong *decoction of poppy-heads*, instead of 'water'; or a like poultice on the surface of which a few drops of *tincture of opium* (laudanum), or *tincture of hemlock*, have been sprinkled.

BREAD POULTICE.—*Stale crumb of bread* soaked in a little *hot water*, then slightly pressed and beaten up to a smooth paste, a little *lard*, *butter*, or *oil* being added. For small surfaces, as of the finger, nipple, &c., a little *chewed bread-and-butter* forms an efficient and convenient 'bread-poultice.' Used as a domestic substitute for 'linseed-meal poultice.'

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* Lat., prim. Gr.; sing., *cataplasma*.

CARROT POULTICE.—1. The common *carrot* scraped so as to form a smooth pulp. This is the favourite 'carrot-poultice' of the vulgar.

2. *Carrot* boiled with a little *water* until quite soft, then beaten to a pulp, and applied warm. This is the formula of the old Dublin Ph. Sometimes a large thick slice of the boiled root is applied without being pulped.

The above are anodyne, antiseptic, and suppurative, but the first is the more stimulant. Both are used in foul and painful ulcers and sores, burns, contusions, &c.; also to ripen tumours. The first is a popular application to fresh bruises, extravasations, burns, scalds, &c.

LINSEED-MEAL POULTICE.—Take of *

Linseed-meal	4 ounces;
Olive-oil	½ fluid ounce;

mix, and add, gradually and constantly stirring, of

Boiling water	½ pint.

This is the formula of the new British Ph. Emollient, soothing, and calefacient. Used to promote the suppuration and ripening of tumours, to allay pain, inflammation, and irritation, &c.; applied warm. This is the common emollient and suppurative poultice of both private and hospital surgeons.

MUSTARD POULTICE.—1. See "Mustard Plaster" (p. 737).

2. Take of *

Linseed-meal.	2½ ounces;
Boiling water (added gradually) .	½ pint;

mix, and stir in of

Flour of mustard (finest) . . .	2½ ounces.

This is the formula of the new Br., L., and other late Ph. In the London Ph. of 1836, *boiling vinegar* was ordered instead of water. It is a powerful counter-irritant, stimulant, and rubefacient, but less so than the "mustard plaster" before noticed, than which, however, it is more manageable, and can be tolerated a longer time. Thus, it may be generally worn on the chest, or on the loins, or between the shoulders, for hours, or even all night. In this way it seldom fails to afford relief in deep-seated inflammatory pains, neuralgic pains, &c.

* Or in like proportions.

POTATO POULTICE.—*Raw potato* simply scraped or grated fine. A common application to fresh bruises, extravasations, burns, scalds, &c., among the vulgar, particularly in the provinces. It is the rustic's remedy for "black eyes."

SOAP POULTICE.—Any *mild soap* (scraped or sliced) dissolved in 4 times its weight of *boiling water*, and the solution thickened with *crumb of bread* or *linseed-meal*. A popular application in scalds and burns.

VINEGAR POULTICE.—*Crumb of bread* soaked in a little *cold vinegar*, and then beaten with a piece of wood to a smooth paste. A popular application in bruises, extravasations, &c., especially black eyes; also in sprains. *Verjuice* is often substituted for 'vinegar' in the rural districts.

BOOT-POWDER.—This is *French chalk*, or *talc*, reduced to fine powder by scraping or grating it. A little of it is rubbed on the inside of the backs, heels, and insteps of new or tight boots, to facilitate 'getting them on.'

CRYSTAL POWDER; QUARTZ POWDER.—*Quartz*, or *rock-crystal*, heated to redness, then thrown into *water*, dried, and reduced to fine powder in a *steel* or *cast-iron mortar* or rolling-mill. Sprinkled on a strop or piece of wood to sharpen edge-tools; also used in some of the advertised razor-pastes.* It was formerly used as an escharotic.

DIAMOND POWDER; DIAMOND DUST.—The *powder* produced by the abrasion of *diamonds* against each other in the process of cutting and polishing them. Besides its use in polishing the gems, it is said to possess the valuable property of giving the finest edge to every species of cutlery. The discovery, or assumed discovery, of this fact, a few years since, led certain knaves to extensively advertise and puff a spurious preparation (powdered quartz) under the name of 'diamond-dust.' In a short time the demand for the factitious article became immense. It soon, however, acquired a bad notoriety. Instead of sharpening cutting-instruments, it infallibly destroyed their edge, and was particularly unfortunate in converting razors into saws. This discovery was not made until it was in the hands of the majority of the adults in the kingdom; nor before the scamps who had manufactured it, and vended it, had realized a moderate fortune.†

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* See "Diamond Dust" (*infrà*).

† Vide "*Cooley's Cyclopædia*," 3rd ed., p. 326.

Washing Powder (Toilet); Alkalized Cosmetic Powder.—Several preparations used in fashionable life, by ladies, instead of soap, have been already noticed.* The following are intended chiefly to soften the water used in making one's toilet, and thus to promote its cleansing action, as well as the free 'lathering' of the soap:—

1. The best *Scotch soda* broken up small, and exposed (spread out) in a warm dry situation, until it effloresces and falls into the state of a fine white powder. ½ a teaspoonful, or thereabouts, to be added to ½ or ⅓ of an ordinary wash-basinful of water.

2. (Dutch Washing-powder.) *Powdered borax*.† A good pinch, as above.

3. Take of

Carbonate of soda (or *effloresced Scotch soda*)	¾ pound;
Borax (in fine powder) . . .	¼ „

mix. Used as No. 2. The above are perfectly harmless to the skin, and promote its health and clearness. The two last, when daily used, also tend to render it soft and white, and to prevent roughness, chaps, &c.‡

Salt of Lemons; Essential Salt of Lemons.—The article sold in the shops under this name, for the removal of 'ink-spots,' 'iron-moulds' 'fruit-stains,' &c., from linen, is *salt of sorrel* (binoxalate of potassa), either alone, or mixed with one half its weight of *cream of tartar* (bitartrate of potassa), both being first reduced to powder.

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* *Vide* "Almond Paste or Powder," "Hand Powder," &c.

† It is difficult to get pure powdered borax. The best way is to buy it in crystals (about 8*d*. per pound), and to powder it at home, when its purity will be insured, and the cost will be less than one-third of the price charged in the shops for the powder. Pure borax, in the lump, is very slowly soluble in cold water, and will remain hours in it undissolved.

‡ The packet "washing-powders" of the shops are the *vilest swindles* ever vended under cover of lying labels, even in this age of sham. The best of them consist of crude *Scotch soda* or *soda-ash*; whilst the rest, and the majority, including "*essence of soap*," "*saponine*," "*glycerine washing-powders*," and the like, are merely this *crude soda*, or *ash*, mixed with an enormous and indefinite quantity of the *commonest common salt*. In those that the directions state are to be stirred with water, and the clear liquid, after subsidence, only is to be used, *fresh-slaked lime* replaces the common salt. They are all injurious to both the skin and linen. How persons can be so foolish as to purchase such trash, at the rate of 8*d*., 1*od*., 1*s*., and even more per pound, when they can buy really good Scotch soda at ½*d*., I cannot tell; but so it is. "Surely the pleasure is as great in being cheated, as to cheat."

A more powerful article is formed by using *quadroxalate of potassa* instead of the 'binoxalate.'

Salt of Lemons is sometimes employed to remove stains from the fingers and nails. For *linen*, it is used by simply rubbing it on the part, previously wetted with a little warm water. For *personal use*, it may be employed either in the same way, or dissolved in a little warm water. It should be thoroughly rinsed off with clean water, as soon as the effect is produced. It is *poisonous*, if swallowed.

Smelling Salts.—*Sesquicarbonate of ammonia** commonly passes under this name with the vulgar, and, with the addition of a few drops of *essential oil*, is frequently employed to fill "smelling-bottles." Its pungency, however, is neither so great nor so durable as that of the true or neutral 'carbonate of ammonia.' The latter salt continues unchanged in composition, and preserves its pungency, as long as a particle of it remains unvolatilized. The portion only which flies off suffers decomposition, as it volatilizes, separating into 'gaseous ammonia' and 'carbonic acid.'† The pungency of the 'sesquicarbonate,' on the other hand, depends solely on its gradual decomposition, in the solid state, into 'carbonate of ammonia,' which flies off under exposure to the air; and into 'bicarbonate of ammonia,' which is much less volatile and only slightly pungent, and which remains behind; the weight of the latter being far greater than one-half the weight of the original salt. 'Carbonate of ammonia,' and not the sesquicarbonate, should, therefore, be alone used in filling "smelling-bottles," if a strong, agreeable, and durable pungency, be desired. It is employed, either directly or indirectly, by the makers of all the more esteemed 'smelling-salts' of the day; and their predecessors did the same, even long before the chemistry of the two salts, and the rationale of the properties which cause a preference for the one, were known.

The following are the formulæ of some of the most popular advertised "Smelling-salts" of the shops:—

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* This is the "carbonate of ammonia" of the shops, and the "sesquicarbonate" of the London & Dublin Ph. In the new "*British Ph.*" it is called "carbonate of ammonia," although it is immediately after spoken of, and its composition or formula is given, as 'sesquicarbonate.'

† These again unite in definite proportions forming another, or other carbonates of ammonia.

1. Take of

Carbonate of ammonia * (crushed small)		1 pound;
Oil of lavender (Mitcham) ℥	}	of each,
Oil of bergamot	}	1 fluid ounce;
„ *cloves*		2 fluid drachms;
„ *cassia*		1 „ „

rub them thoroughly together, sublime at a very gentle heat, into a well-cooled receiver, and at once put the product into a well-stoppered bottle, or bottles. The sublimation may be omitted, but the quality of the product suffers. This is varied, in some samples, by substituting 1 ounce of *oil of lemon*, or a little of the *oils* of *rosemary* and *sweet flag* (calamus aromaticus), for the 'oils of cloves' and 'cassia'; or by adding (after sublimation) a 'dash' (2 or 3 drops per bottle) of *essence of musk* or *essence royale*.

2. As before, but taking, as perfume,

Oil of bergamot	2 fluid ounces;
„ *verbena*	½ „ „
Otto of roses	1 to 2 drachms.

It is varied as No. 1.

3. As No. 1, but using, of

Oil of bergamot	}	of each,
„ *lemon*	}	¾ fluid ounce;
Essence de petit grain		3 fluid drachms;
Oil of cloves	}	of each,
„ *cassia*	}	1 fluid drachm;

varied, as before, at will.

4. Take of

Carbonate of potash (dried)	}	of each,
Sal-ammoniac	}	8 ounces; †

powder them, add of

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* Not 'sesquicarbonate.' It may be produced by the formula of the old Dublin Ph. (1826):—Take of *sal-ammoniac* (dry), and *carbonate of soda* (freed from water by gradually heating it to ignition), equal parts, reduce them to powder, mix, and sublime, by a gradually increased heat, into a well-cooled 'capital' (head) or receiver. *Dried carbonate of potash* (salt of tartar) may be used instead of 'carbonate of soda,' an equivalent quantity being taken.

† The quantity of the 'dried carbonate' *should* be about 11 ounces—weighed after ignition.

*Leaves of Syrian herb-mastic** . ½ ounce;
Rectified spirit . . . . . ½ pint;†
(holding in solution)
Oil of cinnamon . . . . . 20 grains;
„ *cloves* . . . } . { of each,
„ *nutmegs* . . . } . { ½ drachm;
„ *lemon* . . . } . { of each,
„ *orange* . . . } . { 1 drachm;
„ *sweet marjoram* } . { 1 drachm;

triturate the whole well together, then distil, by an extremely gentle heat, into a well-cooled glass-receiver, observing to stop the process as soon as the liquid that rises begins to dissolve the newly-sublimed salt. This is the original formula of one of the West-end houses that has been celebrated for generations for their 'smelling-salts.'

5. (Extemporaneous.)—*a*. Take of

Sal-ammoniac . . . } . . { of each,
Dry caustic potassa‡ . } . . { ¼ ounce;

triturate them together, and add, of

Oil of lemon . . . . . 12 or 15 drops:
„ *cloves* . . . . . 5 or 6 drops.

Or—

b. Moisten *carbonate* or *sesquicarbonate of ammonia* (crushed small), with a little *volatile ammoniacal essence*.§

The products of the formulæ 1 to 4 (antè), when properly managed, are exceedingly pungent, fragrant, and agreeable, and are very highly esteemed.

Mounsey's "Smelling Salts" are said to essentially resemble No. 1, except in containing less essential oil.

"Godfrey's Smelling Salts," so long celebrated among the higher classes, were originally, and, I believe, are still prepared, by a formula similar to No. 4 (antè), the chief difference being that ordinary 'carbonate of ammonia' (sesquicarbonate) is substituted for the sal-ammoniac there ordered.

Solution of Chloride of Lime; Bleaching Liquor.—The

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* "Marum Syriacum."

† A ½ of a pint, or less, is amply sufficient for the purpose.

‡ Solid *hydrate of potassa*. "Potassa caustica," Br. & D. Ph.; "Potassæ hydras," L. Ph.

§ *Vide* pages 594-6 (*antè*).

solution of the British pharmacopœia ("liquor calcis chloratæ"), and of the Dublin Ph. ("liquor calcis chlorinatæ"), is prepared of 1 part of *chloride of lime** to 10 parts of *distilled water* (both by weight).† This is the ordinary strength of that of the shops; but in that which is sold as "Concentrated Solution of Chloride of Lime" the proportions are usually 3 parts of the *chloride* to 20 of *water*.‡ The Ph. direct the chloride to be triturated with (a a little of) the water (to a cream) in a wedgwood-ware or porcelain mortar, and having transferred the whole to a stoppered bottle, to be well shaken, several times, for the space of three hours; lastly, the solution is to be filtered through *calico*, and preserved in a stoppered bottle. The sp. gr. of that of the Ph. is 1·035. On the large scale, the ingredients are usually placed in a carboy, or a stone-ware bottle, which they will only 2-3rds or 3-4ths fill, and after being corked or bunged close,§ agitated, frequently, for a day or two. After repose for two or three days, the clear portion is decanted through a funnel, choked with crushed glass,‖ into bottles. The last should be closely stoppered or corked (preferably the first), and kept in a cool and dark place. Nothing metallic should be allowed to come in contact with it.

The uses of solution of chloride of lime as a disinfectant, bleacher, fumigation, antiseptic, &c., are well known. Largely diluted with water, it is used as a lotion in itch and some other skin diseases, as a wash for foul ulcers, &c.; also as a cosmetic wash, on account of its deodorizing and blanching properties, as noticed elsewhere.¶

Solution of Chloride of Potash; Javelle's Bleaching Liquid; Eau de Javelle; &c.—This is best made by passing *gaseous chlorine* into a *solution* of 1 part of *carbonate of potash* in 10 parts of *water*, until the gas ceases to be absorbed. It may also be made by adding a *solution of carbonate of potash* to *solution of chlo-*

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* Otherwise called *chlorinated lime* ("calx chlorinata," L. & E. Ph.; "calx chlorata," Br. Ph.), *hypochlorite of lime*, *bleaching powder*, &c. It is a mixture of hypochlorite of lime, with some chloride of calcium, and a variable quantity of hydrate of lime.

† That is, 2 ounces to the pint, or 1 pound to the gallon.

‡ That is, 1¼ pound per gallon.

§ A cork or bung of beeswax or gutta-percha should be used for the purpose, unless the vessel is a stoppered one.

‖ The neck of the 'funnel' should be choked with some fragments of broken glass, over which a layer of smaller ones should be placed, and, over all, a thick layer of coarsely powdered glass. This is all the filtration necessary, and is much superior to that ordered in the Ph., as the contact with the calico, and the longer exposure, weaken the solution.

¶ For references, vide *Index*.

ride of lime, with agitation, as long as a precipitate forms; the liquid being afterwards decanted or filtered, as before.* Uses, &c., as the last.

SOLUTION OF CHLORIDE OF SODA; SOLUTION OF CHLORINATED SODA; SOLUTION OF HYPOCHLORITE OF SODA; LABARRAQUE'S DISINFECTING FLUID (or Liquor); EAU DE LABARRAQUE.—1. Take of

Carbonate of soda (cryst.) . . . 12 ounces;
Distilled water . . . . . 1 quart;

dissolve, and pass through the solution the *chlorine* evolved from a mixture of

Common salt . . . . . 4 ounces;
Binoxide of manganese . . . . 3 „
Sulphuric acid (oil of vitriol) . 2½ fluid ounces;†
(previously diluted with)
Water . . . . . 3 „ „

heated in a retort together, and the gas purified by passing through a wash-bottle containing 5 ounces of *water*, before it enters the 'soda-solution.' This is the formula of the London Ph. In the new British Ph. only 36 ounces of water are ordered for the 'soda-solution,' which makes the product ("liquor sodæ chloratæ") 1-10th stronger.

2. To a *solution of chloride of lime* (formed of chloride of lime, ½ pound; water, 3 pints), add a *solution of carbonate of soda* (formed of carb. of soda, cryst., 7 ounces; water, 1 pint), and after agitation, for about 10 minutes, decant or filter, and preserve the filtrate in a well-stoppered bottle, and in a cool and dark place. This is the formula of the Dublin Ph., and often more convenient than the preceding one.

"Solution of Chloride of Soda" possesses similar properties to the corresponding solution of chloride of lime, but it is preferred for many purposes. Besides its uses (diluted) as a cosmetic, and as a medicinal lotion, gargle, injection, eye-water, &c., it is given internally, in scarlet-fever, sore-throat, &c., the dose being 15 to 30 drops in any bland liquid. Meat in a nearly putrid state, washed with, or immersed in, water containing it, is immediately deodorized and sweetened.

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* These processes are precisely similar to that for the 'soda-solution,' an equivalent portion of *carbonate of potash* being used.

† 4 ounces, Troy. (L. Ph. 1836.)

SOLUTION OF DIACETATE OF LEAD; GOULARD'S EXTRACT.*—This may be obtained, ready prepared, at the druggists. It is troublesome and inconvenient to make it on the small scale. It is a heavy, clear, colourless liquid, and should have the sp. gr. 1·260. It is only used (diluted) externally, and is "*poisonous*" if swallowed.

DILUTE SOLUTION OF DIACETATE OF LEAD; GOULARD; GOULARD WATER; GOULARD'S LOTION.†—This is ordered to be prepared by adding 2 fluid drachms each of *solution of diacetate of lead* and *rectified spirit*, to 19½ fluid ounces of *distilled water*. It is kept ready prepared in the shops. It is white,‡ like the preceding, and is *poisonous*. Used as a sedative, refrigerant, and astringent lotion, in various affections; also in many cosmetic washes, as noticed elsewhere.

SPIRIT OF ETHER.—Take of

Ether (pure)	1 fluid ounce;
Rectified spirit	2 „ „

mix. These are the proportions of the Br. and L. Ph. It should be kept in a well-stoppered bottle, and in a cool place. Sp. gr. ·809. It is a diffusible stimulant, anodyne, and antispasmodic, acting almost as soon as taken. It is a great favourite with ladies of the higher classes, many of whom have recourse to it not only for its medicinal action, but as a general stimulant, in the same way as men take wine and spirits. Though generally disguised with Cologne-water, its odour may be often detected in their breath. The dose is ½ to 1 or 2 teaspoonfuls.

AROMATIC SPIRIT OF AMMONIA; COMPOUND S. OF A.; SPIRIT OF SAL VOLATILE§; VOLATILE AROMATIC SPIRIT; AROMATIC AMMONIATED ALCOHOL; SPIRITUS AMMONIÆ AROMATICUS; ALCOHOL AMMONIATUM AROMATICUM; &c. — Formulæ for this

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* This is the "Liquor Plumbi Diacetatis," L. Ph.; "Liquor Plumbi Subacetatis," Br. and D. Ph.; "Solutio P. D.," E. Ph.

† The Latin and pharmacopœial names are the same as the above, with the addition of "diiutus" (dilute) at the end. In the D. Ph. it is called "Liquor Plumbi Subacetatis Compositus."

‡ Both this and the preceding were formerly made with common vinegar, and hence were coloured; and when this was not the case, colouring was added. The coloured solutions are still the only ones kept in some of the lower class of shops but the colourless ones are those only of the pharmacopœias, and adapted for ingredients in cosmetics.

§ This is still the popular name of this article, though long obsolete among professional men. The vulgar pronounce the last word of it in *three* syllables instead of *four* —vol'-a-tile, instead of vo-lat'-e-le.

article, now in such general use among the middle and upper classes, are given in the pharmacopœias, but differ considerably from each other. Some of the West-end houses,* which are celebrated for their 'spirit of sal-volatile,' have their own private formulæ, which have been used by them, in many cases for generations; and the peculiar flavour and aroma of their manufactures are as well known and as highly appreciated by the nervous and aristocratic ladies who patronize them, as are those of Booth or Smith's "Gin," Allsopp's "Pale Ale," and Barclay's "XXX," by their respective votaries. As with the distillers, so with these druggists, it would be impossible materially to alter their formulæ without losing their customers.

The following are the formulæ of our national pharmacopœias:—

1. (British Ph., 1864.)—Take of

Carbonate of ammonia † . . .	8 ounces;
Strong liquor of ammonia (·882)‡	4 fluid ounces;
Volatile oil of nutmeg	4 fluid drachms;
Oil of lemon	6 „ „
Rectified spirit	6 pints;
Water	3 „

mix, and distil 7 pints. Sp. gr. ·870. This is *now* the only authorized formula. The product is excellent, and very agreeable in use.

2. (London Ph., 1851.)—Take of

Hydrochlorate of ammonia (sal-ammoniac)	6 ounces (Troy);
Carbonate of potassa	10 „ „
Cinnamon (bruised) . } *Cloves* (do.) . } . .	of each, 2½ drachms (Troy);
Fresh lemon-peel (thin yellow) .	5 ounces (Troy);
Rectified spirit . . . } *Distilled water* . . . } . .	of each, 2 quarts;

mix, and (after digestion for a few hours) distil 3 quarts. Sp. gr. ·918. Weaker than the preceding. It is still the formula in common use, though officially superseded by the preceding one.

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* For instance, Savory & Moore, of New Bond Street, John Bell & Co., of Oxford Street, and a few others that might be mentioned.

† That is, the "sesquicarbonate" of the London Ph. and chemists, the compilers of the new British Ph. having changed the name to 'carbonate,' it being the only carbonate of ammonia kept in the shops.

‡ The sp. gr. of the 'stronger liquor of ammonia' is printed ·891 in the new Br. Ph., a manifest error, as shown by the description of it.

3. (Edinburgh Ph., 1841.)—Take of

Spirit of ammonia (Ph. E.; caustic)	8 fluid ounces;
Oil of rosemary	1½ fluid drachm;
„ *lemon*	1 „ „

mix. Very pungent, owing to the ammonia being in the caustic state; also less agreeable in flavour than the last. Sp. gr. about ·850.

4. (Dublin Ph., 1850.)—Take of

Rectified spirit	3 pints;
Oil of lemon	½ fluid ounce;
„ *nutmegs*	2 fluid drachms;
„ *cinnamon*	½ „ „

dissolve, and add of

Liquor of ammonia (·900) . . .	6 fluid ounces.

Sp. gr. ·852. Resembles the last in pungency, from the ammonia being in the caustic state; but the flavour is very agreeable.

Spirit of sal-volatile (as it is popularly called) is a diffusible stimulant and an antacid. It is a favourite among ladies of the middle and higher classes as a remedy in debility, languor, low spirits, heartburn, nausea, acidity of the stomach and bowels generally, flatulence, flatulent colic and diarrhœa, nervous headaches, hysteria, &c. The dose is ½ to 1 teaspoonful, in water, or in any bland liquid (not acid), preferably the first.

The spirit of sal-volatile met with in trade very seldom possesses the alcoholic strength of that of the pharmacopœia, and is hence inferior. That of the ordinary druggists generally contains only one-half the proper quantity of spirit; and, what is worse, is now very frequently prepared with 'methylated spirit,' the faint, nauseous odour and flavour of which is only covered by the aromatics in the compound. When this is the case, the preparation exerts a depressing action on the system, and often taints the breath and causes nausea as soon as the effects of the ammonia and aromatics in it have passed off.

Tincture of Iodine.—Take of

Iodine	½ ounce;
Iodide of potassium	¼ „
Rectified spirit	1 pint;

mix, and agitate until solution is complete. This is the "tinctura iodi" of the British Ph. The compound tincture (tinctura iodinii

composita) of the London Ph. contains 4 times this quantity of the iodide. The "tinctura iodinei" of the Edin. Ph. contains 1¼ oz. (Troy) of iodine per pint (without any iodide), or about 2½ times more iodine than the former. Used externally as a paint ("Iodine Paint"), and caustic; internally, in doses of 5 to 20 drops, in scrofula, enlarged and indurated glands, &c.

Tobacco.—A delightful fragrance may be imparted to tobacco, by mixing with it, while slightly damp, a little *cascarilla*, either in very fine shreds or recently powdered; or by a like addition of any of the substances noticed under "fumigating pastils" of which the odour is appropriate to the purpose. "Cigars" may be perfumed by moistening them externally with *concentrated tincture of cascarilla*, or *tincture of benzoin* or *styrax*, or a *mixture* of them; or a minute portion of the *powders*, *shred roots*, or *woods*, may be done up with the bundle of leaves that form the centre of the cigar. The so-called "Anti-choleraic" and "Disinfecting Cigars" are scented with *camphor*, *cascarilla*, and *benzoin*.*

Traumaticine.—This article, originally brought out by the Gutta Percha Company, of the Wharf-road, is simply a *solution* of white and dry *pure unmanufactured gutta-percha* in *bisulphuret of carbon*. Dropped on a wound, or raw surface, it almost instantly forms a pliable, waterproof, and air-tight defensive covering to the part, resembling, in appearance, goldbeater's skin. The fœtid odour of the menstruum is lost in a few seconds. *Chloroform*, which has an agreeable odour, may be used as the solvent, but is very much more expensive than the 'bisulphuret.'

Marseilles Vinegar; Four-thieves' Vinegar; Prophylactic Vinegar; Vinaigre des Quatre Voleurs; Acetum Quatuor Furum.—The original formula for this once celebrated preparation is—Take of

Rosemary-tops (dried)	}	} of each,
Sage-flowers (do.)	} . .	} 4 ounces;
Lavender-flowers (do.)	. . .	2 ,,
Rue (fresh)	. . . . .	1½ ,,

* On the "effects of tobacco," on both mind and body, the reader is recommended to peruse an excellent little pamphlet by Mr. Lizars, the eminent surgeon, first published a few years since. He may also read, perhaps, with advantage, the article "Tobacco" in the Author's *Cyclopædia*, 3rd ed., pp. 1242-3.

Camphor (dissolved in spirit) . 1 ounce;
Garlic (sliced) . . . . . ¼ „
Cloves (bruised) . . . . . 1 drachm;
Distilled wine-vinegar (strongest) 1 gallon;

digest for 7 or 8 days, with occasional agitation, pour off the liquor, press out the remainder, and filter the mixed liquids.

It is said that this medicated vinegar was invented by four thieves of Marseilles, who successfully employed it, as a prophylactic, during a visitation of pestilence. It is also said to have been a great favourite with Cardinal Wolsey, who always carried some of it with him as a preventive. After some time the 'garlic' and 'rue' were omitted, and have not since been used in its preparation. In the "Marseilles vinegar" of the shops, the 'camphor' and 'spirit' are also now generally omitted.

Marseilles vinegar is a popular favourite on the Continent as a corrector of bad smells, and particularly of the air of sick-rooms in fever, about the floors of which it is sprinkled. It was formerly in high repute as a prophylactic against the plague, fevers, and other contagious diseases. It has little pungency, but an agreeable and refreshing odour.

The Edin. Ph. of 1817 contained a formula for a vinegar nearly similar to the above.—Take of

Rosemary (dried) . . } . . { of each,
Origanum (do.) . . } . . { 2 ounces (Troy);
Lavender-flowers . . . . . 1 „ („);
Cloves (bruised) . . . . . 1 drachm („);
Distilled vinegar . . . . . 3 pints;

digest, &c., as before.

Tar Water; Infusion of Tar; Tar Tea.—Take of

Wood-tar . . . . . 1 quart;
Cold soft-water . . . . . 1 gallon;

mix, and stir them briskly with a stick for at least fifteen minutes. After subsidence, pour off the water, strain it, and keep it in well-stoppered bottles or jars. This is the formula of Bishop Berkeley and the D. Ph. Used as a lotion in various chronic skin-diseases, particularly of the scalp in children; also in failing hair, baldness, &c. It was once in high repute as a medicine for internal use.

Tobacco Water; Infusion of Tobacco.—The "Infusum Tabaci" of the old D. Ph. is made of

Tobacco-leaves . . . . . 1 drachm (Troy);
Water (boiling) . . . . . 16 fluid ounces;

infused together for an hour. That of the shops is commonly the 'waste water' which runs from the 'cut tobacco' in 'steaming' it. Chiefly used as a "wash" to kill pediculi.

With the following article on a matter connected with the 'Toilet,' which occasionally proves troublesome and annoying to some persons, I purpose to conclude this Chapter and the volume :—

Shaving (Art of Easy).—The following is chiefly the substance of the instructions of the celebrated Mr. Mechi on this subject :—

Never fail to well wash your beard with soap and cold water, and to rub it dry, immediately before you apply the *lather*, of which the more you use, and the thicker it is, the easier you will shave.

Never use warm water, which makes a tender face.

(In cold weather) place your razor (closed of course) in your pocket, or under your arm, to warm it.

The moment you leave your bed (or bath) is the best time to shave.

Always wipe your razor clean, and strop it before putting it away; and always put your shaving-brush away with the lather on it.

The razor (being only a very fine saw) should be moved in a sloping or sawing direction, and held nearly flat to your face, care being taken to draw the skin as tight as possible with the left hand, so as to present an even surface, and to throw out the beard.

The practice of pressing on the edge of a razor in stropping it soon rounds it; the pressure should be directed to the back, which should never be raised from the strop. If you shave from heel to point of the razor, strop it from point to heel; but if you begin with the point in shaving, then strop it from heel to point.

If you only once put away your razor without stropping it, or otherwise perfectly cleaning the edge, you must no longer expect to shave well and easy, the soap and damp so soon rust the fine teeth and edge.

A piece of soft plate-leather should always be kept with razors, to wipe them with.

APPENDIX.

I. Weights :—

The *weights* used in this work, except when otherwise indicated, are the *Imperial Standard* or *Avoirdupois*, with the minor subdivisions as given in the *first* of the following Tables :—

1. *Imperial Avoirdupois Weight.*

Drachms. *dr.*	Ounces. *oz.*	Pounds. *lb.*	Quarters. *qr.*	Hundredweight. *cwt.*	Ton.	Equiv. in Troy Grains.	Equiv. in French Grammes.	Equiv. in minims of pure water at 62°.
1·*	¼ *or* ·125	·0078	..	..	..	54·6875	3·5428	60·
8·	1·	·0625	..	..	..	437·5	28·3424	480·
128·	16·	1·	..	..	..	7,000·	453·4784	7680·
3,584·	448·	28·	1·	·25	..	196,000·	..	..
14,336·	1,792·	112·	4·	1·	·05	784,000·	..	..
286,720·	35,840·	2,240·	80·	20·	1·	15,680,000·	..	..

*** The '*standard*' in *avoirdupois weight* is the same as in Troy weight. The same 'grain' is used in each.

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* Whenever a 'drachm' is mentioned in ordinary trade and commerce, this one (¼ *oz.* avoir.) is intended. The *old avoir. dr.* (1/16 *oz.* or 27·344 *gr.*) is now obsolete, except in weighing silk.

This is now the only legal weight used in trade and commerce in these realms. Its divisions (*lb.*, *oz.*, *dr.*) are those adopted in the last Dublin Pharmacopœia, and, with the exception of the drachm, in the new British Pharmacopœia.*

Avoird.		*Troy.*
1 lb. is equiv. to	1·21577 lb. *or*	1 lb. 2 oz. 4 dr. 40 gr.
1 oz. „	·9114583 oz. „	7 „ 17½ „

2. *Imperial Troy Weight.*

Grains. *gr.*	Pennyweights. *dwt.*	Ounces. *oz.*	Pound. *lb.*
1·	$\frac{1}{24}$	$\frac{1}{480}$	$\frac{1}{5760}$
24·	1·	$\frac{1}{20}$	$\frac{1}{240}$
480·	20·	1·	$\frac{1}{12}$
5760·	240·	12·	1·

*** The '*standard unit*' in *Troy weight* is 1 cubic inch of *distilled water*, which, at 62° Fahr., and 30 inches of the barometer, weighs 252·458 Troy-grains.

This weight is used for *gold*, *silver*, *jewelry*, *&c.*, and, under a somewhat modified form (vide infrà), in medicine and philosophical experiments.

The *carat* used in weighing diamonds is $3\frac{1}{6}$ grains Troy (nearly).

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* In the new Br. Ph., the Imperial avoirdupois pound and ounce are adopted, and "the drachm and the scruple, the old denominations of weights between the ounce and grain of Pharmacy," abandoned. Weights formerly expressed in them are now directed to be expressed in grains.

3. *Apothecaries' Weight.*
(Modified Troy Weight.)

Grains (Troy). *gr.*	Scruples. ℈	Drachms. ʒ	Ounces. ℥	Pound. lb*	Equiv. in French Grammes.	Equiv. in Avoirdupois Weight.	
						ox.	*gr.*
1·	·05	·01666	·002083	·0001736	·06475		1·
20·	1·	·3333	·0416	·003472	1·295		20·
60·	3·	1·	·1250	·0104166	3·885		60·
480·	24·	8·	1·	·0833333	31·08	1	42·5
5760·	288·	96·	12·	1·	372·96	13	72·5

*** *Apothecaries' weight* is almost exclusively employed in prescriptions and dispensing, and is the one adopted in all the Pharmacopœias published in these realms prior to the 'D. Ph.' (1850), and the new 'Br. Ph.' (1864).

In this weight, when the signs or abbreviations of the different denominations are employed, the number of the latter to be taken is usually expressed, in medical prescriptions, by Roman numerals placed *after* the signs or abbreviations, and not by Arabic figures *preceding* them, as in avoirdupois weight.† A 'half' is expressed by *ss*.‡

Troy.		*Avoirdupois.*
1 lb.	is equiv. to	·822857 lb.
1 oz.	„	1·097143 oz.

†‡† 'Parts,' in formulæ, represent the simple proportions of the ingredients by *weight*. A 'part' may be a *gr.*, *dr.*, *oz.*, *lb.*, *&c.*, at will, according to the desired weight of the product.

II. Measures:—

The *measures* of *volume* used in this work are exhibited in the following Table:—

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* This sign was formerly used to represent also the wine-pint.

† Thus, according te the common notation, 1 lb. 7 oz., unless when otherwise indicated, means 1 pound 7 ounces *avoirdupois*; and lbi ℥vii, *or* lb) ℥vij, 1 pound, 7 ounces, Apothecaries' or Troy weight.

‡ *Ss*, semi (Lat.), half. Thus—℈iiss, ʒviss, respectively represent 2½ scruples and 6½ drachms.

1. *Imperial Standard Measure*, and the relative value of its divisions, including *those used in Medicine*, with their *Equivalent weights*.

Minims *or* measured drops.	Fluid Drachms. *fl. dr.* f3	Fluid Ounces. *fl. oz.* f	Pints. *pt.* O.	Quarts. *Qt.* Oij.	Gallon. *Gal.* C.	Equivalents in *Distilled water*, at 62° Fahr., in	
						Troy Grains.	Avoir. Weight.
							lb. *oz.*
1·	·01656666	·00208333	·00010416	·00005208	·000013 2	·91146	— —
60·	1·	·125	·00625	·003125	·00078125	54·6875	— —
480·	8·	1·	·05	025	·00625	437·5	— 1
9,600·	160·	20·	1·	·5	·125	8,750·	1 4
19,200·	320·	40·	2·	1·	·25	17,500.	2 8
76,800·	1,280·	160·	8·	4·	1·	70,000·	10 —

*** The '*standard unit*' of this measure is the *gallon*, which is declared, by statute, to be capable of containing "*ten pounds* avoirdupois weight of *distilled water*, weighed in the air at the temperature of 62° Fahr., the barometer being at 30 inches."

The pound avoirdupois contains 7,000 grains, and it is declared that a *cubic inch* of *distilled water*, under the above conditions, weighs 252·458 grains; hence the *capacity* of the Imperial gallon, and its divisions, are as follows :—

Imperial gallon	=	277·274 cubic inches.
,, quart	=	69·3185 ,,
,, pint	=	34·65925 ,,
Fluid ounce	=	1·73296 ,,
,, drachm	=	·21662 ,,

†‡† The IMPERIAL GALLON is 1–5th *larger* than the 'old wine-gallon.'
,, 1–60th *smaller* ,, 'old beer-gallon.'

2. *Miscellaneous Measures and their Equivalents :—*

Tea or coffee spoonful . .	(average)	=	1 fl. dr.
Dessert ,, . .	,,	=	2 ,,
Table ,, . .	,,	=	4 ,,
Wine-glassful	,,	=	2 fl. oz.
Tea-cupful	,,	=	5 ,,
Breakfast-cupful	,,	=	8 ,,
Tumblerful	,,	=	8 ,,
Basinful	,,	=	12 ,,
Thimbleful	,,	=	¾ fl. dr.
Pinch (of leaves and flowers)	,,	=	1 dr. (Troy).
Handful ,,	,,	=	10 ,,

*** In *all cases*, in this work, when a "drop" or "drops" are ordered, the MINIM, or measured drop, is referred to.*

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* Drops poured from a bottle vary greatly according to the size of the lip of the bottle, the nature of the liquid, &c., some being less than half the size of others.

III. French Weights and Measures :—

1. *Metrical or Decimal Weights.*

Names.	Equiv. in Grammes.	Equiv. in Troy Grains.	Equiv. in Avoir. weight.			Equiv. in Apoth. weight.			
			lb.	*oz.*	*gr.*	*lb.*	*oz.*	*dr.*	*gr.*
Milligramme ...	·001	·0154	..	..	..	..	..	..	..
Centigramme...	·01	·1543	..	..	..	..	..	..	..
Décigramme....	·1	1·5434	..	..	..	..	..	..	1·5
Gramme	1·	15·4340	..	..	..	..	..	..	15·4
Décagramme ..	10·	154·3402	..	0½	45·	..	..	2	34·
Hectogramme..	100·	1,543 4023	..	3½	12·15	..	3	1	43·
Kilogramme or Kilo.....	1,000·	15,434·0234	2	3½	12·17	2	8	1	14·
Myriagramme...	10,000·	154,340·2344	22	0¾	12·	26	9	4	20·

*** The '*standard unit*' in the above Table is the *gramme*.

2. *Metrical or Decimal Measures of Volume.*

Names.	Equiv. in Litres.	Equiv. in English Cubic Inches.	Equiv. in English Imperial Measure.				
			Gal.	*pts.*	*fl. oz.*	*fl. dr.*	*minims.*
Millilitre	·001	·0610	..	..	..	..	16·9
Centilitre	·01	·6103	..	..	..	2	49·
Décilitre	·1	6·1028	..	..	3	4	10·4
Litre.....	1·	61·028	..	1	15	1	43·7
Décalitre	10·	610·28	2	1	12	1	16·9
Hectolitre.....	100·	6,102·8	22	0	1	4	49·
Kilolitre.....	1,000·	61,028·	220	0	16	6	40·
Myrialitre	10,000·	610,280·	2,201 (= 275¼ *bushels*).				

*** The '*standard unit*' in the above Table is the *litre*.

3. *Metrical or Decimal Measures of Length.*

Names.	Equiv. in Mètres.	Equivalents in English Inches, at 32° Fahr.	English Long Measure, at 62° Fahr.				
			Miles.	fur.	yds.	feet.	inches.
Millimètre.....	·001	·03937	..	..	..	..	..
Centimètre	·01	·39371	..	..	..	..	..
Décimètre.....	·1	3·93708	..	..	..	..	..
MÈTRE	1·	39·37079	..	..	1	0	3·37
Décamètre	10·	393·7079	..	..	10	2	9·7
Hectomètre	100·	3,937·079	..	..	109	1	1·68
Kilomètre	1,000·	39,370·793	..	4	213	1	10·3
Myriamètre	10,000·	393,707·93	6	1	156	0	9·17

*** The '*standard unit*' of the above TABLE is the *mètre*.

IV. *Note on Ancient Egypt.*

The splendid civilization, refinement, and luxury of the ancient Egyptians has been referred to at pages 20-5. The excavations of Brugsch, and others, have brought to light papyri, and other relics, which furnish information respecting this strange and wonderful people during the Mosaic age, and even some centuries preceding it. Art, science, and manufacture, were then at their zenith; and all that later nations have done in the same fields of intellect and industry, appears to have been anticipated, and in most cases surpassed, by the ancient Egyptians and Assyrians. Such was the knowledge of the former in chemistry and physics, that their bodies, paper writings, and cloth, have come down to us upwards of 3,500, and probably 4,000 years old; whilst the triglyphic nature of their inscriptions has rendered these imperishable vehicles of information respecting the ages which produced them. Time, which obscures those of other nations, throws fresh light on those of ancient Egypt, for each inscription bears on its face the key for deciphering it. The graphic system of the ancient Egyptians appears to have been devised with a degree of wisdom, ingenuity, and forethought, peculiar to themselves, for it carries its own expository and, often its own pronouncing lexicon, along with it, and this in a way, and to an extent,

until recently unsuspected. Its authors seem to have anticipated the ultimate extinction of their nation, language, and literature, and in the construction of their formal graphic system, evidently aimed at rendering their inscriptions and writings decipherable to remote ages, and as long as the stone on which they are graven, or the fabric on which they are delineated, shall endure. And they have succeeded. The explorations and critical researches of the curious and learned are now yearly bearing their fruit, and developing specimens of the art, and fragments of the history and literature, of a nation that was ancient in the days of Abraham. Egyptian hieroglyphics are no longer regarded as the relics of an ignorant, superstitious, or barbaric race. The papyri show us that the ancient Egyptians believed in the unity of the Godhead, the immortality of the soul, and the resurrection to life. Epitaphs, above 4,000 years old, teach the most admirable moral lessons, and indicate that obedience, duty, honour, affection, and virtue, then, as now, "won the esteem of men, and the love of woman." Here we have the oldest fairy tale in the world, written by Pharaoh's Master of the Rolls for the amusement of the prince imperial, when Moses was a boy at court; and here we have the affairs of daily life commented on and exposed. The barbers, hairdressers, and perfumers, must have been then a numerous race. We are told that "the barber is to be pitied who is compelled to run from inn to inn to get customers."

V. *Note on Pyrogallic Acid.*

This substance, so largely used in photography and hair-dyeing, is now cheaply made by heating, under pressure, a mixture of

Gallic or *tannic acid* (commercial) 1 part;
Water . . . . . 2 to 3 parts;

until the temperature ranges between 395° and 410° Fahr., at which it is kept for ½ an hour, or rather longer, when the whole is allowed to cool. The vessel is not opened until the whole has cooled, when its contents are found to be a slightly coloured concentrated solution of 'pyrogallic acid.' This solution treated with pure and recently ignited *animal charcoal*, at a gentle heat, then filtered, and gently, but quickly evaporated out of contact with the air, without ebullition, and allowed to cool slowly, yields a hard amber-coloured mass of crystals of 'pyrogallic acid,' which may be obtained quite white and pure by sublimation. An enamelled-iron apparatus formed on the principle of Papin's "digester" is convenient for the first part of the process.

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THE END.

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