The dictionary of daily wants.

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THE

DICTIONARY

OF

DAILY WANTS

IN THREE VOLUMES

price (2.6.)

IT IS ONE THING TO *POSSESS* A BOOK—ANOTHER THING TO *USE* IT. THE DICTIONARY OF DAILY WANTS IS EMINENTLY A BOOK FOR USEFUL PURPOSES. THERE CAN SCARCELY ARISE A DOMESTIC WANT UPON WHICH IT WILL NOT BE FOUND TO AFFORD GOOD ADVICE, AND SOUND PRACTICAL INFORMATION. ITS SPECIALITIES ARE THREEFOLD:—1. COMPREHENSIVENESS OF SUBJECTS. 2. ACCURACY OF INFORMATION. 3. EASE OF REFERENCE.

VOL. I.

LONDON:

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PREFACE.

THE DICTIONARY OF DAILY WANTS may be said to have done for matters of Practical Utility in domestic affairs, what the great naturalist Linnæus did for the science of Botany—it has brought the thousands of useful items scattered in disorder through an unlimited number of Channels, into one Arrangement and System, by which they may be easily found and understood.

We assure those with whom this Dictionary may become a Household Book, that it has been compiled with the greatest care—that every line has been attentively considered before being suffered to pass through the press—that the Medical articles, and those relating to Law, have been written by professional gentlemen not only qualified to write, but experienced by *practice*, in their avocations; and that, in the composition of the closely printed pages of the DICTIONARY, many talents have been employed, and many friendly hands engaged.

It has been found necessary to extend the Dictionary to THREE Volumes instead of TWO, as originally proposed. Had it been circumscribed to two, our Subscribers would have had to say that a very frequent *daily want* was *the want of something which the Dictionary was found upon reference not to contain.* A good work would thereby have been marred, which, by the extension of its pages to three volumes, will be rendered the most perfect work of reference upon practical and domestic information.

The DICTIONARY has already found a very large sale in monthly parts —no less than FIFTY THOUSAND Subscribers have taken it in the serial form. The rapid acquisition of so large a number of Subscribers is partly owing to the plan we announced at the commencement, of distributing among the Subscribers to the Monthly Parts, One Hundred Guinea Tickets, entitling the holders of them to share in the distribution of PRIZES by the ART UNION OF LONDON, amounting to £7,500. Our object in giving these Prizes was to ensure the introduction of a work of real value to Households where, without some popular attraction, it might not find its way, because, although its merits were very high, it presented externally none of those alluring features frequently employed to gain popular favour for worthless literature.

Having succeeded in our object, we are rewarded by the unanimous

voice of our Subscribers, who regard the Dictionary of Daily Wants as being in itself a Prize, and recommend it from house to house as a work which every family should possess.

Thus rewarded, we shall proceed with the greater gratification to distribute among our first supporters the ONE HUNDRED ART UNION GUINEA TICKETS, hoping sincerely that some goodly PRIZES may find their way to the homes of our Friends. Further, we have resolved not to confine the expression of our gratitude to a single distribution, but we will, upon the completion of each volume, distribute among those who have taken the Monthly Parts forming that volume, *One Hundred Guinea Tickets of the Art Union of London.*

It is impracticable to include the purchasers of the Volumes in these distributions, because the sale of a volume is *indefinite in time*—it spreads over many years—whereas the sale of twelve Monthly Parts is limited to a year, and presents, at the twelfth month, a line of demarcation at which the Prizes may be distributed, and every participator in the patronage of the work enjoy a just and immediate share.

But the purchasers of the First Volume may participate in the two forthcoming distributions, by *continuing the Work in Monthly Parts.* They will thus have the advantage of their numbers for reference throughout the year; at the close they can be supplied by their Booksellers with uniform covers for binding, and they will have the chance of gaining an Art Union Ticket, which, if the Art Union Wheel of Fortune favours them, may bring a PRIZE worth from FIVE GUINEAS to TWO HUNDRED GUINEAS.

The Art Union of London is so well known as an Institution sanctioned by Parliament for the encouragement of the Fine Arts, that no doubt can rest upon the validity of the distribution of the Prizes, nor any suspicion exist as to their intrinsic value; while a gift of works of Art in connection with a Literary undertaking, at once illustrates and cements the union which should always subsist between Art and Literature.

As a matter of social interest the Annual Distribution is to be commended. It keeps expectation alive; makes groups of friends interested in each others' fortunes; gives harmless exercise to that organ of the mind which phrenologists call acquisitiveness. Coming at Christmas time each year, it kindles in every social circle an active curiosity, and a pleasant mirth—and it is one of the beautiful laws of our nature that when we see the success of our Friends, our own expectations and hopes burn more brightly. Disappointment may momentarily pale the cheek of Expectation, but it never yet dimmed the eye of Hope.

London, December, 1858.

THE

DICTIONARY OF DAILY WANTS.

ABATEMENT in commerce is a deduction made in the price of goods either in consideration of the payment of prompt cash, or on account of the deterioration of value which the merchandise may from a variety of causes have undergone. In many branches of commerce, especially when the articles are of more than ordinary value, it is customary for the seller to take less than he asks, because he anticipates that *the buyer will bid him less.* When extensive purchases are made this should be remembered and acted upon.

ABBREVIATIONS are made use of in writing for the purpose of saving of time and trouble. In composition, or epistolary correspondence, the abbreviation of words of ordinary import is both inelegant and unnecessary, such as the use of the words "can't," "shouldn't," mustn't," for *cannot, should not,* and *must not,* which, with many other words of a similar nature, should invariably be written in full. It is justly considered an impropriety to use such abbreviations as the following in correspondence: "Remember me to Mrs. B.," "Hoping that Mrs. B. and yourself are quite well," &c. In denoting the titles and distinctions of persons, however, abbreviations are sanctioned by custom, and therefore allowable. The following list includes some of the most important of these abbreviations, with their explanations:—

A.R.A., Associate of the Royal Academy.
B.A., Bachelor of Arts.
Bart., Baronet.
B.C.L., Bachelor of Civil Law.
B.D., Bachelor of Divinity.
Captn., Captain.
C.B., Companion of the Order of the Bath.
C.M.G., Companion of the Order of St. Michael and St. George.
Col., Colonel.
D.C.L., Doctor of Civil Law.
D.D., Doctor of Divinity.
Dr., Doctor.
Esqr., Esquire.
F.A.S., Fellow of the Antiquarian Society.
F.H.S., Fellow of the Horticultural Society.
F.L.S., Fellow of the Linnæan Society.
F.R.S., Fellow of the Royal Society.
F.S.A., Fellow of the Society of Arts.
G.C.B., Knight of the Grand Cross of the Bath.
G.C.H., Knight of the Grand Cross of the Royal Hanoverian Guelphic Order.
G.C.M.G., Knight of the Grand Cross of the Order of St. Michael and St. George.
H.E.I.C., Honourable East India Company.
H.M.S., Her Majesty's Ship; with the prefix "on," Her Majesty's Service.
K.C., Knight of the Crescent.
K.C.B., Knight Commander of the Order of the Bath.
K.C.H., Knight Commander of the Royal Hanoverian Guelphic Order.
K.C.M.G., Knight Commander of the Order of St. Michael and St. George.
K.G., Knight of the Order of the Garter.
K.H., Knight of Hanover.
K.P., Knight of the Order of St. Patrick.
K.T., Knight of the Order of the Thistle.
Kt., Knight.
Lieut., Lieutenant.
LL.D., Doctor of Laws.
M.A., Master of Arts.
M.D., Doctor of Medicine.
M.P., Member of Parliament.
M.R.C.S., Member of the Royal College of Surgeons; the addition of E. implies of Edinburgh.
M.R.I.A., Member of the Royal Irish Academy.
Mus. D., Doctor of Music.
Ph. D., Doctor of Philosophy.
Prof., Professor.
R.A., Royal Academician.
R.N., Royal Navy.
Rt. Hon., Right Honourable.

The following miscellaneous abbreviations are also universally used :—

& Co., and Company.
A.D., The year of our Lord.
A.M., Before noon.
B.C., Before Christ.
Cr., Creditor.
Do., or ditto, or ", As before.
Dr., Debtor.
i. e., That is to say.
Inst., The present month.
£. *s. d.*, Pounds, shillings, and pence.
MS., Manuscript; MSS., Manuscripts.
N.B., Observe.
Nem. Con., Without contradiction.
P.M., Afternoon.
Pro. Tem., Temporarily.
P.S., Postscript.
Ult., The last month.
U. S., United States.
Viz., Namely.
Xmas, Christmas.
Cwt. qr. lb. oz., Hundredweight, quarter, pound, and ounce.
4to., Quarto, folded into four.
8vo., Octavo, folded into eight.
12mo., Duodecimo, folded into twelve, &c.

ABDOMEN, the lower part of the body, extending longitudinally from the cavity or hollow usually called the pit of the stomach to the lower part or trunk. The intestines of the abdomen are liable to a variety of diseases, the most formidable of which is inflammation. Many internal injuries of the abdomen are caused by continual external pressure, to obviate which all articles of clothing which come in contact with this part of the body should be made to fit loosely, and with an equal weight upon the whole surface.

ABERRATION OF MIND.—A form of disordered intellect and incipient insanity, which fluctuates according to circumstances. This affliction is the result of a variety of causes, but frequently arises from excessive application to sedentary occupations, and an undue exercise of the mental faculties in any one direction. The remedy for this derangement is moral rather than physical. A certain regimen should be scrupulously observed; all mental employment abstained from; while change of scene, cheerful conversation, and harmless amusement may generally be adopted with success.

ABLUTION. — The frequent affusion of the surface of the body is not only necessary to cleanliness and comfort, but is also essential to the preservation of health. The explanation of this is, that the pores of the skin act as agents for removing from the body useless and superfluous matter, which is constantly being generated, and which, in the form of minute scales, is deposited upon the outer portion or cuticle of the skin. If this refuse is suffered to accumulate and remain, it forms in the process of time a thick hard crust, which obstructs the pores of the skin, and impedes their functions. It is obvious, therefore, that the internal organs of the body, being deprived of the assistance and vital energy rendered by the pores, become by this means enfeebled in their operations, and habitually debilitated and deranged. To obviate these evil effects, it is necessary that the whole surface of the body should be *daily* subjected to an ablution of cold water, or, where this may be impracticable, to friction with a damp cloth.

ABRASION is the violent removal of the outer skin in any part of the body, such as may be caused by a fall or a blow. The best remedy is court plaster or goldbeater's skin, or linen bandages spread with spermaceti ointment. *Common adhesive plaster should never be applied in these cases*, because it irritates instead of healing.

ABSCESS.—A collection of pus or matter deposited in a cavity, occasioned by inflammation. The mode of treatment for the cure of abscess is, to promote suppuration rather than retard it; this is effected by warm fomentations, and poultices of bread and water or linseed meal. If the suppuration proceeds slowly it may be hastened by opening with a lancet, and after the discharge of matter, the poultices may be continued until all tenderness has left the part. The wound should then be dressed with spermaceti ointment twice a day, and lightly bandaged. In the early stages a liberal diet may be adopted, until the period of discharge; a light nutritious diet should then be substituted, and mild aperients administered, until perfect health is restored.

ABSORPTION is the action by which liquids and gases become incorporated with various bodies, as sponge, sugar, and chalk absorb water, and the pores of the skin absorb the fluids and gases near the mouths of the vessels. When fluids absorb each other, it arises from one being more fluid or less viscid than the other. The following are the relative powers of absorption of various bodies:—Garden mould, 95 deg. of moisture; pipe clay, 85 deg.; alumina, 84 deg.; silica, 40 deg.; wool, 18 deg.

ABSTINENCE, both in eating and drinking, is occasionally advantageous in the preservation of health, the cure of disease, and the prolongation of life. In taking food or drink, nature unerringly reminds us when we ought to *abstain*, and an indulgence beyond this point becomes excess, which sooner or later acts injuriously upon the system, and engenders a number of painful and tedious diseases. In minor complaints, such as headache, heartburn, cold, &c., abstinence will frequently effect a more certain and speedy cure than any medicine. On the other hand, excessive abstemiousness should be guarded against, as being liable to induce debility and nervousness; but here nature again steps in, and informs us when the supply of food is not sufficiently nutritive and invigorating.

ACACIA.—A variety of shrubs and plants are included under this name. The *rose acacia* grows to a great height in genial situations, and will sometimes bloom twice during the year. The *smooth tree acacia* blossoms in August; it flourishes best in a light mould, requires careful tending, and protecting from the wind. The *sponge tree acacia* grows best on a rich soil and in a warm situation, also requiring great care and attention in its culture.

ACADEMIES.—See EDUCATION.

ACCEPTANCE of a bill of exchange is the name of a party *written by himself, or by some person duly authorized by him*, thus—"Accepted, Thomas Jones," upon an unconditional order for a certain sum of money, whereby he accepts the obligation to pay the amount specified. Any person so signing his own name, though for a company or another person, renders himself personally liable. Any person signing his name upon a blank bill stamp may be made to pay any bill afterwards drawn upon it to the amount of the stamp. Acceptance by joint stock companies must be by two directors, expressed to be accepted by them on behalf of the company, and countersigned by the secretary.

ACCEPTOR.—The technical or mercantile designation of the person primarily liable to pay a bill of exchange. An acceptance is a conclusive admission of the ability of the drawer to make the bill upon the acceptor, for which reason he is liable, though the drawer's signature be forged. If a trader, he may be made a bankrupt upon it, though the time for payment may not have arrived. —See BANKRUPT.

ACCESSORY (BEFORE THE FACT), is, in law, a person who though not absolutely assisting in a felony at the time of its committal, yet counsels or abets another to commit the felony. An accessory *after the fact*, is one who harbours or assists the felon, with the knowledge of a felony having been committed. In two offences, the highest high treason, and the lowest misdemeanor, there are no accessories, all persons implicated being considered as *principals;* and in murder, administering poison, attempts to drown, suffocate, or strangle, shooting, stabbing, administering poison to a woman to procure abortion, abduction of women for lucre, child stealing, and bigamy, accessories *before the fact* are punishable in the same manner as principals.

ACCIDENTS.—As there is no age or condition which can insure us against accidents, it is of the utmost importance that we should always be prepared against such contingencies, and that we should have some line of conduct marked out by which we are resolved to act in an emergency. This faculty is termed *presence of mind*, and it is to the want of this that the lamentable loss of human life is in many cases attributable. When an accident occurs, firmness of resolution, and coolness of action, are indispensable. In the majority of instances, however, it unfortunately happens that the mind, being suddenly overwhelmed by fear, becomes as it were paralyzed, and is unequal to the conception of the simplest means by which both life and property might be saved. It is, therefore, incumbent upon us all that when we are most secure, and the mind is in the full and calm possession of its reasoning powers, we should devise and mature certain plans, to be put into execution in the hour of danger for the preservation of ourselves and the succour of others. There are accidents of daily and hourly occurrence, which the exercise of the commonest prudence might prevent, and which we may be said to rush into through carelessness and indiscretion.

Stand not near a tree, or any leaden spout, iron gate, or palisade in time of lightning. ——Never sleep near charcoal; if drowsy at any work where charcoal fires are used, take the fresh air.——Carefully rope trees before they are cut down, that when they fall they may do no injury.——Air cellars, vaults, and sewers, by letting them remain open some time before you enter, or scattering powdered lime in them.——Where a lighted candle will not burn animal life cannot exist. Before entering damp and confined places, therefore, it will be an excellent caution to try this simple experiment.——Never leave horses whilst in use by themselves, nor go immediately behind a led horse, as he is apt to kick.——Leave nothing of a poisonous nature open or accessible, and never fail to write the word "POISON" upon it in large letters wherever it may be placed.——In walking the streets keep out of the line of the cellars, and avoid scaffolding and ladders; and never look one way and walk another.——Never meddle with gunpowder by candlelight.——Lay loaded guns in safe places, and never imitate firing a gun in jest.——In trimming a lamp with naphtha never fill it. Leave a space for the spirit to expand with warmth.——Do not enter a room where there is an escape of gas, with a lighted candle.——Never alight from an omnibus while it is in motion, nor stand on the steps to receive change, nor enter with the point of your stick or umbrella upwards.——When driving, keep on your right side of the road, and abate speed when approaching corners or cross roads.——Never throw orange rinds about in the streets.—— Open windows at the top: it is better both for ventilation and safety.——Sprinkle door steps with coal ashes or sand on frosty mornings. Never sprinkle them with salt. ——Take great precautions with fires where children are, as this is an element that they are very fond of amusing themselves with. ——Do not "rake out" fires at night time; let them go out of themselves; there will be no loss of fuel, as they will support the temperature of the apartments, and be less likely to cause accidents.——Never quit a room leaving the poker in the fire.——Put a wire guard before each fire on going to bed.—— Turn off gas at the meter the last thing at night.——Look both ways before you cross a street; and when you know you have to cross, take the first opportunity of doing so, instead of waiting until you arrive at the spot where you must cross.——Never be attracted by a mob. Be assured that where there is a crowd there are already too many for any good purpose; therefore pass on.——Never be induced to venture upon platforms hurriedly erected by needy people, to let out places at small fees for viewing public spectacles.——When travelling by railway, do not put your head out of the window, nor lean against the door, without due caution.——Keep lucifer matches in their boxes, and never let them be strewed about.

As accidents from whatever causes are always sudden, and as life may be saved, or much pain and suffering averted, by the promptness with which remedial agents are applied, every household should have a few of the most necessary articles always at hand in case of emergency. Wherever there are children, such appliances as will at once assuage the anguish of a burn, or stop the effusion of blood, become absolutely imperative, as before a medical man can be obtained much time is lost; and in the anxiety and confusion consequent on an accident, and in the hope of giving the sufferer some relief, the most injudicious means are often, erroneously, employed.

ARTICLES TO BE KEPT IN THE HOUSE FOR ALL CASES OF ACCIDENT.

A piece of adhesive plaster.
A few sheets of wadding.
A little fine wool.
A 4-ounce green bottle of liquor plumbi, or pure extract of lead, properly labelled *Poison*.
And a few bandages, two or three yards long, and 2 inches wide.
These should be kept together in a box or drawer, so as to be ready at any moment.
The use and application of these articles will be explained under the different headings by which various accidents are distinguished. — See also BURNS, COPPER, DROWNING, FIRES, LEAD, POISONS, &c.

ACCIDENTS, RESPONSIBILITY FOR.—When one person meets with an accident through the carelessness and negligence of another, the amount of the damage sustained thereby is recoverable by action at law. If, for instance, a person falls into a cellar which opens into a public thoroughfare, and it is proved that such cellar was not properly guarded at the time, all expenses and losses attendant upon such accident—namely, medical attendance, loss of wages, salary, or any other form of income, both present and prospective, may be sued for against the owner or occupier of the cellar in question. The same responsibility also exists where the servants of an employer cause an accident, the employer being considered by the law as answerable for the acts of the employed.—See MASTER AND SERVANT.

ACCOSTING.—When a lady is met or a person of either sex in a superior position, the hat should be lifted as a mark of respect. A gentleman should not presume to notice a lady, until the lady recognizes him; the lady should also be the first to advance her hand to be shaken. Upon the occasion of shaking hands the gloves should not be removed. When a person bears evident signs of being in a hurry, he should just be acknowledged, and then suffered to pass on. When an acquaintance betrays a wish not to be recognized, he *should not be seen*. Modes of recognition which consist of slapping persons on the back, tapping them on the shoulder, pulling their coat tails or their hair, calling in their ear, or shouting out their name in the street are vulgar and absurd antics, reprehensible in the extreme.

ACCOUCHEMENT.—See CHILDBIRTH.

ACCOUNTS.—See BOOK-KEEPING.

ACIDITY OF THE STOMACH is chiefly characterized by sour eructations, and is a sure symptom of a weak or deranged digsetion. Small doses of carbonate of soda or sal volatile, with extract of gentian added, should be taken three or four times daily. At the same time the bowels should be kept regular, all gross and oily food should be avoided, and as much exercise as is compatible with strength should be taken daily in the open air.

ACIDS in chemistry are a comprehensive class of substances generally distinguished by a sourness of taste, and possessing the property of changing blue vegetable colours into red. Acids are chiefly vegetable and mineral. Many of the vegetable acids, such as the juice of limes, lemons, oranges, &c., are efficacious in a number of diseases. Mineral acids have totally opposite properties to vegetable acids, possessing highly stimulating effects when administered in the mildest form, and the majority of them exhibiting in a greater or less degree destructive and poisonous properties.—See also OXALIC ACID, PRUSSIC ACID, TARTARIC ACID, &c.

ACIDULATED DRINKS.—See LEMONADE, SHERBET, TAMARIND-WATER, &c.

ACIDULATED DROPS.—Boil a pint of clarified sugar, pour it on a slab, and mix with it a quarter of an ounce of tartaric acid. Fold the edges of the sugar over the acid, and continue to mix the acid in this way, but do not pull it. Roll it out in long sticks, cut into small drops, and mix with sugar dust.—See BARLEY SUGAR.

ACIDULATION.—The process adopted for preserving animal food, by the application of vinegar. The meat intended to be preserved having been previously laid in a very strong brine for one, two, or three days, according to the length of time it is to be preserved, the vinegar, which has been already boiled with herbs or spices agreeable to the taste, is poured into a pan with an equal quantity of water also previously boiled, and the meat laid in it to soak. After it has lain three or four days it may be taken out, hung up, and will thus keep sweet for a length of time.

ACKNOWLEDGMENT IN LAW made in writing after six years renews a debt barred by the Statute of Limitations. A general promise to pay is an acknowledgment of the sum demanded being due, and is frequently the evidence upon which a plaintiff recovers *an amount* from an incautious debtor that he might otherwise have successfully disputed. The trustee of a fund, or the holder of a sum of money to be applied to any specific purpose, acknowledges himself bound to apply it as the payer directs upon becoming the recipient of the money so paid. Acknowledgment of a deed before a judge, &c., by a married woman is necessary to the disposal of her property.

ACONITE.—See WOLF'S BANE.

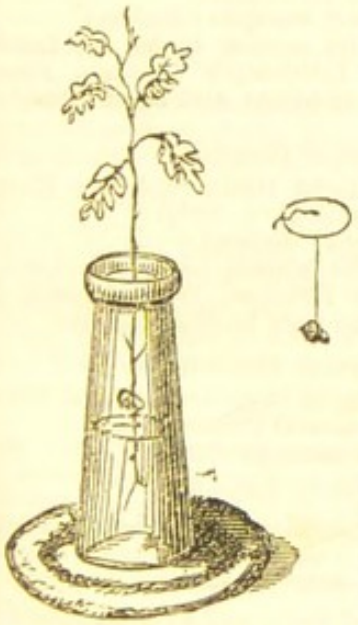
ACORN.—The well known fruit or nut

of the oak tree. They possess the property of fattening animals, especially hogs—bacon which has been thus fed acquiring a more than ordinary firmness, and an agreeable flavour. When hogs are fed upon acorns the quantity should be limited, and also mixed with a more laxative food to prevent constipation. While eating this food, the hogs should not be confined to their sty, but suffered to run at large; otherwise they will neither thrive nor grow fat. Acorns should be gathered about the middle of October, and in order to be preserved, should be thinly spread in an airy loft until thoroughly dried; after which they may be put in bags or barrels, and kept until the spring.

ACORN CAKES—Take ripe acorns, peel off their skins, and bruise them into a paste; let them lie in water for a night, and then press them dry—this will remove their astringent property; the mass should then be dried and reduced to a powder, and kept in a covered jar or keg. When wanted it may be kneaded into dough, and formed into thin cakes, which may be baked on the hob or in the embers. We do not recommend these cakes for habitual eating, but in times of great scarcity they might be occasionally partaken of as a substitute for wheaten bread.

ACORN COFFEE.—Peel the husks from sound ripe acorns, divide the kernels, dry them gradually, and roast them in a close vessel; while roasting they should be stirred continually, and small pieces of butter added from time to time. Care must be taken not to burn, or roast them too much. When roasted, they may be ground and used as ordinary coffee. We insert this receipt with the same reservation as the preceding.

ACORN TREES.—Very pretty ornaments for the parlour may be produced by setting acorns to germinate in hyacinth glasses, and placing them over the mantel-piece. Half fill with rain water a white glass, one of those usually employed for bulbous roots. Take a ripe acorn, which has been for a day or two steeped in rain water, or in damp moss or mould; with the aid of a piece of cork or cardboard suspend the acorn about a quarter of an inch above the water. Let the cork or cardboard fit the mouth of the glass tightly, so as to exclude the air. In a few weeks the acorns will begin to grow, and the interesting process of the germination of one of our noblest trees may be watched from



time to time. When the leaves reach the cork another arrangement must be adopted: the acorn must be raised, the leaves be pushed through the cork or cardboard, and the young plant be suspended in the position shown in the engraving. Should the water become green or turbid, it must be changed; and if any fungi appear upon the acorn, they must be carefully brushed or wiped away. The oak plants thus produced will, with attention, flourish for two or three years—the most important points for their preservation being the changing of the water, and the cleansing of the root when fungous plants appear. When the acorns are first put to grow, nothing must be done to them except removing the cup; the shell of the acorn must be uninjured.

ACQUAINTANCE.—According to the rules of etiquette, a person is not so considered until the ceremony of introduction has been gone through. Every person, especially in London and other large cities and towns, where so many facilities offer for mixing with society, should be careful in forming acquaintances, as many unprincipled people, favoured by the opportunities which a large community offers, make the acquaintance of the inexperienced and unwary, for the purpose of forwarding some dishonest schemes of their own.

ACRE.—The statute acre contains 4840 square yards. It is divided into 4 roods, and each rood into 40 perches. An acre is composed of

4 roods, each rood 40 perches.
160 perches, 16½ft. each.
4840 square yards, 9ft. each.
43,560 square feet, 144 inches each,
174,240 squares of 6 inches each, 36 inches each.
6,272,640 inches, or squares of one inch each.

Land is measured by the *chain*, which is 22 yards long, so that ten *square* chains are one acre. Thus:—

22 chains
22
—
44
44
—
484
10
—
4840 produce.
—

121 Irish acres are equivalent to 196 English acres. 48 Scotch acres are equal to 61 English acres. The French acre is a square, whose side is 10 metres, and 1000 English acres are equivalent to 40.466 French acres.

ACTION, IN LAW.—The process by which a person seeks to recover, through the assistance of the law, that which he deems to be due to him. The injured person (termed the plaintiff) obtains a writ against his adversary (the defendant), who, upon being personally served with a copy thereof, undertakes to appear at the trial. The plaintiff then puts in a written statement or declaration, in which he sets forth the ground of his action, and claims to be restored to his right, or to be compensated for the injury sus-

tained. The defendant then answers the declaration, by contradicting the allegations which it contains, asserting his own right, or justifying his pretentions. The material questions raised upon the pleadings are termed issues, upon which the verdict is given; and in accordance with this verdict the judgment is pronounced, which is carried into execution by the sheriff or other proper officer.

ACTION, IN SPEAKING.—See ELOCUTION.

AD CAPTANDUM ("Vulgum" understood).—Lat. *To catch the mob.* A speaker who appeals to popular feeling or private prejudice is said to use *ad captandum* arguments.

ADDENDUM—Plural ADDENDA.—Lat. for an addition or appendix to a work; generally speaking, anything *added.*

ADDER-BITE.—The remedy for this is to bathe the bitten part with a strong solution of ammonia, or chloride of lime, until pain and smarting are felt. But if the bite is of an aggravated description, it should first be well washed with water of ammonia, and afterwards thoroughly seared with lunar

caustic; and when there is reason to apprehend greater danger still, the surface of the wound, both external and internal, should be removed with the knife. The poison of venomous reptiles is introduced into the system by means of absorption, and when the poison has been once received, active measures should be resorted to, to prevent its communication to the system generally, and this may be effected by placing a ligature or bandage upon the limb immediately above the wound. It is of the greatest importance to know that the poison of adders is communicable *by absorption only;* if, therefore, the person who is bitten, or any one who happens to be present, should possess the presence of mind to immediately suck the wound, the poison, or at least a greater portion of it, might be withdrawn without incurring any dangerous consequences. In India a favourite remedy for the bite of reptiles is to drink a bottle of Madeira wine in two doses, about three minutes apart, the effect of which is to impede absorption.

ADDRESSES OF PERSONS OF RANK AND DISTINCTION:—

THE ROYAL FAMILY.

Superscription.—To the Queen's *(King's)* Most Excellent Majesty.

Commencement.—Most Gracious Sovereign; May it please your Majesty.

Conclusion.—I remain, with the profoundest veneration, Your Majesty's most faithful subject and dutiful servant.

PRINCES OF THE BLOOD ROYAL.

The Sons and Daughters, Brothers and Sisters, Uncles and Aunts of the Sovereign.

Sup.—To His *(Her)* Royal Highness the Prince of Wales *(Princess Alice).*

Comm.—Your Royal Highness.

Con.—I remain, with the greatest respect (I have the honour to be), your Royal Highness's most obedient servant.

Other branches of the Royal Family.

Sup.—To His Royal Highness the Duke of Cambridge.

Comm.—Your Royal Highness.

Con.—I remain with the greatest respect your Royal Highness's most humble and obedient servant.

NOBILITY AND GENTRY.

Duke or Duchess.

Sup.—To his Grace the Duke *(Her Grace the Duchess)* of Northumberland.

> *To*
>
> *His Grace*
>
> *The Duke of Northumberland.*

Comm.—My Lord Duke *(Madam).*

Con.—I have the honour to be, My Lord Duke *(Madam)*, Your Grace's most devoted and obedient servant.

Marquis or Marchioness.

Sup.—To the Most Noble the Marquis *(Marchioness)* of Westminster.

Comm.—My Lord Marquis *(Madam).*

Con.—I have the honour to be, My Lord Marquis, Your Lordship's *(Madam, Your Ladyship's)* most obedient and most humble servant.

Earl or Countess.

Sup.—To the Right Honourable the Earl *(Countess)* of Aberdeen.

Comm.—My Lord *(Madam).*

Con.—I have the honour to be, My Lord, Your Lordship's *(Madam, Your Ladyship's)* most obedient and very humble servant.

Viscount or Viscountess.

Sup.—To the Right Honourable Lord Viscount *(Lady Viscountess)* Palmerston.

Comm. and *Con.* same as Earl's.

Baron or Baroness.

Sup.—To the Right Honourable Lord *(Lady)* Macaulay.

Comm. and *Con.* same as Earls.

YOUNGER *Sons of Earls, and* ALL *the Sons of Viscounts and Barons.*

Sup.—To the Honourable Arthur Hamilton Gordon.

Comm.—Honoured Sir.

Con.—I have the honour to be, Honoured Sir, Your most obedient and very humble servant.

Baronet and His Wife.

Sup.—To Sir Richard Carr Glyn, Bart. *(Lady Glyn).*
Comm.—Sir *(Madam).*
Con.—I have the honour to be, Sir, Your most humble and obedient *(Madam, Your Ladyship's most obedient and very humble)* servant.

Knight and His Wife.

Sup.—To Sir Peter Laurie (Lady Laurie).
Comm. and *Con.* as preceding.

Esquire.

This title is now accorded to every man of position and respectability, but persons entitled to superior consideration are distinguished by "&c., &c., &c.," added to their superscription.

The wives of Gentlemen, when several of the same name are married, are distinguished by the Christian name of their husbands, as Mrs. *John* Harvey, Mrs. *William* Temple.

Privy Counsellors have the title of *Right Honourable*, which is prefixed to their name thus:

Sup.—To the Right Honourable Benjamin Disraeli, M.P.
Comm.—Sir.
Con.—I have the honour to be, Sir, Your most obedient very humble servant.

THE CLERGY.

Archbishop.

Sup.—To His Grace the Archbishop of Canterbury.
Comm.—Your Grace.
Con.—I remain, Your Grace's most devoted obedient servant.

Bishop.

Sup.—To the Right Reverend the Bishop of Winchester.
Comm.—Right Reverend Sir.
Con.—I remain, Right Reverend Sir, Your most obedient humble servant.

Doctor of Divinity.

Sup.—To the Reverend James William, or To the Reverend Dr. Vivian, D.D.
Comm.—Reverend Sir.
Con.—I have the honour to be, Reverend Sir, Your most obedient servant.

Dean.

Sup.—To the Very Reverend The Dean of St. Paul's; or, To the Very Reverend Henry Milman, D.D., Dean of St. Paul's.
Comm.—Mr. Dean; or, Reverend Sir.
Con.—I have the honour to be, Mr. Dean, or Reverend Sir, Your most obedient servant.

Archdeacon.

Sup.—To the Venerable Archdeacon Hale.
Comm.—Reverend Sir.
Con.—I have the honour to remain, Reverend Sir, Your most obedient servant.

Clergymen.

Sup.—To the Reverend Thomas Dale.
Comm. and *Con.* same as the preceding.

*** When a Bishop or other Clergyman possess the title of *Right Honourable* and *Honourable*, it is prefixed to his Clerical title.

Baronets and Knights have their clerical title placed first.

Sup.—To the Right Honourable and Right Reverend the Lord Bishop of Bath and Wells.
Sup.—To the Right Honourable and Reverend the Lord Bishop of Carlisle.
Sup.—To the Right Honourable and Reverend Lord Wriothesley Russell, M.A.
Sup.—To the Honourable and Reverend Baptist Wriothesley Noel, M.A.
Sup.—To the Reverend Sir Henry R. Dukinfield, Bart., M.A.

No clerical dignitary confers title or rank on the wife of the dignitary, who is simply addressed *Mistress*, unless possessing a title in her own right, or through her husband, independently of his clerical rank.

JUDGES, &C.

Lord Chancellor.

Sup.—To the Right Honourable Robert Monsey Rolfe, Lord Cranworth, Lord High Chancellor of Great Britain.

Rolls.

Sup.—To the Right Honourable the Master of the Rolls.

Chief Justice.

Sup.—To the Right Honourable the Lord Chief Justice; or, the Right Honourable Lord Campbell, Lord Chief Justice of the Court of Queen's Bench.

To

The Rt. Hon. Lord Campbell,

Lord Chief Justice

of the Court of Queen's Bench.

The Chief Justice of the Court of Common Pleas, and the Chief Baron of the Exchequer, are addressed in the same form, and are all styled *My Lord.*

Puisne Judges.

The Puisne Judges, and the Barons of the Exchequer, are Knights; but the title of Judge being superior, they should be addressed thus:

Sup.—To the Honourable Mr. Justice Williams.
Sup.—To the Honourable Baron Bramwell.

Serjeant.

Sup.—To John Humphreys Parry, Esquire, Serjeant-at-Law.

Naval Officers.

Admirals have the rank of their flag added to their own name and title thus:

Sup.—To the Honourable Sir Richard Saunders Dundas, Admiral of the White.

If untitled, they are simply styled *Sir.*

Commodores are addressed in the same way as admirals.

Captains are addressed either to "Captain William Smith, R.N.;" or if on service, "To William Smith, Esquire, Commander of H.M.S."

Lieutenants are addressed in the same way.

Military Officers.

All officers in the army above Lieutenants, Cornets, and Ensigns, have their military rank prefixed to their name and title.

Sup.—To *General* Sir De Lacy Evans.

Subalterns are addressed as *Esquire*, with the regiment to which they belong, if on service.

MUNICIPAL OFFICERS.

Lord Mayor.

Sup.—To the Right Honourable the Lord Mayor *(The Lady Mayoress)* of London, York, Dublin; The Lord Provost *(The Lady Provost)* of Edinburgh.

Comm.—My Lord *(Madam).*

Con.—I have the honour to be, my Lord, Your Lordship's *(Madam, Your Ladyship's)* most obedient humble servant.

The Mayors of all Corporations, with the Sheriffs, Aldermen, and Recorder of London, are styled *Right Worshipful;* and the Aldermen and Recorder of other Corporations, as well as Justices of the Peace, *Worshipful.*

AMBASSADORS.

Ambassadors have *Excellency* prefixed to their other titles, and their accredited rank added.

Sup.—To His Excellency Count Colloredo, Ambassador Extraordinary and Plenipotentiary from H.I.M. (His Imperial Majesty) The Emperor of Austria.

Sup.—To His Excellency The Right Honourable Viscount Stratford de Redcliffe, P.C., G.C.B., Her Britannic Majesty's Ambassador Extraordinary and Plenipotentiary to the Sublime Ottoman Porte.

To

His Excellency

The Rt. Hon. Viscount Stratford de Redcliffe, P.C., G.C.B., H.B.M. Ambassador Extraordinary and Plenipotentiary

To the Sublime Ottoman Porte.

Comm.—My Lord.

Con.—I have the honour to be, My Lord, Your Excellency's Most humble obedient servant.

The wives of Ambassadors have also Excellency added to their other titles.

Envoys and Chargés d'Affaires are generally styled Excellenas, but by courtesy only.

Consuls have only their accredited rank added to their names or titles, if they have any.

ADDRESSES TO GOVERNMENT DEPARTMENTS, AND PUBLIC COMPANIES:—

Queen in Council.

All applications to the Queen in Council, the Houses of Lords and Commons, &c., are by *Petition*, as follows, varying only the title:

To the Queen's Most Excellent Majesty in Council,

The humble Petition of M. N., &c., showeth

That your Petitioner . . . . .

. . . . . .

Wherefore Your Petitioner humbly prays that Your Majesty will be graciously pleased to . . . . . .

And Your Petitioner, as in duty bound, will ever pray.

Lords and Commons.

To the Right Honourable the Lords Spiritual and Temporal (To the Honourable the Commons) of the United Kingdom of Great Britain and Ireland, in Parliament assembled,

The humble Petition, &c.

And your Petitioner [or Petitioners] will ever pray, &c.

Treasury and Admiralty.

Sup.—To the Lords Commissioners of Her Majesty's Treasury.

Sup.—To the Lords Commissioners of the Admiralty.

Comm.—My Lords.

Con.—I have the honour to be, my Lords.

Navy Office and Ordnance.

Sup.—To the Principal Officers and Commissioners of Her Majesty's Navy.

Sup.—To the Principal Officers of Her Majesty's Ordnance.

Comm.—Gentlemen.

Con.—I have the honour to be, Gentlemen, &c.

Victualling and Auditing Offices.

Sup.—To the Commissioners for Victualling Her Majesty's Navy.

Sup.—To the Commissioners for Auditing the Public Accounts.

Comm. and *Con.* same as preceding.

Custom House.

Sup.—To the Commissioners of Her Majesty's Customs.

Excise Office.

Sup.—To the Commissioners of Excise.

Tax Office.

Sup.—To the Commissioners of Taxes.

Stamp Office.

Sup.—To the Commissioners of Stamps.

Bank of England.

Sup.—To the Governor, Deputy-Governor, and Court of Directors of the Bank of England.

East India House.

Sup.—To the Court of Directors of the United Company of Merchants of England, trading to the East Indies.

Com. and *Con.* of the above same as Navy Office and Ordnance.

ADDRESSES OF LETTERS.—As this branch of epistolary correspondence is one of the most important, we subjoin a few hints which letter writers generally would do well to attend to.

When writing several letters, place each in its envelope, and address it as soon as it is written. Otherwise awkward mistakes may occur, your correspondents receiving letters not intended for them. If there be a town of the same name as that to which you are writing existing in another county, specify the county which you mean on the address. Thus, Richmond, *Yorkshire.*

When the person to whom you are writing is visiting or residing at the house of another person, it is considered vulgar to put "at Mr. So-and-So's," but simply "Mr. So-and-So's," *at* being understood.

It is more respectful to write the word "Esquire" in full. The —— substituted for initials is vulgar, and pardonable only in extreme cases; if the Christian name or initials of your correspondent do not occur to you at the moment, endeavour to ascertain them by inquiry.

When addressing a gentleman with the prefix "Mr.," the Christian name or initials should always follow, being more polite, as well as avoiding confusion where persons of the same surname may reside in one house.

In addressing a letter to two or more unmarried ladies, write "The Misses Johnson," and not "The *Miss Johnsons;*" and, lastly, always write an address clearly and legibly, so that it may not be delayed in delivery, nor be missent.

ADDRESS, PERSONAL.—The advantage of this qualification is constantly making itself apparent in our daily intercourse with the world, both social and commercial. It is, in fact, an element necessary to the attainment of success in every grade of profession, and in every branch of trade. From the highest to the lowest, from the richest to the poorest, a "good address" not only tends to advancement and popularity, but by bespeaking the goodwill of others also contributes to happiness. Every one, therefore, should endeavour to attain this advantage, more especially as it is easily acquired, and once known can never be forgotten. But the question arises—what is good address? The answer to this inquiry is subject to modifications arising out of the various tastes and opinions of individuals. To a certain extent good address consists in adapting ourselves to the habits and manners of those with whom we are required to associate, and the business we have to pursue. Excessive politeness would be felt to be as repulsive by one class of persons, as an extreme familiarity by another class. Were a commercial traveller to call upon a tradesman, and in endeavouring to transact business affect the manners and tone of a West-end man of fashion, the tradesman would probably be so disgusted that no effort of persuasion would induce him to transact business with a person against whose absurd foppery he had conceived a deep dislike. On the other hand, were a traveller to assume an undue freedom, and under the guise of bluntness or candour make abrupt and satirical remarks, he would equally defeat his purpose. Good address, especially in its relation to our prospects in life, consists in a careful observance of the manners and the tastes of others, and in such an adaptation of our own conduct thereto, as shall excite favourable impressions, and beget for us the confidence and respect of those with whom we mingle. It should ever be borne in mind, that truthfulness, frankness, and modesty are among the chief elements of good address, which is but the manner of exhibiting our principles, opinions, and objects to others. Practical men of the present day are too discerning to be long deceived by hypocrisy, and too acute in their judgments not to discover rectitude of principle where it really exists.—See ETIQUETTE.

ADHESIVE PLASTER.—See PLASTER.

AD INFINITUM.—Lat. *Without end.* "He had answers to his advertisement *ad infinitum.*"

AD INTERIM.—Lat. *In the meanwhile.* "The Lord Mayor not having arrived, the chair was taken by Dr. Smith *ad interim.*"

ADJECTIVE is a part of speech in grammar used to denote the quality or condition of the noun that follows it. Thus we see in the accompanying cut a man, a girl, a

boy, and balls. So that in order to indicate them more distinctly, we observe that the man is *old*, the girl is *young*, the boy is *little*, one ball is *black*, and the other ball is *white;* the words in italics are adjectives, because they qualify the nouns man, girl, boy, balls. They may be used along with the nouns either in the way given or as follows:—An old man, a young woman, a little boy, a black ball, a white ball.

The name of any colour is an adjective and not a noun, as it does not express the thing itself, but merely the colour of it.—*Miss Corner's Grammar.*

The word *adjective*, in its full, literal sense, means *something added to something else.* There are several turkeys in the yard, some black, some white, some speckled; and, then, there are large ones and small ones of all the colours. I want you to go and catch a *turkey;* but I also want you to catch a *white* turkey, and not only a white turkey but a *large* turkey. Therefore I add, or *put to* the noun the words white and large, which,

therefore, are called *adjectives.*—*Cobbett's Grammar.*

The misuse of the adjective is one of the most prevalent errors in speaking. People frequently say what *beautiful* butter; what a *nice* view. Such errors need only to be pointed out to be at once understood.

ADJOURNMENT, the putting off to another hour or day. A meeting which is convened to discuss a certain question is *adjourned* to a future day in order to give an opportunity for further discussion if it be needed. An adjournment is sometimes effected by stratagem. If, for instance, a public meeting is held in order to promote some measure which has both partisans and antagonists, any person unfavourable to the motion may interrupt the proceedings by moving "that this meeting do now adjourn;" this proposal, if duly seconded, is put to the meeting, and if carried by a show of hands the meeting is virtually broken up, and adjourned accordingly. The adjournment of Parliament differs from *prorogation.* The former is effected by the House itself, the latter is the act of Royal authority.

AD LIBITUM.—Lat. *At pleasure.* A banquet was served in the hall, and the company helped themselves *ad libitum.*" This is also a term in music, showing that the passage indicated may be played at the discretion of the performer.

ADMINISTRATION, LETTERS OF.—When a person having property dies without making a will, the Ecclesiastical Court, upon application, will grant letters of administration, by which the applicant is empowered to take care of and distribute the estate of the deceased person according to the form prescribed by law. This power is usually granted to the widow if there be one, and if not, to the next of kin; and from persons that are equally near in degree the "Ordinary" may select which he pleases. The scale of distribution of the estate is one-third part to the widow, and the remainder in equal proportion among the children; or, if they are dead, to their lineal descendants. If there be none of these, the widow takes one half and the remainder goes to the next of kin in equal degree; if there be no widow, then the whole estate is divided among the children, or their representatives. The order of nearness of kin, in respect to this law, is thus arranged:—Children, parents, brothers, grandfathers, uncles, or nephews (and the females of each class respectively), and lastly cousins. Letters of administration are also granted where a testator makes a will, but names no executor, the distribution in such case being governed by the provisions of the will.—See PROBATE.

ADOPTION, IN LAW, signifies the admission of a stranger to the rights and privileges of a son or daughter. In these cases the adopted child frequently assumes the family arms and name of the self-styled parent, which are accorded to the bearer by "letters patent."

AD REFERENDUM.—Lat. *To be referred,* or to await further consideration.

ADULTERATION.—This species of dishonesty is best guarded against by avoiding dealing at those shops where the low price of the articles sold is a sufficient evidence of their spuriousness. Should a person, however, purchase an article which he has reason to believe by its taste and appearance to be grossly adulterated, he would be conferring a benefit on society, as well as protecting himself, by having the article in question analyzed by a respectable chemist; and if the result confirms his suspicions, to give information to the Board of Excise, who will investigate the matter, and fine the nefarious shopkeeper accordingly. For ascertaining the various methods of detecting adulteration—see BEER, BREAD, CHICORY, COFFEE, SPIRITS, TEA, WINE, &c., &c.

AD VALOREM.—Lat. *According to the value.* Certain articles imported through the Custom-house instead of being estimated by weight or measure pay an *ad valorem* duty. Almost all stamp duties are *ad valorem* in conveyances or leases upon the amounts of the purchase-money or rent reserved.

ADVANCE, IN COMMERCE, implies money paid on goods consigned or deposited. Sometimes a sum equal to half or two-thirds of the value of the merchandise is advanced, and is frequently forwarded upon receipt of the invoice. In some money transactions also a stipulation is made "for payment in advance;" in such cases the greatest precaution should be taken in order to secure subsequently that which has been paid for previously.

ADVERB is a part of speech which signifies a word added to, or used together with, a verb, an adjective, or another adverb, for the purpose of *qualifying* it. With a verb: She rides *well.* With an adjective: She is *very* nervous. With another adverb: She reads *rather* badly. Adverbs may be known by their answering to the questions How? When? Where?

The words that are used to tell us *when* as well as *how* a thing is done are adverbs; for instance, we may say that we dine *early* or *late;* that we mean to go into the country *soon.*—*Miss Corner's Grammar.*

But there are many adverbs which do not express the manner of actions, movements, or states of being, and which are *not* added to verbs. For instance: "*When* you sow small seeds make the earth *very* fine, and if it have *of late* been dry weather, take care to press the earth *extremely* hard upon the seeds." Here are four adverbs, but only the last of the four expresses anything connected with a verb. This shows that the name of this class of words does not fully convey to our minds a description of their use. However, with this name you must be content; but you must bear in mind that there are adverbs of *time,* of *place,* and of *degree,* as well as of manner; and that their business is to express, or describe, some circumstances in addition to all that is expressed by the nouns, adjectives, and verbs. In the above sentence, for example, the words *when, very, of late,* and *extremely,* add greatly to the precept, which, without them, would loose much of its force.—*Cobbett's Grammar.*

ADVERTISEMENT.—This popular mode of intercommunication, by which the various sections of the public correspond with each other, has made such rapid strides of late years as to have almost become a social necessity. It is needless here to enter fully into the advantages of advertising; for it is sufficiently obvious, that with our accelerated means of communication both at home and abroad, no better medium exists for making our wants known than advertisements in the more influential organs of the press.

As an illustration of the truth of this assertion we have only to mention a few facts in connection with *The Times*. This journal has a daily circulation of about 50,000 copies; each copy is probably seen on an average by 10 persons, giving a total number of readers of half-a-million. The area of its circulation is of unlimited extent: it finds its way into the most remote part of England, it is dispatched to our Colonies, travels over the whole of Europe, and is seen in nearly every portion of the civilized world. A person advertising in this journal, therefore, secures for a few shillings an audience more numerous and influential than he could possibly obtain by any individual effort of his own.

Besides *The Times*, there are many other metropolitan journals, both daily and weekly, conducted generally with great ability, and enjoying varied success.

The system of advertising is not confined to publicity through the columns of newspapers; bills, circulars, trade lists, and other forms of advertisement, being generally adopted.

That great benefits are derived from advertising in the public papers cannot be doubted. In some instances large fortunes have been made by a lavish expenditure in advertisements; but far more frequently important sums have been thrown away, and advertisers brought to ruin, by their want of knowledge how to make a proper selection of papers, and how to interest the public by their announcements.

The success of certain quack medicines, which are extensively purchased by the public, notwithstanding the frequent exposure of them in medical and chemical journals, and by parliamentary reports, is commonly instanced as a proof of the fortunate result of extensive advertising. To some extent this is true; but it must be remembered that thousands of adventurers have, from time to time, started favourite nostrums, and spent considerable sums of money thereon, without being able to find success. To what, then, do these successful quack medicines owe their popularity? *First*, to the lamentable ignorance of large masses of the people upon the subject of health and the rational treatment of disease. *Second*, to the great number of cunningly-devised advertisements brought to bear upon the ignorance of those masses. *Third*, to the general expensiveness of professional advice and proper medicines. *Fourth*, to the professions of the quacks, that their medicines cure nearly *all* kinds of disorders, thereby obtaining the largest possible field for the sale of them; and. *Fifth*, because the medicines themselves cost their proprietors a mere trifle, and therefore nearly the whole amount received for them may be applied to cover the costs of advertising.

Here, then, are five distinct and peculiar elements of success, which explain why the advertising of quack medicines has produced, in certain instances, such profitable results. But it cannot be inferred therefrom, that in other matters an equal amount of advertising would be as successful, because the same elements tributary to the desired result may not exist.

The Times is an excellent medium for advertisements of standard classes, that is, for those advertisements which, from their constant appearance in that paper, have become recognized features in its columns, and which are therefore regularly consulted by those sections of the general public who are interested in them. These consist of amusements, books, and music, businesses for disposal, educational establishments, houses and lands to be sold, law notices, lost property, missing friends, money to lend or money wanted, persons wanting employment, persons wanting assistants or servants, public meetings, railway arrangements, sailings of ships, and sales by auction. For such advertisements as the foregoing the *Times* is undoubtedly the *best* medium; but for advertisements not belonging to these classes, any other medium is better than the *Times*, because the large amount of advertising matter, of the standard class, completely swamps the few advertisements of miscellaneous interests, and causes them to be overlooked. For such announcements any paper having few advertisements, which must, from their proximity to the columns of news, fall under the eye of the reader, is to be preferred.

Much depends upon the form of an advertisement. Such charlatanic headings as "Wonders will never cease!" "Read, mark, learn, and inwardly digest!" "Alarming sacrifices — giving away!" &c., generally offend the reader, and defeat the pu poses of the advertiser. While announcements in the form of a "Proclamation!" or puffs with the words "Murder!" "Reward!" "One thousand pounds!" &c., thrown out in large letters to attract the eye and deceive the sense, only create disgust, and do injury to the interests they are designed to serve. As a proof of this, no instance is known of success being achieved by such means.

Advertisements, to catch the eye and create a favourable impression, should be brief, explicit, and truthful. A person commencing advertising will find it far more beneficial to carefully decide, before commencing, upon a fitting or "telling" form of advertisement, and to keep to that form for a long period. Every variation of the form estranges the mind of the reader from the recollection of what he has previously seen, and does away with that *cumulative influence* of a series of advertisements, of which experienced advertisers know the value.

No person should venture upon speculative

advertising who needs an immediate return for his outlay. The productiveness of advertisements is a thing of growth, to be developed and expanded by constant attention and continual investment, until a favourable impression is produced. These latter remarks do not, of course, apply to matters of single and temporary need, such as "Houses to let," or "Situations wanted."

The want of employment is one of the great "daily wants" of a large proportion of society, to which the requirement of able and worthy assistance on the part of shopkeepers, merchants, and others, is only second. We will therefore point out a few of the best mediums at present established for bringing persons of particular classes and professions into communication with each other.

The Times, for employment of every description, especially clerks in mercantile houses, town and country travellers, secretaries to companies, and domestic servants of all descriptions.

The Morning Advertiser, for waiters, barmen, potmen, and all relating to taverns, &c.

The Athenæum, for literary, artistic, and educational employment.

Bell's Life in London, for gamekeepers, grooms, jockies, huntsmen, and all relating to country sports and rural occupations.

The Builder, for assistant engineers, architects, builders, and mechanics in general.

The Ecclesiastical Gazette, for tutors, schoolmasters, teachers, governesses, and domestic servants in institutions and families belonging to the Church of England.

The Era, for every description of employment connected with the stage, the circus, exhibitions, and amusements generally.

The Field, for gamekeepers, grooms, jockies, huntsmen, farm bailiffs, gardeners, &c.

The Gardener's Chronicle, for farm bailiffs, gardeners, and domestic situations in country places.

The Guardian, for situations of all kinds in families belonging to the Church of England.

The Lancet, for medical and chemical assistants, appointments to hospitals, poor law unions, and other public offices.

The Law Times, for clerks and assistants to barristers, attornies, conveyancers, auctioneers, engrossers, &c.

The Mining Journal, for mining engineers, managers, and secretaries of mining companies, clerks, &c.

The Nonconformist, for employment in the families of dissenters generally.

The Patriot, for employment in the families of Independents, Baptists, and other dissenters.

The Railway Journal, for appointments upon railways and other public works.

The Record, for situations in Church-of-England families, and for appointments as schoolmasters and mistresses in the national and infant schools of the Establishment.

The Watchman, for employment in Wesleyan families, schools, &c.

There are various newspapers throughout the kingdom whose importance and influence in their localities is relatively as great as that of those metropolitan journals which we have enumerated.

A single advertisement will frequently bring assistance or employment to those who need it, and the investment of a few shillings for such an object is a wise economy.—See EMPLOYMENT.

ADVERTISEMENTS, FRAUDULENT.—It is a well known fact that there exist certain adventurers who seek to entrap the unwary by inserting a class of announcements in the newspapers of a specious and plausible character, the terms of which advertisements, as a matter of course, never are and never were intended to be, carried out. One of the most common forms of conducting these dishonest proceedings is for the advertiser to offer to teach some accomplishment (generally light and elegant) by which a handsome income may be realized, on consideration of receiving a certain number of postage stamps. The knowledge imparted for the stamps so sent is almost invariably of the most worthless description: sometimes it takes the form of a hackneyed receipt for preparing some article that is seldom or ever in request. At another time it consists of instructions in some art that offers little or no employment. And one of these schemers has been known to have the assurance to transmit to his correspondent, as a means of making a handsome income, the process by which a certain quantity of potatoes might be bought at the wholesale price, baked, and retailed to the public at so much per head. It is unnecessary to single out individual instances of fraud committed in this direction; suffice it to say, that where extraordinary advantages are offered in return for a totally inadequate consideration, there is the greatest reason to suspect the good faith of the advertiser.

ADVICE, IN COMMERCE, means *information by letter*. For instance, a person in the country wishing to remit a sum of money to a person in London through the medium of a third party, writes to the person who is to pay the money, authorizing him to do so, and also writes to the person who is to receive the amount, instructing him to that effect. When bills are drawn for payment or acceptance upon persons residing at a distance, they should always be preceded by a letter, with all particulars of the bills, date, amount, to whom payable, &c., this being necessary, not only for convenience sake, but to guard against forgeries.

ADVICE, MEDICAL, is given daily without charge by a number of London Physicians to such persons as are supposed to be unable to pay the customary fee. The same privilege is also accorded by the various hospitals, the medical practitioners at which, in addition to giving advice, perform operations, dress wounds, and dispense medicines gratuitously.

ADVOCATE, IN LAW, a person legally qualified to plead the cause of another. The law, like every other profession, boasts of certain members, who from their abilities stand pre-eminent above their fellows. The manner in which a case is conducted by an advocate conduces materially to its failure or success; when a person goes to law, therefore, he should make a point of se-

curing the services of one who is not only possessed of forensic talent, but who has also a practical acquaintance with that branch of jurisprudence to which the case relates. Advocates' fees are not governed by any tariff, but vary from one guinea and upwards, according to circumstances.

ÆOLIAN HARP.—A well known instrument which produces a pleasing combination of sounds, by the action of the wind. This instrument is of the simplest construction, consisting merely of a number of catgut or wire strings, stretched in parallel lines over a box of thin deal, with sounding holes cut in the top. The strings being tuned in unison, the instrument is then placed in a current of air, and harmony is produced.

AERATED WATERS.—See LEMONADE, SODA WATER, &c.

ÆTHER, a volatile liquor, obtained by distillation from a mixture of alcohol and a concentrated acid. It is used for a variety of medical purposes, both externally and internally. Burns and scalds are rendered cool and less inflammatory, by a piece of linen rag dipped in æther being applied to them. It relieves headache when rubbed upon the part where the pain is situated. Its application to the face in cases of toothache considerably alleviates the pain; and in an attack of spasms, relief is almost always afforded by doses of from fifteen to twenty drops being administered in a wine glassful of water at short intervals. As an agent for producing insensibility by means of inhalation, æther was formerly in great repute; but in the present day when this effect is desired to be produced, chloroform, a still subtler spirit, is generally used. As æther rapidly evaporates under ordinary circumstances, this waste should be prevented by keeping the bottle that contains it in a cool place, and by having stoppers which fit the bottle exactly.

Caution.—Æther is a highly inflammable spirit, and when mixed with common air is liable to cause an explosion; when any escape of æther is apprehended, therefore, no lighted candle should be suffered to approach.

AFFIANCE implies in law a mutual pledge entered into between a man and a woman for the purpose of binding themselves to the performance of the marriage contract.—See BREACH OF PROMISE OF MARRIAGE.

AFFIDAVIT, a statement of facts in writing, made on oath. Affidavits must contain, with sufficient certainty that perjury may be assigned thereon, the name, residence, and occupation of the deponent, who signs his name at the foot. He is then asked to swear to his name and handwriting, and also to the truth of the contents of the paper. Stealing an affidavit is transportation for seven years.

AFFILIATION is an order made by justices in petty sessions upon a putative father for the maintenance of an illegitimate child by an unmarried woman. It may be made before the birth of the child upon the application of the mother, but it is necessary that her evidence be corroborated in some material particular by other testimony. The payment may be to the extent of 10s. for the midwife, 5s. per week for the first six weeks after the birth of such child, and not exceeding 2s. 6d. per week afterwards.—See BASTARDY.

AFFINITY signifies in law blood-relationship by marriage. Persons coming within this degree of relationship are prohibited from marrying each other, and the offspring of any such marriages are illegitimate. The degrees of affinity are computed in the same manner as relationship by blood; that is to say, a man may not marry his sister by blood, neither may he marry his sister-in-law; a woman cannot wed her nephew by blood, neither can she her nephew by marriage. A common notion is prevalent with respect to affinity, that first cousins may marry, but that second may not—this is erroneous, as marriage between *all degrees of cousins* is legal. There is one prohibited degree of affinity, to dissolve which strenuous efforts have been and still are being made; namely, marriage with a deceased wife's sister: all such marriages *in England* are illegal, except they were made previously to the 1st of September, 1835, up to which time they were declared legal by Act of Parliament. In contravention of this Act, however, marriages with deceased wife's sisters are constantly being solemnized in various territories that are not subject to the English laws. Such marriages hold good in the countries *where they are made*, but not *in England*. The marriage, however, of subjects of any State, according to the laws thereof, holds good in any other State.

AFFIRMATION.—A simple form of declaration which Quakers and other sects are permitted to use instead of an oath, and which is regarded equally as binding on their conscience. When a person claims the privilege of affirmation he must be prepared to show a good and sufficient reason for claiming this immunity. A false affirmation, like a false oath, is perjury, and is visited with the same penalties.

A FORTIORI.—Lat. *From stronger reasoning.* If an ounce of arsenic will kill a man, *a fortiori* two ounces must be certain to do it.

AGE is a term having a relative signification to certain periods of existence, extending from birth to death. Human life is marked at certain stages by features of a distinctive character in the animal economy:—

The teeth are renewed at the 7th year	7
Puberty arrives at twice seven	14
Full stature at three times seven	21
The vigour of growth at four times seven	28
The greatest vigour of body and mind at five times seven	35
The commencement of decay at six times seven	42
General decay and decrease of energy at seven times seven	49
Old age at eight times seven	56
And the grand climacteric at nine times seven	63

AGE, IN LAW, bears reference to such periods in life as qualify persons to become responsible for certain acts and qualified for

certain offices. At twelve years of age a male person may be called upon to take an oath of allegiance to the Sovereign; at fourteen he may consent to marriage, and choose his guardians; and at twenty-one he may alien his lands, goods, and chattels. A female person is at nine years of age, if married, entitled to her dower; at twelve she may consent to marriage; at fourteen she may choose a guardian; and at twenty-one alien her property. The law recognizes a person of the age of fourteen as competent to become a witness. But if capable of understanding an oath, although of tenderer years, may be admitted as evidence. No person can serve as a member of Parliament until he is twenty-one years of age. No man can be ordained priest till twenty-four, nor be a bishop till thirty. A man cannot be sworn on a jury or inquest until twenty-one; nor can a man be admitted to practise as an attorney, proctor, or notary public until twenty-one.—See INFANTS.

AGE, IN RELATION TO THE ADMINISTRATION OF MEDICINES.—Taking a dose of *one drachm* as proper for a person aged twenty-one, the proportionate doses, calculated upon that basis, will be as follows:—

7 weeks . .	1-15th,	equal to	4 grains.
7 months. .	1-12th	,,	5 grains.
14 months. .	1-8th	,,	8 grains.
28 months. .	1-5th	,,	12 grains.
3½ years . .	1-4th	,,	15 grains.
5 years . .	1-3rd	,,	1 scruple.
7 years . .	one-half	,,	½ a drachm.
14 years . .	2-3rds	,,	2 scruples.
21 years . .		,,	1 drachm.
63	11-12ths	,,	55 grains.
77	5-6ths	,,	50 grains.

AGENT, in its general signification, implies a person employed to transact any description of business for another person. An agent may be constituted by direct writing, by word of mouth, or his authority may be implied from his situation. In some cases the former is necessary, and in others the latter is deemed sufficient. The powers of an agent may be derived from a simple letter containing general instructions, or specifying some particular operation. An act performed on behalf of another, although not authorized, constitutes an agency, if the act is not repudiated by the principal. An agent in the general case is entitled to remuneration for his services, and even where no express contract has been entered into, a claim made for commission frequently holds good, as being "according to custom and usage." Generally speaking, payment made to an agent is as if paid to the principal; also contracts undertaken by an agent are imperative and binding on the principal.

AGREEMENT.—A contract in writing between two or more parties, of which mutuality is the basis. All agreements where the subject matter exceeds the value of £20, are required to be stamped, and cannot be received as evidence upon a trial without. Agreements, however, that have not been stamped at the time they were drawn up, may be stamped within fourteen days after date without a penalty, or at any time, upon payment of £10 and the duty.

An agreement that has been obtained by fraud, misrepresentation, or intimidation, may be set aside on due proof thereof.

For the nonfulfilment of an agreement, there are two remedies provided, one by law to seek pecuniary compensation for the breach of the agreement, and the other in equity to compel the defaulting party to perform his part of the agreement according to promise.

An agreement should invariably be drawn up by a solicitor, the expense being too inconsiderable to be worth notice in comparison with the feeling of security; however, printed forms of agreement, with blanks left to be filled, may be purchased at any law stationer's in the locality of the inns of court. The following is the cost of stamp for agreements:—For an amount of £20 and upwards, and less than 2160 words, 2s. 6d.; if 2160 or upwards, then an additional 2s. 6d. for every 1080 words after the first 1080.

AGREEMENT BETWEEN MASTER AND SERVANT.—See MASTER AND SERVANT.

AGRICULTURE.—See HARROWING, MANURES, PLOUGHING, REAPING, SOWING.

AGUE mostly arises from a poisonous state of the atmosphere, and is especially prevalent on damp and marshy soils. The first step in the treatment of a person suffering from ague should be to remove him from the influence of the noxious air; and if this cannot be effected, he should be placed as far away from the soil as possible, in one of the top rooms of the house. Several remedies are made use of for this complaint, one of the most popular of which is the *cobweb* produced by the black spider, which inhabits cellars, barns, and stables. This is administered in doses of ten grains, twice or thrice before the expected time of each paroxysm, and continued for three or four days. Although this singular means of effecting a remedy may excite incredulity, a great many accredited cases are on record, and it is also supported by high medical authority. Another specific is *arsenical solution*, four drops of which, increased to six or eight twice or thrice a day, will prove of the greatest benefit.

Persons who have once been afflicted with ague are exceeding liable to be again attacked by it; they should therefore avoid exposure to damp or night air as much as possible, and in spring and autumn should put themselves under a course of sulphate of quinine.

AIR is composed of oxygen, nitrogen, and carbonic acid gases, in the proportion of oxygen 20 volumes, nitrogen 79 volumes, and carbonic acid gas one volume. The air when once breathed parts with one-sixth part of its oxygen; were it therefore to be breathed six times successively it would be deprived of all its oxygen; the consequence of which would be that the blood would be divested of its vitality, the organs have their action suspended, and death would ensue. Air, vitiated by the different processes of respiration, combustion, and putrefaction, or which is suffered to stagnate, becomes prejudicial to the human frame; hence large

cities, public assemblies, hospitals, burying-grounds, &c., are injurious to health, and often productive of contagious disorders.

The quality of air is greatly influenced by local causes; sea air is well known to be beneficial and invigorating, which is attributable to its constant agitation by the winds and tides, and also to the absence of many deteriorating causes to which land is subject, such as the respiration of animals and the putrefaction of animal and vegetable substances. Lofty and exposed aspects have a bracing effect upon the system, while low situations, if on a dry soil, are more congenial to less hardy constitutions. In many instances, however, the surrounding air may be rendered pure or impure by circumstances over which we have immediate control. If, for instance, we suffer filth and refuse to accumulate near our dwellings, a vitiated atmosphere will be the inevitable consequence of the exhalations arising from these nuisances; or if an impure state of the air exist without any such aggravating causes, the remedy is within our power by the appliance of such means as art and science have placed within our reach.—See also DRAINAGE, EXERCISE, VENTILATION, &c.

AIR, CHANGE OF, is efficacious in many diseases, amongst which are pulmonary complaints, asthma, affections of the throat and windpipe, dyspepsia, and hypochondriasis, chronic rheumatism, scrofula, liver complaints, and the state of convalescence from fevers.

Pulmonary complaints are benefited by removal from a colder to a warmer climate; and Madeira, from the equality of its temperature, is universally esteemed as the best adapted for consumptive patients. In dyspepsia and hypochondriasis, the suitability of climate depends on the habit and constitution of the patient. If there be a relaxation and debility, a dry and bracing air is needed; but if the tendency of the system be to fever and inflammatory action, the soft and humid climates are preferable. In cases of chronic rheumatism, mild climates are generally found suitable, such as Bath in England, and Rome or Nice on the Continent. In scrofula a pure, bracing air is required, such as the watering places on the north-west coast. In liver complaints, and convalescence from fevers, change of air generally, guided by circumstances, is beneficial. The benefits derivable from change of air are not applicable alone to invalids and convalescents, but will yield an equal source of enjoyment and relaxation to all those whose avocations are pursued daily in busy cities and towns, and whose systems become exhausted by the constant and unremitting exertions which their minds and bodies undergo.

AIR-CUSHION.—This useful appliance is made of a textile fabric, rendered air-tight by a coating of the solution of India-rubber. At one corner is a mouth-piece fitted with a screw; when the cushion is required, by unloosing the screw, and blowing into the mouth-piece, the cushion becomes expanded, the screw is then tightened, and the air remains until the cushion is no further required, when the air is freed by turning the screw in a contrary direction. By this means railway travellers by the second and third classes, and others who are likely to be subject to a hard seat for some time, are provided with a cushion which is of great comfort when in use, and which when not in use may be folded up into a small compass and carried in the pocket. Air-beds and air-pillows have been constructed upon the same principle, but these have been found objectionable; for air being a bad conductor of heat, the imprisoned air when made warm by contact with the body or head retains its warmth, and produces an unpleasant sensation of dry heat to the part which rests upon it.

ALABASTER.—A species of soft marble used for ornamental purposes, which derives its name from Alabastron, a town of Egypt, where a manufactory formerly existed of works of art in domestic vessels, executed from the stone found in the neighbouring mountains. As this composition is of a delicate nature, easily scratched, and soon stained by the smoke or atmosphere, all objects should be preserved from these external influences by being kept under glass shades. Should they however become stained, the following is the best method *To clean alabaster:*—Remove the stains by brushing with soap and water, then white-wash the stained part, and let it remain for some hours; after which remove the white-wash, rub the stained part with a soft cloth, and the stains will have disappeared. *Grease spots* may be removed by rubbing the blemishes with powdered French chalk, or a little oil of turpentine.

To bronze, apply to the whole surface of the object a coat of size, after which lay on paint of a bronze-green colour; and when this is nearly dry, gently apply to the most prominent parts a little bronze powder through the medium of a wad of wool or soft cotton. The success of the process greatly depends upon the delicacy with which it is conducted.—See BRONZE and SIZE.

To imitate.—Alabaster ornaments may be imitated by brushing over plaster of Paris models with spermaceti, white wax, or a mixture of the two, or by steeping the models in the warm mixture. Or, instead of this process, they may be brushed over several times with white of egg, allowing each coating sufficient time to dry. Only models made of the finest plaster are suited for these processes.

To join.—As alabaster objects are composed of several parts, they are liable, from a variety of causes, to become disjoined, and when this occurs the parts may be rejoined by a cement made from the white of one egg mixed with a teaspoonful of quick lime. The cement should be used immediately that it is mixed, and the parts to be joined should be previously damped with lukewarm water.

To polish.—First, carefully clean the article with a piece of pumice stone dipped in water; then apply a thick paste made of whiting, soap, and milk; and when this is perfectly done, wash the article thoroughly, dry it

with a soft cloth, and rub with a flannel until the polish is produced.

To stain or colour.—This is effected by simply applying to the surface with a brush the oil or tincture of the colour desired; such as cochineal, saffron, alkanet, or verdigris.

ALARUM is the name given to a mechanical contrivance, by which persons may be awakened on an emergency, or at any particular hour. An ordinary clock may be furnished with an alarum by being fitted with a chain and weight, which is adjusted in such a manner the night previously, as to run down at the hour required, and cause the clock to strike long and rapidly. The *Weaver's Alarum*, so called because it was used by those operatives, is very simple. It consisted of a weight or bell, which was fastened to a piece of packthread, and placed in such a relative position to the candle, that at a certain time the flame reached and ignited the packthread, causing the weight or bell to fall. Another alarum also consists of a cup or other vessel placed over the head, into which water drops from another source above until the cup becomes full, overflows, and drops on the face of the sleeper.

These simple but clumsy contrivances, are now superseded by a new and economical alarum, of American invention and manufacture. The figures upon the face represent the number of hours required to elapse before the alarum shall be allowed to go off. Thus, if a person wished to sleep five hours, he would calculate that number of hours from the time of his going to bed, which, if he retired at eleven at night, would extend to four o'clock in the morning. He would, therefore, set the hands of the alarum at the figure seven, and at the last moment of the fifth hour, which would be four o'clock, the alarum would go off with a loud ringing.

ALBUMEN is an organic nutritive principle, which forms the chief ingredient in the white of eggs. It is one of the elementary constituents of the blood, brain, and glands. It exists in cartilage, horn, hair, and nails, enters into the composition of oysters, whelks, periwinkles, and snails, and also occurs in vegetables. The peculiar property of albumen is that of solidifying, or *coagulating*, when exposed to a moderate heat, in which state vegetable albumen is not to be distinguished from the white of egg. White of eggs, when applied to burns immediately after the accident, generally prevents them from rising in blisters; it also tends to abate recent inflammation of the eyes, if applied to the parts affected, spread upon soft linen. It may also be used as a lotion for the face in the heat of summer, as a preventive against sunburns and freckles.

ALCOHOL is a pure spirit, or essence, produced by fermentation, and constitutes the intoxicating principle in all fermented liquors. It acts as a powerful solvent on many vegetable substances, and therefore is extensively used in the preparation of liqueurs for the table. It has been found hitherto impossible to freeze alcohol with the greatest degree of cold that can be generated, hence its employment for thermometers.

ALE.—A bushel and three quarters of ground malt, and a pound of hops, are sufficient to make 18 gallons of good family ale. As soon as the water boils, dip off half of it into a tub or vat raised upon a bench about a foot and a half from the ground, and which has a hole in its side, near the bottom, into which is put a spigot and faucet sufficiently large, and over the end of which, in the vat, is fixed a bundle of small clean sticks, or other convenient apparatus, to prevent the malt from running out. Let the hot water remain undisturbed in the vat, till it has cooled down to about the temperature of 175 or 180 degrees of Fahrenheit's thermometer; or, in the absence of this instrument, till the face can be seen pretty distinctly in the water; then mix the malt with the water gradually, stirring it with a mashing stick, or other convenient spatula. Preserve a few handfulls of the dry malt to strew over the surface after it is mixed, in order to prevent as much as possible the escape of heat. The vat should also be covered with cloths, more effectually to keep the mixture hot, which must remain undisturbed for three hours. The wort is then to be run out by the spigot and faucet. As soon as it has done so, pour on again upon the malt the same quantity of water, cooled in a tub to the same degree of heat as before, and let it remain with the malt half an hour, or somewhat longer. Then let the wort run off a second time.

As you will now be enabled to judge how much more wort will be necessary to fill your cask, add as much more water, cooled down as before, as will be sufficient for the purpose, letting the last portion stand a short time in the vat, always remembering that for a cask of 18 gallons it is advisable to have at least 7 or 8 gallons of wort more than sufficient to fill the cask, to allow for waste and evaporation.

When the worts have all been run off, mix them together, and put them into the copper, making it boil as quickly as possible. When the wort is reduced by boiling to nearly the proper quantity, put in the one pound of hops, and let them boil in the wort for about twenty minutes, covering the copper over in the meantime to prevent the escape of the aroma of the hops. The boiling being completed, let the wort be strained off into proper coolers. When it is cooled down to 65 or 70 degrees, mix one quart of good yeast with a few gallons of the wort first, and afterwards put the whole together into a vat to ferment for two or three days or more; or put it at once into the cask, and let it ferment there.

The necessary care must be taken to watch the fermentation in the cask, and fill it up occasionally with the superfluous liquor. As soon as the cask will bear a bung in it,

it ought to be stopped down slightly at first, till the power of the disengaged gas be ascertained, or otherwise the cask may burst. This ale, if it is brewed when the weather is mild, will be fit for drinking in about six weeks or two months.

To brew *Table Ale*, mix the first and second worts together, suffer it to ferment, and proceed in the same manner as before directed. If the ale is for present use, take three-quarters of a pound of hops to each bushel of malt; but if intended to be kept, take one pound of hops to each bushel of malt. It will be fit for use in about a week. —See also BEER, BREWING, FERMENTATION.

ALEHOOF OR GROUND IVY.—This wild plant creeps upon hedge banks, at the foot of trees, and in many shady places flowering in spring. It has a peculiar and strong smell, and is best gathered when in flower. It is an excellent remedy for wounds,

either by outward application or taken inwardly; and an ointment made of it is particularly healing to ulcers and fistula. The decoction of the herb taken daily for a continuance is efficacious in cleansing the stomach, promoting the proper secretions, and strengthening the blood; it is also an excellent eye-water.

ALE JELLY.—To the prepared stock or jelly add (where the shape is large), a pint bottle of strong ale, a pound of loaf sugar, the peel of one, and the juice of four lemons, a stick of cinnamon, and the beaten whites of eight eggs; put all into a saucepan, stir it gently; let it boil for fifteen minutes, and pour into a jelly bag till it runs perfectly clear.

☞ Ale, 1 pint; sugar, 1lb.; lemons, peel of 1 and juice of 4; cinnamon, 1 stick; eggs, 8 whites.

ALE POSSET.—Boil a pint of new milk with a slice of toasted bread; pour a bottle of mild ale into a punch bowl, sweeten and add spices, and then pour the boiling milk over it.

ALIAS.—A Latin word signifying *otherwise*, and usually used to denote a name or title that has been assumed, as Danby *alias* Jenkins. The assumption of an alias does not absolve the person who adopts it from the responsibility of any act he may have committed under his assumed name. Thus a marriage celebrated under an alias is equally as valid as though the proper name had been used. And a bankrupt who has traded under another name, must account for all such transactions, just the same as though they had been performed under his correct name.

ALIBI, a Latin term signifying *elsewhere*. Sometimes, when a person is charged with a crime, he rebuts it by producing witnesses to prove that at the time the crime was committed he was seen in another place, and this evidence if substantiated is, of course, a complete answer to the charge. A plea of this kind, however, is regarded with great jealousy by the law, owing to the ease with which a plea may be concocted by accomplices, or witnesses procured to swear falsely. A case lately occurred where a man committed a crime on a certain night, came home stealthily and *put the clock back two hours*, he then awoke his servant who had been asleep some time, and told him to go down stairs and see what time it was. In the course of events this man was charged with the crime, and the servant's evidence was instrumental in his acquittal.

ALIEN.—A person born out of the allegiance of the Sovereign. It is an error to suppose that because a person is born out of the dominion of the Crown he is therefore an alien, for a child born of a father who is a natural born subject, even though it be in a foreign country and by a foreign mother, is regarded as an English subject. The civil disabilities of an alien are that he cannot hold any landed property either by purchase or devise without the Sovereign's permission. He is debarred from sitting in Parliament or the Privy Council, and is incapable of holding grants or offices of trust under the Crown; nor ought he to be returned on a jury except in cases of high treason, or where an alien is to be tried. An alien, however, may occupy a house and premises, and also possess goods and chattels and money in the funds, the whole of which he may dispose of by will. In matters of trade and commerce aliens lie under no particular restriction, they may sue and be sued in the Queen's court as British subjects, the only legal bar being that the Court of Chancery will not protect by injunction the copyright of an alien. The foregoing relates to *alien friends*. *Alien enemies* are the subjects of another state at actual war with our own, and do not possess even the bare right of residence, or the power of enforcing any contract or suing for any debt due to them. The disabilities which alien friends lie under may, however, be removed.—See DENIZATION and NATURALIZATION.

ALIMENT.—By this term is understood the nutritive quality furnished by every kind of food after it has undergone the process of digestion. Alimentary matter must neces-

sarily be derived from animal or vegetable. There exist, however, certain inorganic agents, such as lime, salt, water, &c., which, though unable to produce nourishment by themselves, yet, when taken in conjunction with alimentary substances, contribute materially to nutrition. Aliments differ from each other in their properties, according to the fundamental principles existing in their composition; they may be divided into nine classes, as follows:—

1. *Farinaceous:* wheat, barley, rice, peas, potatoes, &c.
2. *Mucilaginous:* lettuce, carrot, asparagus, cabbage, melons, artichokes, &c.
3. *Saccharine:* sugar, honey, figs, peaches, apricots, dates, &c.
4. *Acidulated:* oranges, lemons, apples, pears, strawberries, &c.
5. *Oily:* nuts, cocoa, olives, animal fats, oils, butter, &c.
6. *Caseous:* the different sorts of cheese, milk, &c.
7. *Gelatinous:* tendinous parts of animals, such as calf's foot, certain kinds of fish, and the flesh of young animals generally.
8. *Albuminous:* oysters, mussels, eggs, brains of animals, &c.
9. *Fibrous:* the flesh and blood furnished by different animals.

ALIMONY is the provision made from the husband's estate for the support of his wife, in cases of separation. A wife is entitled to alimony only when she is entirely dependent on her husband, or does not possess sufficient means of maintenance suitable to her position in life. But when she has a separate and sufficient income vested beyond the husband's control, she is not entitled to alimony. The amount of alimony awarded is at the discretion of the court, and is governed by the circumstances of the case. For instance, a distinction is drawn between a substantial income and one that is derived from precarious resources. The fortune brought by the wife is likewise taken into consideration, as also the disposal of the children, and the expense of their education. During the progress of a suit, the subsequent assignment of alimony will not free the husband from his liability for past or present debts. But on the conclusion of the suit, and when the court has allotted the wife a separate maintenance, she henceforward becomes responsible for her own contracts, and the husband is entirely freed.

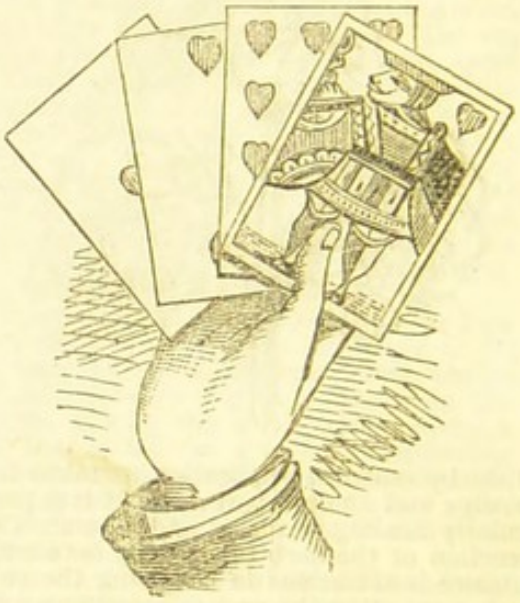
ALKALIES signify those substances which possess the following properties: incombustible, capable of converting vegetable blues into a green colour, having a hot and caustic taste, and a capability of forming salts with acids. They have purifying and antiseptic properties, and hence are used in the form of potash, soda, or soap, for domestic purposes.

ALKALIES, POISONING BY.—Administer immediately vinegar, lemon-juice, or olive oil, with or without water; and if neither of these are within reach, endeavour to induce vomiting by causing the patient to swallow a tumbler full of warm water containing a little salt. Leave the further treatment of the case to medical assistance.—See POISONING.

ALKALIES, STAINS BY.—Quick lime, potash, soda, &c., may be removed by moistening them with vinegar; or where they are very obstinate, by well diluted sulphuric or muriatic acid.

ALKANET.—A plant brought from the southern parts of France, and used in medicine. It grows wild in Kent and Cornwall, but in other counties is cultivated in gardens. The root, boiled with butter or lard, is used as an ointment for bruises, and a decoction of it mixed with honey is excellent in jaundice, ague, and diseases of the kidneys. The leaves with hyssop, drank in infusion, kill worms; and the leaves and root in wine are considered good in uterine disorders.

ALL-FOURS.—This game may be played by either two persons or four, and derives its name from the four chances therein, for each of which a point is scored, namely, *high*, the best trump out; *low*, the smallest trump dealt; *jack*, the knave of trumps; and *game*, the greatest number scored from the tricks. Ace counts 4; king, 3; queen, 2; knave, 1; and ten, 10. Low is always scored by the player to whom it is dealt; but jack is the property of whoever can win it.



Deal is cut for, the highest winning. Six cards are dealt to each player, three at a time; and when the required number of cards are dealt, the next card following is turned up for trump; then if the eldest does not approve of his hand, he *begs*, when the dealer gives either three more cards, or allows a point; if the trump turned up at the second deal is of the same suit as the first, three more cards are given, and so on until a different suit occurs.

Each player should strive to secure his own tens and court cards, or take those of his adversary, to accomplish which a low card should be played, so as to throw the lead into the opponent's hand.

When the dealer shows any of his adversary's cards, a new deal may be demanded; but in showing his own, he must abide by the accident. If discovered previously to

playing, that too many cards are given to either party, a fresh deal may be claimed, or the extra cards withdrawn by the opponent.

Each party must follow suit, or trump, if they can, if not they forfeit one point. Books: *Hoyle's Book of Games, Bohn's Handbook of Games, Brittain's Book of Games.*

ALL-HEAL.—A plant growing on the sides of rivers or lakes, and in moist lands. It has long hairy leaves, and small red flowers in clusters round the stock. The leaves of this plant, when freshly plucked, bruised, and bound over a wound, stop the bleeding without any other combination.

ALLSPICE.—The berry of a species of myrtle tree, in the West Indies. It combines the flavour of cinnamon, nutmegs, and cloves, hence its name. Its agreeable taste and aroma causes it to be frequently employed for domestic purposes; and a few drops of its oil or essence are sufficient to impart a flavour to mulled wine, gravy, or made dishes. This essence may be made as follows:—Bruise one ounce and a half of allspice, and steep it in a pint of brandy for a fortnight, occasionally shaking and pouring off the clear liquor.

ALMANAC.—A term of Arabic origin, derived from *al* and *manac*, a diary. It is, as its name implies, an annual table or register containing a calendar of days and months, the times of the rising and setting of the sun, the age of the moon, the ebb and flow of the tide, and other phenomena, celestial and terrestrial.

ALMOND.—This nut is of two kinds, the *sweet* and *bitter*. Sweet almonds are taken with dessert; they are very indigestible, and should either be eaten with raisins, or have their husks removed by blanching. Bitter almonds are used in flavouring many preparations, but when taken in excess are poisonous.

ALMOND BISCUITS.—Beat up one pound of powdered loaf sugar with the yolks of nine eggs, and whip into a froth separately the whites of twelve eggs, then mix both together, add six ounces of sweet and half an ounce of bitter almonds, blanched and pounded; mix well together, dredging in at the same time two ounces of flour; place in paper moulds, sift over them flour and pounded sugar, and bake in a moderate oven.

☞ Sugar, 1lb.; eggs, 9 yolks and 12 whites: almonds, sweet, 6oz.: bitter ditto, ½oz.; flour, 2oz.

ALMOND BLOOM, a cosmetic. In three pints of water boil one ounce of Brazil dust; strain off, and add six drachms of isinglass, two ounces of grana sylvestria, one ounce of alum, and three drachms of borax, mix the whole well together, boil again, and strain through muslin into bottles.

☞ Water, 3 pints; Brazil dust, 1oz.; isinglass, 6 drachms; grana sylvestria, 2oz.; alum, 1oz.; borax, 3 drachms.

ALMOND BONBONS.—Grate one pound of blanched almonds very fine, and mix with them a pound of powdered loaf sugar; melt the mixture in a stew-pan gradually over a slow fire, stirring it continually until the ingredients are thoroughly mixed, then pour on a tin plate, roll it quickly with a rolling-pin, and cut in forms according to fancy.

ALMOND CAKE.—Blanch, dry, and pound to the finest possible paste, eight ounces of fresh Jordan almonds, and one ounce of bitter ditto; moisten them with a few drops of cold water, or white of egg, to prevent their oiling; then mix with them *very* gradually, twelve fresh eggs, which have been whisked until they are exceedingly light; throw in by degrees one pound of fine dry sifted sugar, and keep the whole light by constant beating with a large wooden spoon, as the separate ingredients are added. Mix in, by degrees, three-quarters of a pound of dried and sifted flour of the best quality; then pour gently from the sediment a pound of butter, which has just been melted, but not allowed to become hot, and beat it gradually but thoroughly into the cake; add the finely-grated rinds of two sound fresh lemons, fill a thickly-buttered mould rather more than half full with the mixture, and bake the cake from an hour and a half to two hours in a well-heated oven. Lay paper over the top when it is sufficiently browned, and guard carefully against its being burned.

☞ Jordan almonds, ½lb.; bitter almonds, 1oz.; eggs, 12; sugar, 1lb.; flour, ½lb.; butter, 1lb.; rinds of lemons, 4

ALMOND CAKES (SMALL).—Reduce to a paste half a pound of blanched almonds, with two or three bitter almonds, adding white of egg to prevent their oiling; then add a pound of sugar, a small teacupful of cream, and twenty drops of orange flower water. Make a flour paste in the usual way, of the thickness of a crownpiece, which cut into rounds or squares, and cover with the preparation of almonds; bake in a hot oven and dredge with sugar.

☞ Blanched almonds, ½lb.; bitter almonds, 2 or 3; sugar, 1lb.; organge flower water, 20 drops; cream. small teacupful.

ALMOND CANDY.—In a half pint of water, beat up the sixth part of the white of an egg, and pour it over a pound of loaf sugar; after standing for a quarter of an hour, let it boil for three minutes, and then let it stand on one side until the scum settles down, skim it, and boil again until it becomes very thick, then throw in four ounces of almonds, which have been dried in the oven, and sliced, mix the whole well, and continue stirring until it is done, which will be known when a spoonful placed on a plate remains in a firm mass, and does not *sink*. It must then be poured out as quickly as possible into moulds or tins, and suffered to remain until quite cool.

☞ Water, ½ pint; egg, ⅛ part of white; sugar 1lb.; almonds, 4oz.

ALMOND CHEESECAKES. — Pound eight ounces of sweet and ten bitter almonds with a little orange flower water; add eight yolks and four whites of eggs, three-quarters of a pound of powdered loaf sugar, beat all together; add one pound of melted butter nearly cold, one nutmeg, the peel of one lemon grated, a wineglassful of orange flower water, and one of brandy. Mix the

ingredients thoroughly, and bake in patty pans lined with paste.

☞ Blanched almonds, ½lb.; bitter almonds, 10; eggs, 8 yolks and 4 whites; loaf sugar pounded, ¾lb.; butter, 1lb.; nutmeg, 1; rind lemon, 1; orange flower water, wineglassful; brandy, wineglassful.

ALMOND CREAM.—Pound six ounces of almonds with a little rose water; mix with a pint and a half of cream which has been boiled with the peel of one lemon; add two eggs well beaten, and stir the whole over the fire till it be thick, taking care not to allow it to boil; sweeten it to taste, and when nearly cold stir in a tablespoonful of orange flower or rose water.

☞ Almonds, 6oz.; cream, 1½ pints; lemon peel, 1; eggs, 2; sugar to taste; rose or orange flower water, 1 tablespoonful.

ALMOND CUSTARD. — Pound eight ounces of blanched almonds with a little rose water; add a quart of cream, and the yolks of twelve eggs well beaten; sweeten to taste, and stir over a slow fire till it becomes thick, but without allowing it to boil.

☞ Almonds, ½lb.; rose water few drops; cream, 1 quart; eggs, 12 yolks; sugar to taste.

ALMOND FRITTERS.—Over a pound of blanched almonds, pour four tablespoonfuls of orange flower water; add a pint and a half cream, and let them stand for three hours, then beat into a paste; add the yolks of nine eggs well beaten; half a dozen Naples biscuits, pounded sugar to taste; mix well together; fry in butter to a good colour, and serve with powdered sugar over the top.

☞ Almonds, 1lb.; orange flower water, 4 tablespoonsful; cream, 1½ pints; eggs, 9 yolks; Naples biscuits, 6; sugar to taste.

ALMOND MILK.—Pound two ounces of sweet almonds and two ounces of bitter; mix with the paste a pint of boiling milk, and strain through a sieve; then add two eggs well beaten, and sugar sufficient to sweeten; put over a slow fire till it becomes thick.

☞ Sweet almonds, 2oz.; bitter almonds, 2oz.; milk, 1 pint; eggs, 2; sugar to sweeten sufficiently.

ALMOND PASTE.—Pound eight ounces of bitter, and one pound of sweet almonds, blanched; add one pound of honey, and mix with a sufficient quantity of orange flower or rose water. Put into pots for use, and tie over closely with paper.

ALMOND PUDDING.—Pound one ounce of bitter, and half a pound of sweet almonds, and add to them a tablespoonful of brandy and a wineglass full of orange flower water; soak a quarter of a pound of biscuit powder in a pint of cream; beat eight yolks of eggs with half a pound of moist sugar; add the peel of one lemon grated, and a quarter of a pound of melted butter; mix the whole thoroughly; and after stirring it over the fire until it is heated, bake it in a pie dish ready lined with a puff paste for half an hour in a moderate oven.

☞ Bitter almonds, 1oz.; sweet almonds, ½lb.; brandy, tablespoonful; orange flower water, wineglass full; biscuit powder, ½lb.; cream, 1 pint; eggs, 8 yolks; sugar, ½lb.; lemon peel, 1; butter, ½lb.

ALMOND ROCKS.—Cut in small slices three-quarters of a pound of sweet almonds, half a pound of candied peel, and two ounces of citron; add one pound and a half of sugar, a quarter of a pound of flour, and the whites of six eggs; roll the mixture into small sized balls, and lay them on wafer paper about an inch apart; bake them in a moderate oven, until they are of a pale brown colour.

☞ Sweet almonds, ¾lb.; candied peel, ½lb.; citron, 2oz.; sugar, 1½lb.; eggs, 6 whites; flour, ½lb.

ALMOND SAUCE.—Beat together the yolks of two eggs, a teaspoonful of milk, and a tablespoonful of sugar; stir over a fire until nearly boiling; then let it stand to cool. When partly cooled, stir into it a glass of sherry, and serve in a sauce-boat. This sauce is a great improvement to plum-pudding.

ALMONDS, BLANCHED.—Put them into cold water, and heat them slowly to scalding; then take them out and peel them quickly, throwing them into cold water as they are done. Dry them in a cloth before serving.

ALMONDS, DEVILLED.—Fry blanched almonds in fresh butter, until they become a light brown, drain them, season with salt and cayenne, and serve hot as a relish with wine.

ALMSHOUSES are asylums intended for the reception of the aged and infirm. The principal part of these charities are in connection with, and under the management of, the various City Companies, and other public bodies, and, generally speaking, certain conditions and qualifications are necessary to entitle a person to the privilege of becoming an inmate in one of them. There are in all about 150 almshouses in and about the metropolis; for the particulars respecting each of which see *Sampson Low's Charities of London.*

ALOES, a well-known purgative, of a warm and stimulating character, generally taken in doses of from five to fifteen grains. In cases of jaundice this medicine is very efficacious, as it acts as a substitute for the defective bile, it is also beneficial to costive habits. Aloes, however, should be used with caution, as repeated doses produce irritation about the lower parts, and when this begins to make itself felt, even in the slightest degree, the medicine should be immediately discontinued. One of the best forms of taking aloes is in the compound tincture, which does not produce the injurious effects alluded to. To destroy the extremely bitter and nauseous taste of this drug, it should be taken in a strong solution of extract of liquorice.

To make *Compound Tincture of Aloes.*—Macerate for ten days 2oz. each of extract of spiked aloes and saffron, with a pint and a half of tincture of myrrh. Then strain it off.

ALPACA.—This is one of the most useful and durable woollen textures worn, and is especially useful for linings of coats, dresses, &c., answering all the purposes of silk, at

one-fourth of its cost. The animal from which this fabric is derived, is a Peruvian sheep of a peculiar breed, and of singular habits—it ranges over the wildest and most desolate places, and feeds in the bleakest and dampest situations; it requires neither fold nor manger, and in the severest winter is satisfied to crop the refuse left upon the

moors; in a word, this animal, although of delicate appearance, is one of the hardiest of the creation.

ALTERATIVE MEDICINES are those which re-establish the health, and gradually restore the decayed functions of the system, without producing perspiration, purging, or other sensible evacuations. They are, in fact, medical remedies assuming the mildest form for the purpose of assisting and co-operating with nature.

Alterative Powder.—Recipe: Dover's powder, fifteen grains; mercury with chalk, twelve grains; divide into six powders, and take one every night. The quantities of the ingredients specified are for a *grown-up person;* for a youth under twenty they should be *one-half less*, and for a child under ten *three-quarters less.* See BLUE PILL, CALOMEL, COD-LIVER OIL, GREY POWDER, SARSAPARILLA, &c.

ALUM is a chemical salt, possessing astringent properties, and put to various uses as a domestic medicine; it is useful in diarrhœa, and when given in repeated small doses has an opposite tendency in cases of constipation. The proper administration for the latter is from 5 to 20 grains, every four, eight, or twelve hours, according to the nature of the complaint. As an astringent tonic it may be taken in the form of pills to the extent of ten grains three times a day.

ALUM, ADULTERATION OF BREAD BY. —See ADULTERATIONS, BREAD, &c.

ALUM CONFECTION.—This preparation acts as an astringent in cases of sore throat, relaxed uvula, and ulceration of the mouth. Mix two scruples of powdered alum with four scruples of treacle. *Dose:* half a drachm.

ALUM EYEWASH.—Dissolve half a drachm of alum in half a pint of water, and use two or three times a day.

ALUM LOTION.—Dissolve three drachms of alum in a pint of water. This may be applied to sores and wounds when the inflammation has subsided, and will hasten their healing.

ALUM OINTMENT.—Mix two drachms of alum powder, an ounce of turpentine, and two of hog's lard, and stir them over the fire till well mingled. This is sometimes used instead of the lotion, when the sores have become dry and hard.

ALUM WHEY.—Boil two drachms of alum in a pint of milk, until a curd appears. Then strain off the liquor, and add two ounces of spirit of nutmeg and an ounce of syrup of cloves. A teacupful three times a day will be found useful in discharges of blood, uterine fluxes, &c.

AMALGAM.—The incorporation of mercury with other metals, to render them available for certain processes. Thus an amalgam of tin and mercury is used for silvering the reverse side of mirrors, and an amalgam of silver and mercury is used for filling decayed teeth.

AMBER.—A mineral substance of a resinous character, dug out of diluvial soils, and found in large quantities on the Baltic shores. The chief uses of amber are for ornaments, such as beads, bracelets, &c.; also the heads of canes and mouth-pieces for pipes.

AMBER VARNISH.—To half a pound of powdered amber, add four ounces of scio-turpentine, melted; macerate for half an hour, and add one-third of white resin, warmed, and half a pound of linseed-oil, hot.

AMBERGRIS.—A substance found floating in the seas or the coasts of various tropical countries. It has an exceedingly pungent odour, and when mixed with perfumes in the minutest quantities is supposed to improve them. A grain or two in a hogshead of claret is perceptible to the taste. It is used for imparting a flavour generally accounted agreeable.

AMENDMENT is a term used to express a *counter-resolution* proposed at any public meeting, and which if carried renders the original motion inoperative. When in the House of Commons a bill is proposed to be read by a certain member, and another member proposes by way of amendment "that the bill be read that day six months," the question is put, and if the mover of the amendment gains a majority of votes the bill is thrown out.

AMERICAN CRESS is raised from seed, sown generally in drills nine inches apart. If wanted through the whole of the summer the seed must be sown every six weeks, from March up to August; and if for winter or spring one sowing only, at the end of August or beginning of September is necessary. Water occasionally during dry warm weather and at the commencement of the winter season; shelter the plants by laying a few light twigs among them, and over these a slight covering of litter. The plants being cut or the outside leaves stripped off, shoot again for another gathering. The soil to be preferred is, for the winter crop, light and dry, and the situation open but warm. For the summer a moister soil and shadier border should be chosen. — See CRESS, SALAD, &c.

AMMONIA, ACETATE OF, SOLUTION OF.—Mix one ounce with six ounces of water, from which a lotion is obtained for applying to external inflammation, bruises, scald head, &c.

AMMONIA, AROMATIC SPIRITS OF.—For debility, fainting, spasms, and hysterics, take from thirty to forty drops in a wineglassful of water.

AMMONIACUM MILK.—Gum ammoniac two drachms, stirred gradually in half a pint of distilled water until it becomes milk. In cases of obstinate cold this is an excellent remedy for loosening the phlegm and promoting expectoration. Take two tablespoonfuls twice a day.

AMUSEMENTS, INDOOR.—See CARDS, CHARADES, CHESS, FORFEITS, &c.

AMUSEMENTS, OUTDOOR.—See ANGLING, ARCHERY, CRICKET, QUOITS, &c.

ANAGRAM.—The changing of the sense or construction of a phrase by the transposition of the letters that constitute it.

TRANSPOSED	FORMS
Astronomers	No more stars.
Catalogues	Got as a clue.
Elegant	Neat leg.
Impatient	Tim in a pet.
Immediately	I met my Delia.
Masquerade	Queen as mad.
Matrimony	Into my arm.
Melodrama	Made moral.
Midshipman	Mind his map.
Old England	Golden land.
Parishioners	I hire parsons.
Parliament	Partial men.
Penitentiary	Nay I repent.
Presbyterians	Best in prayer.
Radical Reform	Rare mad frolic.
Revolution	To love ruin.
Sir Robert Peel	Terrible poser.
Sweetheart	There we sat.
Telegraphs	Great helps.

One of the most remarkable anagrams is *Honor est à Nilo* (Honour at the Nile), which words may be found out of the letters composing *Horatio Nelson*. *Field Marshal the Duke* makes *The Duke shal (l) arm the field.* The forming of anagrams from family names, and brief mottoes or sentences, constitutes an agreeable occupation by the fireside on winter evenings.

ANCHOVIES (BRITISH).—Pound in a mortar half a peck of fine sprats, with one pound of salt, one ounce of bay salt, half a pound of saltpetre, one ounce of prunella, and a few grains of cochineal; then put into an earthen vessel or small barrel, first, a layer of sprats, then a layer of the compound, and so on alternately to the top. Press down and cover them close for four months, when they will be in a fit state to be eaten.

☞ Sprats, ½ a peck; salt, 1lb.; bay salt, 1oz.; saltpetre, ½lb.; prunella, 1oz.; cochineal, few grains.

ANCHOVY.—A species of small herring found in great abundance on the Mediterranean coast. This fish is esteemed as a relish for breakfast, lunch, &c., and is also much used for seasoning other dishes in the form of paste or essence. Sardines and sprats are both frequently substituted for this fish, but the anchovy may be easily distinguished from these by its rounded back, whereas the backs of the two former are flat. Its head is also thicker, and its colour of a dusky brown.

ANCHOVY BUTTER.—Scrape the skins of twenty good sized anchovies, remove the bones and the heads, and pound the flesh in a mortar until it is quite smooth, then take out the flesh and rub it back into the mortar through a hair sieve; add one pound of fresh butter, a teaspoonful of grated nutmeg, the same quantity of mace, and three parts of a saltspoonful of cayenne pepper. Mix the whole thoroughly together. If for table use serve in moulded shapes, but for preservation it may be kept in gallypots or jars, in the pantry, or other cool place.

☞ Anchovies, 20; butter, 1lb.; nutmeg, one teaspoonful; mace, one teaspoonful, cayenne, three parts of a saltspoonful.

ANCHOVY ESSENCE.—Put two pounds of fine anchovies into four quarts of water, add one ounce of whole pepper, six bay leaves, half an ounce of mace, twelve shalots chopped small, the rind of two lemons, and a gill of port wine; stir over the fire and boil for three quarters of an hour; rub through a hair sieve, and bottle off. The bottles should be corked and sealed down, and kept in a cellar or closet that is both cool and dry.

☞ Anchovies, 2lbs.; water, 4 quarts; pepper (whole), 1oz.; bay leaves, 6; mace, ½oz.; shalots, 12; lemon peel, 2; port wine, 1 gill.

ANCHOVY PASTE.—Scrape half a pound of anchovies very clean; remove the bones, and pound the flesh in a mortar until quite smooth; add one pound of fresh butter, a teaspoonful of mace and nutmeg mixed, and a saltspoonful of cayenne, mix well together, and let it stand for six hours, then pot, and pour on the top of each pot a slight covering of melted butter, just warm.

☞ Anchovies, ½lb.; butter, 1lb.; mace, half teaspoonful; nutmeg, half teaspoonful; cayenne, 1 saltspoonful.

ANCHOVY TOAST.—Cut slices of bread of a moderate thickness, pare off the crust, and fry the slices in melted butter until quite brown, spread them with anchovy butter (as above), and serve hot.

ANEMONE, Greek name for a plant signifying *wind-flower*. There are two species of this flower, the poppy anemone (fig. 1), and the broad-leaved anemone (fig. 2). The soil most suitable is a mixture of earth turf and cow-dung, made very fine on the surface. Sow the seed in January, and sprinkle over them a light sandy soil to the thickness of a quarter of an inch, water the seed gently in dry weather, and as the young plants spring up, shelter them both from the frost and the sun; take up the roots in March, and preserve them in a dry place. They may then be re-planted in October, to bloom in the following spring. Anemones may be propagated by cuttings from the parent plant, they should be placed in raised beds, so as to prevent the wet from injuring

their roots; they should be taken up in June, and replanted in October.

ANGELICA, a plant so called from its supposed angelic properties. It is to be found both wild and in gardens, and will grow in any soil or situation. It is propagated by seed which should be sown in August or September, and the plants may be cut in the May or June following. It will also grow from cuttings.

ANGELICA CANDY.—Cut the stalks off the angelica, when they have obtained a good size, and before they have become tough cut them into slices, remove the skin, and boil them in water till they become tender; then take them out and wash them two or three times in cold water; boil them in a strong syrup, made from loaf sugar, for an hour, let them stand for twenty-four hours, and then boil them twice a day until the syrup has almost all been absorbed by the fruit. When this is done, take them out and place them apart in an oven to dry. Angelica will thus keep for years, and forms an agreeable addition to a dessert.

ANGELICA RATAFIA.—Put a quarter of a pound of angelica shoots into one quart of brandy, half a pint of water, one pound of sugar; add a quarter of an ounce of allspice. Let the mixture infuse in a close vessel for six weeks, then drain off, and bottle.

☞ Angelica shoots, ¼lb.; brandy, one quart; water, half pint; sugar, 1lb.; allspice, ¼oz.

ANGLE, a form in geometry which indicates the inclination of two lines measured by arcs of a circle, the centre of which is the point where both the sides of the angle meet. Angles are divided into right angles, equal to 90 deg., four of which are equal to the whole circle; obtuse angles, those greater than 90 deg.; and acute angles, those which are less.

ANGLING.—The "regular season" for this sport is between the months of April and November. The *best time of the day* for angling is, during the summer months, from sunrise to two or three hours after, and from two hours preceding sunset until an hour after that time. In the colder months the best hours are from twelve to three, for the fish are shy at biting until the air is warmed by the sun. The *best weather* is as follows:—A warm lowering day is, of all others, the most propitious; on a cloudy day also succeeding a moonlight night the fish will bite readily; the most favourable winds are south and south-west—easterly the most unfavourable.

HINTS.—When fishing, keep at some distance from the margin of the stream, so that your shadow may not fall upon the water, and frighten away the fish; to avoid the same consequences, do not indulge in laughter or loud conversation.

If the water be still, throw in small pieces of ground bait; if a strong current, large pieces; do this quietly and cautiously, for fish are so wary and suspicious, that it requires the nicest delicacy and management to circumvent them.

When the wind blows right across the water, fish with your back to the wind, as you will not only be able to throw your line better, but the fish will be on that side, attracted thither by the flies and other natural bait which the wind will blow into it.

NOTE.—That *bream* are to be found in the most secluded places; *eels* under the banks of rivers; *perch* and *roach* in clear swift streams; *chub* in deep shaded holes; and *trout* in clear rapid brooks. Situations abounding in weeds, or old stumps of trees, often harbour large numbers of fish that bite freely; but in such cases the line requires to be managed with great care, so that it does not become entangled or broken. The openings of sluices and mill-dams always invite fish up the current to seek the food which is conveyed with the stream, so that angling in these places is generally attended with success.

ANGLER'S CALENDAR.

January.—Pike, chub, and roach only. The best time the middle of the day. The weather should be still and the water clear.

February.—Perch, carp, chub, roach, and pike. The best time the middle of the day. The mildest days preferable in eddies and near banks.

March.—Pike, carp, perch, roach, dace, chub, and gudgeon will bite. Middle of the day the best time, in eddies and shallows.

April.—Trout, tench, barbel, bleak, flounders, and eels; also those mentioned in March. Trout and tench in rivers; the others in shallow waters.

May.—All sorts of fish bite well this month. Eels bite both by night and day.

June.—Not a favourable month for the angler—the spawning season. Trout may be taken.

July.—All sorts begin again to bite.

August.—Fish begin to bite more boldly. Morning and evening the best times.

September.—Barbel, roach, chub, and dace are found in deep water. Baits must be shotted to reach the bottom.

October.—Roach and chub in bottoms. Not a good month for ponds or still waters.

November.—Roach, jack, and chub if the weather be genial. The middle of the day the best.

December.—A month of rest and inactivity both for the fish and the angler.

The *favourite places for angling near London* are Richmond, Twickenham, Teddington, Kingston, Thames Ditton, Hampton, Sunbury, Walton, Weybridge, Chertsey, Staines, and Windsor; also Waltham Abbey, Broxbourne, and Tottenham. There are many other resorts for the angler scattered over the United Kingdom, in many instances possessing peculiar and distinct characteristics.

Books: *Davy's Salmonia, Walton and Cotton's Angler, Salter's Angler's Guide, Hofland's Angler's Manual,* and *Carroll's Angler's Vade Mecum.* See also FISH BAIT, FLIES ARTIFICIAL, FISHING LINE, FISHING ROD, &c.

ANIMALCULE, a minute form of animal life existing and generated in decayed animal and vegetable substances. Animalcules in water are supposed to have purifying properties, by removing from it the substances injurious to human life, and by expiring oxygen gas. Animalcules may be removed by boiling the water or filtering it through charcoal.

ANIMATION SUSPENDED.—See COLD, DROWNING, HANGING, INTOXICATION, and SUFFOCATION.

ANISEED CORDIAL is made by mixing three gallons of proof spirits, half an ounce of oil of aniseed, one gallon and a half of water, and two pounds of loaf sugar. This is an excellent stomachic, very comforting for pains in the bowels, flatulency, &c.

ANNATTO, a colouring matter, formed from the pulp of a plant common in the West Indies. The extract is imported into this country in the shape of cakes or

balls, and is extensively used not only for dyeing purposes, but also for colouring cheese. As there are several imitations of annatto palmed off for the genuine article it may be well to know that the West Indian annatto possesses the following properties. It is of a yellow flame colour, brighter in the interior part than on the outside, soft to the touch, and with an odour resembling violets. The proportion of annatto used in colouring cheese is one ounce to one hundredweight, and it is added to the milk previously to turning it into curds.

ANNEALING.—The process of gradually cooling bodies that have been subjected to the influence of heat. This is particularly practised in the manufacture of glass, which if suffered to *cool suddenly* would be extremely brittle, and it is therefore *gradually* cooled in an oven constructed for that purpose. Metals which have imbibed a harshness in the process of manufacture are softened in the same manner.

ANNO DOMINI (A. D.)—Lat. *The year of our Lord*—a computation of time, the first year of which dates from our Saviour's birth.

ANNUITY signifies, in its general sense, a yearly income, payable at stated periods, and derivable from a certain source. Annuities may be secured to persons at given periods of their lives, and to continue until death, by the payment of a certain sum of money which is estimated as equivalent in value to the annuity secured. Insurance offices grant such annuities, which are calculated according to the ascertained probabilities of human life, and which also depend upon the fulfilment of certain specified conditions.

The most important and practicable of these are—1. *Immediate Annuities.* 2. *Deferred Annuities.* 3. *Survivorship Annuities.*

AN IMMEDIATE ANNUITY signifies that upon condition of a certain amount being *paid down*, a yearly sum shall be paid from that period until death, and an explanation of this will be fully illustrated by the following table, showing the amount of annuity granted for every £100 paid.

Age.	Amount of Annuity per Annum.	Age.	Amount of Annuity per Annum.
	£ s. d.		£ s. d.
35	5 8 6	53	7 11 9
36	5 10 0	54	7 16 3
37	5 11 7	55	8 1 2
38	5 13 2	56	8 6 5
39	5 14 11	57	8 12 2
40	5 16 8	58	8 18 3
41	5 18 5	59	9 4 6
42	6 0 2	60	9 10 8
43	6 2 0	61	9 16 6
44	6 4 0	62	10 2 7
45	6 6 1	63	10 9 1
46	6 8 4	64	10 16 4
47	6 10 9	65	11 4 4
48	6 13 6	66	11 13 2
49	6 16 6	67	12 3 1
50	6 19 10	68	12 14 2
51	7 3 7	69	13 6 9
52	7 7 6	70	14 0 10

Example. — An immediate annuity of £5 16s. 8d., payable during the remainder of life, may be secured at 40 years of age by the single payment of £100.

A DEFERRED ANNUITY signifies that upon the annual payment of a specified amount, for a given term of years, an annuity shall be secured from a certain period of life until death, as follows:—

ANNUAL PREMIUM TO ASSURE AN ANNUITY OF £10 PER ANNUM, ON ATTAINING THE AGE OF 50, 55, 60, AND 65.

Age next Birthday.	Age at which the Annuity is to commence.								
	50			55			60			65		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20	2	8	4	1	11	5	0	19	6	0	11	4
21	2	11	2	1	13	1	1	0	9	0	11	11
22	2	14	2	1	14	10	1	1	7	0	12	6
23	2	17	6	1	16	10	1	2	8	0	13	1
24	3	1	1	1	18	10	1	3	11	0	13	9
25	3	4	11	2	1	1	1	5	2	0	14	5
26	3	9	2	2	3	6	1	6	6	0	15	2
27	3	13	10	2	6	0	1	8	0	0	16	0
28	3	18	10	2	8	11	1	9	7	0	16	10
29	4	4	5	2	12	0	1	11	3	0	17	9
30	4	10	8	2	15	4	1	13	1	0	18	9
31	4	17	7	2	18	11	1	15	0	0	19	10
32	5	5	3	3	2	11	1	17	2	1	0	11
33	5	14	0	3	7	4	1	19	6	1	2	1
34	6	3	9	3	12	2	2	2	0	1	3	5
35	6	14	4	3	17	7	2	4	10	1	4	10
36	7	7	9	4	3	7	2	7	10	1	6	4
37	8	2	7	4	10	3	2	11	1	1	7	11
38	9	0	0	4	17	9	2	14	9	1	10	9
39	10	0	9	5	6	3	2	18	9	1	11	9
40	11	5	9	5	16	0	3	3	3	1	13	11
41				6	7	2	3	8	2	1	16	2
42				7	0	0	3	13	9	1	18	10
43				7	15	5	4	0	0	2	1	7
44				8	13	6	4	7	2	2	4	10
45				9	15	4	4	15	4	2	8	4
46							5	4	9	2	12	3
47							5	15	8	2	16	8
48							6	8	7	3	1	8
49							7	3	11	3	7	4
50							8	2	5	3	13	11
51										4	1	6
52										4	10	11
53										5	0	9
54										5	13	2
55										6	8	4

Example.—A person aged 20 at his next birthday may secure an annuity of £10 per annum on his attaining the age of 50, by the annual payment of £2 8s. 4d., such payment to commence on his twentieth birthday, and to terminate on his fiftieth.

In addition to the securing of this annuity, there is another mode by which the whole of the premiums paid (except the first) may be made returnable in the event of the person dying before he reaches the age for which he assures. This is accomplished by the payment of a certain amount in excess of the ordinary premium.

Examples.—A person at the age of 20 wishing to secure an annuity of £10 per annum at the age of 50, with *premiums returnable in case of death*, would have to pay an annual premium of £2 15s. 4d.; or if a person at the age of 30 wishes to secure at the age of 60, the same annuity with the same proviso, he would have to pay an annual premium of £2 0s. 9d., the excess in both instances being about seven shillings per annum on the preceding table.

A SURVIVORSHIP ANNUITY signifies that a person may, on behalf of himself and another, assure an annuity to be paid to whichever of the two parties survive the other.

ANNUAL PREMIUM TO INSURE A SURVIVORSHIP ANNUITY OF £10 ON THE LIFE OF A. AFTER THE DEATH OF B.

Age of A.	Age of B.	Annual Premium.			Age of A.	Age of B.	Annual Premium.		
		£	s.	d.			£	s.	d.
10	10	2	2	2	25	10	1	12	1
	15	2	10	2		15	1	18	1
	20	2	18	2		20	2	4	0
	25	3	9	3		25	2	12	3
	30	4	2	8		30	3	2	8
	35	4	18	1		35	3	15	0
	40	5	19	0		40	4	12	2
	45	7	2	9		45	5	12	1
	50	8	18	1		50	7	2	8
	55	11	13	8		55	9	11	3
	60	15	9	2		60	12	17	6
	65	19	12	6		65	16	10	6
	70	26	8	2		70	22	10	0
	75	35	14	6		75	30	14	8
	80	45	14	7		80	39	10	10
15	10	1	18	8	30	10	1	9	0
	15	2	6	0		15	1	14	5
	20	2	13	5		20	1	19	6
	25	3	3	8		25	2	6	9
	30	3	16	4		30	2	16	0
	35	4	10	9		35	3	7	0
	40	5	10	7		40	4	2	7
	45	6	13	3		45	5	0	9
	50	8	7	2		50	6	9	2
	55	11	0	6		55	8	15	0
	60	14	13	2		60	11	18	0
	65	18	13	3		65	15	7	1
	70	25	4	0		70	21	0	7
	75	34	3	8		75	28	17	0
	80	43	16	0		80	37	4	4
20	10	1	15	5	35	10	1	6	0
	15	2	2	0		15	1	10	8
	20	2	8	8		20	1	15	3
	25	2	17	9		25	2	1	7
	30	3	9	7		30	2	9	8
	35	4	3	1		35	2	19	0
	40	5	1	8		40	3	12	9
	45	6	3	0		45	4	9	0
	50	7	15	4		50	5	14	9
	55	10	6	5		55	7	17	7
	60	13	16	0		60	10	16	7
	65	17	12	8		65	14	1	6
	70	23	18	3		70	19	8	6
	75	32	10	8		75	26	16	2
	80	41	15	8		80	34	13	7

Age of A.	Age of B.	Annual Premium. £	s.	d.
40	10	1	3	1
	15	1	7	4
	20	1	11	1
	25	1	18	8
	30	2	3	6
	35	2	11	5
	40	3	3	2
	45	3	17	0
	50	5	0	1
	55	6	18	11
	60	9	13	7
	65	12	13	7
	70	17	13	6
	75	24	11	8
	80	31	19	0
45	10	1	0	2
	15	1	4	0
	20	1	7	2
	25	1	11	10
	30	1	17	9
	35	2	4	1
	40	2	13	10
	45	3	5	3
	50	4	5	1
	55	5	19	8
	60	8	8	10
	65	11	3	1
	70	15	14	8
	75	22	2	3
	80	28	19	7
50	10	0	17	3
	15	1	0	8
	20	1	3	4
	25	1	7	4
	30	1	12	3
	35	1	17	2
	40	2	5	3
	45	2	14	0
	50	3	10	4
	55	5	0	2
	60	7	3	2
	65	9	10	1
	70	13	11	4
	75	19	5	3
	80	25	6	10
55	10	0	14	7
	15	0	17	4
	20	0	19	8
	25	1	3	0
	30	1	7	2
	35	1	11	2
	40	1	17	6
	45	2	4	0
	50	2	16	8
	55	4	1	8
	60	5	18	4
	65	7	19	9
	70	11	7	6
	75	16	6	7
	80	21	11	3
60	10	0	12	1
	15	0	14	8
	20	0	16	6
	25	0	19	3
	30	1	2	8
	35	1	5	11
	40	1	10	0
	45	1	15	6
	50	2	5	3
	55	3	5	8
	60	4	16	3
	65	6	8	6
	70	9	7	7
	75	13	12	6
	80	18	1	10
65	10	0	9	9
	15	0	12	2
	20	0	13	5
	25	0	15	10
	30	0	19	2
	35	1	1	2
	40	1	5	3
	45	1	8	4
	50	1	15	3
	55	2	11	7
	60	3	16	8
	65	5	1	8
	70	7	10	3
	75	11	1	7
	80	14	15	8
70	10	0	7	11
	15	0	9	9
	20	0	10	7
	25	0	12	7
	30	0	15	0
	35	0	16	10
	40	1	0	2
	45	1	2	0
	50	1	6	8
	55	1	19	5
	60	2	19	5
	65	3	17	10
	70	5	15	7
	75	8	12	8
	80	11	10	2
75	10	0	7	2
	15	0	7	10
	20	0	8	5
	25	0	9	10
	30	0	12	0
	35	0	13	6
	40	0	16	2
	45	0	17	4
	50	1	0	3
	55	1	10	0
	60	2	6	2
	65	2	19	7
	70	4	8	10
	75	6	14	8
	80	8	19	6
80	10	0	4	10
	15	0	6	3
	20	0	6	8
	25	0	7	10
	30	0	9	6
	35	0	10	6
	40	0	12	11
	45	0	13	7
	50	0	15	6
	55	1	2	7
	60	1	15	8
	65	2	5	3
	70	3	7	2
	75	5	3	10
	80	6	17	9

Example.—By this table a husband, for instance, aged 30, may secure to his wife' age 25, an annuity of £10 per annum after his death by the annual payment of £3 2s. 8d. See also ENDOWMENT and INSURANCE.

ANODYNES, from a Greek word *anodunos*, which signifies "that which relieves pain." Anodynes act in three ways: by *actually assuaging pain*, as by cupping; by *inducing sleep*, as with laudanum; or by *stupifying the senses*, as with chloroform. These remedies should be applied with great care, or they may only aggravate the pain which is sought to be relieved. It should also be observed that an habitual resort to these agents should by all means be avoided, as by repetition their operation is weakened, and the means must necessarily be augmented from time to time in order to accomplish the desired end. It is obvious, therefore, that these repeated demands upon the system tend to enervate and weaken it, so that the good accomplished by the temporary lulling of local pain is far outbalanced by the permanent injury sustained by the general health. See CAMPHOR, CANTHARIDES, COLCHICUM, CREASOTE, CUPPING, DOVER'S POWDER, FOXGLOVE, HEMLOCK, HENBANE, LAUDANUM, LETTUCE, MORPHIA, OPIUM, PAREGORIC, POPPIES, &c.

ANT.—There is a variety of methods for destroying this insect, so troublesome and noxious both in pasture lands, and to fruit and flower trees. To *prevent* their approach to trees night-soil should be laid about the roots, or the earth round the foot of the tree should be constantly turned up, and plentifully strewn with coalashes or sawdust. To *drive away or kill them*, dig up the nests, and mix the earth with gas lime, or pour some quick lime with boiling water into the mouth of the nest. Another way is to smear the inside of a garden pot with honey, invert it over the nest, and when crowded with them hold it over the steam of boiling water; and a simpler method still is to turn a flower-pot with its hole stopped up over the nest. After a time ants will build in it, and the whole colony may be removed with the spade. These insects may be kept away from cupboards by having a small bag of camphor hung up in it.

ANTE-MERIDIEM (A.M.).—Lat. signifying before noon.

ANTHONY'S FIRE.—See ERYSIPELAS.

ANTHRACITE COAL.—See COAL.

ANTIDOTES, from two Greek words, signifying *given against*, remedies which are used both externally and internally to counteract the effects of poison. See POISONS; also ARSENIC, COPPER, LEAD, PRUSSIC ACID, &c.

ANTIMONY is a metal of a silver grey colour, which for commercial purposes is chiefly used as an alloy with other metals. For medical uses a great variety of preparations are made from it, but it is chiefly employed for the cure of febrile and inflammatory diseases *when at their height*, its operation being to increase the action of the skin,

to promote perspiration, and to stimulate the fluids of the stomach and the biliary secretions. The mode of administering this medicine in inflammatory diseases, is from a quarter of a grain, or less, to one grain (according to the character of the inflammation), dissolved in water, and given every two hours until the fever subsides. This remedy, when applied with caution and skill, often effects a cure in the most aggravated cases of fever, without subjecting the system to the debilitating effects which bleeding and other violent remedies entail.

In larger doses antimony excites vomiting and in this character is commonly known as *tartar emetic*, the case with which it produces the desired effect causes it to be much used for this purpose It should be known, however, that in cases of poisoning antimony should be by no means administered, as its action is always preceded by nausea, during which time the poison would be absorbed by the stomach.

ANTIMONY WINE. — Dissolve two scruples of tartar emetic in sixteen ounces of boiling distilled water, filter, and add four ounces of rectified spirits of wine. In cases of acute rheumatism six drachms of this wine, mixed with one drachm of laudanum, will form an excellent compound, of which twenty drops may be taken in water four times a day. For eruptions of the skin also the following mixture will be found beneficial:—Mix four drachms of antimonial wine, one drachm of laudanum, and one drachm of the solution of oxymuriate of mercury, of which twenty-five drops may be taken in water every night and morning.

ANTI-SCORBUTICS.—See SCURVY.

ANTISEPTICS.—See DISINFECTION and PRESERVING.

ANTI-SPASMODICS.—See CHOLIC, CRAMP, SPASMS, &c.

APARTMENTS.—The arrangement and decoration of the different apartments of a house agreeably to their *suitability and uses* is an art by no means to be despised, since it is not only capable of gratifying others, but also of administering to that comfort and happiness which is always associated with *home*. The following hints, therefore, in connection with this subject may not be unacceptable:—

Apartments that are lighted from south and west should be *cool* in their colouring; but those lighted from north and east should be *warm*.

The colours employed in the interior of an apartment should be so distributed as to *contrast with each other*. Thus, the colours of the carpet should neither be so brilliant as to destroy the effect of those of the paper, nor the contrary; and with regard to the curtains, they should all be of a colour, so as to blend and harmonize with both. For instance, a very brilliant coloured carpet, say crimson, may have a drab or other quiet colour, both in the curtains and the paper; but by way of relief, the bordering of these should introduce a little of the same brilliant colour. So a room with a bright blue or crimson carpet may have white, yellow, or drab curtains and paper; but blue or crimson ornaments or bordering should be introduced to preserve harmony of effect. A green carpet may have black, white, or red curtains, with green borders or ornaments. A yellow carpet may have black curtains and a dark grey paper, with yellow borders and ornaments.

The *designs or patterns* of both carpet and paper should be in keeping with the apartment; that is to say, *large patterns* are most suitable for *large rooms*, and *small patterns* for *small rooms*. It should also be observed that for *low-pitched* rooms striped paper is preferable, because it gives an effect of height; whilst on the other hand patterns with lines across, or borders, should be avoided as detracting from the height. The designs of curtains and other hangings should always be what is termed "up and down," as more in keeping with their character than any other.

The *arrangement* of apartments should be such as to combine comfort with effect, neither being unnecessarily sacrificed to the other; in this particular the judgment and the eye are the best monitors, as they seldom fail to dictate that which is most proper and artistic. The following suggestions apply to the suitability of decoration and arrangement of individual apartments.

Drawing-rooms should be characterized by light and cheerful colouring; and this is produced by the introduction of the light tints of brilliant colours, with a considerable degree of contrast and gilding. The furniture should be light in make and tasty in design. There should also be introduced sculpture, paintings, and a few illustrated books, all selected with the greatest taste. And it should be remarked here that a drawing-room should not be *crowded with ornaments*, especially those of a trivial character, as it not only betrays a vulgarity of taste, but also renders every step and movement of a visitor hazardous.

Dining-rooms.—The characteristic colours should be warm, rich, and substantial; and when contrasts are introduced they should not be vivid; the furniture should be massive, and principally made from mahogany or other dark wood, and the whole of the apartment should be so furnished and ordered, as to convey the greatest possible amount of *ease and comfort*. This room should be so situated in the house as to be at a convenient distance from the kitchen, without being subject to the odours arising from the culinary operations.

Parlours, which are intended, on an exigency, to supply the place of either drawing-room, or dining-room, should be furnished in a medium style between those apartments.

Libraries and Studies should have a grave and quiet tone pervading them, without being too dull or monotonous. The furniture and appliances of these apartments of course mainly depends upon the taste and pursuits of the occupant.

Bed-rooms should have a light, cleanly, cheerful style of colouring; a greater degree of contrast may be admitted here than in any other apartment. The carpets may even

be brilliant and gay, and the paper florid and fanciful.

In addition to the foregoing, we subjoin the following hints appertaining to the subject of decoration generally.

Bright red or crimson colours assort *ill* with mahogany furniture — green colours assort *well*.

Violet or blue stuffs combine *well* with light woods, such as satin-wood, maple, &c.

Dark red stuffs are *more durable* than any other colour.

With old paintings, gilt frames harmonize *well*; black or bronze *badly*.

With engravings light gilt frames or maple harmonize *well*; black or dark coloured woods *badly*.

Hangings of a light green colour are the *most favourable*; those of an orange colour the most unfavourable.

Small patterned paper-hangings are generally *preferable to large ones*.

Light coloured carpets are *more serviceable* than dark coloured.

Bright coloured carpets are best for *large apartments*.

The brightest colours of a carpet should be *in the centre*.

The frames of paintings and engravings occupying the same room should be similar both in their *fashion and colour*.

The valance for hangings in low-pitched rooms should be fixed as *near to the ceiling* as possible.

In furniture *no one new article* should be intruded amongst that which has been long in use.

APARTMENTS, LAWS OF LETTING.—See LANDLORD AND TENANT.

APERIENT MEDICINES are those which have a purgative quality, and facilitate evacuations by removing obstructions. Remedies possessing this property in a milder or more intense degree should be administered according to the requirements of the case. When, for instance, a slight interruption in Nature's laws occurs, it would be injudicious to produce excessive evacuation by purging; whilst, on the other hand, when an obstinate obstruction offers itself, it would only enfeeble the constitution and encourage the continuance of the derangement, to apply to it such means as were inefficacious.

In the majority of cases aperient medicines may be taken without the intervention of medical advice; and when they are needed, either from some accidental circumstance, or from some peculiarity in a person's habit, which has become part of his nature, experience will soon teach him what is the kind of medicine, the strength of the dose, and the frequency of administration required.

In connection with this subject it should be remembered that when aperient medicines are being taken, *their operation should be assisted* by a suitable diet and regimen. If, for instance, a person having recourse to an aperient eats the same food and drinks the same liquids that he does on ordinary occasions, he is obviously wrong in so doing, because, under such circumstances, the operation of the medicine is impeded by the passage of the food through the body, and its demand upon the digestive organs. If, therefore, a person wishes for positive benefit and relief from aperient medicines, his diet for one, two, or three days, as the occasion suggests, should be of a light nature, and chiefly confined to what are called slops. For breakfast he should take a little dry toast, and a large cup of tea; for dinner a basin of mutton broth or beef tea; and for supper gruel or arrowroot. By adopting this course, the medicine will work off freely and thoroughly, and fresh energy and renewed appetite will be the reward for this temporary discipline.

At the same time, persons should be cautious not to take aperient medicines too frequently, as their repetition induces a state of the system sometimes constipated and sometimes relaxed, and which in the end becomes confirmed and habitual. There are, indeed, persons who have a morbid propensity for flying to these remedies to cure some trivial ailment, which a little judicious management of diet and regimen would relieve, without the aid of medicine at all.

The two most popular aperients that are used are "brimstone and treacle" for children, and "blue pill and black draught" for adults; both of these remedies are excellent and efficacious. To meet the several requirements for aperient medicines, however, we append here a few recipes, which may be fully relied on for performing the offices indicated.

Mild Aperient Pill for Adults. — Powdered rhubarb, half a drachm; powdered ipecacuanha, six grains; powdered Castile soap, fifteen grains; to be mixed with water, and made into twelve pills. Two to be taken every other night.

Strong Aperient Pill for Adults.—Compound extract of colocynth, half a drachm; powdered scammony, fifteen grains; powdered gamboge, fifteen grains; calomel, fifteen grains; to be mixed with water and divided into twenty pills. Two for a dose as occasion requires.

Purgative Pill for Adults.—Powdered aloes, half a drachm; powdered Castile soap, half a drachm; made into pills. Two to be taken as required.

Aperient Draught for Youth (from 10 to 12 Years of Age).—Senna leaves, four drachms; sliced ginger, half a drachm; tartrate of soda, half an ounce; extract of liquorice, one drachm; boiling water, six ounces. After these have stood for three hours, strain the liquor off and add tincture of cardamoms, half an ounce. Take two teaspoonsful every morning.

Mild Aperient Powder for Children (from 5 to 6 Years of Age).—Mercury with chalk, twelve grains; rhubarb powder, twenty-four grains; divided into six powders, one to be taken at night.

For Children from 3 to 5 Years of Age.—Mercury with chalk, six grains; rhubarb powder, twelve grains. To be divided and taken as above.

For Children from 1 to 3 Years of Age.—Mercury with chalk, five grains; rhubarb powder, ten grains. To be divided and taken as above.

To Infants under 1 Year of Age.—Mercury

with chalk, three grains; rhubarb powder, six grains. To be divided and taken as above.

See also ALOES, CALOMEL, CASTILE SOAP, CASTOR OIL, COLCHICUM, COLOCYNTH, CROTON OIL, EPSOM SALTS, JALAP, RHUBARB, SENNA, &c.

APIARY, a place for keeping bees, the name of which is derived from *apis* the Latin word for bee. This adjunct to a farm or cottage is greatly to be recommended, not only on account of the interest attached to it, but also for the profitable produce which it affords from a comparatively trifling outlay, and with little care or trouble.

The *aspect* of a hive should be towards the south, and during the winter months the entrance of a hive should never face the sun, as the bees are by that means tempted forth in the morning, and are probably overtaken by the cold and dark, and perish before they can return.

The *situation* of the hive should be in a sheltered part of the garden, protected by a wall or hedge from the cold and biting winds.

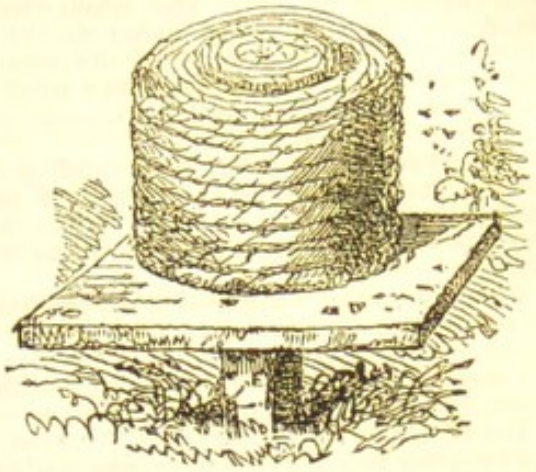
The *position* of the hive should be about two feet from the ground, so as to keep out the humidity arising from the earth, and also to guard it against the entrance of toads, mice, and other enemies to the bees. The board on which the hive stands should be nailed firmly to the pedestal in a somewhat slanting direction, to admit of the rain running off.

The *arrangement of the hives* should be in a right line, but if their numbers be too great to admit of this it is more advisable to place them one above another than in double rows. As bees use much water, the hives should be situated in the neighbourhood of a stream; but where this is not practicable shallow pans of water should be placed within their reach. The entrance to the hive should be clear, and unobstructed by shrubs or plants, so that the bees upon their return home weary and laden may reach the hive without difficulty.

Cleanliness in bee-keeping is of the utmost importance; the stand upon which the hive is placed should be cleansed about four times a year, the first cleansing taking place at the commencement of spring. During the winter the snow that has accumulated on the hives should be assiduously brushed away to prevent dampness, which is very injurious to bees. And the entrance of the hive should also be frequently examined in order to remove any damp masses which may have formed to the exclusion of the air.

The *construction* of hives admits of great variety, the most common form is that of a thimble or flower pot in an inverted position. The Polish hive, which has many advantages, is made of wood, standing from three feet and a-half to five feet high, and of a conical shape. The size of the hives should be in proportion to the swarm, so that the labours of the bee and the capacity of the combs may correspond. One of the best constructed hives is that known as Payne's Improved Cottage Hive, as shown in the accompanying engraving.

In the spring, when a hive is well peopled with many thousands of young bees, a particular period arrives when they look out for another asylum than that of their mother. A *swarm*, therefore, is a colony of bees which



forsake their native home to establish themselves in another.

In England the swarms generally appear in the months of May and June, by which time the new hives should be placed to receive them; or where this may have been neglected, a pail, box, or large garden-pot will sometimes act as a substitute in retaining the swarm.

It seldom happens that the first flight of a swarm is to any great distance, but it generally alights on a neighbouring bush, and every exertion should be then made to hive it. The best method is to watch the swarm in silence, and when it has collected, an empty hive should be held immediately beneath the bush or branch upon which the bees hang suspended, and which being tapped, with a quick firm stroke, will cause the bees to fall into the new hive. Sometimes the swarm will settle upon the stump of a tree, or other situation similarly inconvenient. In these cases a hive prepared with sugar and beer should be *held over* the crown of the swarm, and gradually and gently lowered until the swarm is secured.

It sometimes happens that a swarm divides itself into different clusters; this is a certain sign that there are several queens, each cluster having one. These clusters should not be molested, but quietly watched until they incorporate, which they will presently do.

When swarms from different hives form a junction, as they sometimes will, it will be prejudicial to the apiarian, and to separate them the following process may be pursued. The swarm being collected into one hive, a sheet must be spread on the ground, the hive must be held over it, and giving it a smart knock the bees will all fall upon it; no fear need be entertained of their flying away, and the queen should be immediately sought for. Having detected a queen in the midst of a group, cover it with a small bell glass, and then proceed to divide the bees as nearly as possible into two equal portions. For this purpose two hives must be in readiness, and having allotted a proper number to the queen, who is at large, the hive should be placed in a remote part of garden, and as far as possible from the

parent hive. The imprisoned queen is then set at liberty and conducted to her hive with that proportion of bees which has been assigned to her. The whole being placed in the hive, it is placed as far as limits will admit in a contrary direction to the former hive. No further fear need be entertained of their adapting themselves to their several homes.

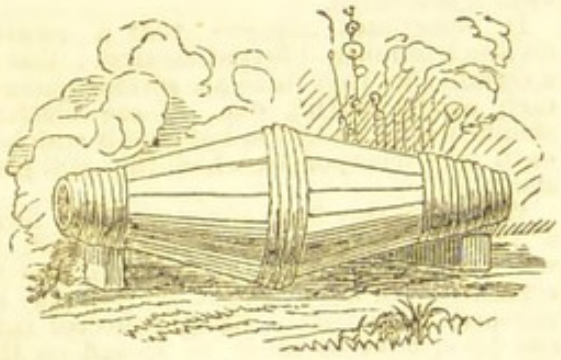
If, on the days immediately succeeding the hiving, the weather be rainy, a little food consisting of a mixture of honey, sugar, and water should be administered to them each night.

When persons are engaged in the operation of swarming, the head and face should be covered, as a safeguard against the stings of the bees; and the clothes should be neither black, brown, blue, or any other dark colour.

The intention of swarming is betrayed by the bees, for two or three days previously by an extraordinary number of bees hanging in clusters about the entrance of the hive, in an unusual state of commotion, and by an apparent idleness reigning in the hive.

When the swarm is hived, and the bees appear restless and confused, it is a certain sign that the queen is not among them, and the bees will soon return to the parent hive: in this case a queen bee should be taken from the parent hive and introduced among the swarm. The presence of a queen bee may be ascertained by a group of bees being formed around her. After swarming, the hive should not be moved for some hours, in order that stragglers may have time to return to their new home.

The Polish method of making a swarm pass from one hive to another is as follows:—Take both hives in the evening (when all the bees are at home), the full and the empty one, which must be smeared with honey; put the opened bottoms of both hives together in such a manner as to prevent any single bee escaping, as seen in the cut;



smoke the full hive at the top with smoke produced from dry rags, and the bees will speedily remove to the new hive. After that allow the swarm time to settle, and remove them to the stand prepared for them.

The best time for taking the honey from the hives is the month of July, and this is done in two ways, partially and wholly. When a *part* of the honey only is to be taken, the full hive should be inverted and an empty one placed over it, and the two fastened together by a lage sheet or tablecloth. The hives being thus arranged, beat the sides gently with a stick, being particular not to strike those parts where the combs are attached. After a few minutes the bees will have ascended into the new hive, and it may then be placed on the pedestal formerly occupied by the old hive. Having extracted the requisite quantity of comb, the hive may be returned to its former position, reversing the hive which contains the bees; and placing the deprivated hive over it, they may be left in that position for four and twenty hours, by which time the bees will be once more in possession of their old habitation. When the honey is to be wholly taken, the bees are suffocated by the introduction of smoke into the hive. The first-mentioned method, however, is not only more humane, but also more in keeping with apiarian economy.

In the early spring and autumn, when there is a scarcity of flowers, bees require *feeding*. The most appropriate food is a syrup composed of sugar, ale, and salt, the proportions being one quart of ale, one pound of sugar, and half an ounce of salt, the whole to be boiled for a quarter of an hour and carefully skimmed. A well-stocked hive will require about one pound of syrup in a fortnight. A plant called the golden rod should be cultivated in the vicinity of the paper, as this begins to blow when other flowers fade, and continues in bloom until the middle of November.

To extract the honey from the comb, three things are necessary, heat, celerity, and cleanliness. Two or three earthen pans with wire frames should be placed in readiness. The hives should then be brought into a warm room, and the combs loosened from the hive with a long thin knife; those parts of the comb that are empty should be cut off first, and those that are black and drossy should be drained by themselves. The pure combs should be cut into small pieces, sliced twice in a horizontal direction and laid on the wire frames to drain; in two or three hours they may be turned; the honey must then be run through horsehair sieves into jars. When the jars are filled they should be fastened down and stored in a dry place.

It is highly important that the apiarian should be made acquainted with the habits and characteristics of the bee tribe, and able

to distinguish them by their forms. Bees are divided into three classes—the male bee, or *drone*; the neuter bee, or *worker*; and the female bee, or *queen*. The drone (Fig. 1) is

easy to be distinguished from the other bees in the hive by the bulkiness of his body, its obtuse termination, and a thick covering of short pale brown iris about the throat; he is also known by the loud humming noise that he makes in his flight.

The neuter bee, or worker (Fig. 2), is of a

2

nearly black colour, and neither so large as the drone or queen. The abdomen is of a conical shape, and composed of six distinct divisions. The queen bee (Fig. 3) is wholly

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different in form from the former two, her body is longer and more taper than that of the drone and bee, and she is also distinguished by the extreme shortness of her wings. The breast of the queen is of a golden colour, and the upper part of her body is of a brighter hue than that of the common bee. Books: *Huish's Treatise on Bees, Harrison on Bees, Huber's Treatise, Beekeeping for the Many,* and *Chylinski's Beekeeper's Manual.*

APOPLEXY. — Apoplexy is a disease which arrests all voluntary motion, and deprives a person of consciousness, as though he had been struck by a blow. Sometimes a person is warned of the approach of apoplexy by various symptoms, such as giddiness, drowsiness, loss of memory, twitching of the muscles, faltering of the speech, &c.; but most frequently he falls to the ground without any warning, and lies as though in a deep sleep. While so lying he breathes heavily, with a *snorting* kind of noise, and with considerable muscular action of the features. The face is red and swollen, the veins distended, the eyes protruding and blood-shot, remaining half-open or quite closed, and a foam frequently forms about the mouth.

Apoplexy mostly arises from accumulation of blood in the system, but it may be the result of an enfeebled constitution, and general want of vitality.

Where a person is seized as described, a medical man should be sent for, and the patient should be carried into a cool room and placed in a sitting posture, in such a situation that the air may be freely admitted to him. The neckcloth, shirt collar, waistband, and other ligatures should be unfastened, and cold water should be poured over the head. Mustard plasters may be applied to the soles of the feet and the calves of the legs, or where the mustard cannot be immediately procured, the feet and legs should be placed in hot water.

If the attack occurs with a person of *full habit* of body, a dozen leeches may be applied behind the ears and on the temples. It is of great importance that the bowels should be freed of their contents, and as there is a great difficulty of swallowing, *one drop of croton oil* should be placed on the tongue and repeated every two hours, until the object is entirely accomplished. Blood-letting should in no case be attempted by a non-professional person. Where the fit arises from enfeebled strength (which is indicated by a small irregular pulse) the remedies should be of a milder form, and stimulants may be cautiously administered at intervals.

The most common *immediate cause* of apoplexy is pressure of the brain, either from an effusion of blood or serum, or from a distention of the vessels of the brain by an accumulation of the blood in them, independently of effusion.

The *predisposing causes* are the habitual indulgence of the appetite in rich and gross food, or stimulating drinks, coupled with luxurious and indolent habits, sedentary employments carried to an undue length; the habit of sleeping, especially in a recumbent posture after a full meal; and lying too long in bed.

The *exciting causes* are excesses in eating and drinking; violent mental emotions; the sudden suppression of piles, gout, rheumatism; or any other cause which augments the circulation of blood to, or extracts the flow of blood from the brain.

Persons below the middle height, robust, with large hands and short thick necks, are generally recognized as apoplectic subjects; but it is, in truth, confined to no particular conformation of the body, *all persons* being alike liable to be attacked by it.

Persons, however, who are *predisposed* to this disease should not fail to profit by the warnings of its approach mentioned at the commencement of this article. Their diet should be light and nutritious; all luxurious habits should be abandoned, and moderate exercise should be taken. Above all, they should avoid giving way to their passions, as it is well known that many persons have been struck with death in the midst of a fit of anger.

APOTHECARIES' WEIGHTS AND MEASURES.—The standard by which apothecaries dispense medicines. Apothecaries' weight differs from that which is used for the buying and selling of every-day commodities, and is as follows:—

20 grains	. . .	1 scruple.
3 scruples	. . .	1 drachm.
8 drachms	. . .	1 ounce.
12 ounces	. . .	1 pound.

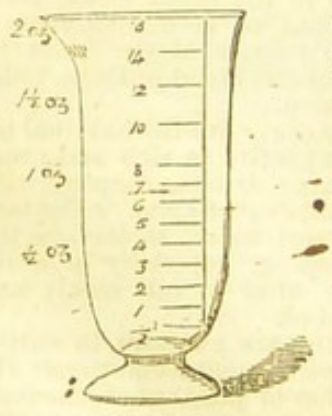
The above quantities have certain abbreviations and signs by which they are expressed in prescriptions and medical works, thus: *grain*, gr.; *scruple*, ℈; *drachm*, ʒ; *ounce*, ℥.

Liquids have their equivalent in weight as follows:—

60 minims	. .	1 drachm.
8 drachms	. . .	1 ounce.
16 ounces	. . .	1 pint.

The medical signs for these quantities are—*minim*, ♏, *drachm*, ʒ; *ounce*, ℥.

In compounding medicines, measures and weights should be always used, as articles of domestic use vary so widely in their size and capacity that it is impossible to convey through them the correct instructions for the various doses to be taken. In twenty different houses the teaspoons, tablespoons, and wineglasses will perhaps be of as many different sizes; in one case, therefore, the dose intended will be much lessened, and in the other considerably augmented—a variation which might in many instances be attended with sad consequences. Again, in domestic recipes, to express *minim* the word "drop" is frequently made use of, but in these there is as much difference, comparatively, as in larger quantities; the capacity of a drop will depend upon the neck of the vessel from which it is poured, upon the momentum with which it is forced from the bottle, and upon the character of the fluid itself; and besides, when a person is pouring out drops he is liable to miscount them by having his attention distracted, and many other causes. To obviate these consequences there are *graduated glasses* sold by chemists which contain a given quantity in the whole, and which is divided into its component parts, marked accordingly on the glass.



Failing the possession of apothecaries' weights and measures, however, it will be useful to know the following estimated *average of miscellaneous measures and their equivalents*:—

Teaspoonful	is equal to	1 fluid drachm.
Dessertspoonful	,,	2 ,,
Tablespoonful	,,	4 ,,
Wineglassful	,,	2 fluid ounces.
Teacupful	,,	5 ,,
Breakfastcupful	,,	8 ,,
Tumblerful	,,	8 ,,
Teabasinful	,,	12 ,,
Thimbleful	,,	¾ fluid drachm.
Pinch (of leaves and flowers, &c.)	,,	1 drachm.
Handful	,,	10 drachms.

APPAREL may be considered in a variety of interesting aspects relating to domestic economy. In *buying* apparel, cheapness should not so much be regarded as substance and durability. As a general rule, the purchase of low-priced clothes is an unwise economy, as they are almost invariably of an inferior description, and also badly made. A coat displayed to the greatest advantage in a ready-made clothes shop window will look well to the eye, but if it be purchased and placed on the back it soon assumes quite a different character; in the course of a few weeks the cloth loses its gloss and begins to turn white, the buttons drop off, and the seams give way, and in three or four or six months' time at the farthest the garment is no longer fit to wear. This matter is easily accounted for. Cloth, like every other staple commodity, bears a certain market value relative to its quality, so that garments made of certain qualities of cloth cannot be honestly produced under a certain price. The cloth, therefore, from which ready-made clothes are fashioned, is not what it professes to be, but is an inferior article, got up with a *face, or artificial surface*, in imitation of the true material.

It is more satisfactory, therefore, to order clothes from a respectable tailor, or to purchase the materials from a woollen warehouse, and have them made according to direction.

In the *make* of clothes, comfort should not be wholly sacrificed to fashion, nor, on the other hand, should fashion be totally disregarded; in most cases a compromise may be made between the two without overstepping the boundaries of either.

Apparel should possess a certain *suitability*, that is to say, that every person should appear in such clothes as are adapted to his pursuits, and conformable to his station in life. A man who occupies a humble position is not expected to dress extravagantly. Neither is he who possesses the means justified in ignoring conventionalities by wearing apparel absurdly mean and ill-fashioned.

The *harmony* of apparel should always be considered, both as it affects the wearer as a

whole, and also in the contrast and combination of the different garments. The first rule in the harmony of dress is a quiet and subdued tone of colouring, elegance, neatness, and simplicity. All gaudy colours and large staring patterns are offensive to the eye, and convey an idea of *vulgarity*. The object of the wearer of such apparel is avowedly to attract attention and produce an impression; and this is most effectually achieved, but whether favourably or unfavourably it is unnecessary to state. It has been truly said that a gentleman to be *properly dressed* should not be able to leave behind him the remembrance of any one particular garment he has on, but only the conviction of a *gentlemanly style* not easily definable.

The opposite appearances which different styles of costume give to the wearer is well known and should be taken advantage of. Tall persons, for instance, will look shorter in dress coats, short persons taller in surtouts; stout men appear thinner in black, and thin people stouter in light colours. Persons with dark complexions should be very careful in the selection of colours; but fair persons are allowed a greater latitude, because the contrasts created are seldom so conspicuous. *Black is always becoming;* it also sets off the whiteness of the linen, and serves as the groundwork or frame for the introduction of any other colour.

The manner in which *clothes are worn* materially affects their appearance: if they be ever so well made in the first instance, and are carelessly put on and negligently adjusted, they will always have a clumsy and awkward look. On putting on a coat it should be pulled down at the waist, and fitted to the figure by two or three gentle movements of the arms. Waistcoats should be *buttoned from the top*, and the buckle at the back adjusted to the figure; trousers should be put on after the *boots*, and not before, and their height should be properly regulated by the braces. It is always better to have two suits of clothes, and wear them on alternate days; otherwise, incessant use produces a confirmed derangement of shape, such as bagginess at the knees, bulging at the elbows, and creases about the waist.

The *preservation of clothes* depends, as a matter of course, greatly upon the care that is bestowed upon them, for under favourable circumstances they will last twice as long as when they are neglected. It is better to brush them with a whisk made of loose twigs than with a hard brush, as the nap is soon worn off by the frequent application of the latter. When mud in any quantity has collected on clothes it should be removed by rubbing two parts against each other. When clothes are put away they should be hung up in a wardrobe or closet in preference to being folded up in drawers or boxes, as wrinkles are almost sure to follow the latter method. Apparel should be occasionally beaten in the open air with a thin smooth cane, and then laid on a table and thoroughly brushed, but this should not be done too frequently or roughly. A lounging dress should always be adopted for the house, which by being substituted in the evening for the costume that has been worn during the day will add both to comfort and economy. But when it is not practicable to change the whole attire the coat at least should be substituted; this not only applies to home wear of an evening, but should also be adopted during an employment that is likely to be prejudicial.

The *renovation of apparel* is another great consideration, especially to persons with limited means. The following receipt will be found useful for renovating *black cloth*. Boil four ounces of logwood in a boiler or copper containing two or three gallons of water for half an hour. Dip the clothes (which have been previously well brushed) in warm water, and squeeze them dry, then put them into a copper, and boil for half an hour, then take them out and hang them up for an hour or two; take them down, rinse them in three cold waters, dry well, and rub with a soft brush which has had a few drops of olive oil rubbed on its surface. If the clothes are threadbare about the elbows, cuffs, &c., raise the nap with a teazel or half-worn hatter's card, filled with flocks, and when sufficiently raised, lay the nap the right way with a hard brush. *Grease spots or stains* may be removed by a teaspoonful of the essential oil of lemon, mixed with a wineglassful of spirits of turpentine.

The next important consideration in connection with apparel is its *influence upon the bodily health* and comfort. The natural heat of the body is ascertained to be 98 deg., any degree of heat or cold above or below this is prejudicial to health if it continue for a length of time; the great aim with regard to clothing should be, therefore, so to regulate it according to climate and season, that it may have the power of retaining or passing off heat, as occasion may require. In our variable climate we ought never to discard our winter clothing too early, nor to wear our summer apparel to late; and the safest plan is to make the change gradually, so that the body may be accustomed and inured to it. *Apparel should always be easy and loose* fitting, so that every member of the body may be unimpeded in its action, and permitted to develop itself naturally. No stress or pressure should be allowed on any part of the body. Cravats, garters, buckles, and other ligatures fastened tightly tend to obstruct the natural flow of blood, and act injuriously upon the system generally. In cold weather an addition to the clothes usually worn in the house should be made upon venturing out, and upon returning into a warm room from the cold air the extra clothing should be gradually laid aside. *Persons of delicate constitutions* should pay the strictest attention to their apparel, and study health in preference to appearance. It is absolutely necessary that such persons should always be well protected next their skin, so as to be prepared for any atmospheric changes that may suddenly take place. Damp or wet clothing should be taken off as quickly as possible, the serious consequences of neglecting this precaution are too well known to be further dwelt on.

The clothing of infants demands the greatest attention, for their organs and functions are so feeble as to be liable to serious and even fatal consequences from any sudden or undue exposure of the body. *The clothing of the aged* should also be of warm materials and of sufficient quantity, as a sensation of coldness is inseparable with the decline of life, and artificial means are therefore needed to supply the place of the natural warmth.

Cleanliness in apparel is necessary both to comfort and health; linen should be changed three times a week, and flannel once; and where washable clothes are worn in summer they should undergo that process every month or six weeks.

Apparel, as appertaining to female attire, will be treated separately. See also Boots, Coats, Hats, Shirts, Trousers, Waistcoats, &c.

APPAREL, Female, from its very nature and fashion, favours elaboration and the exercise of the decorative art. Indeed, females are permitted and even expected to bestow such an amount of care and attention upon attiring their persons as will tend to render them the charm of the household and the ornament of society. No female, therefore, need despise studying dress as *an art:* by which we mean that exercise of taste and judgment which teaches what style and colour of dress is *most becoming to the figure, face, age, &c.*, and also what fashions and colours best blend and harmonize with each other. The following rules illustrating this subject may be confidently relied on and advantageously applied. *Short females* should not wear flounces to their dresses, because the undue breadth which it gives to the lower part of the person tends to diminish its height. For the same reason they should not wear large check patterns or stripes running round the dress. *Tall females*, as a matter of course, may wear their dresses on principles diametrically opposite to this. *Stout females* should wear dark-coloured dresses, and simple patterns, as they diminish the apparent size of the figure; the skirts also should have few or no flounces except where the figure is above the ordinary height. *Thin females* should wear light-coloured dresses, and patterns displaying breadth of design, such as large checks, broad stripes, &c.; flounces may also be freely adopted, as they serve to diminish the angles of the figure, and to impart a certain degree of rotundity. *Young females* have a wide latitude allowed them for dress; gayer colours and more fanciful styles may be indulged in, so long as they do not amount to over-dressing or unsuitableness. *Elderly females* should attire themselves in a neat quiet manner; the materials of their dress should be substantial, the colours dark, and the design small. Above all things they should avoid a juvenility of style, since, instead of making old people look younger, it has an immediately opposite effect, and only serves to bring out more prominently, and to contrast more painfully, *the youth of the dress with the age of the wearer. Dark females* look best in light colours, which supply a pleasing contrast to the complexion, or in yellow, which sheds a subdued violet hue favourable to brunettes. *Fair females* appear to the best advantage in black, on account of the contrast which is derived from it; or in light green or sky blue, both of which colours possess the power of imparting to pale or fair complexions what are called complimentary tints.

The science of colour, as it exercises so important an influence on personal attire, ought to be studied much more carefully than it is, for it is no uncommon thing to meet females whose costume creates an unfavourable impression, simply because the colours of the various articles of the dress have been selected without the slightest regard being paid to their harmony with each other. This reciprocal agreement of colours is based upon certain laws of harmony, relation, and contrast, thus: *red* has an affinity for *green*, *blue* accords well with *yellow*, *white* with *violet*, *black* with *white*, *violet* with *yellow*, and *blue* with *red*. To ascertain what colours will harmonize with each other, the following simple plan may be adopted. When making a dress or other article, cut a piece of it of the size and shape of a large wafer, and lay it on a black ground; look on this for a few seconds either by the light of the sun or candle, then suddenly turn the eye on to a sheet of white paper, and the tint which presents itself will indicate the colour that will harmonize best with the article being made.

We now come to *the suitability of dress generally*, in regard to which it may be safely laid down as a rule that the style universally regarded as the most becoming is that which is elegant without being gaudy or ostentatious, and simple without savouring of prudery or affectation. Extravagance or singularity of design, large staring patterns, and a profusion of gay colours, instead of being agreeable are positively repulsive to the eye. Many females appear to labour under a delusion in this respect, and when dressed in this grotesque fashion imagine that because they are stared at they are admired, whereas if they could but hear the comments which these vagaries provoke, they would not be long in exchanging their style of costume for one of a totally different nature.

As *personal ornaments* may be considered a part of dress, a few hints respecting them will not be unacceptable here. In the first place, all ornaments should be made of those materials of which they are supposed to consist; mosaic jewellery in place of gold, paste instead of diamond, and numerous other substitutions, are paltry artifices which no person of respectability or good taste would descend to. In most cases they fail to produce the effect intended; their very lavishness, taken in connection with the wearer's means, beget suspicions of their genuineness; and when they are at length detected, the exposure only causes discomfiture. In the second place, a profusion of ornaments, however valuable they may be, are not to be approved of. Such a profuse indulgence appears like an endeavour to

outshine everybody else, and also suggests the idea that more importance is attached to these decorations by the wearer than to any mental endowments which they may possess, or any personal advantages with which nature may have gifted them. In the third place, ornaments should be appropriate to the dress, and appear designed to answer some useful purpose; a chain, for instance, when worn round the neck should support a watch or locket; and a brooch or other ornament should be placed in that part of the dress where it fulfils its intended uses. No article should be worn in a manner that would make it appear simply as an *ornament*. The only exceptions to this rule are *rings* and *bracelets*.

With regard to the *economy of dress*, it is certainly wiser to select the better class of materials in preference to inferior fabrics, because the cost of making up, lining, trimming, &c., is as expensive in the one case as in the other; so that with the lower-priced dress this outlay is incurred twice or thrice as frequently as with the higher priced, thereby rendering the cost much greater and never appearing half so well. Plain dresses are also more economical than fancy, and single colours than varied, because as fresh patterns and new combinations of colours are springing up every day, it is quite possible for the fashion to be obsolete before the material is half worn. And besides, in dresses of varied shades, the colours may not be equally fast; and if one of them fades, the whole dress loses its freshness and beauty. The most serviceable materials of all are French merino, black satin, black satinet, and black silk.

Dresses may be preserved better in presses or wardrobes than in drawers, and when put away should be hung up, with the lining outwards, to preserve them from dust or discolouration. Where flounces are worn care should be taken when sitting down to remove those out of the way which are likely to come in contact with the seat, otherwise they become creased and tumbled, and spoil the whole appearance of the dress.

In purchasing dress it should be borne in mind that a good article is always worth a good price. As a rule bargains are wholly unworthy of that name; and when linen-drapers and others pretend to sell articles at a "tremendous sacrifice," "immense reduction," "twenty per cent. under cost price," &c., it is in the majority of cases simply a specious artifice by which they get rid of their stock at a much higher price than that for which the same goods could be obtained at less pretentious establishments. Our advice to the ladies, therefore, on this head is, deal with shopkeepers who have a character for integrity and fair dealing, and do not endeavour to obtain goods for a less price than it cost to make them.—Book: *Housewife's Reason Why*.—See CLEANING, DRESS-MAKING, DYEING, MOTHS, STAINS, &c.

APPEAL, IN LAW, signifies the removal of a cause from a lower to a higher tribunal. To entitle a party to appeal, some matter of erroneous judgment must be stated. The proceedings are termed proceedings "in error." The writ of error on any judgments of the Queen's Bench, Common Pleas, or Exchequer of Pleas, is returnable in the Exchequer Chamber, and from thence to the House of Lords, which is the *final* judgment, and conclusive upon all parties.

APPEAL TO THE SESSIONS is allowed from the convictions or orders of justices of the peace, or magistrates generally, as a matter of right, where the defendant is dissatisfied with their adjudication; but the right is in many cases barred by various statutes, which render convictions and orders of magistrates final. *All* appeals are subject to various regulations as to security for costs, deposits, bail, &c.

APPEARANCE, IN LAW.—It is not necessary in *civil causes* for defendants to appear personally at the bar of a court; but an appearance is recorded in a book kept by the proper law officers, who receive a memorandum delivered to them by the defendant, or an attorney employed by him. When a defendant has been personally served with a *writ of summons*, if he have good defence to the action, or seeks to gain time by making terms of settlement, he should, within eight days inclusive after such service, cause an appearance to be entered for him in the court out of which the writ issued; or in default of his so doing the plaintiff may, on the *morning of the ninth day*, proceed to judgment, and on the 17th day, reckoning from the serving of the writ, execution at his option against his goods or his person.

APPETITE in its general sense signifies the desire for food, which desire may either be natural or artificial. *Natural appetite* depends upon the proper performance of the digestive and other organs of the body, and it immediately results from the waste which the system is constantly undergoing and the instinctive desire for a further supply of stamina to replace that which has been parted with. *Artificial appetite* is that which is induced by certain medicines, cordials, sauces, or other provocatives, which rouse the organs of taste from their torpor, and excite a temporary energy. A person to be healthy should always have a natural appetite, and the want of it is one of the surest indications of the derangement of the system. Loss of appetite is not only occasioned by ill health, but may also arise from other causes, such as grief, over-exertion, and even atmospheric influences. Sometimes it is produced by protracted fasting, the lengthened interval between the periods of taking food having induced an exhaustion of the system, which renders it incapable of receiving food.

With regard to artificial appetite, although it may be stimulated on occasions, and for a time, it cannot be done so habitually. Incentives applied in the first instance lose their power on a second or third trial, and the appetite subsides into its former inanity. Upon this, weakness and a want of nervous energy follow, and the system sinks lower and lower, until serious illness at length arrives, frequently ending in death. It is obvious, therefore, that the preservation of the natural appetite is of the utmost

consequence, and this, in the majority of instances, may be accomplished by attending to certain rules of both regimen and diet, which experience and common instinct tell us we ought to follow. In the first place exercise daily in the open air is necessary. We all know when we take a walk in the country before dinner with what a zest we return to that meal; while, on the contrary, if we remain within doors all day, our meals are partaken of more as a matter of routine than to satisfy any particular desire. Early rising and early going to bed should also be habitually practised, and an excessive indulgence in wine, spirits, or beer, should be carefully avoided. The mind should also be kept in as calm and equable a state as possible, excessive grief, violent paroxysms of anger, and other mental emotions, are extremely prejudicial to the appetite, and if indulged in during the time of taking meals, will render the process of eating more hurtful than beneficial. It should also be borne in mind that the appetite is materially influenced by the regularity with which meals are taken, and that stated intervals should be observed between each meal, so as to allow the food which has been previously eaten to undergo the process of digestion thoroughly, without being interrupted by the introduction of fresh materials into the stomach.

The length of time required between each meal for the process of digestion differs according to the nature of the food taken, to the employment of the body afterwards, and other accidents. As a general rule, however, an interval of from four to five hours may be regarded as the standard for persons whose health is moderately robust, and whose occupations are of an ordinary character.

In cases where the appetite fails without any apparent cause, the operations of nature may be assisted by having recourse to the following remedies.

Mix a saltspoonful of rhubarb in a wineglassful of extract of gentian, and take morning and night; or,

Take Rhubarb . . two drachms
„ Syrup . . . one drachm
„ Oil of Caraway . ten drops

make into forty pills, and take two every morning. Frequently also appetite may be encouraged by taking a wineglassful of bitters half an hour before a meal, or by chewing two or three ginger or peppermint lozenges. — See BREAKFAST, DIGESTION, DINNER, FOOD, SUPPER, TEA, &c.

APPLE.—This well-known fruit, comprising upwards of 1500 varieties, is to be found in every part of the kingdom, and in all kinds of situations and soils. The apple is propagated chiefly by seed, and by grafting: by seed in order to produce new varieties, and by grafting to increase the stock of those kinds already held in esteem. In *propagation by seed*, they may be sown during the autumn in pots or beds, in rich light earth, and about an inch below the surface. At the expiration of a year they are *transplanted* into nursery rows, and are so placed as to have a foot of clear space for each plant. From the nursery they are afterwards removed to their destined place in the orchard or garden, and planted in the midst of a clear space of six or eight feet. They will then bear fruit in five or six years. When a selection is to be made from the plants raised from seed, those having broad round leaves are preferable to others having long narrow leaves: the former indicating a more fruitful tree than the latter. The seeds selected should be those of the largest and most convex form; care should also be taken that the stock is of a superior class, sound and healthy, as any defect in the parent tree is perpetuated in the youthful plant. When it is desired to improve or strengthen any species already existing through the medium of seedlings, recourse is had to mixing, or "crossing" seeds of various fruits having properties in common, but with different qualities: thus the various kinds of pippins will cross better together than when mingled with a totally opposite class, such as the codling.

Propagation by grafting is achieved by two kinds of stocks, the *wild crab* and the *paradise:* the former should be used only for standards, being of a vigorous growth; while for dwarf trees the paradise is more suitable, as it possesses the property of curbing the growth of the shoots, and rendering them more fertile. The period for grafting is generally the first or second week in March. It may, however, be more particularly guided by the rising of the sap, indicated by the enlargement of the buds.—See GRAFTING.

Apple trees are trained in the form of *standards*, *dwarfs*, or *espaliers*. When *standards* are planted they should be supported by a stake, in order to protect and strengthen them. At the end of the first year the branches should be thinned so as to encourage the formation of a good head. After this they will require only an ordinary amount of care and attention, and may be left to their own natural growth. *Dwarfs* are generally trained for garden culture, their fruit being of the finer sort for supplying the dessert table. Plants which have been grafted one year will train best for this purpose after standing untouched for a year, at the end of which time the head should be thinned, and redundant branches pruned; and on the completion of the second and third years the same process should be had recourse to, but more sparingly. *Espaliers* entail an elaborate mode of culture, and demand the greatest care to keep them in order. They are mostly trained so as to form a leading shoot from the centre, with lateral branches from the stem, as seen in the accompanying engraving. The young

plant when first put into the ground is not more than a foot high, and the lower branches are secured by small stakes. These

supports must be changed and shifted according to the growth of the trees. When they bear their full crop of fruit from eight to twelve stakes will be sufficient to sustain the branches, and at other times not more than six. Another method of training is known as *balloon*, which is accomplished by attaching cords to the extreme ends of the principal branches, and fastening them to pegs placed around the stem. By this means the branches acquire an inverted and downward growth, and the whole tree assumes the shape which its name imports. The advantages of balloon trees are, that they do not require so much room for growth, are more accessible for the purposes of culture and gathering, and their crop being more protected is not liable to the accidents of rough and windy weather.

The fruitfulness of the apple tree depends much upon *the nature of the soil*, the most congenial being a strong loam. The subsoil especially should be dry; and where there is a tendency to undue moisture it should be drained. Old apple trees may be nursed and rendered more fruitful by a timely *application of manure*. This should be done by removing the soil round the foot of the tree to the depth of four or five inches, laying down the manure in its place, and covering the whole with a slight surface of earth. If this remedy is applied about once in every three years the old tree will continue to produce fruit equal in size and flavour to that of its most vigorous days. The following is also an excellent mode for resuscitation. Take fresh made lime from the kiln, slake it well with water, and thoroughly dress the tree with it by means of a brush: by this process both moss and insects will be completely destroyed, the outer rind of the tree will fall off; a new, smooth, clear, and healthy one formed; and finally there will be an abundant produce of fruit.

Apples should be *taken from the tree* when slightly unripe, they should be gathered on a dry day, and care taken not to bruise them, as the decay occasioned is not confined to the particular apples bruised, but is also communicated to the remainder of the fruit. The best method of *preserving* apples is, after they are gathered to spread them lightly on the shelves or floor of a dry room; when they have thus lain for about ten days or a fortnight, and have freely thrown off a gum-like moisture termed sweat, each apple should be rubbed singly with a dry cloth, and replaced on the floor or shelf, so that they do not touch each other, in layers, with thin coatings of straw between each layer; they may be piled up in this manner to the height of a foot or a foot and a half, but not higher, as the apples which are undermost are liable to be bruised and crushed, by too great a weight resting above. About once a month they should be carefully examined; and any apples betraying symptoms of unsoundness, such as discolouration or speckles, should be removed. As the cold weather advances the covering of straw should be increased, and when the frost sets in the apples should be completely enveloped in straw, and remain so until the approach of a more genial season.

Books: *Loudon's Encyclopedia of Gardening; Lindley's Guide to the Orchard and Kitchen Garden; Glenny's Handbook to the Fruit and Vegetable Garden; Neill's Fruit, Flower, and Kitchen Garden; Bucknal's Orchardiast; Coxe's View of the Cultivation of Fruit Trees; Lawrence's Fruit Gardener; Knight's Treatise on the Apple and Pear; Forsyth's Treatise on Fruit Trees; Billington's Series of Facts; Switzer's Practical Fruit Gardener.*

APPLE BISCUITS.—Boil a dozen fine apples until they become pulpy, then take them out and rub them into a mortar through a hair sieve; add two pounds of powdered loaf sugar, and two or three drops of oil of lemon or cloves; mix thoroughly together, then roll the mixture into separate masses of the size and thickness of a bun, and cut them into any shape desired; they may then be dried in a very slow oven, care being taken that the sugar does not melt.

☞ Apples, 12; sugar, 2lbs.; oil of lemon or cloves, 2 or 3 drops.

APPLE BREAD.—Take a quantity of fresh gathered apples and boil them to a pulp, which mix with double its weight of flour, little or no water is required; yeast is employed in the same proportion as in ordinary bakings, and after being allowed to rise for about ten hours, it is then baked in long loaves. This bread is much eaten in France, and is to be recommended for its light and agreeable properties.

APPLE BUTTER.—Peel, quarter, and core, one bushel of sweet apples; put them into a stew-pan over a gentle fire. When the apples begin to get soft, add the juice of three lemons, one pint of rum, and one pound of loaf sugar dissolved in a quart of water. Boil the whole together, and pour into jars.

☞ Apples, 1 bushel; lemon juice, 3; rum, 1 pint; sugar, 1lb.; water, 1 quart.

APPLE CAKE.—Peel and core eight or ten good sized apples, add the peel of one lemon and half a stick of cinnamon. Make them into a marmalade with a half pint of water; boil the whole with one pound of loaf sugar, and keep stirring until it falls in masses from the spoon, when it will be done. Turn it out when cold into moulds or dishes, and add cream or custard.

☞ Apples, 8 or 10; lemon peel, 1; cinnamon, ½ stick; water, ½ pint; sugar, 1lb.

APPLE CALF'S FOOT JELLY.—Pare and core a pound and a half of apples, add to them three pints of apple juice, simmer till the apples are broken, then strain, and let it cool. Put a quart of this juice into the stew pan with three pints of calf's foot stock, three quarters of a pound of powdered sugar, the juice of three lemons and the rinds of two, with the whites and shells of ten eggs; let it boil gently for ten minutes, then strain it through a flannel bag, and when cool put it into moulds.

☞ Apples, 1½lbs; apple juice, 3 pints; stock, 3 pints; sugar, ¾lb.; lemons, juice, 3; rinds, 2; eggs, 10 (whites and shells).

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APPLE CHARLOTTE.—Peel, core, and slice one dozen large sized apples, and stew them with half a pound of sugar, one ounce of butter, the peel of one lemon, half a stick of cinnamon, and half-pint of water; continue boiling until the mixture becomes a thick paste. Line the bottom and sides of a mould with thin pieces of bread dipped in clarified butter. Fill the space with the apple marmalade, and cover the whole with a piece of bread dipped in clarified butter. Bake it in a hot oven till it is of a pale brown colour, and when done turn out, and serve in a dish.

☞ Apples, 12; sugar, ½lb.; butter 1oz.; lemon peel, 1; cinnamon, ½ stick; water, ½ pint.

APPLE CHEESE.—Take two dozen moderate sized apples and three pounds of sugar; boil the sugar in half a pint of water and clear the scum as it rises, then add the apples (peeled and cored) and the peel of one lemon grated; mix thoroughly and boil till it becomes a thick paste, then turn into moulds. When cold a cream made as follows may be added; the yolks of two eggs beaten in a pint of milk and flavoured with cinnamon. Boil these together, sweeten to taste, and when cold pour round the dish that contains the above.

☞ Apples, 24; sugar, 3lb.; water, ½ pint; lemon peel, 1; (for the cream) eggs, 2 yolks; milk, 1 pint; sugar and cinnamon to taste.

APPLE COMPOTE.—Peel and core some choice pippins and boil them until they are soft, then take them out and beat them into a marmalade, place over the fire again and continue to stir until it becomes a stiff thick paste, then add an equal weight of sugar and mix both well together; press the mixture into the thickness of a quarter of an inch, and dry in a cool oven.

APPLE CREAM.—Peel a dozen and a half large apples and boil them to a pulp, then add two pounds of powdered loaf sugar and the whites of three eggs; mix thoroughly together and serve when cold in a dish.

☞ Apples, 18; sugar, 2lb.; eggs, 3 whites.

APPLE CUSTARD.—To one pound of flour add two eggs, two ounces of butter, and two tablespoonfuls of sugar; mix thoroughly together and make into a paste; line a mould with the paste and fill it with apple marmalade. Bake in a moderate oven, and when done turn it out of the mould into a dish; powder with sugar and serve.

☞ Flour, 1lb.; eggs, 2; butter, 2 ounces; sugar, 2 tablespoonfuls.

APPLE DUMPLINGS.—Make a good puff paste, peel, core, and cut into quarters some large apples, then roll some of the crust round each apple; dip a clean cloth into boiling water, slightly flour it, tie each dumpling up separately, and put them into the boiling water; keep them boiling for three quarters of an hour and they will be done.

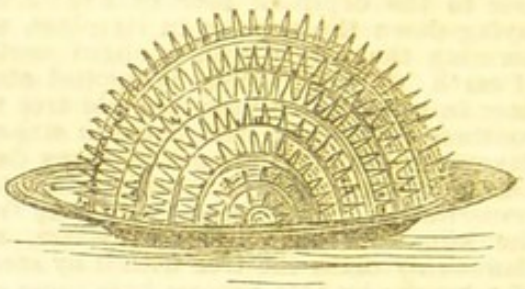
APPLE FOOL.—Put two dozen apples cored and peeled and a pound of sugar into a stone jar, add a tablespoonful of water, and stir the whole over a fire until it becomes a thick pulp; rub the mass through a colander or hair sieve, and add to it a cream made of a quart of new milk with two eggs beaten in it; mix the whole gradually and sweeten to taste.

☞ Apples, 24; sugar, 1lb.; water, 1 tablespoonful; milk, 1 quart; eggs, 2.

APPLE FRITTERS.—Peel, core, and slice one dozen fine apples, put them into a basin, and add a wineglassful of brandy and six drops of essence of lemon; let them remain in this for some hours before use. When required take them out and strew them lightly in a frying pan prepared with heated lard; fry them until they are of a light brown colour, lay them on writing paper to drain, dust with powdered loaf sugar and then serve.

☞ Apples, 12; brandy, 1 wineglassful; essence of lemon, 6 drops.

APPLE HEDGEHOG.—Place some marmalade in a dish in as compact a form as possible, and cut apples into small pieces of a conical form, dilute them in a little saffron, and boil them once. Let them cool, and when perfectly coloured, arrange them on the marmalade in alternate colours—white, red, and yellow, and in the form seen in the accompanying engraving.



Pour over it apricot or angelica jelly, which must be of sufficient consistence as not to run down the sides.

APPLE JELLY.—Peel, core, and slice very thin six fine apples; boil them in a quart of water, until a fourth part is consumed; strain off and add one pound of sugar and half a stick of cinnamon: boil the whole until moderately thick, add a quarter of a pound of isinglass, strain it off repeatedly until quite clear, and then put up in jars. Calf's foot jelly may be used instead of isinglass.

☞ Apples, 6; water, 1 quart; sugar, 1lb.; cinnamon, ½ stick; isinglass, ¼lb.

APPLE MARMALADE.—Peel and core two pounds of apples and put them into an enamelled saucepan with half a pint of white wine and one pound of powdered loaf sugar; stew them over a slow fire until the fruit is very soft, and squeeze it through a hair sieve; if not sufficiently sweetened add sugar to taste and put away in jars. It may afterwards be eaten with milk or with cream.

☞ Apples, 2lb.; white wine, ½ pint; sugar, 1lb.

APPLE MIROTON.—Peel, core, and slice, twenty fine apples, melt a quarter of a pound of fresh butter and stir in it half a pound of sugar, the peel of one lemon grated and the juice of two. Fry the apples in this mixture, and serve them in a dish.

☞ Apples, 20; butter, ¼lb.; sugar, ¼lb.; lemons, 1 peel, 2 juice.

APPLE PIE.—Make a good puff paste and lay it round the inside of the dish you intend using; peel, core, and slice a sufficient number of apples according to the size of the dish, and lay half of them in, cover these with sugar, and add half a lemon peel grated with a few drops of the juice a sprinkling of cloves, and half a stick of bruised cinnamon; then put in the rest of the apples and sprinkle again with sugar; add the upper crust and bake.

APPLE PRESERVE.—Peel and core two dozen apples, and place them in a jar with three pounds of powdered loaf sugar and a quarter of a pound of ground ginger distributed in layers. Let them remain two whole days, and during half that time let a quarter of a pound of bruised ginger infuse in a pint of boiling water; strain and boil the liquor with the apples for about an hour, skim and take off the fire when quite clear.

☞ Apples, 24; sugar, 3lb.; ginger ground, ¼lb.; ginger bruised, ¼lb.; water, 1 pint.

APPLE PUDDING, Baked.—Peel and core twelve large apples, and put them into a saucepan with a teacupful of water; boil them until very soft, beat them well, and stir in a quarter of a pound of butter, a pound of loaf sugar, the peel of two lemons cut into shreds, the juice of three; the yolks of eight eggs, previously beat up; mix all well together, turn into a dish lined with puff-paste, and bake in a moderate oven.

☞ Apples, 12; water, teacupful; butter, ¼lb.; sugar, 1lb.; lemons, peel 2, juice 3; eggs, 8 yolks.

APPLE PUDDING, Boiled. — Peel, core, and slice apples in sufficient quantity for the size of the pudding intended, make a good puff-paste, roll it out to about half an inch in thickness, place the apples in, and close up the crust, tie it up in a cloth, and set in on the fire; if it is a moderate sized pudding, two hours will be sufficient to boil it; if large, three hours will be required.

APPLE PUDDING, Swiss.—Line a dish with thin paste, put in a layer of sliced apples and sugar, then a thin layer of pounded rusks that have been soaked in milk, then another layer of apples, and another of rusks; add melted butter, and powdered sugar.

APPLE PUFFS.—Peel and core a sufficient number of apples, and stew them in a stone jar in the oven; then let them cool, and mix the pulp with sugar and lemon peel shred fine. Bake them in thin paste, and in a quick oven.

APPLE SAUCE.—Peel, core, and slice apples according to quantity required; put them in a stone jar into a saucepan of water; when done, beat them to a pulp, add a small piece of fresh butter, and sweeten sufficiently with brown sugar.

APPLE SAUCE, Baked.—Fill a quart basin with apples, pared, cored, and quartered; add a tablespoonful of water, cover it over, and set it in a moderate oven until the apples are reduced to a pulp; beat them with a spoon till quite smooth, adding a small piece of fresh butter, and sugar in sufficient quantity.

APPLE SAUCE, Brown.—Pare and core a pound of choice apples, and stew them in a teacupful of rich brown gravy until they have become a thick and smooth marmalade; season with black pepper or cayenne, and serve very hot.

APPLE SNOWBALLS.—Pick and wash well three quarters of a pound of rice, boil it in plenty of water for a quarter of an hour then drain, and let it cool. Pare and core (but without dividing them) half a dozen large apples, enclose them in the rice separately, and boil them for one hour. When eaten, a little butter and sugar, with powdered nutmeg or cinnamon, will improve their flavour.

APPLE SOUFFLÉ. — Peel, core, and slice twelve apples, put them into a deep dish, and cover them to about the depth of two inches, with rice boiled in new milk and sugar; beat up the whites of two eggs, and pour it over the rice, and bake it to a pale brown.

APPLE SOUP.—Boil two quarts of shin of beef-stock, which has been thoroughly skimmed; at boiling point add a pound of apples, and stew them gently until they become a soft pulp, strain through a hair sieve, skim, and serve hot.

APPLE TANSY.—Peel, core, and slice thinly, four choice pippins, fry them in butter, then beat up together four eggs, a teacupful of cream, twelve drops of rose-water, half a teaspoonful of nutmeg, and a quarter of a pound of powdered loaf sugar, pour this over the apples, and fry the whole till brown; garnish with lemon, and strew with powdered sugar.

☞ Apples, 4; eggs, 4; cream, teacupful; rose-water, 12 drops; nutmeg, half a teaspoonful; sugar, ¼lb.

APPLE TART, with Quince.—Prepare the apples as for apple pie, and lay them in a dish; then stew two quinces with a little water, sugar, and butter, and pour them on the apples; then add a layer of pounded sugar, and the rind of a lemon grated, cover with puff-paste, and bake to a light brown.

APPLE TRIFLE.—Scald such a quantity of apples as when pulped through a sieve will make a thick layer at the bottom of the dish; mix with them half a lemon-rind grated, and as much sugar as will flavour it agreeably. Mix half a pint of milk, half a pint of cream, and the yolk of one egg; give it a scald over the fire, and stir it all the time; do not let it boil; add a little sugar only and let it grow cold. Lay it over the apples with a spoon, and then put on it a whip made the day before of rich cream, whites of two eggs, sugar, lemon-peel, and raisin wine.

☞ Apples, sufficient; lemon, ½ rind; sugar, to taste; milk, ½ pint; cream, ½ pint; egg, 1 yolk.

APPLE WATER.—Cut four large apples into slices, put them into a jug, and pour a quart of boiling water over them, cover the jug; and when quite cool, strain and sweeten, and flavour with lemon juice.

APPLE WINE.—Bruise two bushels of

apples, and put them in a gallon and a half of cold water; add seven pounds of honey, three pints of rum, one ounce of white tartar, and a nutmeg grated; boil it as long as any scum arises, then strain it through a sieve, and let it cool; add some good yeast, and stir it well; let it work in the tub for two or three weeks, then skin off the head, draw the liquor clear off, and tun it.

☞ Apples, 2 bushels; water, gallon and ; honey, 7lb.; rum, 3 pints; tartar, 1 oz.; nutmeg, 1.

APPLES, PROPERTIES AND USES OF.—All apples contain sugar, oxalic acid, and gum, and the flavour and properties of the fruit depend upon the distribution and proportions of their constituents. In the raw state, apples are injurious to weak stomachs, not only on account of their acidity, but also because they contain a large amount of fixed air, which, upon being introduced into the stomach, causes flatulency. Even the strongest stomachs are unable to digest apples when unripe, because in that condition the cells containing the gum, acid, &c., are unopened and insoluble by the gastric juice. These injurious properties, however, may be made to disappear by cooking, by which process a great deal of the acid is decomposed, and converted into sugar. Other inconveniences may be obviated by simply scraping the fruit when ripe into a pulp, and thus eating it, by which means the fixed air is liberated, while the juice and flavour of the apple are retained. When eaten ripe, and partaken of fasting in the morning, apples act as a mild laxative, and cool the blood, and from their wholesome and unwholesome properties at various times of the day they are said to be "gold in the morning, silver in the afternoon, and lead at night." When cooked they also partake of a slightly laxative character, and thus in the form of sauce are eaten for the purpose of assisting the digestive process of gross food, such as pork, goose, and duck. Under the same condition they are also cooling to the system, for which reason roasted apples, sweetened with sugar, may be safely given to patients suffering with diseases of a febrile and inflammatory nature. It should be remembered that the peel, core, and pip of the apple are highly indigestible and irritating to the stomach, and should therefore never be eaten.

The domestic uses of this most popular and abundant fruit are almost innumerable, and as an article of food, a confection, or beverage it is capable of being prepared in endless form and variety. The best kinds of apples are—For *eating:* the Colville, Kent, Godolphin, Dowton, and other pippins, especially the ribstone. For *cooking:* the pearmain, codling, russet, and English rennet.

APPLES A LA PORTUGAISE.—Peel, halve, and core a dozen fine apples, place them in a pan thickly spread with butter, powder them with sugar and grated lemon-peel, and bake them in the oven. Nearly fill an ornamental tin with apple marmalade, leaving an opening in the centre; pile the baked apples upon the marmalade in the form of a dome, fill the opening that has been left with custard, and cover the whole with orange marmalade. Bake in an oven and serve hot.

APPLES BAKED.—Put the apples whole into an earthen pan, or jar, with a few cloves and a little lemon peel, some coarse sugar, and a glass of port wine; bake them in a quick oven, and take them out in an hour.

APPLES BUTTERED.—Peel and core apples of the choicest kind, stew in their syrup as many as will fill the dish, and make a marmalade of the rest. Cover the dish with a thin layer of marmalade. Place the apples on this, with a bit of butter in the heart of each, lay the rest of the marmalade into the vacancies. Bake in the oven to a pale brown colour, and powder with sugar.

APPLES DRIED.—Choose apples having clear rinds and without blemishes, wipe them, and put them on a baking pan into a very slow oven, let them remain for four or five hours; draw them out, rub them in the hand, and press them gently; return them to the oven, and press them again to a nearly flat shape; when cold, if they look dry, rub them over with a little clarified sugar.

APPLES FROSTED.—Peel some pippins, stew them in a thin syrup till they become tender, dip them into the white of an egg that has been whipped into a froth, and sift pounded sugar over them thickly; put them in a cool oven to candy, and serve in a glass dish.

APPLES IN BUTTER.—Peel some small sized apples, and remove the cores without dividing them, place them in a pie dish upright and singly, and with a space between each; fill the vacancies left by the cores with sugar and grated lemon-peel; pour butter round and upon the apples, and bake in a moderate oven.

APPLES STEWED.—Peel, core, and slice apples, and stew them in a syrup just sufficient to cover them, made of equal portions of water and red wine; when they are tender, add a stick of cinnamon, a few cloves, and a little fresh butter, mash them; sweeten to taste, and serve.

APPLES STEWED WITH RED CABBAGE.—Wash thoroughly and cut up a large sized red cabbage; peel, core, and slice an equal weight of apples; put them into a stewpan together with a very small quantity of water and a piece of butter; stew them gently until quite tender; season with pepper and salt; stir and mix well together, and serve with roast pork.

APPOINTMENTS UNDER GOVERNMENT are certain employments connected with the public revenue or administration of the country. In the various departments coming under the above denomination there are between fifteen and twenty thousand persons employed in all, whose salaries are regulated by the department in which they are placed, and the position that they occupy. Government situations possess peculiar advantages which are denied to any other occupation. In the first place, the duties are light and the hours are short; in the second place, the salaries are in the majority of cases sufficient to enable a man to maintain himself and his family in comfort and respectability;

and, in the third place, the situations are permanent so long as a man conducts himself properly. On the other hand, there are some objections to be urged against Government situations, which materially detract from the charms they appear to possess at first sight. The chief of these is monotony; for when once a person is appointed to any particular department, he is seldom or ever removed into another; so that day after day, and year after year, he is continually engaged in the same dull unvarying routine of duty. Nor has a man an opportunity of achieving an independent position. It is true that he is gradually promoted through the various grades of his department, but to this there is a limit at last; and the utmost point which he reaches is that of being a well paid servant. Notwithstanding these drawbacks, however, Government situations are greedily coveted, and the number of appointments are totally inadequate to the number of applications. The patronage of Government situations is vested in the Ministers of the Crown, and is by them distributed amongst those Members of Parliament who support the Ministry by their votes. Unless a person, therefore, is acquainted with some Member of Parliament on the Ministerial side, it is in vain for him to hope to succeed in obtaining a Government situation; nor does the bare knowledge of such a person, or the mere application to him, ensure a favourable issue. On the contrary, a Member of Parliament is so beset with these applications, and is bound as it were to return an encouraging answer to all, when, in many instances, he well knows that it will be utterly impossible for him to grant the request that is being made. It is not sufficient, therefore, to simply make the request and there let the matter rest, but it is absolutely necessary that from time to time, and at frequent intervals, the Member should be constantly reminded of his promise, until at length (perhaps with a view of escaping further importunity) the favour is granted. With regard to patronage, a new order of things has been recently established, by which certain Government appointments are supposed to be bestowed by public competition. This, however, is only a nominal concession producing no result, and the patronage is in reality administered under precisely the same system that it ever was.

Before a person enters upon the duties of a Government situation, he has to undergo a term of probation to fit him for his appointment. He is accordingly placed under certain persons in the department to which he is about to be appointed, and is instructed by them in the various branches of the duties that will be required of him. He then undergoes an examination upon these points, which, if passed satisfactorily, qualifies him for his post. In addition to this initiation into official duty, the candidate is also examined in various branches of elementary knowledge; such as writing, arithmetic, history, geography, bookkeeping, composition, French and Latin translation, and other acquisitions, according to the exigencies of the department.

Candidates for Government situations are only eligible for admission at certain ages, and, generally speaking, the condition is, that they shall not be less than sixteen or older than twenty-five. The salaries given in Government offices, although small at the outset, are augmented periodically; so that a youth beginning with £60 a year at sixteen may be in receipt of £250 before he is five-and-twenty. In many of the public offices the privilege is allowed of adding to the salary by working after office hours; and as this interval is generally from ten till four, or nine till three, a few hours extra labour may be performed without overtaxing the mental or bodily energies. Having thus stated the necessary requirements for a Government situation, we append the following list of the principal Governmental departments:—

The Admiralty is devoted to the administration of naval affairs, and is composed as follows:—

Naval Department, 39 clerks; salaries, £100 to £1000.

Accountant-General, 194 clerks; salaries, £90 to £800.

Seamen's Register, 35 clerks; salaries, £90 to £500.

Dockyards, 113 clerks; salaries, £80 to £450.

Somerset House, 40 clerks; salaries, £70 to £200.

In addition to these there are other minor branches, each employing from six to twenty clerks, with salaries ranging from £80 to £400.

Audit Office.—The duties of this office consist in examining the public accounts; it employs a staff of 92 examiners and inspectors, with salaries varying from £90 to £400.

Custom House.—This branch of the service is considered one of the best, both on account of its varied employments, and for the value of its appointments. The duties consist of the examination of imports and exports, taking the accounts of and levying the duties thereon. The Custom House may be primarily divided into two classes—the first comprising officers of various grades, who are charged with the actual examination of merchandise for import and export; and the second class consisting of clerks, who prepare and examine the accounts and other documents belonging to their respective departments. The first class is divided as follows:—*Weighers*, whose duty it is to assist the landing waiters in unpacking, opening, weighing, &c.; salaries from £25 to £35 per annum, with half-a-crown a day when employed. *Lockers*, to attend to the receipt and delivery of the goods from the warehouses; salaries from £100 to £120 per annum. *Landing Waiters and Surveyors*, to take an account of goods landed from all vessels arriving from foreign countries; salaries, £160 to £600. *Gaugers*, to measure the contents of casks containing wine, spirits, oil, and other liquids; salaries from £125 to £500. *Tide Waiters*, to remain on board ship from the time of their arrival until their departure in order to prevent smuggling, and to take an account of all drawback

goods received on board; salaries from £55 to £75 a year, with 1s. per day when employed.

The second class of officials in the Customs department is distributed among a variety of branches, each having its peculiar duties, but all possessing the usual features of office routine generally, salaries rising from £75 to £500.

Inland Revenue.—Under this title are included the Excise, and the Stamps and Taxes. To the Excise branch is assigned the collection of revenue arising from home or inland sources. One portion of this department is worked by what are popularly termed "Excisemen," each of whom have a certain district placed under his control, and in which he is expected to take an account of and levy the duty upon all articles manufactured and chargeable with duty. The occupation of an Excise officer is harassing and attended with great discomfort, inasmuch as he is liable to be removed from district to district at a week's notice. This continual change coupled with the peculiar and somewhat unpopular post that he fulfils, totally debar him from enjoying the amenities of social life, or of cultivating the friendship and acquaintance of those with whom he may be brought in contact. The salary of an ordinary Excise officer is £100 a year; the higher grade of supervisor from £150 to £250. The clerks employed in the Excise receive salaries much on par with those given in the better departments of the Custom House.

Stamps and Taxes.—This branch employs between three and four hundred clerks, whose duties are of the usual official character; the salaries range from £80 to £400. The latter sum is, however, rarely attained to, the maximum in the majority of cases being £200, at which salary many clerks remain in this department after a service of twenty years.

Ordnance Office.—The province of this department consists of providing for the exigencies of the army and navy. The appointments are both numerous and valuable, consisting of clerks with salaries of from £90 to £600, and store-keepers £190 to £700.

Post Office.—This department employs an immense number of servants in a variety of grades and capacities. The appointments in contrast with other Government situations are not to be coveted, for its duties are exceedingly heavy, and the remuneration unreasonably small. The usual hours of attendance are from ten till four, but in the Inland Office attendance is required from five in the morning till nine, and from five to eight in the evening. In this office the greatest punctuality is exacted, and no allowances are made for being behind time. The clerkships are distributed among various offices, the salaries ranging from £60 to £200. Connected with this department are also letter-carriers and sub-sorters; the scale of remuneration for the first named is from 20s. to 30s. per week; to this may be added gratuities received in the shape of Christmas boxes; but as this is an observance now fast dying out, it cannot be considered as a certain source of additional income. The sub-sorters are selected from the letter-carriers, and receive from £65 to £110.

War Office—Employs a limited number of clerks from £80 to £500; its duties are generally light, and an appointment in it difficult to secure.

In addition to the foregoing there are *The Treasury, Board of Trade, Colonial Office, Foreign Office*, and a variety of other branches which employ a limited number of clerks, appointments in which require an immense amount of influence, being generally given to the relatives and connections of the ministerial members of both houses.

APPOINTMENTS, VARIOUS.—Distinct from Government appointments, and yet partaking of a similar character, and possessing equal privileges, are the *Bank of England*, and the *East India House*. The patronage of the Bank of England, with the exception of every seventh vacancy, is in the hands of the directors, a clerk being appointed by each director in rotation, until the vacancies are filled. Clerks are admissible from the age of seventeen to twenty-five; the salary for the first year is £50, increasing yearly until twenty-one; from the age of one-and-twenty to five-and-twenty, the increase is £5 per annum, and then at the rate of £8, until it reaches £260 a year, which is fixed as the limit. In addition to these salaries, extra remuneration may be made by overwork, as at certain seasons the augmentation of labour is made to devolve upon the clerks already upon the establishment, instead of fresh hands being engaged. The Bank of England also employs about 80 porters at salaries of £76 and £84.

East India House.—The appointments in connection with this institution, although not very numerous, are respectable and well paid.—The patronage is vested in the directors of the company and the president of the Board of Control. The clerks are divided into two classes, "established clerks" and "extra clerks." The established clerks are eligible from the ages of eighteen to twenty-five; the commencing salary is £96, and gradually progresses to £400. The extra clerks are qualified for admission until thirty years of age, their salaries commence at £30, and progress to £200. They possess the privilege, however, of adding to their stated pay by extra attendance, and by this means are enabled with diligence and energy to double the salaries specified.

Akin to these appointments are those of *Railways, Insurance Offices, and Private Banks;* the hours of attendance and the remuneration being governed by a similar scale to that which applies to Government departments. The increase of salary being also certain and progressive, and the permanency of the employment greatly depending upon the capacity and good conduct of the employed. It is almost needless to state that the appointments in these last mentioned are left to the nomination of those gentlemen who are either directly or indirectly connected with the respective undertakings. The chief qualifications for these situations are a sound commercial education, an apti-

tude for correspondence, a gentlemanly deportment, and a good address. Books: *Thomson on the Choice of a Profession; The Imperial Calendar (Annual); Mitchell's Guide to Government Situations.*

APPRAISEMENT.—The valuing of anything. In cases where goods or chattels are distrained for rent the person distraining must cause the distress to be appraised by two sworn appraisers, whom the constable will attend at the time they make their appraisement and swear them before they begin, that they will appraise them truly.

APPRENTICE signifies a person who is bound by indenture to serve a master for a certain term, and receives in return for his services instruction in his master's profession, art, or occupation. Apprentices and masters are equally bound to perform their portion of the contract towards each other; and if the master neglect to teach the apprentice his business, or the apprentice refuse to obey his master's instructions, both are liable to be summoned before a magistrate to answer the complaint against them. A master cannot legally compel his apprentice to work an unreasonable length of time. There is no specific duration marked out by law, but doubtless the habitual employment of an apprentice for more than twelve hours daily (exclusive of meal times) would be deemed unreasonable. Compelling an apprentice to work on Sunday is clearly illegal. On these points, however, justices have not the power to interfere where the premium paid exceeds £25. When an assignment is made of a trader's effects, the apprentice may form part of the assignment, and he is bound to serve him to whom he is transferred in all respects the same as his original master. Bankruptcy, however, is a discharge of the indenture. In cases of dissolution of partnership, the apprentice is bound to serve the remaining members of the firm, just as though the partnership remained intact. When the master dies the apprenticeship is at an end, for the contract is held to be a personal one between master and servant. But, by the *custom of London*, if a master die, the apprentice is bound to continue his services to the widow, provided she carry on the same trade. Indentures may be cancelled by mutual consent; the safest and most economical mode in such a case is simply to cut off the names and seals of the parties in the indenture, and endorse thereon a memorandum, signed by all parties, to the effect that they give their consent to the cancelling of the same. If there be any covenant for maintenance in the indentures, the executor of the deceased master is bound to make provision for the same so far as the assets will allow. A master may administer reasonable corporal chastisement to his apprentice, but he cannot discharge him. If any apprentice, whose premium does not exceed £10, runs away from his master, he may be compelled to serve beyond his term for the time which he absented himself, or make suitable satisfaction, or be imprisoned for three months. If he enters another person's service, his master is entitled to his earnings, and he may bring an action against the persons who enticed him away. An apprentice cannot be compelled to serve in the Militia, nor if impressed in the Royal Navy. Apprenticeship indentures need not of necessity be legally prepared, but may be drawn up on printed forms designed for that purpose, and sold at the various law stationers.

APPRENTICING.—As this step has the most important influence upon success in life, it ought to be exercised by parents and guardians with the most scrupulous care and discretion. In apprenticing a youth it is not alone sufficient that he should learn a trade from which good earnings may afterwards be derived, but that the trade selected should be in accordance with his taste, and also conformable to his mental and physical capacity. It may be said that a boy does not know his own mind, and that it is consequently idle to consult him upon a subject when his seniors are better qualified to judge. But in the majority of cases a boy will be found to give unmistakeable indications of the branch of mechanical employment upon which his mind is most bent, and for which his hands will be consequently most fit. And if this evidence of a distinctive perception is disregarded, and the boy is apprenticed to a trade of a totally opposite nature to that for which he has a predilection, the incessant struggle between natural desire and constrained duty will frequently entail failure and disappointment, and irrevocably blight the youth's prospects in life. Equally necessary is it that the mental and bodily faculties should be considered before apprenticeship. It is, for instance, manifestly unjust both to master and apprentice to place a youth of notoriously dull parts in a situation where a constant demand will be made upon him for mental labour which he is unable to supply. And it is also a species of cruelty to select for a youth of a weak and delicate constitution such a trade as is only adapted for the robust and hardy. Obvious as these deductions may appear, yet it is certain that they are continually being disregarded, and youths without number *are* apprenticed to trades for which they have neither the inclination, aptitude, or strength, simply because some relation or friend happens to be of a particular trade which seems to offer an excellent opportunity for advancement.

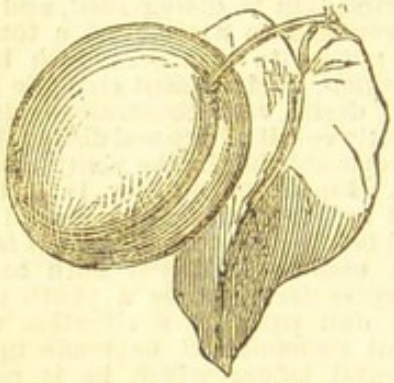
The *moral character* of the future master, together with his commercial reputation, should be strictly inquired into; for there are some employers whose only anxiety is to secure the premium, and when that is received to allow the apprentice to pursue his own undirected course as best he may. The wisest plan, therefore, when the particular trade is determined on is to place the youth with a person who has been established for some years, and whose reputation and ability can be testified to by former apprentices.

The *premiums* for apprenticeship are governed by no stated tariff, but as a general rule they are proportioned to the wages which the trade affords. For instance, instruction in an art by which three pounds

a week may be earned is as a matter of course worth more than that from which only five and thirty shillings a week can be gained. The amount of the premium, therefore, is a secondary consideration to the advantages which its outlay secures. In apprenticing, another consideration is to be attended to, which is, that the trade chosen shall not be one which materially fluctuates, or that depends upon the caprices of fashion. That handicraft is the most reliable, which produces articles that are and must be as a matter of necessity always in request. Amongst these may be enumerated boot-maker, hatter, tailor, carpenter, engineer, plumber and painter, sadler, turner, watch-maker, &c.

The usual term of apprenticeship is seven years, namely, from fourteen to twenty-one years of age, but that period of probation is not always necessary, and, generally speaking, it is optional to determine upon a shorter term.

APRICOT.—There are twenty-nine varieties of this delicious fruit, of which the Moorpark and Turkey are the most esteemed. Apricots, if not too ripe, agreeably strengthen the stomach; but when over-



ripe they lose their aromatic flavour, and become less easy of digestion. The *propagation* of the apricot is best accomplished by *budding*, which is performed in the months of June and July, on muscle or plum stocks two or three years old; dwarfs should be budded at nine inches from the earth, half standards at three feet, and standards at five feet. The period for *planting* extends from October to March; for this, maiden plants should be chosen in preference to those that have been headed down. If a maiden plant comes on well, it will furnish two or three shoots on each side, the lowest shoot on each side must be trained horizontally, and the others in an oblique direction. The trees should be pruned short, and the branches trained thin, by which means the trees will keep their vigour, and the size and flavour of the fruit both be improved. The *most suitable soil* is a sound rich loam, having little or no manure. The *aspect* should be warm, a southerly one being the most congenial.

The apricot tree is liable to be attacked by wasps, flies, and other insects, to protect it from which it should be covered by a net, extending about a foot outwards from the wall. Mildew is also a disease to which this tree is liable, arising generally from too damp a soil at the roots; to remedy this, careful drainage should be had recourse to, and where this fails, powdered sulphur may be gently dusted over the tree. In the rough months of February and March, the young blossoms are apt to be torn off by the wind; the best protection at such times is a covering of canvass, or the material known as bass. *Gathering* should take place a day or two before the fruit arrives at maturity, otherwise it will have a spongy taste. *Thinning* should be resorted to at the latter end of May or the beginning of June, to accomplish this effectually the apricots should be left upon the tree in such a manner as to be half a foot apart from each other, this prevents them from dropping off the tree. Apricots are generally deemed in perfection when the fruit nearest the sun becomes a little soft, or the ends begin to open. Apricots may be preserved for two or three weeks later by being gathered when half ripe, and placed in an ice-house, dairy, or other cool place where it may be suffered to ripen gradually.

The fruit is justly held in the highest estimation, not only for its agreeable flavour, but also on account of the ease with which it is digested. The best kind of preserves are made from it, and the kernels of it are extensively used in a variety of confections.

APRICOT BISCUIT.—Peel and boil ripe apricots, and to the pulp produced add an equal weight of sugar, mix thoroughly together, and boil for twenty minutes; then pour out the mass on to paper in the shape of small cakes, and dry in a very slow oven for five or six hours, turning them occasionally.

APRICOT CHEESE.—Stone a dozen ripe apricots and put them into a stewpan with three quarters of a pound of sugar and a teacupful of water; boil and stir them till reduced to a pulp, which rub through a hair sieve into a basin; add one ounce of isinglass, and pour the preparation into a mould; when set firm turn it out on to a dish, and fill the centre with whipped cream.

☞ Apricots, 12; sugar, ¾lb.; water, teacupful; isinglass, 1oz.; cream, sufficient.

APRICOT CHIPS.—Peel, stone, and cut into chips a dozen apricots, add a pound of sugar, and put them on the fire together; when the sugar is dissolved, turn them out of the dish into the syrup. Warm them together again the next day, stirring in the meantime, and continue doing so day after day until the fruit has absorbed the whole of the syrup.

APRICOT COMPOTE.—Peel and halve ripe apricots; remove the kernels, and set the fruit over the fire in a small quantity of water, when they become soft take them off and turn them into cold water; drain them and immediately put them into clarified sugar; boil two or three times and skim thoroughly, drop in the kernels which have been previously blanched, let the compote stand to cool, and then serve.

APRICOT ICE.—To twenty fine apricots add three quarters of a pound of sugar, half of the apricot kernels, mash them together and strain through a hair sieve; add a pint

of cream, the juice of a lemon, and then freeze.

☞ Apricots, 20; sugar, ¾lb.; apricot kernels, 10; cream, 1 pint; lemon juice, 1.

APRICOT JAM.—Take a dozen apricots, not too ripe, halve them and remove the stones, lay them with their insides uppermost in a dish, and strew over them three quarters of a pound of sugar; let them lie until the sugar becomes absorbed, then add the kernels which have been previously blanched, and boil the whole together for half an hour, let it cool, and pot.

☞ Apricots, 12; kernels, 12; sugar, ¾lb.

APRICOT JELLY.—Divide two dozen ripe apricots into halves, pound half of the kernels in a gill of water, and a teaspoonful lemon juice; reduce the fruit to a pulp and mix the kernels with it; put the whole into a stewpan with a pound of sugar, boil thoroughly, skim till clear, and pot.

☞ Apricots, 24; kernels, 12; water, 1 gill; lemon juice, teaspoonful; sugar, 1lb.

APRICOT MARMALADE.—Divide, stone, and slice thirty apricots and their kernels; put them into the pan with a pound and a half of sugar and half a pint of water; boil them till tender, scum till clear, and pot.

☞ Apricots, 30; kernels, 30; sugar, 1½lb.; water, ½ pint.

APRICOT PASTE.—Put any quantity of fruit required into a stewpan, stew it till tender; then remove the stones, and pass the fruit through a hair sieve; add an equal weight of clarified sugar; mix well together and dry in a very slow oven.

APRICOT PIE.—Pick and wash the fruit and fill the dish with it, raise the centre high, and introduce a teacup beneath; add sugar as required, cover with a light paste, and bake in a moderate oven.

APRICOT PUDDING.—Mix the grated crumbs of a stale penny loaf with a pint of hot cream, add a quarter of a pound of sugar, the yolks of four eggs, and a glass of white wine. Halve twelve ripe apricots, and pound them with six of the kernels, then mix the whole of the ingredients together, place them in a dish, cover with a light paste, and bake for half an hour.

☞ Bread, 1 penny loaf; sugar, ¼lb.; eggs, 4 yolks; cream, 1 pint; white wine, 1 glassful; apricots, 12; kernels, 6.

APRICOT RATAFIA.—Cut two dozen apricots into small slices, pound half of the kernels and put both together into a jar; add three pints of brandy, half a pound of sugar, a stick of cinnamon, and six cloves. Make the jar air tight, and let it remain for a fortnight, frequently shaking it in the meantime; then strain off into bottles, and keep in a cool place.

☞ Apricots, 24; kernels, 12; brandy, 3 pints; sugar, ¼lb.; cinnamon, 1 stick; cloves, 6.

APRICOT TART.—Spread puff-paste equally on a baking tin, and cover it with apricot marmalade about a quarter of an inch in depth; then cut some paste into narrow strips, roll it, and arrange it crosswise over the marmalade, bake in a moderate oven.

APRICOT WINE.—Boil seven quarts of water and six pounds of sugar together; scum it and put in twelve pounds of apricots, pared and stoned; boil till the fruit is tender, then drain the liquor off; let it stand to cool, and bottle.

☞ Water, 7 quarts; sugar, 6lbs.; apricots, 12lbs.

APRICOTS DRIED.—Pare apricots, remove the stones, blanch the kernels, and replace them in the apricots; on every pound of fruit strew a pound of sugar, and let them stand till the sugar has extracted the juice, then boil them together slowly; when the fruit becomes tender, take it out and boil the syrup separately till rich and thick, then pour it over the fruit, and in three days put it upon dishes and dry them on glasses in the sun.

APRICOTS IN BRANDY.—Put apricots whole into a jar that has a close cover, add to them one fourth their weight of sugar, and brandy so that it covers them; lay a piece of thick paper between the fruit and the lid, and close it; set the jar into a saucepan of water over the fire till the brandy becomes hot, but not boiling; let it stand to cool, and close securely.

APRICOTS PRESERVED.—Pare apricots, and remove the stone without dividing the fruit; lay them in a dish, and strew over them an equal weight of sugar; let them stand for a night, then simmer gently, add the kernels which have been previously blanched, skim till clean, place the fruit into jars, pour the syrup over it, let it cool, and then fasten down.

APRICOTS PRESERVED GREEN.—Lay vine or apricot leaves at the bottom of the pan, then fruit, and so on alternately till full, the upper layer being leaves; then fill with spring water and cover down; set the pan at some distance from the fire, and let it remain for five hours. Make a thin syrup of some of the juice, and drain the fruit, let both cool; then add the syrup to the fruit, and set the pan at a proper distance from the fire, so that the fruit may green without cracking or boiling; then remove them and let them stand for three or four days; then pour off a portion of the syrup, which boil with more sugar, and a little sliced ginger added. When cold, and the thin syrup has been absorbed by the fruit, pour the thick over it, then pot.

APRIL, GARDENING FOR.—The following is an alphabetical list of plants and roots in the *Kitchen Garden*, which require attention during this month. *Alexanders*, sow. *Angelica*, sow. *Artichokes*, dress and plant. *Asparagus*, sow, plant, force in hot beds, dress established beds. *Beans*, plant, hoe, and advance. *Brocoli*, sow, prick out seedlings, leave for seed. *Cabbages*, plant, prick out seedlings, sow, earth up, and advance. *Carrots*, sow, weed advancing crops. *Cauliflowers*, plant out from glasses, prick out seedlings, sow. *Celery*, sow, earth up, dress old plantations, leave for seed. *Cucumbers*, sow, prick out seedlings, ridge out, and advance. *Cress* (American), sow. *Endive*, sow. *Fennel*, sow or plant. *Horseradish*, plant. *Kale*, sow and plant. *Leeks*, leave for seed. *Lettuces*, sow, plant out from frames,

prick out seedlings, tie up, and advance. *Lavender*, plant. *Mint*, plant. *Melons*, sow, prick out, ridge out, and advance. *Mustard* and *Cress*, sow, leave for seed. *Mushrooms*, prepare bed for. *Mangolds*, sow. *Onions*, sow, leave for seed, and advance. *Potatoes*, plant. *Trees* (generally), plant. *Parsley*, sow, leave for seed. *Parsnips*, sow, weed, and advance. *Peas*, sow, hoe, stick, and advance. *Pennyroyal*, plant. *Radishes*, sow, thin, and advance. *Rhubarb*, plant. *Spinach*, sow, thin, and advance. *Savoys*, sow, prick out seedlings. *Sage*, plant. *Tomato*, sow. *Thyme*, sow and plant. *Turnip Cabbage*, sow, and water when dry.

General Remarks.—During this month particular attention should be paid to the preparation of the earth, both as regards digging, dunging, and trenching. The hoe should be applied freely and in all directions between the rows of young plants, in order not only to beat down the weeds, but also to loosen the surface of the ground, and gather earth about the stems. Seed beds should undergo a careful and unremitting weeding; as the weeds are apt to spring up very fast during this month to the prejudice of the rising plants.—See GARDENING, AND THE NAMES OF THE VARIOUS GARDENING OPERATIONS.

Flower Garden.—Anemones, finish planting. *Annuals* of all sorts, sow. *Auriculas*, place in sheltered situations, and propagate by suckers. *Biennials*, sow. *Carnations*, sow, and finish planting. *Evergreens*, plant, transplant, and water. *Hyacinths*, shelter from the wind and rain. *Mignonette*, sow, and put young plants in pots. *Passion Flower*, plant, thin, and nail up. *Perennials* of all sorts, sow. *Pinks*, plant both roots and slips. *Roses*, plant suckers or full plants. *Stocks*, sow in patches for transplanting. *Wallflowers*, sow, transplant, and propagate by slips and cuttings.

General Remarks.—This is one of the most important months for the garden during the whole year; for it is now that nature, after a long season of inactivity, begins to display new life and fresh vigour. Everything possessing life, whether animal or vegetable, now increases wonderfully in strength and growth, which reminds us that this season of the year, while it is congenial to the beauties of the garden, is also favourable to the development of that species of creation that is noxious to vegetation. Active measures, therefore, should be taken to destroy everything that tends to retard and interrupt the progress of plants and flowers. Grubs, slugs, and flies should be killed, and weeds exterminated as quickly as they appear. Borders and beds should be dug, trimmed, and weeded. New edgings may be planted and old ones clipped. Gravel walks should be fresh laid, and kept well swept and rolled. Mow and roll grass lawns so as to maintain an even surface. Place sticks to every stalk or plant requiring support, drive them in the ground, and tie each stem at two or three places. If there is a succession of dry days the beds should be watered, especially those that have been lately planted or sown. In a word, the garden should, during this month, be watched with unremitting solicitude, and tended with assiduous care, leaving nothing undone that can assist the operations of nature and improve the vigour and beauty of vegetation.

APRIL.—THINGS IN SEASON:—*Fish:* Carp, chub, crabs, cray-fish, herrings, lobsters, mullet, skate, soles, tench, trout, turbot.

Fruits: Apples, pears.

Meat: Beef, grass-lamb, mutton, veal.

Poultry and Game: Chickens, ducklings, fowls, leverets, pigeons, pullets, rabbits.

Vegetables: Asparagus, beet, brocoli, burnet, carrots, celery, endive, lettuce, onions, parsley, pot-herbs (all sorts), radishes, spinach, sprouts, salads (small).

A PRIORI.—Lat. A mode of reasoning by which we proceed from the cause to the effect. Anything demonstrated *à priori* is done so independently of any actual knowledge; mathematical problems, for instance, are resolved in this way.

APRON.—This article of ladies' attire is made with little trouble or expense; remnants of stuff, and the least worn parts of left-off dresses, may be converted into aprons. If a new one is desired, the best material is black *glacé* silk, about three or four shillings a yard; three quarters of a yard of eighteen-inch wide silk being a sufficient quantity to make it with. An apron may be trimmed with velvet or braid, and in order to give it a lighter appearance the trimming should be varied in width. The pleats or gathers should be done very neatly, and not drawn into too narrow a compass, say about ten inches. The neatest and most convenient method of fastening aprons is to sew the ribbons on to them at one end, and to fasten the other end to the apron by means of hook and eye. The colours of aprons should be dark, and the materials plain.

APTHÆ.—A papillary eruption attended with slight fever, extending from the lips, mouth, and fauces to the stomach, and often the whole length of the alimentary canal.—See THRUSH.

AQUA FORTIS.—A common term first applied by the alchemists to nitric acid, and so called on account of its strong corrosive action on many animal, vegetable, and mineral substances.—See NITRIC ACID.

AQUARIUM.—To construct and maintain successfully this really elegant and instructive parlour ornament, three considerations have to be constantly borne in mind. 1. That the tank or bowl is free from all extraneous impurities. 2. That the stock is healthy when put in. 3. That a proper balance is maintained between the animal and vegetable inhabitants.

The principles upon which the aquarium is founded are very simple, and may be thus stated. All animal life, whether terrestrial or aquatic, is sustained by a due supply of oxygen. This supply, when exhausted by the breathing organs of aquatic animals, is renewed through the medium of vegetation which generates oxygen when exposed to the action of the sun's rays.

Carbonic acid gas is the result of exhausted air: in other words, it is the refuse of vital air after it has performed its invigo-

rating functions upon animal life. This carbonic acid gas is the food of plants. Thus what would prove fatal to animal life if not withdrawn is the very support of vegetable

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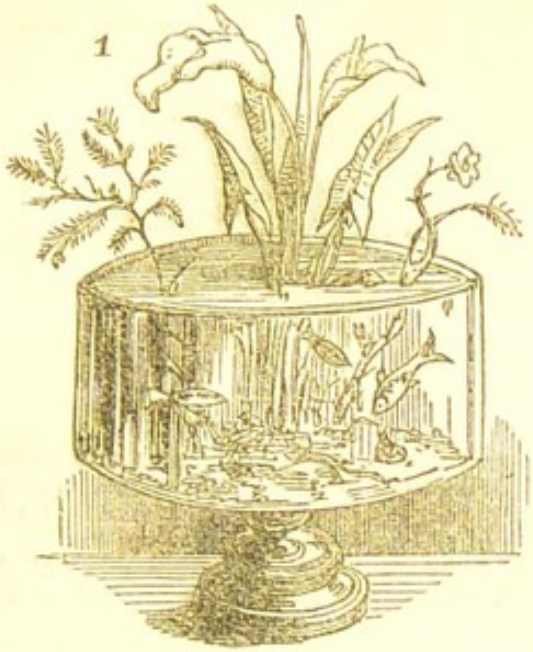

life. But both plants and animals *die* When the latter cease to breathe, it is easy to remove their bodies from any receptacle so much under observation as the aquarium. But a certain portion of its vegetable occupants are always dying. Hence the necessity for the introduction of an agent, whose proper occupation it is to remove all such decaying matters, whose food in short is putrefaction. An aquarium, then, is a little world of animal and vegetable life. For its due regulation, although no infallible rule can be given, careful observation joined to experience will ever prove the best guide, the following particulars are to be attended to:—The *form* of the tank is immaterial. The familiar fish-bowl of past years will do, and no additional expense in that direction need *necessarily* be incurred. The tank, or bowl, must be quite clean. Where this is circular, and made entirely of glass, there is little risk; but when the tank is formed, as usual, of four sides and a base, care must be taken that no poisonous emanations from putty or paint, or any other metallic substance, be present. To avoid this, the water, which may be either river water, rain water, or pump water, *that has not been boiled*, must be putinto the tank some time previous to the introduction of the plant. If after standing for a few days no prismatic scum appears upon the surface of the water, it is a proof that it is sufficiently clean.

The plants proper for an aquarium will live and flourish without mould or gravel. Where these are admitted they should be so disposed that while they form a rest or anchorage for the plants, they do not interfere with the purity of the water. Shells and rockwork are to be admitted subject to the conditions of cleanliness and freedom from metallic taint, which may easily intrude in the form of cement. The directions above given with reference to the jointing of the tank must therefore be followed, and the whole framework be carefully washed. It is hardly necessary to remark that marine shells should find no place in a fresh water aquarium, or fresh water adjuncts in one intended solely for marine animals and algæ.

Light is necessary to the healthy growth of plants; and although both animal and vegetable life may exist for some time without it, neither will flourish or perform their several functions properly in the dark. The amount of solar light admitted to an aquarium should be regulated by the consideration of how much is usually received into a pond. In short, the aim should be to afford the same proportion of the sun's rays as the plants and animals have been accustomed to in their natural habitations. It will be obvious to every observer that the surface of any artificial water receptacle is *unnaturally calm*. Hence the water in such receptacles is devoid to a certain extent of the proper amount of air. The wind that sweeps over the face of a lake or pond, while it agitates that face, carries into the water fresh globules of air, thus conveying the vital oxygen to its inhabitants. This aerating process should be occasionally imitated by means of a pair of hand bellows, to the nose of which a tube of gutta percha has been affixed. Where a fountain can be attached to an aquarium, the necessity for any other mode of aeration is obviated.

With respect to the tenants of the aquarium, as the stores of nature are inexhaustible it is impossible to give a complete list of them within anything like limited space. For a *fresh water aquarium* the most common plants are:—

The Great Water Plantain (*Alisma*).
The Water Lily (*Nymphea Alba*).
The Yellow Water Lily (*Nuphar Lutea*).
The Forget-me-Not (*Myosotis Palustris*).
The Frogbit (*Hydrocharis Morsus Rani*).
The Valisneria (*Valisneria Spiralis*).
The Arrowhead (*Sagittaria Sagittifolia*).
The Water Iris (*Iris Pseudocorus*).
The Water Aloe (*Stratiotes Aloides*).

THE ANIMALS.—*Gold Fish.*—(2.) Perch, (*Cyprinus Auratus*) Tench, Roach, Gudgeon, Sticklebacks.

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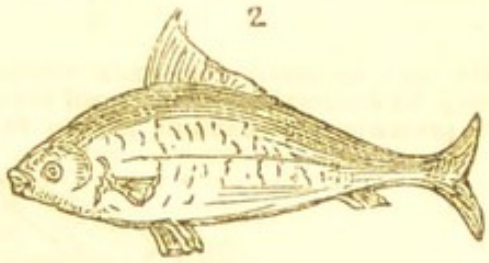

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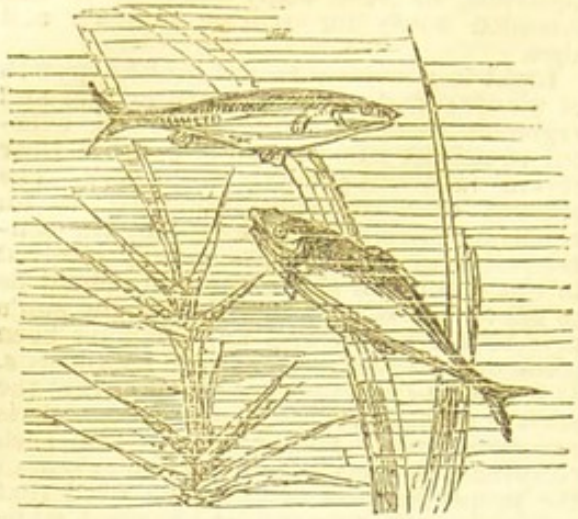
(3.) Minnows. (4.) The Molluscæ (who act as the scavengers of the establishment), are

the Mud Snail (*Limneus Pereger*); the Marsh Shells (*Paludina Vivipara* and *Paludina Achalina*); the Pearl Mussel (*Alos Modon Margaritiferus*).



From some mysterious instinct of our nature the order Reptilia has never been a favourite object of study; yet the move-

ments and economy of such specimens as may be successfully introduced into the st pretentious aquarium are as full of

beauty and as worthy of an attentive study as those of the most gorgeous denizen of the grove. Among these are:—The Tree Frog (*Rana Arborea*). (5.) The Smooth Newt (*Lissotriton Punctatus*). (6.) The Water Persicaria (*Polygonum Amphibium*). The only insects to be safely entrusted into an ordinary

aquarium are (7, 8) the lesser and greater waterbeetles (*Dytcus Marginalis*). (9) The Diving Spider (*Argyroneta Aquatica*); Caddis Worm (*Phryganea*); the Shrimp, &c.

For the *marine aquarium* the same kind of tank will serve; but sea water, real or arti-

ficial, must be obtained. The former may be procured by Londoners for a trifling fee through the master or steward of most of the sea-going steamers. For its conveyance a cask, which has not been previously used, is the best. No taint of spirits, wine, acids,

or chemicals, should attach to the vessel, even the bung should be newly cut, or failure will result. Artificial sea water may,

however, be readily purchased, or home-made from the annexed receipt:

Common salt . .	3½oz.	Avoird.
Epsom salts . .	¼oz.	
Chloride of magnesium	200 grains	Troy.
Chloride of potassium	40 grains	
New River water . . .	4 quarts.	

The marine plants are:—*Rhytiphlœa Pinastroides;* the *Polysiphoniæ, Corallina Officinalis, Delessaria Alata, Chrondus Crispus, Phyllophora Rubens;* the *Griffithsiæ;* the *Callithamnia, Codium Tomentosum;* the *Cladophoræ, Bryopsis Plumosa;* the *Enteromorphæ;* the *Ulvæ.*

The *Fishes* are:—The Smaller Sticklebacks, Grey Mullets, Blenmes, and Gobies; the Spotted Gunnel, Wrasses, Rocklings, Flounders, Dabs, Eels.

The Mollusca.—The Seahare; Periwinkles; Tops; the Purple; the Murex; the Chilons; the Bullas; the Scallops; the Mussel; the Modioles; the Anomia; the Oyster; and some of the sand-burrowing bivalves—*Venus, Mactra, Pullastra,* &c.

The Crustacea.—Strawberry Crab, Swimming Crab, the Shore, Masked Soldier, and Broad Clawed Crabs; the Shrimp; the Pounder.

The Zoophytes.—Sea Anemone, and both species of Madrepore.

An easy method of renewing the water in the tank is by means of a syphon, the use of which needs no description. Where there is an objection to applying the mouth to the end of the pipe, this is rendered unnecessary by a simple contrivance: let the syphon be held the reverse way, like the letter U, and be then filled with water; with a finger stop the lower end, and quickly plunge the short end into the tank. The water will flow through the lower end, and continue to do so until the whole has run out. Books: *Lankaster's Aquavivaria; Gosse's Handbook to the Marine Aquarium; H. N. Humphreys' Ocean Gardens and River Gardens; J. Bishop's Plain Instructions for the Management of the Aquarium; Ward's Wardian Cases and their application; Warrington's Garden Companion.*

AQUA TINTA.—A species of etching on copper, producing an effect resembling a drawing in Indian ink. It is performed by sifting powdered asphaltum or lac resin on the plate, previously slightly greased, and after shaking off the loose powder, gently heating it over a chafing dish; on cooling, the lights are covered with turpentine varnish, coloured with lampblack, by means of a hair pencil; and a rim of wax being placed round the plate, a mixture of aqua fortis and water is then poured on it, and allowed to remain for five or six minutes, when it is poured off, the plate dried, and recourse had to the pencil as before. The process of stopping and etching is repeated again and again until the darkest shades are produced.

ARBITRATION is the submission of matters in difference between parties to the decision or arbitrament of other persons. An arbitration clause always forms part of properly prepared partnership articles, and is to the effect that any difference between the partners shall be referred to the arbitration of two indifferent persons, one to be named by each partner, and an umpire to be named by such two arbitrators in case they differ; and that the decision of the arbitrators or umpire, as the case may be, shall be binding and conclusive on all parties. It is essential that a submission to arbitration should be by some legal instrument under the seal of the parties to be bound thereby, and should contain a clause that it be made a rule of one of the courts of law at Westminster; but where such instrument is not in existence at the time of the difference arising, the more economical mode is for one of the parties, by mutual consent, to give a writ against the other, whereupon a judge's order is drawn up referring all matters in difference to a gentleman named. Where the arbitrators are not in the legal profession, they should be at liberty to employ a solicitor to advise them, and to prepare the award, as many references have failed in effect for want of proper precautions being taken to bind the parties to fulfil the decision of the arbitrators or umpire after all the trouble and expense of a reference has been gone through. Indictments for assaults, nuisances, &c., may be referred by leave of the Court where they are depending; but without such permission indictments cannot be preferred. For arbitration of disputes between masters, labourers, and servants, see SERVANTS.

ARBUTUS is an evergreen shrub, with flowers shaped like the strawberry. There are two species, one being hardy and the other demanding some little protection. For the common kind the ordinary garden soil is suitable, but for the more delicate class, greenhouse culture is necessary, and a soil composed of equal parts of rich loam and peat. They are propagated by seeds or layers, but sowing is most generally adopted as being productive of the better sort of plants.

ARCHERY is a sport, but little practised in England at the present day; but is nevertheless to be commended as a healthgiving pastime, and one that affords a harmless and pleasurable excitement. In this sport the size of the target to be aimed at, and the distance for shooting, are regulated by a variety of circumstances; the field distance for beginners is generally one hundred feet, with a circular mark four feet in diameter. In the act of shooting with the bow the whole muscles of the body are called into play, and it is particularly necessary that the legs should be planted firmly on the ground, otherwise the body will be thrown off its equilibrium, and the aim destroyed. In sending the arrow from the bow the string should be quickly loosened, but without a jerk or jar, nor should the hand or elbow be either elevated or depressed, for the slightest derangement in the delivery of the arrow weakens its aim, and a deviation of a quarter of an inch while in the hand causes it to fall a hundred feet wide of the mark. The archer should study the wind so as to make allowances for the various currents of air, the flight of the arrow being as a matter of course materially expedited or impeded by the state of the atmosphere.

Bows are of different degrees of strength, the standard for a man being fifty-four pounds; the distance of the string from the centre should not in a bow five feet long exceed five inches, and in the longest bow not more than six inches, nor less than five and a half. The best description of woods for arrows are deal and ash for light, and lime for heavy shafts. Arrows should be selected according to the strength and size of the bow; for bows of five feet, twenty-four-inch arrows are used; five feet nine inches, twenty-seven-inch arrows; and for six feet, from twenty-eight to thirty inches. The arrows that are thickest directly under the feathers and taper gradually to the pile carry the furthest. The nock of the arrow should adjust itself closely to the string without requiring force to fix it. Books: *Blaine's Encyclopedia of Rural Sports; Walker's Manly Exercises; Hansard's Book of Archery; Hastings' British Archer; Archer's Guide.*

ARCHITECT.—The education for this profession consists in a pupil being articled for a period of four or five years to some architect who is in practice. The premiums vary from £100 to £500; and the outfit, which chiefly consists of drawing instruments, &c., costs only a few pounds. The great aim of an architect pupil is for him to become a finished and expert draughtsman, and a quick and correct arithmetician. The education of the pupil is greatly benefited by a visit to Rome and Greece, where he may have an opportunity of studying the principles of his art from the purest models, but this should be done under the guidance and instruction of an experienced person, otherwise he may derive more detriment than advancement from his journey. Students in architecture are admitted to the privileges of the Royal Academy, by which they have free access to the schools for a period of ten years, and may attend the lectures given by the professors. There is also an Institute of British Architects, for which a person is eligible to become an associate after he has studied seven years.

The total expense of education for an architect, including living, instruments, books, &c., will not cost far short of £1000. The progress in the profession is slow unless expedited by some extraordinary accident; but when once established, it yields a fair income, and confers a good standing in society.

Books: *Haskoll's Architects' Guide; Wightwick's Hints to Young Architects; Gwilt's Elements; Donaldson's Maxims and Theorems; Pugin's Ancient and Modern Architecture; Brook's City, Town, and Country Architecture; Richardson's Designs; Stuart's Dictionary; Gwilt's Encyclopedia; Rickman's Styles; Bartholomew's Specifications; Inwood's Studies; Ruskin's Examples of Architecture; Seven Lamps of Architecture;* and *Lectures.*

AREOMETER.—All liquids, though possessing equal bulk, have not the same specific gravity: for instance, wines, spirits of wine, and ethers are lighter than water, while many mineral acids and saline solutions are heavier; it is therefore possible to determine whether by adulteration or other means the due proportions of any liquors have been altered; and to ascertain that point recourse is had to the *areometer.* This instrument consists of a glass tube, terminating with a bulb containing mercury, and is marked at intervals with graduated figures, representing degrees. When this instrument, therefore, is plunged into the liquid, it will sink or float in proportion to the increase or decrease of the density. Thus in distilled water, or in pure alcohol, the areometer will invariably sink to a certain depth; but upon adding water to the alcohol or alcohol to the water, the degree indicated will undergo a change proportionate to the amount of the foreign liquid that has been introduced.

ARGAND LAMP.—This lamp is so constructed that the wick, and consequently the flame, assume the form of a hollow cylinder; through this a current of air is made to ascend, so that a free supply of oxygen is communicated to the interior as well as the exterior of the flame. By this means a more perfect combustion and a greater brilliancy of light is ensured than can be obtained by the usual means; and this object is further assisted by chimneyglasses which confine the current of air round the wick, and by producing an upward current causes the flame to rise high above the wick. The invention takes its name from Argand, a native of Geneva.—See LAMPS.

ARITHMETIC.—The science of numbers, or that part of mathematics which is concerned with the properties of numbers. Every number is, properly speaking, only a ratio or relation, thus: the number 4 expresses the ratio which one magnitude has to another smaller than itself; while, on the other hand, ¼ expresses the ratio of one magnitude to another greater than itself. Having distinguished the numbers or relations of magnitudes which we have conceived in our minds by particular signs, arithmetic becomes the art of combining these relations with one another. Hence the four operations —addition, subtraction, multiplication, and division, include the whole science; and although for facilitating commercial and other calculations many other rules have been invented, still they are all primarily based upon these four principal rules.—See CALCULATION, DECIMALS, FRACTIONS, PRACTICE, RULE OF THREE, &c.

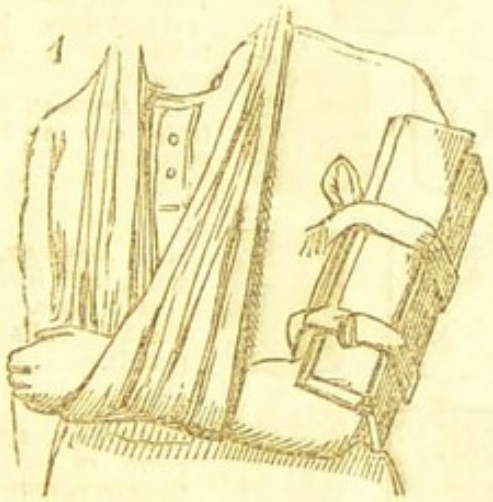
Books: *Darby's Practical Arithmetic; Hind's Principles of Arithmetic; Wright's Self Instruction; Bonnycastle's System; Taylor's Useful Arithmetic; Felton's Mental Arithmetic; Laurie's Mercantile Arithmetic.*

ARM, BROKEN.—Broken bones or fractures are usually divided into two kinds, the simple and compound fracture. A simple fracture is where the bone alone is broken without any injury to the skin and surrounding parts. The term *compound fracture* implies not only a broken bone, but considerable external laceration of cuticle, muscles, and probably arteries. A third condition of fracture sometimes presents itself where, in addition to the last form, the bone has been crushed or splintered into several pieces; this form of accident is called a *compound comminuted fracture.* Again: a

simple fracture may be of two kinds, either transverse where the bone is broken directly through its centre, or oblique where the bone is as it were splintered obliquely in the direction of its length. As a general rule, there is very little displacement of parts when the fracture is transverse; while in the oblique, from the contrary action of opposing muscles on the broken ends of the bone, there is at once shortening of the limb, displacement, and disfigurement.

The arm by anatomists is divided into two portions, the arm proper or brachius, that portion extending from the shoulder to the elbow, and the forearm or cubit, the extent from the elbow to the wrist.

THE ARM PROPER.—The bone of the arm or humerus may be broken in any portion of its length; though the parts where fractures most frequently occur are about four inches below the top of the shoulder, about the centre of the bone; and, lastly, about three inches above the condyles, or those sharp projections that define the elbow. *Treatment.*—When the fracture of the bone of the arm is transverse, there is seldom any shortening or disfigurement; and the injury is only known by the pain, loss of power, and grating noise made by the edges of the bone as it is moved about for examination; consequently little trouble is experienced in placing the two ends of the bone in exact apposition. When, however, the fracture is oblique, the bones frequently overlap, and some care and skill is required to place them again in their natural position. To effect this the patient must be seated, and one person grasping the arm with both hands above the fracture and keeping the limb firm, another must take hold of the arm above the elbow with his *left*, and bending the patient's fore-arm with his *right* hand, gradually extend or stretch the extremity till the edges of the bone are brought down to their natural position. Two pads, or long narrow bags, loosely filled with wool or



chaff, and a little longer than the splints, are to be placed, one on the inner and the other on the outer side of the arm, and the splints applied over them; two or three ligatures of broad tape are then to be passed over all and tied with tolerable tightness; the fore-arm is then to be bent and supported on the breast by a handkerchief passed over the neck and spread out into a sling, as represented by fig. 1. A bandage is next to be passed once or twice round the chest and over the splints to keep the arm in steady repose by the side; and the bone is then left to the process of reunion and ossification. Lastly, the bandages should be frequently wetted with an evaporating lotion to soothe and allay inflammation.

THE FORE-ARM.—Fractures may occur in either one or both of the bones that constitute the fore-arm or cubit, and at any part of the length of either, though most frequently occurring in their centres. The larger bone or radius being more exposed to blows, accidents, and shock from falls on the hand and from lying on the outer or thumb side of the arm, is more liable to be broken

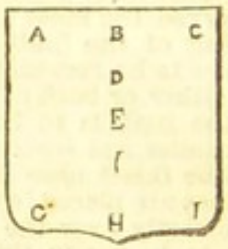
than its smaller and inner companion, the ulna. Fractures of the fore-arm are most frequently transverse, and except from the pain and immovability of the limb, present no particular feature of accident. When, however, the fracture is oblique, the displacement is sometimes considerable, and the shortening very evident. *Treatment.*—Although, generally speaking, fractures are injuries that cannot be safely entrusted to non-professional persons, yet as fractures of the fore-arm sometimes occur in situations where no surgeon is at hand, and as none are easier to reduce, with the following precaution observed, the most unskilful may effect the setting of the limb with safety. The circumstance to be remembered is, that in fracture of either or both of the bones of the forearm, the limb is to be placed *half way between pronation and supination;* that is, *narrowise* with the *thumb uppermost.* By this means both bones are placed in their natural position, one directly over the other. The arm is always to be set in this situation; for if placed in any other, the bones will unite twisted, and the proper action of the forearm destroyed. Extension is to be made in the same manner as for fracture of the arm or humerus. An assistant is to grasp the elbow, and keeping the arm steady, is carefully to extend or pull it, while another taking the hand and keeping the thumb uppermost, gradually pulls the limb towards him, as

the operator, or a third person, adjusts the ends of the broken bone to their place with his fingers. Pads are then applied to either side of the arm, sufficiently long to reach from elbow to wrist, the splints placed on them, and the whole secured by a series of tape ligatures or strings; the arm is then to be bent, and with the thumb side uppermost, the limb suspended by a sling, as shown by fig. 2. See FRACTURE.

ARMS, COATS OF.—Honourable badges of more importance formerly than at the present day, but a knowledge of and a slight acquaintance with which is now generally admitted to be necessary, not only as part of a polite education, but as a key to biography and history. The existence of coats of arms may doubtless be traced to a very remote antiquity; but the laws by which they are regulated, and the nomenclature of the science of heraldry, as we find it at present, date no further back than the commencement of the fourteenth century. The most obvious reason for the adoption of coats of arms is to be found in the wars of the Crusades, when some badge or distinctive mark became absolutely necessary to prevent the respective combatants from turning their swords upon each other. The earliest roll of arms is of the time of Henry III., and the first-known book written upon the subject is dated 1300.

Arms are thus classified:—1. Arms of *Dominion*—as the Royal Arms of Great Britain and Ireland; 2. Of *Pretension*—where the bearer claims or pretends to something not actually in his possession; 3. Of *Community*—as those of universities, dioceses, or the like; 4. Of *Assumption*—where the bearer sets up of his own proper right and motion any addition to his coat of arms; 5. Of *Patronage*—as of governors of provinces, patrons of benefices, &c.; 6. Of *Succession*—borne by the heritors of estates either by will, entail, or donation; 7. Of *Alliance*; 8. Of *Adoption*; 9. Of *Concession*; 10. *Paternal* and hereditary.

The first thing to be noticed about a coat of arms is the shield, escutcheon, or banner—the name of shield being the one most generally adopted—the form of which is arbitrary, but the parts or *points* of which are thus disposed:—

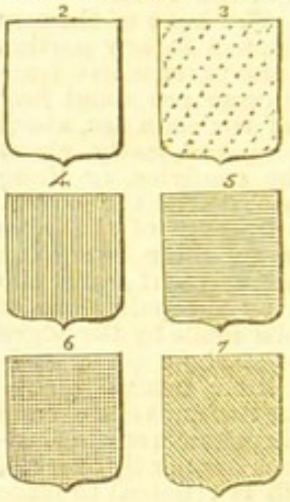


The upper half, occupied by the letters A B C D, is called the *chief*. The lower half is termed the *base*.

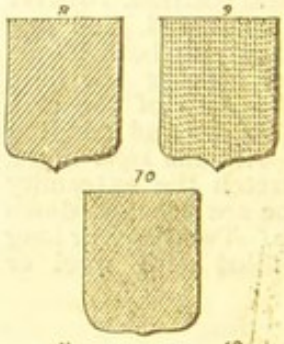
The point A is the dexter chief point.
" B is the precise middle chief.
" C is the sinister chief.
" D is the honour point.
" E is the fess point.
" F is the nombril or navel.
The point G is the dexter base point.
" H is the middle base point.
" I is the sinister base point.

These various terms of *chief*, *fess*, and others to be mentioned, namely, the *pale*, the *bend*, the *chevron*, &c., are so many lines or bands which cut the shield in a variety of ways and are readily distinguishable when once attentively considered.

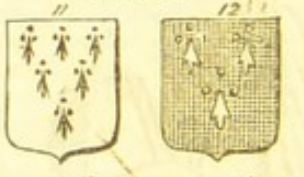
The colours on a coat of arms are of great importance; and where, as in the case of coats engraved upon metals or sculpture, the presentation of actual colours is inadmissible, certain dots or lines variously disposed, stand for them. These colours or their corresponding signs are as follows:—

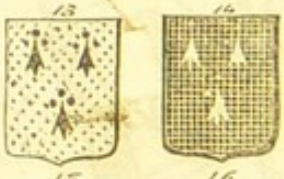


(2) *Argent* or silver (white), the shield *quite plain*.
(3) *Or*, gold, shown by a *dotted* shield.
(4) *Gules* (red), vertical lines.
(5.) *Azure* (blue), horizontal lines.
(6) *Sable* (black), lines cross-hatched at right angles.
(7) *Vert* (green), lines from the right upper corner to the left lower one.

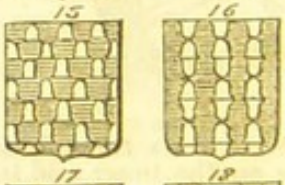


(8) *Purpure* (purple), lines the reverse of the above.
(9) *Tenne* (or orange). Thus.
(10) *Murrey* (Sanguine or blood-red). Thus.
Besides the metals or colours are *furs*. These are:—
(11) *Ermine*, black tails on a white ground.
(12) *Ermines*, white tails on a black ground.

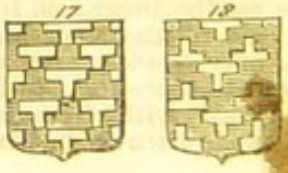




(13) *Erminois*, field gold, tails black.
(14) *Pean*, field black, tails *or* (gold).



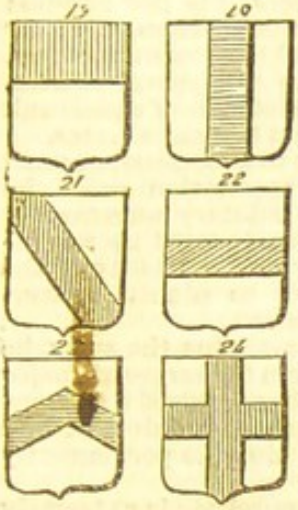
(15) *Vair*, several rows of cup-like figures reversed.
(16) *Counter-vair*, differing from the former by the cups being base to base and point to point.



(17) *Potent*.
(18) *Counter-potent*.

The last four furs are always understood to be *azure* and *argent* (blue and white) unless it is otherwise expressed.

Shields are distinguishable by their *charges* or the figures expressed upon them. These may be simply divisions or subdivisions of the field in the plainest manner; but the ways in which the lines are disposed are—



1. By a horizontal line, parting off the upper third of the shield or *chief*. (19)

2. By a third part parted off perpendicularly and called a *pale*. (20)

3. By a third portion formed by two diagonal lines drawn from the right or dexter chief point to the left or sinister base point, and termed a *bend*. (21)

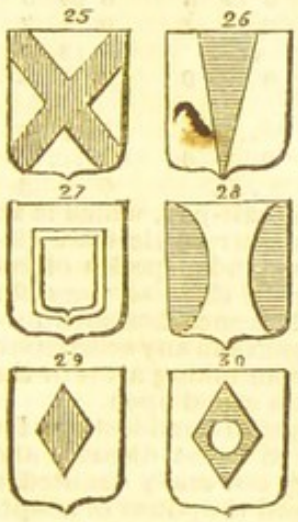
(A *bend sinister* is a similar partition drawn from the left upper corner to the right base point.)

4. By a third portion parted off beltwise exactly through the centre of the shield, called a *fess*. (22)

(A *bar* is similarly formed, but is only one-fifth of the shield in depth.)

5. By an angular partition, called a *chevron*. (23)

6. By a *cross*. (24)



7. By a *saltier*, or figure commonly known as St. Andrew's Cross. (25)

8. By a wedge-shaped figure called a *pile*. (26)

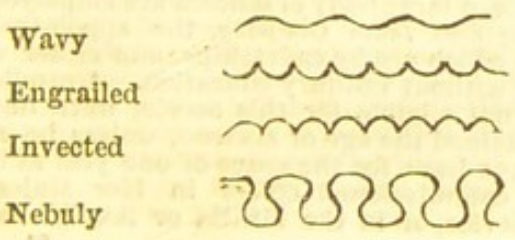
9. By an inner frame or shield placed upon the first called an *orle*. (27)

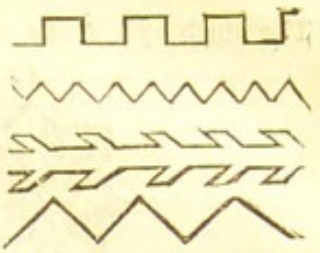
10. By *flanches*. (28)

11. By a *lozenge*, or a figure like the diamond upon playing cards. (29)

12. By the *rustre*, which resembles the lozenge, but is pierced or *voided*, as in fig. 30.

There are other divisions of the shield, but the foregoing are the fundamental ones. They are all subject to a variation as to their outer or inner edges, or both; and these edges are named as follows:—

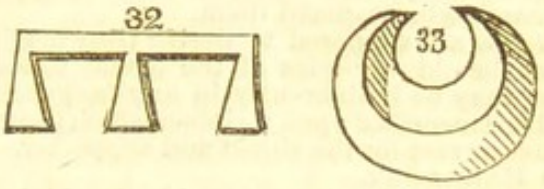




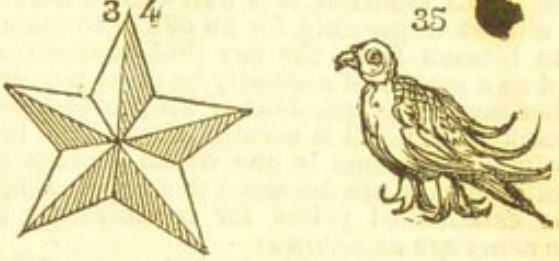
Thus, in speaking of a shield which is charged with a chief or pale of another colour, we must say a *chief* (or a pale) *wavy* (or *embattled*), *or gules* or *azure*, as the case may be.

Differences are marks superinduced upon shields for distinction sake, as thus:—

A *label* or *file* denotes the shield of an eldest son or heir. (32) A *crescent* denotes the shield of the second son. (33)

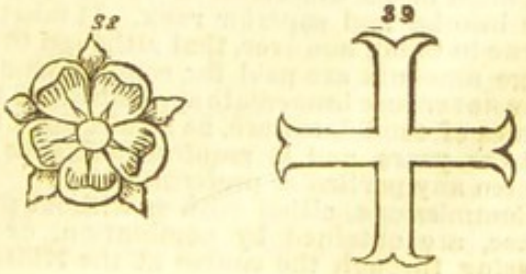


The shield of the third son is distinguished by a five-pointed figure called a mullet. (34) That of the fourth by a *martlet*. (35)



That of the fifth by an *annulet*. (36) The sixth by a *fleur-de-lis*. (37)

The seventh by a *rose*. (38) The eighth by a *cross moline*. (39)



The ninth by a *double quarter-foil.* (40)

40

By the term *charge* is to be understood any figure whatever described upon the field of the escutcheon or shield.

The *crest* is the object surmounting the shield, sometimes attached to a helmet, at others simply resting upon a wreath.

Supporters are generally animals real or fanciful, placed at either or both sides of the shield. They are not of very ancient origin, Henry VIII. being the first English monarch who assumed them.

Mottoes are supposed to derive their origin from the old war-cries of the feudal times. They may be indifferently in any language, and are inscribed upon a ribbon which forms a base or rest for the shield and supporter.—See HERALDRY.

ARMY. — Appointments in the higher grades of this profession are, generally speaking, obtainable by purchase, and consequently it is an occupation that is principally confined to the sons of the upper and richer classes. In addition to the first expense thus incurred, it is well known that it is almost impossible for an officer to maintain himself from the pay that he receives, and as a matter of necessity he must possess other means independent of his professional remuneration. It is certain, then, that the profession of arms is one which persons of limited means are debarred from embracing. The established prices for commissions in the army are as follows:—

Life Guards	Lieutenant	£1785
,,	Cornet	1260
Horse Guards	Lieutenant	1600
,,	Cornet	1200
Dragoons	Lieutenant	1190
,,	Cornet	840
Foot Guards	Lieutenant (with rank as Captain)	2050
,,	Ensign (with rank as Lieutenant)	1200
Regular Infantry	1st Lieutenant	700
Regiments	2d do.	500
,,	Ensign	450

These commissions permanently retain their value, so that an officer wishing to sell out may obtain the same amount for his commission as he gave for it.

Promotion may also be purchased by the payment of the difference in value between the inferior and superior rank. It must be borne in mind, however, that although these large amounts are paid for commissions, it does not ensure immediate appointment; the names of candidates are, as a rule, upon the list for years, and it requires influence to hasten any particular preferment.

Commissions, either with or without purchase, are obtained by nomination, or by passing through the course at the Military College at Sandhurst. After a cadet has pursued his studies for a certain period at this establishment, he undergoes an examination, embracing history, geography, arithmetic, fortification, and one of the three European languages at his discretion. The expenses of education at Sandhurst College are: for the sons of officers in the army under the rank of field officers, £40 per annum; for the sons of regimental officers, £50; for the sons of colonels and lieutenant-colonels, £70; and for the sons of general officers, £80. The sons of naval officers of equal rank are also admissible upon the same terms.

No person is eligible to a commission until the age of sixteen; application must be made by letter to the military secretary of the Horse Guards, accompanied by recommendations certifying the eligibility of the candidate with respect to education, connections, and bodily health.

When a subaltern first joins the army, he undergoes a drilling from the sergeant-major and adjutant until he has acquired a military bearing, and an insight into his duties; and when reported fit for duty, is permanently posted.

Promotion without purchase is extremely slow, except in the time of war, and this tardiness is naturally the result of the number of superior officers being wholly disproportionate to that of the inferior grades. The pay of officers in the army is at the following rate *per day*:—

	Cavalry. £ s. d.	Infantry. £ s. d.
Lieut.-Colonel	1 3 0	0 17 0
Major	0 19 3	0 16 0
Captain	0 14 7	0 11 7
Do. with Brevet	....	0 13 7
Lieutenant	0 9 0	0 6 6
Do. after 7 years' service	....	0 7 6
Cornet	0 8 0	....
Ensign	....	0 5 3

Officers are entitled to half-pay, which is an allowance made when their services are dispensed with for a time, and a species of retaining fee for securing their services for future need. This allowance becomes forfeited if the officer engages in any occupation which prevents him from taking arms in the event of his being again called upon.

The moral and physical qualifications for an officer are a power to resist disease, and endure fatigue, energy not easily daunted, a cheerful disposition, and the power of adapting himself to every situation and circumstance. During the varied and bustling life of a soldier, each and every one of these qualifications will be called into requisition, and considerably tend to diminish the disagreeable phases of a necessarily unsettled life. Independently of Her Majesty's Service, a large body of officers are employed by the *East India Company*, the appointments to which are by cadetships, and either with or without military education. A candidate is not eligible for this service until he has attained the age of sixteen, unless he shall have been for the space of one year at least a commissioned officer in Her Majesty's Service, or in the Militia or fencible corps

when called into actual service, or in the Royal Artillery. Candidates previously to admission as cadets are examined in English dictation, mathematics, history, geography, fortification, and drawing. Testimonials must also be produced of good moral conduct during the two years previously. Although the officers of the East India Company's Service are disqualified for taking rank except in that part of the empire they serve, they have reason to congratulate themselves upon occupying a much better position than the officers of Her Majesty's Service, for in addition to their pay being much larger, their promotion is more certain and rapid, the opportunities of employment more numerous, and the pension more liberal.

A great deal of the patronage of the East India Company is vested, as a matter of course, in the Court of Directors; but a son of a retired or deceased company's officer is regarded as possessing peculiar claims for selection.

Books: *Campbell's British Army as it Was, &c.; Griffith's Artillerists' Manual; Bismark's Cavalry Tactics; Gurwood's Wellington Dispatches; Hodge's Catechism of Fortification; Pasley's Elementary Fortification; Muller's Elements of Fortification; Stocqueler's Catechism of Field Fortification; Malroti's Treatise on Permanent and Field Fortification; Spearman's British Gunner; Lewis's Infantry Drill Manual; Sinnott's Light Infantry Manual; Suasso's Infantry Movements; Montmorency's Lance Exercises; Palmer's Line Movements; Scott's Military Code; Burn's Military Dictionary; Martin's Guide to Military Examination; Samuel's Military Law; Malroti's Military Plan Drawing; Bordieu's Military Position; Ney's Military Studies; Mitchell's Military Tactics; Stocqueler's Officers' Duties; Malcolm's Instructions to Officers.*

ARNOTT'S STOVE is a close fireplace, invented by Dr. Arnott with a view to economy in both fuel and heat. The stove consists of an exterior iron case, lined with fireclay: the fuel is burned in a box or vessel within the case; there is one opening in the outer case to admit fuel, another to remove ashes, and a third at which a flue may be fixed to carry off the products of combustion. These apertures being closed, air is admitted by a very small opening near the level of the burning fuel, and this closes by a self-acting valve. When the fire is too fierce, the valve refuses to admit any more air until the heat becomes subdued; but under average circumstances, the valve admits only a steady stream of air. By this process the heat of the apartment is regulated, and the wasteful consumption of fuel is rendered a matter of impossibility.—See CHIMNIES, FIRES, GRATES, STOVES, &c.

AROMATIC CONFECTION.—Nutmeg, cinnamon, and saffron, each two ounces; cloves one ounce, cardamoms half an ounce, prepared chalk one pound, white sugar two pounds. Rub the dry ingredients together into a very fine powder, and keep them in a well stopped bottle. When the confection is to be used, to each ounce of the powder add two fluid drachms of water, and mix all the ingredients together until they are thoroughly incorporated.

☞ Nutmeg, 2oz.; cinnamon, 2oz.; saffron, 2oz.; cloves, 1oz.; cardamoms, ½oz.; prepared chalk, 1lb.; white sugar, 2lbs. *Proportion:* powder, 1oz.; water, 2 drachms.

AROMATIC MIXTURE.—Mix two drachms of aromatic confection with two drachms of compound tincture of cardamoms, and eight ounces of peppermint water. *Dose*, from one ounce to one and a half. *Use*, in flatulence, cholic, and spasms of the bowels.

AROMATIC TINCTURE.—Mix bruised cinnamon, cardamom seeds, and bruised white ginger, one ounce each, with two drachms of long pepper, and a quart of spirits. Infuse for a fortnight in a warm, dry place, and strain. *Dose*, two teaspoonfuls in a glass of weak wine and water. *Use*, as a restorative for debility, langour, and depression.

AROMATIC VINEGAR.—Mix acetic acid one pound, oil of cloves one and a half drachms oil of rosemary one drachm, oils of bergamot, cinnamon, pimento, and lavender, each half a drachm; neroli twenty drops, camphor two and a half ounces, rectified spirit two fluid ounces. Or the following for extemporaneous purposes: acetate of potash one drachm, oil of vitriol twenty drops, oils of lemon and cloves, of each three drops. *Use*, as a refreshing perfume for faintness, &c. *Caution*, it is highly corrosive, and therefore should be kept from coming in contact with the skin and clothes.

AROMATICS.—This term includes certain drugs or spices possessed of considerable warmth, and a strong aroma used in medicine to impart an agreeable flavour to mixtures or lotions; but though generally used as mere condiments, or as vehicles for unsavoury physic, aromatics are frequently employed from their stimulating and antispasmodic properties in combination with other articles as carminatives.—See CARMINATIVES.

ARRACK is the Indian name given to all spiritous liquor, but chiefly to that which is distilled from rice, and a vegetable juice from the cocoa tree called toddy. Arrack is but little known in England, and is seldom used except occasionally to flavour punch, and other compounds.

ARRACK, MOCK.—Mix three gallons of rum, half an ounce of flowers of benzoin, quarter of an ounce of balsam of tolu, quarter of an ounce of pineapple juice; let them stand for a month, with occasional stirring, then rack.

ARRANGEMENT WITH CREDITORS is the mode by which a debtor extricates himself from pecuniary embarrassment, without the interference of the Courts of Bankruptcy or Insolvent Debtors. A debtor finding himself in the position of being unable to meet his engagements, but believing that time be given him by his creditors he will be able ultimately to satisfy their demands, should call his creditors together, and take their advice as to the best course for him to pursue. To conduct this proceeding successfully a little judgment and tact are required; and, in the first place, the debtor should avail himself of the services of a respectable solicitor, who is both able

and willing to assist him *personally* in the matter. Thus provided, he should wait upon his creditors, and acquaint them with the state of his affairs; and having so done, a meeting should be called and a proposal laid before them, showing how their claims may be compromised or liquidated with the greatest advantage to themselves. After the circular calling the meeting has been despatched, it would be as well that the debtor should again wait in person upon those creditors favourable to an arrangement, and urge their attendance. The law has made provision against unreasonable opposition to such a course, by declaring that a deed of arrangement executed by 6-7ths in number and value of the creditors is (under certain conditions) binding upon the whole. The mode of payment is generally by instalments, at stated intervals.

Another method of arrangement is for the debtor to be empowered to wind up his affairs, under the superintendence and control of two or more of his largest or most influential creditors, and, as his estate is realized, to declare dividends from time to time until the produce thereof, up to the period of his stopping payment, has been exhausted. By this means the debtor is enabled to carry on his business as heretofore; all transactions subsequent to the suspension of payment being kept distinct and separate, and wholly free from any claim by previous creditors. Should the debtor fail to persuade the creditors to allow him to wind up his affairs under either of these arrangements, he ought then to propose to place his affairs in the hands of trustees, by whom the estate should be got in, and divided amongst the creditors.

A third arrangement is that which is conducted under the control of the Court of Bankruptcy. These proceedings are commenced by the debtor himself petitioning the Court for protection. But in order to do this successfully, he must have immediate assets to the value of £200 and upwards, and deposit a sum of not less than £10, and not exceeding £30, for expenses. The protection having been granted, an official assignee is appointed, under whose supervision the arrangement is carried out. Matters are then conducted by private meetings of the creditors; and the terms of compromise having been agreed upon, the estate of the petitioning trader vests in the official assignee, who accounts to the Court once in every six months for all monies and effects appertaining to the estate. When the arrangement is carried into effect, the petitioning trader receives a certificate that is equally as operative as one received under the ordinary bankruptcy proceedings. The advantages derivable from private arrangement with creditors, in addition to the saving of expense and the avoidance of exposure, is, that a person is permitted to conduct his affairs undisturbed, and without any material detriment to his prospects or position. It should be borne in mind that the success of an arrangement with creditors depends in a great measure upon the debtor himself. He must not only be able to convince his creditors of his integrity and good faith, but must also submit such a clear statement of his affairs as will carry out by facts and figures the representations and proposals made.

ARREST.—An arrest is the taking into custody the defendant's person for a debt or damage during the progress of a suit. The debt or damage must be for £20 or upwards, and the plaintiff must show a reasonable presumption for believing that the defendant means to go abroad promptly, and to reside abroad. An arrest may be made at any hour even of the night, but not on a Sunday. An officer may not break open an outer door of the defendant's own dwellinghouse, but after admission to the house he may an inner door. In the house of a stranger, after demand of admission and refusal, an officer may break open even an outer door.

ARROWROOT is a farinaceous substance obtained from the grated root of an East and West Indian plant, *maranta arundinacea*, and its name originates through being confounded with another root used by the Indians as an antidote against poisoned arrows. The *properties of arrowroot* consist in being an easily digestible and soothing food, and is thus adapted for children, invalids, and weak stomachs generally. It should not, however, be persisted in as a diet for any length of time, as it is destitute of the nitrogenous elements of nutrition, and consequently does not possess sufficient stay or support for the stomach. It should also be observed that, except in inflammatory diseases, a little brandy should be mixed with this food in order to correct the acidity which it is liable to create in the stomach. The *adulteration of arrowroot* is, perhaps, more extensive than in any other article, owing to the ease with which it may be imitated, and the difficulty of detection. This, however, applies to that casual glance which persons are generally content with giving when purchasing articles of food, for upon a close inspection, and the exercise of discriminatory powers, the mock arrowroot is easily distinguished from the true. *Genuine arrowroot* is of a dull white colour, and when pressed in the hand yields a peculiar crackling sound, and also retains the impression of the fingers; it is perfectly free from either taste or odour, and retains these characteristics even when mixed with boiling water. The jelly will also remain firm and sweet for three or four days. *Adulterated arrowroot* is concocted in a variety of ways, but chiefly from equal parts of potato flour and sago meal. The colour is of a clearer white than the genuine kind, it contains glistening particles, feels soft to the touch, and has both the flavour and smell of raw potatoes; when mixed the jelly is wanting in firmness, and will turn thin and sour in twelve hours or less. Arrowroot should never be bought in canisters or other packages—firstly, because greater facilities are thereby offered for adulteration; secondly, because arrowroot having no aroma does not require to be kept closed; and, thirdly, because the price of tin canisters or other enclosures adds materially to the price of the article. The chief inducement

held out to purchasers in this, as in every other article of adulterated food, is lowness of price; it will easily be understood, however, that this is an unwise economy, since adulterated arrowroot has properties the very opposite of the genuine, and instead of soothing the stomach, irritates and corrodes it; this is the reason why we so frequently hear patients say that they cannot take arrowroot, because "it does not agree with them." Genuine arrowroot may be obtained at first-class grocers, and Italian warehouses.

ARROWROOT WITH MILK.—Mix three tablespoonfuls of arrowroot with a little water until it has become quite smooth; after standing a quarter of an hour pour off the water, and add the necessary quantity of sugar. Then boil a pint of milk, gradually pouring it over the arrowroot and stirring it well.

ARROWROOT WITH WATER.—Mix the arrowroot as in the preceding, and add boiling water instead of milk in which a piece of lemon has been boiled; add a glass of sherry or port wine, sweeten with sugar, and flavour with nutmeg.

ARROWROOT BLANC-MANGE.—Mix a teacupful of arrowroot with a little cold milk until quite smooth; boil a pint of milk with ten sweet and four bitter almonds that have been blanched and pounded; stir in powdered loaf sugar sufficient to sweeten, and after straining pour it gradually upon the arrowroot, stirring in the meantime; then boil it up for a few minutes, pour into a shape, and let it remain till cold.

☞ Arrowroot, teacupful; milk, 1 pint; almonds, 10 sweet, 4 bitter; sugar, sufficient.

ARROWROOT CREAM.—Mix two tablespoonfuls of arrowroot with half a pint of water, let it settle well, and then pour the water off; boil two quarts of milk with the peel of one lemon and a stick of cinnamon, strain it, and pour over the arrowroot, stirring continuously till cold, sweeten to taste. This is an agreeable addition to fruit tarts or preserved fruits.

☞ Arrowroot, 2 tablespoonfuls; milk, 2 quarts; lemon, 1 peel; cinnamon, 1 stick; sugar, sufficient.

ARROWROOT JELLY.—Mix a tablespoonful of arrowroot with half a pint of water till quite smooth; boil for five minutes, season with nutmeg and sugar and place it in a mould or dish to grow cold. This jelly is a specific for simple diarrhœa.

ARROWROOT PUDDING.—Mix two tablespoonfuls of arrowroot in a teacupful of milk, and pour upon it a pint and a half of boiling milk; add to this when nearly cold the yolks of four eggs well beaten, two ounces of pounded loaf sugar, and two ounces of butter in small pieces; season with nutmeg, and bake in a dish for twenty minutes.

☞ Arrowroot, 2 tablespoonfuls; milk, 1 pint and a half and teacupful; eggs, 4 yolks; sugar, 2oz.; butter, 2oz.; nutmeg to season.

ARSENIC is a metal existing under a variety of conditions, and extensively used in arts and manufactures. When it takes the form of arsenious acid, or *white arsenic*, it becomes a deadly poison if taken incautiously, but when administered with certain restrictions, has several valuable medicinal properties. Arsenic is also vaguely said to possess the property of imparting an *embonpoint* to the figure, and of bestowing a bloom to the complexion and a brilliancy to the eyes. A short account of circumstances recently occurring in connection with this subject will be neither irrelevant or unimportant.

One of the most extraordinary criminal trials on record is that of Madeline Smith, who was accused of having caused the death of Emile L'Angelier by the administration of arsenic. The trial lasted several days, and the verdict of not proven was returned. In the course of the defence the counsel, in order to account for the purchase of arsenic by the accused, declared that she habitually used it as a cosmetic; and to explain away the presence of arsenic detected in the body of the deceased, raised a theory partially believed in, that the eating of arsenic improved and beautified the person. With regard to the first statement of arsenic in the character of a cosmetic, it was proved by actual experiment that if an ounce of arsenic were placed in a basin of water, it would sink to the bottom and remain nearly intact and insoluble, and it could not possibly impregnate the water sufficiently to produce the effect desired. With regard to the eating of arsenic, it was said to be habitually practised in several parts of the world, and works were referred to, to carry out the hypothesis. In *Chambers' Edinburgh Journal and Johnston's Chemistry of Common Life*, it is stated that in Lower Austria, Styria, and Hungary, especially among the peasantry and mountaineers, it was a common practice to eat arsenic for the purpose of producing a fulness and plumpness of the figure, together with a fresh healthy complexion, and a brilliancy of the eye. It was stated that the arsenic was so taken during several days in the week, and that the dose was gradually increased until as much as four grains had been known to be taken at one time. It was also stated that at Vienna and Frankfort-on-the-Maine it was a common practice for coachmen and horse-dealers to administer arsenic to the horses, in order to give a sleekness to their appearance and a polish to their coats. These extraordinary assertions, so utterly opposed to preconceived notions in connection with arsenic, gave rise to a strong controversy among the medical profession; and Dr. Inman, who is regarded as an authority on questions of this nature, undertook to meet and rebut the statements made. He set out by saying that as the poison, in the instances in question, is purchased from hucksters and pedlars, the probability is, as in all cases where articles are largely consumed by the lower classes, that the poison is extensively sophisticated by foreign admixtures, so that even in so large a dose as four grains there would be but a small percentage of arsenious acid. The plump and blooming appearance referred to, he says, are merely swelling and inflammation, the natural consequences of the action of the arsenic known to every medical man. In reference to

horses, he ascribes the sleekness of their appearance to the constant falling off of the old hairs, and the as constant renewal of young ones, arsenic being a powerful depilatory. Dr. Inman further states that one-tenth part of a grain is the limit for safe administration for an adult, and concludes thus: "If any one feel disposed to try the effects of arsenic, let me give them the following caution—to use only a preparation the real strength of which they know. Fowler's solution contains the 1-120th of a grain in a drop. Very few indeed can bear to take five drops three times a day. It is best borne on a full stomach. It soon produces griping, sickness, and purging. Its use should be universally suspended every alternate fortnight. The dose cannot be increased indefinitely or with impunity. When once the full dose that can be borne is ascertained, it is better to begin with that, and go on diminishing it to the end of the fortnight, than to begin with a small dose and go on increasing it daily. Lastly, let me urge upon all who take this step to make some written memorandum that they have done so, lest in case of accident some of their friends may be hanged in mistake."

ARSENIC, POISONING BY.—The symptoms of poisoning by arsenic are pricking and burning pains in the stomach, heat in the mouth, and excoriated lips, violent gripings in the bowels, succeeded by vomiting and purging, unquenchable thirst, pains in the region of the heart, great anxiety and collapsing of the features, twitching of the muscles, rigors, convulsions, and death. The main thing to be achieved is to empty the stomach as quickly as possible with the stomach-pump or an emetic; for this latter a dose of fifteen or twenty grains of sulphate of zinc, or ten grains of sulphate of copper, is the most efficacious, producing almost instantaneous vomiting, without exciting the previous stage of nausea which so frequently characterises other emetics. On the other hand, violent emetics are objected to, because they increase the irritation caused by the poison. With this view of the case, it is recommended to excite vomiting by making the patient drink large quantities of warm water, milk, water containing sugar or honey, linseed tea, and other mucilaginous fluids, the throat in the meantime being tickled with the finger or a feather. Of the two modes of treatment, the latter is undoubtedly the most advisable for unprofessional persons to pursue. Or in the absence of ordinary emetics, give a tablespoonful of mustard seed, or a dessert spoonful of powdered mustard made thin with warm water and drank off immediately. When the stomach has been emptied, honey, treacle, mucilage, flour and water, the whites of eggs and milk, must be given in quantity and frequently repeated, the object being to involve any particles of arsenic remaining, and to protect the coat of the stomach from the further irritation of the poison. These remedies are suggested, supposing that a medical man is momentarily expected, and that the operation produces the desired effect. But where medical aid is not to be obtained, and the sufferer is not relieved by the application last-named, the sulphate of zinc must be administered. Arsenic produces its fatal effects by absorption; and agreeable with this principle, such liquids should be administered as are least liable to dissolve the poison in the stomach. When the stomach, therefore, is emptied of its contents by vomiting, lime water should be drunk. After the immediate danger has been overcome, the regimen of the patient should be carefully attended to, in order to restore him as speedily as possible to convalescence; for this purpose his diet should chiefly consist of milk, gruel, cream, rice, and beverages of an emollient and mucilaginous character. In connection with this subject, persons should be cautious in their use of many articles which have arsenic in their composition; thus, for instance, the envelopes which are tinted on the inside are dangerous, because arsenic is mixed with the colouring matter, which being frequently brought in contact with the tongue is apt to produce the worst consequences. Arsenic is extensively used in the arts and for many articles of domestic manufacture besides giving a tone to envelopes; the papering of our rooms is so deeply impregnated with arsenic, especially the green colours, that crystals of arsenic may be obtained from the air of the apartment where these arsenical papers are used. It also enters largely into the manufacture of candles, to purify foul tallow and give the candle hardness; the arsenic consequently given off from the combustion, and inhaled into the system in the form of vapour, is often dangerously large. Again: arsenic is employed to a great extent to colour children's toys and sweetmeats; and the utmost care should be employed in selecting all such articles for the use of children.

The principal medicinal properties of arsenic are those of a tonic and febrifuge character, and its dose is from 1-16th to 1-10th of a grain taken three times a day.

ARSON is the wilfully and maliciously setting fire to any church, chapel, house, warehouse, office, barn, hovel, or shed; any stack of grain, hay, straw, wood, turf, or coals, whether the same shall then be in the possession of the offender, or of any other person, with intent thereby to injure or defraud any person. It is a felony, and the offender is liable to be transported for his natural life, or for not less than fifteen years, or to be imprisoned for any term not exceeding three years, with or without hard labour, or solitary confinement. If the offender is under eighteen years of age, in addition to any other sentence, he may be publicly or privately whipped, not exceeding three times.

ARTERIES are long, hollow, pulsating tubes, consisting of three coats, muscular, fibrous, and mucous, which like pipes from a reservoir, spring from the heart, and convey the blood from that organ to the remotest part of the body. Arteries are highly elastic, and admit of considerable expansion and contraction, according to the exigencies of circumstance and motion. The great difference

between an artery and a vein consists in the former arising in large vessels from the heart, and after dividing and subdividing, gradually diminishing in calibre as they recede from it, till terminating in the finest filaments on the surface of the body. Veins, on the contrary, commence in minute fibres or capillaries, and gradually enlarge into branches and trunks as they converge to the heart, *into* which they all terminate by two large vessels. The next distinguishing feature of an artery is its pulsation, the blood being propelled along its tube in jerks, exactly synchronous or in rhythm with the action of the heart; this peculiarity of the artery is perceptible in the smallest and most removed ramification, as accurately as to time as in the great vessels in immediate proximity to the heart. Lastly, arteries are distinguished by the colour and warmth of the blood they carry; arterial blood being of a bright scarlet, and of a slightly higher temperature than venous blood, or the blood of veins, which is always of a dark red or purple colour. See CIRCULATION, HEMORRHAGE, PULSE, WOUNDS.

ARTESIAN WELLS are perpendicular perforations through which water rises from various depths below the surface of the soil. The name is derived from Artois, a district in France. Artesian wells are most available for supplying water to houses situated in low and level districts, where water cannot be obtained from springs or wells of ordinary depth. They may also be introduced into fish-ponds, for the water being of a warm and equal temperature, obviate the effects produced by the extreme variations of the seasons.

ARTICHOKE, CULTURE OF.—Of this plant the globe shape are considered most serviceable, and the conical or French as possessing more flavour. Generally speaking artichokes are produced from July to November, but, under peculiarly favourable circumstances, they may be produced a month earlier or later. Their *propagation* is by young shoots rising in the spring from the old plants. These offsets should be taken from the parent plant in March or April, according to the progress of the season, and separated with as much root as possible. Holes fifteen inches in diameter and twelve inches deep should then be dug and filled with dung, and compost. These holes should be made in double rows; each plant four feet asunder, and each row two feet apart. Water occasionally, and hoe and weed the ground between them. When the entire crop is taken, the plant should be cut close to the ground, so as to allow more room for young shoots. But when it is desired to encourage the production of the large main heads, the lateral shoots are separated when young. For *winter dressing* the large leaves should be removed in November, the earth dug round, and raised close about each plant; and in frosty weather they should be covered with litter a foot deep. These plants require to be well manured every twelvemonth or two years at the furthest. They thrive best in a rich deep soil; and a liberal supply of sea-weed mingled with the earth is singularly efficacious in promoting their growth and luxuriance. The artichoke plant continues productive for four or five years, but at the end of that time it begins to degenerate, and new plantations are required. Artichoke bottoms may be preserved for winter by blanching them in water and then drying them.

ARTICHOKE, USES AND PROPERTIES OF.—The *uses* of the artichoke are for cooking purposes, salad, and pickling. Their flowers also contain a coagulating milk, sometimes used instead of runnet. The *properties* of the artichoke are a bitter taste and a diuretic tendency. When cooked it is agreeable to the taste, but not very nourishing; it is, however, easy of digestion, and less productive of flatulence than many other vegetables.

ARTICHOKES A LA BARIGOULLE.—Cut several small and tender artichokes into quarters, and throw them into some water slightly mixed with vinegar; then melt some butter in a stewpan, and put in the artichokes, having first drained them; fry them till they are of a good colour, then add some shred parsley and green onions, salt, pepper, and a handful of bread crumbs; moisten with a ladleful of stock, and let them stew till the liquid is quite thick; serve hot.

ARTICHOKES BOILED.—Cut off the ends of the leaves, the stalk, and the hard leaves underneath; put them in a kettle with boiling water, so as to three parts cover them; add salt, pepper, a bunch of mixed herbs, and a piece of butter. To ascertain if done draw out a leaf, which if easily detached is a safe criterion. Take them out of the water, and put them upside down to drain.

ARTICHOKES BROILED. — Parboil them, remove the chokes, and in their place put a pinch of chopped parsley and chives, some bread raspings, a teaspoonful of oil, salt, and pepper; broil on a gridiron and serve hot.

ARTICHOKES FRICASSEED. — Pare artichokes, and boil them in milk and water for twenty minutes; have ready a sauce made of a piece of butter the size of a walnut, a tablespoonful of flour, and a half-pint of milk, seasoned with salt, pepper, and nutmeg; stew the artichokes in this for five minutes, and serve either plain or with melted butter.

ARTICHOKES FRIED.—Remove from young artichokes all but the tenderest leaves, the ends of which take off. Put into a large dish six tablespoonfuls of flour, three of oil, one of vinegar, two eggs beaten, a wineglassful of water, a little pepper, salt, and nutmeg; beat the whole into a batter with a wooden spoon, and dip in the artichokes, stir them about, and detach those that stick together. When they are of a brown colour, take them and throw into the fry a handful of parsley, which when done take out and drain on a cloth, sprinkle with salt, and dress the artichokes on a folded napkin set round with the fried parsley.

ARTICHOKES PICKLED. — Gather young artichokes as soon as formed, slightly

boil them, then remove them into jars, and cover them with a cold brine of salt and water; let them lie in this for a day, then draw off the brine, and pour in hot vinegar, add ginger, mace, and nutmeg, and tie down.

ARTICHOKES PRESERVED.—Select the finest and cut off the ends of the leaves, scald them long enough to extract the hay, then sprinkle with salt, and let them stand; the following day remove them into an earthen pan with cold water and salt; after lying six hours, change the water, and make a stronger pickle with three or four handfuls of salt, and a quarter of a pint of vinegar; cover them with melted mutton suet, and keep them in jars. When required for use steep them in luke-warm water, and afterwards boil them in a large quantity of water to get rid of the taste of the pickle.

ARTICLE, IN GRAMMAR, is a part of speech used before a noun to define or limit its application. There are two articles, the definite *The* and the indefinite *a*. This last becomes *an* when used before a noun commencing with a vowel or an *h* not aspirated. The definite article *The* is used when we wish to point out any particular person or thing, as "The man who called yesterday called again to-day." The indefinite article *a* or *an* is used when we speak generally of any one person or thing, as "A man called to-day with a message;" or, "A walk by the seaside is pleasant." The absence or omission of the articles *a* or *The* denotes the plural number, as "Man is mortal"—meaning all men; birds fly"—*i.e.*, all birds.

ARTIST, in a limited sense, has reference to a person who occupies himself in drawing or painting. The most profitable branch of this profession is *portrait painting*, in which, if an artist once succeeds to establish a reputation, he is furnished with a certain and handsome income. This is frequently accomplished by the patronage of some notability in the first instance, whose portrait having been taken and extensively exhibited acts as an advertisement and recommends the painter. Sometimes also a portrait painter is established by the countenance and encouragement of a large circle of friends and relations, through whom he is enabled to extend his connection and introduce himself to the world. Without the probability of being aided by one of these auxiliaries, it would be hazardous for a person to attempt portrait painting as a profession by which to obtain a subsistence.

The education of an artist consists in placing the pupil with some professor of the art or at a private school, the cost of which is from £200 to £500. To assist the artist in his education there is the School of Design, where he may pursue his studies during certain hours, and also the Royal Academy; this latter institution confers what are termed travelling studentships, by which the student is enabled to reside on the continent during the space of three years, having £80 allowed for his journey and return, and £130 per annum for his expenditure.

Drawing on Wood is a branch of the pictorial art which, owing to the large increase of illustrated works, employs a great number of persons at various scales of remuneration. An artist having a good conception and a ready hand may, when regularly employed in this capacity, earn a decent income. It is necessary, however, to gain the ear of the publisher before this can be accomplished, and the best method for doing this is to strike out some idea of a novel character, or to pourtray passing incidents in such a manner as will be likely to awaken popular sympathy and gain public approval.

The first essential to an artist is the possession of a natural gift or aptitude to perceive *character*. By character is meant the appearance which one object presents as distinct from every other. The next is, the power to depict the same. This is to be gained by study only. *Ruskin's Elements of Drawing* is an excellent first-book to place in the hands of a beginner; and *Harding's Lessons on Art* is a very useful work considered as an introduction to landscape painting. For mechanical drawing, *R. Scott Burn's Treatise* is a good one. To an artist who aims at the highest results, a thorough knowledge of the proportions of the human figure is essential. This is scarcely to be obtained without "life studies" or drawing from the "nude," as practised at the Royal Academy. For less exalted purposes, a portfolio of *Jullien's Etudes en deux crayons* will serve. Books:—*Harding's Elementary Art; Harding's Lessons on Trees; Harding's Lessons on Art; Harding's Guide and Companion to Lessons on Art; Prout's Microcosm; Bell's Anatomy for Artists; Bell's Expression; Burnet's Practical Treatise on Painting; Burnet's Education of the Eye; Jameson's Sacred and Legendary Art; Chevreuil on Colour; Barnard's Theory and Practice of Landscape Painting; Lavorte's Handbook to the Arts of the Middle Ages; Reynolds's Discourses; Siddons's Gesture and Action; Howard's Drawing-book; R. Scott Burn's Illustrated Drawing-book; R. S. Burn's Mechanical and Geometrical Drawing; Jullien's Etudes; Burchett's Practical Geometry; Bean's Drawing Copies; Calvert's Drawing-book; Needham's Landscape Album; Jarves's Art Hints.*

ARTS, SOCIETY OF.—This is an association established in London which has for its object the encouragement of the arts, manufactures, and commerce of this country, by means of exhibitions, meetings, and correspondence, and by adjudging rewards for works of merit, inventions, discoveries, and improvements. This object is more particularly carried out by committees appointed to consider the various communications received, and to recommend their adoption or rejection by the council. It will be seen by this that where a person has made any invention, discovery, or improvements, in connection with arts, manufactures, or commerce, he can adopt no better course for testing its merits, and making it known among the most influential classes, than by putting himself in communication with the society referred to.

ART UNION.—A society for the encouragement of the fine arts by the purchase of works of art out of a common fund raised

in small shares or subscriptions. The principle upon which the Art Union of London is conducted is, that every person subscribing one guinea or more annually becomes entitled to one or more shares in the advantages held out. A committee of management is appointed out of the body of subscribers, under whose direction the funds collected are expended on the general behalf. At the conclusion of the year each subscriber receives an engraving, statuette, or some other work of art, as an equivalent for his guinea. It will easily be understood that, although this engraving or work of art could not be purchased in the ordinary way for less than a guinea, the large number that is produced in this instance renders the cost of each much less, and consequently leaves a large profit on the transaction. The surplus thus formed is appropriated to the purchase of paintings, sculptures, bronzes, and other works of art, each of which is estimated at a stated value; a public drawing then takes place, in which each member has a chance of obtaining a prize from £10 up to £200, and which, if he is fortunate enough to win, he is allowed under certain restrictions to select for himself.

ASAFŒTIDA.—The article sold in the shops and generally known under this name is a gum resin, of a strong disagreeable odour, resembling onions or garlic, extremely acrid in smell, and remarkably volatile; and as its efficacy depends mainly on the essential oil that gives it its pungency, it requires to be preserved in bladders or well stoppered bottles. Asafœtida is obtained by incisions from the full-grown roots of the plant "Ferula Asafœtida," a shrub common in Syria and Arabia, but found in greater abundance and perfection in Persia. The roots of the old plant are selected as yielding the best gum, from which it exudes in tears, or small conglomerate masses of a red and white or whitish brown appearance, that become hard by exposure to the sun. The leaves of the young plant are used by the natives as a vegetable, and when cooked form a kind of spinach, and the roots cleansed and roasted are eaten as a substitute for the yam and potatoe. As a medicine, the pharmacopœia hardly contains an article of more use and benefit than this most disagreeable but really excellent drug. As an antispasmodic, expectorant, emmenagogue, anthelmintic, and stimulant, it is equally efficacious and certain, and especially in the first-named class for hysteria, or in cases of syncope or fainting, as well as in colic or pains the result of flatulence and indigestion, it is a remedial agent of the highest order. Though kept in the shops in the form of tincture, emulsion, spirit, and pills, it is in the latter shape,—the compound asafœtida pill,—a combination of myrrh, galbanum, aloes, asafœtida, and ginger, that it is most frequently given. One of these pills may be taken three times a day, or two at bedtime and one in the morning; or a small piece of the gum the size of a pill made round by the fingers may be swallowed at any time, as an excellent remedy for flatulence or indigestion, the result of torpidity of the digestive organs.

ASBESTOS.—A soft fibrous mineral, composed of easily separable filaments of a silky lustre. It consists essentially of silica, magnesia, and lime. When woven into cloth, it possesses the property of resisting the action of fire, enabling persons to walk through flames, or carry red-hot iron without being burnt in the slightest degree. In the United States of America asbestos is sometimes used as a lampwick.

ASH.—This is one of the most valuable and useful of British trees. It is prolific in ripening seed, and rapid in growth, hence it is to be met with in every portion of England. The most favourable soil for the growth of the ash is a good strong loam, rather rich, and slightly moist; the moisture, however, must have ready access away from the roots, and not suffered to stagnate. The ash is also fond of shelter, and its most advantageous situation is a valley or glen, or in the midst of a plantation. It will, however, grow well in other soils, excepting thin and wet soils, peaty earth, or gravel. The *culture* of the ash requires that the seed should be gathered in autumn, and immediately sown in nursery beds. Some of the seeds may not rise till the second or third year; but as soon as the seedlings are five or six inches high, they should be rowed out to gain strength, till finally transplanted. There are several varieties of this tree; the most ornamental of which is the weeping ash, which forms an arbour of itself when grafted on a lofty stem. It is most useful when the trunk attains a diameter of three inches, and the underwood is fit to cut every seven years. The wood of the ash combines hard and elastic properties, and being held in universal esteem is put to a variety of uses: among which are spokes of wheels, poles and shafts for carriages, beams for ploughs, tops for kitchen tables, milk pails, oars and ship blocks, handles for gardening and agricultural implements, hop-poles, ladders, and hoops. The bark is used for tanning fishermen's nets and calfskins; and also for dyeing green, black, blue, and yellow colours. The leaves and shoots form a food for cattle, and are also dishonestly appropriated to the adulteration of tea. The ash-keys or buds were formerly considered a delicacy, pickled in salt and vinegar, and served to table for sauce. The sap is used for medicinal purposes. As a fuel it is excellent, burning when new or green better than any other tree.

ASHES.—The remains of anything burnt, whether of animal or vegetable origin, and, to some extent, of mineral bodies also. *Coal ashes* consist almost entirely of the various earths, a small portion of charcoal, and the saline matters, of which sulphate of lime (gypsum) and lime constitute about a fourth. The presence of these substances renders coal ashes favourable to fertilization; it is therefore extensively used as a manure, and as a top dressing for lucern, red clover, sainfoin, and other grains, is superior to any other. As a manure for the garden, they require to be used sparingly and with

caution, their employment in too large quantities is detrimental rather than beneficial. They are extensively used in the formation of walks for gardens and ornamental grounds; spread over the surface of the mould they prevent the depredation of garden mice; and in the case of early sown peas, it will be found that where the surface of the ground is covered with coal ashes, the peas will make their appearance three or four days earlier than those to which no ashes have been applied. Coal ashes are also employed in brickmaking, and are also turned to a variety of domestic uses. *Vegetable ashes* contain carbonate and muriate of potash, phosphate of lime and magnesia, silica, and the oxides of iron and manganese. These constituents, which comprise all the salts required for the food of plants, render vegetable ashes invaluable as a manure, especially when mixed with common manure, the quality of which is considerably improved thereby. The quantity of ashes produced by a plant depends upon its soil, age, and aspect. But all vegetables when green will produce more ashes than when previously dried. Potash and pearlash are obtained by lixiviating the ashes of wood. Animal ashes, peat ashes, and mineral ashes, are also extensively used as manures.

ASPARAGUS.—The soil best adapted for this delicious and highly prized vegetable is a light rich sandy loam, well mixed with rotten dung or seaweed; the soil should not be less than two and a half feet deep, and before planting the bed should be trenched over to that depth, burying plenty of dung at the bottom. The site of the beds should be such as to derive as much sun as possible during the whole of the day, and neither trees or shrubs should be near. *To raise plants from seed*, they may be sown from the end of February to the beginning of April, the first or second week in March being the usual time. The seed should be inserted with a dibble six inches apart, and an inch below the surface; if the weather be dry, they should be watered frequently, but moderately. When the plants begin to appear, which will be in three or four weeks from the time of sowing, the beds should be carefully weeded. If two plants arise from the same hole, the weaker of the two should be removed. Sometimes asparagus is suffered to remain in the bed where it has been sown, and at other times it is *transplanted*. This operation is performed about the end of March in a variety of ways; but the following is one of the most approved methods:—Dig the space required to the depth of five feet; sift the mould that is taken from it, and reject all stones, both large and small; put aside the finest portion of the mould for dressing the bed. Then lay in the materials of the bed in the following order: dunghill manure, eight inches; turf, six inches; manure, six inches; sifted earth, six inches; turf, eight inches; dung, six inches; finest mould, eight inches, which well incorporate with the preceding layer of dung. Divide the whole space into beds five feet wide, by paths constructed of turf two feet in breadth and one inch in thickness. The beds being thus prepared, remove the plants carefully from the seed bed, with a narrow elongated dungfork, taking the greatest care not to injure the roots; the plants must then be laid evenly together, to prevent the roots becoming entangled; this process should be performed expeditiously, as the plants suffer from protracted exposure to the air. In planting them, the bud or top of the shoot must be placed to the depth of an inch and a half in the ground, and at the same time the roots must be spread out as widely as possible, somewhat in the shape of an open umbrella. As each plant is put in the ground, a small piece of stick must be placed near to mark the spot. As soon as the earth is settled and dry, a spadeful of fine sand should be heaped on each plant in the form of a molehill. The plants ought to be two years old when they are transplanted; they will even take at three, but at four they are apt to fail. After the plants have been transplanted three years, they will be fit to cut for use. Cut off the buds within the ground with a narrow sharp pointed knife, or small saw, thrusting it down straight close to each shoot, separately; cut it off slantingly and with care not to wound the younger buds shooting below. Cutting should be discontinued about the first week in June, the common practice being to let asparagus grow when green peas come in. Towards the end of October or beginning of November, the stalks which have run up to seed having done growing, or begun to decay, cut them down close, and carry them away; then hoe off all the weeds from the beds, and lay on a coating of good dung, and thus let it remain till spring. About the end of March, or the beginning of April, before the buds begin to advance below, loosen the surface of the beds with a three-pronged fork, and turn up the top earth carefully without injuring the roots; this process, by admitting air, moisture, and sunshine, enables the shoots to rise in free growth. *Forcing* asparagus takes place in the beds themselves, without disturbing the roots; the trenches are filled with hot dung, and the beds are covered with the same material about six inches deep; by these means the plants will be fit to cut early in the spring, but at the same time the tenderness and flavour suffer in proportion. When it is desired to have exceedingly large heads of forced asparagus, pieces of bamboo, or any other hollow tubes, should be put over the shoots when they first make their appearance, they will thus acquire a length of as much as eighteen inches. As the successful culture of asparagus mainly depends on the preparations that are made for it, it would be as well for an inexperienced person to have in the first instance the assistance of a practical gardener.

ASPARAGUS A LA FRANCAIS.—Boil asparagus, and chop the heads and tender part of the stalk, together with a boiled onion, into small pieces; add a little salt and pepper, and the beaten yolk of an egg; beat it up. Serve it on sippets of toasted bread, and pour over it a little melted butter.

ASPARAGUS A LA PARMESAN.—Boil asparagus tops in water with a little

salt; spread on some grated cheese, with butter; place on this a layer of asparagus, then cheese and butter, and so on, alternately, finishing with the cheese and butter; brown in a Dutch oven.

ASPARAGUS AS PEAS. — When the asparagus are young and green, cut the heads off in pieces of equal size, about the third of an inch in length; wash them well, and put them into boiling water with the customary quantities of salt, and a very small portion of carbonate of soda: let them boil for ten minutes, drain them thoroughly, and lay them on a clean napkin; wipe them gently until they are quite dry, and then put them into a stew pan with a good slice of butter, which should be dissolved just immediately before the asparagus is put in. Stew them in this over a brisk fire for ten minutes, shaking them well; dredge in a teaspoonful of flour, and half that quantity of sugar; then pour in boiling water to cover the asparagus, and boil it rapidly until nearly all the liquid is absorbed; stir in the beaten yolks of two eggs, heap the asparagus high on a dish, and serve hot.

ASPARAGUS, BOILED.—Scrape the stalks quite clean, and then let them soak in salt and water for an hour. Cut them of an equal length, and tie them up in small bundles with tape; boil them gently in three different waters till the stalks are tender, which will be in about half an hour. Dip a delicate toast, about half an inch thick, with the crust cut off, into the asparagus liquor; untie the bundles; lay the asparagus upon the toast, and serve with melted butter in a sauce boat.

ASPARAGUS IN CREAM.—Boil asparagus as usual; parboil half a pint of cream with a little butter, stir till the butter is melted, season with pepper and salt, and pour it over the asparagus.

ASPARAGUS PICKLED. — Select the largest asparagus, and after cutting and washing the heads, immerse them in water, and let them lie for three hours. Scald them in boiling salt and water, drain them quite dry, and lay them on a napkin to cool. Make a pickle of vinegar and salt, according to the quantity of the asparagus. To a gallon of pickle put two nutmegs, and a quarter of an ounce each of mace and white pepper, whole; put the asparagus into a jar, pour the pickle hot, but not boiling, over them, cover the jar with a thick cloth and let it stand for a week; then boil the pickle a second time, and when it has stood another week in the same manner boil a third time; let it stand till quite cold, and then cover the jar close.

ASPARAGUS PRESERVED.—Asparagus may be preserved for a day or two by keeping the stalks immersed in cold water an inch deep; and for a week or so they may be kept by burying in fine sand, damped. To preserve green for winter use, take away the white part, and boil the remaining portions for three minutes with salt and butter; then take them out, and put them in cold water for an hour. Then drain thoroughly, and put them by in jars or other vessels, with a sprinkling of salt, a few cloves, a lemon cut in slices, and vinegar and water in equal proportions; cover with butter that has been previously melted to the thickness of a pennypiece, and store in a moderately cold place.

ASPARAGUS, PROPERTIES AND USES OF.—Asparagus is accounted one of the most wholesome and nutritious of our culinary vegetables; it is both a diuretic and a sedative, and is recommended in cases of dropsy, stone, and affections of the chest and lungs. For the latter complaint especially the following extract will be found serviceable:—Boil the asparagus in water for several hours, then strain, and evaporate the liquor gradually over a very slow fire until it becomes exceedingly thick; then add a wineglassful of brandy to each pint, and put by in bottles. Take a tablespoonful night and morning in warm milk.

ASPARAGUS SALAD.—Boil the heads of large asparagus, previously scraped, till nearly done; strain and put them into cold water for five minutes, and drain them dry, afterwards lay them in rows on a dish; mix with dressing as other salads.

ASPARAGUS SOUP.—Cut the greenest half of the asparagus into pieces about an inch long; reduce the remaining portion to a pulp, and boil in water till quite done; boil the pieces separately, strain the soup made from the pulp, add the pieces, and serve hot with sippets of toast.

ASPARAGUS WITH EGG.—Beat up two or three eggs, and season with pepper and salt; boil asparagus as usual, cut them into small pieces of the size of peas, and stir them thoroughly into the eggs; melt two ounces of butter in a stewpan, and pouring in the mixture stir it till it thickens, and serve hot on toast.

ASPECT.—Previously to a house being built or occupied, its position in relation to air, light, &c., is a consideration of the highest importance, both as regards health and general comfort. A southern aspect has the advantage of the sun's rays during the greater part of the day; a northern aspect on the contrary never has full sunshine. An aspect to the east has the sun only in the morning; an aspect to the west, the sun only in the evening. The most preferable aspect of any however is south-east; not only because it affords a due amount of both warmth and light, but because in most parts of Great Britain the wind blows less frequent from that quarter than from any other; and when it does blow it is always warm. This aspect is beneficial also to the grounds and garden attached to a house; the former drying sooner after rain, and the latter producing earlier and finer crops of vegetables, fruits, and flowers. The consideration of aspect is not confined to the house itself, but also extends to the apartments of a house; of these the most important in connection with this subject are the sleeping-rooms, the children's nursery, and the chambers of the sick. A *sleeping-room* should have an eastern aspect, because it then receives the first rays of the sun, and has time to become cool again before the hour of retiring to rest. *Children's nurseries* should have a south-

eastern aspect, because it has the advantage of receiving the morning rays of the sun, without the drawback of the sultriness of an afternoon. *Sick chambers* should have a northern aspect, because the heat of the mid-day and afternoon sun is avoided, and the degree of air and light may be regulated, which cannot be done if the windows face any other quarter. The aspect of the remaining apartments of a house is a matter of minor importance.

ASPHALTE.—This is a material recently introduced into building, and which has many valuable properties. It is a compound of carbonate of lime and mineral pitch, and is found in a natural state in the south of France. The chief properties of asphalte are, that it is impervious to both sun and rain, repels vermin, is slightly elastic, and possesses an equable temperature. These properties, independently of their several advantages, are generally conducive to durability, and consequently render asphalte a desirable material for many uses in domestic and rural economy. Among these are as floorings for stables, barns, and other outbuildings ; foot-pavements for gardens, yards, and terraces ; covering for flat roofs, and lining of water-cisterns. Asphalte may be formed artificially in England, equally as good and cheap as that which comes from France. The following is the recipe : eighteen parts of mineral pitch, and eighteen of resin ; put into an iron pot, and boiled for a short time ; after which add sixty parts of sand, thirty of small gravel, and six of slacked lime. The foundation must then be rendered dry, and brought to a level with gravel or small stones ; then take the mixture out of the pot with a shovel, and spread it evenly in a boiling state over the prepared surface ; the depth required is, two inches for ordinary pavement, and three for floors and flat roofs.

ASPHYXIA is that condition of the body most nearly allied to death, in which the vital principle may be said to be in abeyance, but not extinct ; where the heart and lungs have ceased to act, and the body without pulsation or feeling presents the appearance of an inert mass. Whatever interrupts the respiration and arrests the action of the heart, throws the body into that state which is known as suspended animation or asphyxia. In this manner drowning, hanging, and the inspiration of mephitic air or noxious gases, if continued only for a very brief time, produces a simulation of death, which, if carried out a little longer, would eventuate in perfect dissolution. The difference between syncope or fainting and asphyxia consists in this : that in syncope the respiration and the circulation are only *impeded*, in the latter they are *suspended*. The same characteristics of insensibility, paleness of countenance, and cold extremities, belong alike to each. Besides the above causes of suspended animation there is another peculiarly fatal to life, and arises from protracted labour, causing a child previously alive, seemingly to die in the birth, and to be brought into the world still born, *The Treatment* of asphyxia is nearly the same from whatever cause it results. The usual mode of procedure is to open the external jugular vein, and relieve the head by a copious bleeding, to inflate the lungs by artificial respiration, dash cold water on the face, stimulate the nostrils with burnt feathers and ammonia, and apply heated bricks to the feet and spine. For the asphyxia of infants, it is necessary, before cutting off the connection between mother and child by tying the umbilical cord, to place the infant in a basin of hot water, or at a temperature of 80 degrees, cleanse the nostrils and mouth of all mucus, and inflate the lungs by means of a pair of bellows ; at the same time friction must be employed rapidly along the spine by the fingers or hand of the operator. Should these means fail, it may be necessary to change the hot for cold water, repeating the same operations. When the cord has been tied remove the child from the basin, rub the chest and spine with brandy, wrap the body in flannel, and lay it on its back on hot bricks, or across a heated warming pan, till some convulsive twitchings of the face give evidence of restored vitality. A few drops of brandy and water may be administered to promote reaction, and the child kept warm till its loud cries give confirmation of its safety.—See DROWNING, HANGING, &c.

ASPIRATE, the peculiar expression or emphasis given to certain letters of the English language, chiefly to the letter H. This emphasis is produced by the mouth or lips in the same way as breath is *expired* or driven out after its *inspiration* or reception into the body.

The H, aspirated, is found at the commencement of a great number of words ; in fact, the number of instances when in such a situation it is *not* aspirated are very few, amounting in all to not more than ten or twelve. The following list may be said to comprehend the whole :—Heir, herb, honestly, honour, hospital, hostler, hour, humble, humility, humour. Even in some of these the use of the aspirate would not be offensive. The real difficulty lies in the avoidance of an aspiration before words which begin simply with vowels, as *h*ounce for ounce, *h*egg for egg, &c. The effect can only be avoided by a careful attention to the spelling of words, and to the conversation of good and correct speakers. It is, however, frequently the case that an educated person finds himself aspirating the vowels. This would probably arise from a hurried mode of utterance when the speaker was carried away with his subject, and did not give himself time to articulate correctly. The best remedy in that case would be in the adoption of a more deliberate style. To avoid putting an H before words beginning with a vowel a very good plan to adopt is, to join the final consonant of the previous word to the commencing vowel, thus : for instance, supposing a person was in the habit of saying "a boiled hegg," let him pronounce the sentence, "a boile-degg." That, strictly speaking, would not be the true pronunciation, but it would be an ap-

proximation to it, and the ear would be less offended by such a sound than by the aspiration given to the vowel e. The omission of the aspirate in cases where it ought to be used, is not less an offence against euphony and grammar: for a speaker to say,

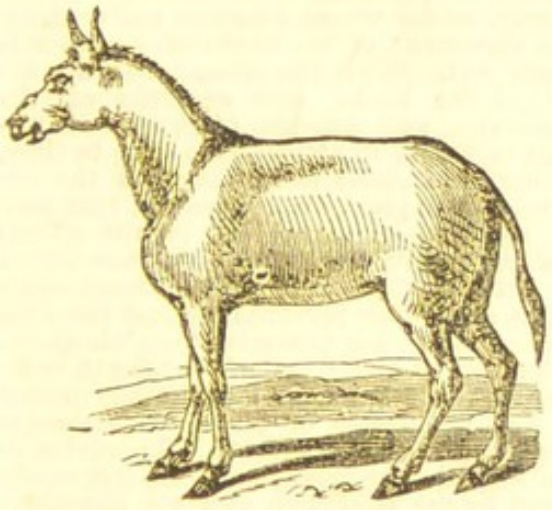
"*E* laughs at scars who never felt a wound,"

is equally as faulty as for a vocalist to sing,

"*H*all is lost now."

There are cases where the aspirate has to be used in a medium degree. In such words as *when*, *where*, *what*, and *why*, the *h* should be heard, or, if the expression may be allowed, *felt to be present*. It is related of the great actor Edmund Kean, that to correct any tendency to drop the *h* in these words, he used to exercise himself in their repetition by adopting an exaggerated pronunciation in the opposite direction, uttering them as if spelt, "*oo-when*," "*oo-why*," "*oo-where*." Another defect in the use of the aspirate sometimes arises from a too great anxiety to be correct. This causes a speaker to lay so much stress upon his H's that they appear to stand out in relief from the other and smooth portions of his discourse. The only genuine remedy, however, for the omission or misapplication of the aspirate is that already pointed out, namely, careful reading, and a close observation of the most cultivated speakers. Read "H? or no H?" in *Enquire Within*.

ASS.—This well-known and valuable species of horse is a descendant of the *Onager*, or wild ass, inhabiting the mountainous deserts of Tartary, &c. The real merits of this animal are but little known in England; the neglect and ill-treatment which it universally receives, have debased and degraded its nature, until we have become accustomed to regard it proverbially as a stupid and almost worthless animal. Buffon attributes this to the fact, that the horse as a



beast of burthen monopolizes all our care and solicitude, he being tended with an amount of care almost equal to that assigned to a human being. But if the ass were to receive only a portion of the same considerate and tender treatment, there cannot be a doubt but that the advantage and profit derived would be equal to, if not greater than, that which is repaid by the more favoured animal. The best proof of this assertion is, that in Spain, Arabia, Egypt, and other countries where the ass receives careful attention, his appearance and capacities are so superior, as almost to engender the belief that he belongs to a totally distinct species from that of our ragged-looking and stunted drudges. The accompanying engravings will illustrate more clearly, the appearance this animal presents under these different modes of treatment.

The nature of the ass is robust and hardy; he is capable of long-sustained efforts, and is peculiarly adapted for hilly and mountainous districts. The most general colour of the ass is a mouse-coloured gray, with a black or blackish stripe extending along the spine to the tail, and crossed by a similar stripe over the fore-shoulders. In proportion as the colour of the ass merges into reddish-brown, or bay, it is considered as an indication of a bad disposition and an inferior capacity. The ass is much healthier than the horse. He requires but little sleep, and only lies down when extremely tired; eats sparingly, and is content with the coarsest food; is patient and sure-footed; and above all, evinces the strongest attachment towards his owner.

An ass can be purchased for about one thirtieth the price of a horse, and may be kept in first-rate health and condition for less than quarter the expense attending the keep of that animal. A good draught horse cannot be purchased much under £30. A capital ass, in the prime, of his age can be purchased for £1. A good draught horse, in full work, will cost his owner upwards of £20 per annum; but the expense of keeping an ass is not as many shillings; for so long as there is a hedgerow overgrown with briars and thistles, or a piece of waste land furnishing a few tufts of rank and bitter grass, the ass will live contentedly and work on, and cost little.

ASSAULT.—An attempt, with force or violence, to do a corporal injury to another, as by holding up the fist in a menacing manner; striking at another with a cane or stick, though the party striking misses his aim; drawing a sword or bayonet; throwing a bottle or glass with intent to wound or strike; presenting a gun at a person who is within the distance to which the gun will

carry; pointing a pitchfork at a person who is within reach; riding after a man and threatening to horsewhip him, so as to compel him to run into a place of shelter; or by any other similar act to denote at the time an intention, coupled with a present ability, of using actual violence against the person of another.—See BATTERY.

ASSAY.—The process of trying or analysing metals, by which their composition and consequent value are determined. This operation is of the utmost importance on account of the fabrications to which plate and trinkets are subjected by unscrupulous manufacturers. The process requires considerable practical skill in its performance, and cannot be undertaken successfully by any person unacquainted with the art. It is, therefore, practised as a profession by itself, there being in London and other large cities persons termed assayers, who undertake to test any metals submitted to them, and to render a faithful account of the result of their operations.

ASSEMBLY, UNLAWFUL.—When three persons or more shall assemble themselves together, with an intent mutually to assist one another, against any who shall oppose them, in the execution of some enterprise of a private nature, with force or violence, against the peace, or to the manifest terror of the people, whether the act intended were of itself lawful or unlawful; and if they only meet for such a purpose or intent, though they shall after depart of their own accord without doing anything, this is an unlawful assembly. If after this first meeting they shall move forward towards the execution of any such act, whether they put their intended purpose into execution or not, this is a *rout;* and if they execute such a thing in deed, then it is a *riot.*

ASSES' MILK, from the close resemblance it bears to the milk of the human female, has long been celebrated for its sanative and nutritious qualities. Asses' milk is particularly beneficial in cases of derangement of the digestive organs and assimilative functions, because it is at once nutritious, and unproductive of irritation while digesting. Consumptive patients, especially, derive the greatest benefit from this source, for frequently when all other remedies have failed, asses' milk alone has been the means of sparing and prolonging life. In order that the remedial properties of the milk may not be prejudiced, care should be taken that the animal furnishing the supply should have foaled but a short time previously, and also that the quality of her food is good, and her stabling comfortable. In order that the warmth of the milk may be retained, it should be drawn into a vessel that has been previously heated by means of hot water. It should also be observed that the fixed air which the milk contains is apt to occasion pains in the stomach; to obviate which a teaspoonful of rum may be taken with the milk, but should only be put in just immediately before it is drunk.

ASSES' MILK, ARTIFICIAL. — Mix a quart of water with a quart of new milk, an ounce of white sugar-candy, half an ounce of eringo root, and half an ounce of conserve of roses; boil till the quantity be half wasted. This mixture is wholesome only so long as it remains sweet.

ASSETS comprise the estate or property of a deceased debtor, whether in the hands of his executor or administrator, or in the hands of others, that can be got in, liable to the payment of his debts. Thus all outstanding debts mentioned in the inventory exhibited by an executor in the Court of Probate are assets in his hands, for which reason, an executor in such inventory ought to set forth which debts are sperate, and which desperate. Executors or administrators should never attempt to administer a possibly insolvent estate without the advice of a solicitor, for by an admission of assets an executor may render himself personally liable to pay legacies, and will certainly be held personally liable (to the extent of the assets received) for the payment of debts, though he had no notice of them at the time of distribution. By an Act of Parliament passed in the 4th year of the reign of William the Fourth, the freehold and copyhold estates of a deceased person were made assets for payment of his simple contract debts. The word assets, is sometimes used as a designation of the estate and effects of a bankrupt or insolvent.

ASSIGNEE.—A person deputed by the act of a party, or the operation of law, to do any act or enjoy any benefit on his own account. A purchaser of a lease is an assignee by deed or act of the party. An executor is an assignee by operation of law to his testator.

ASSIGNEE, OF A BANKRUPT.—An officer appointed to administer a bankrupt's estate, such as getting in the debts, realizing the effects, and distributing the proceeds among the creditors. There are two kinds of assignees, each having distinct and separate functions, and yet acting in co-operation with a view to the same end. The *Official Assignee* is an officer appointed by the Court of Bankruptcy, under whose direction and control the statement of the bankrupt's affairs is made out. With the official assignee are lodged the books and accounts of the bankrupt, and at his office the bankrupt is bound to attend from time to time, in order to assist in making out the accounts, or to give any explanation that may be required of him. It is the official assignee's duty from time to time to report in writing, the state of the bankrupt's books, and of his personal conduct since his bankruptcy to the Commissioner, whose decision as to the class of certificate to be granted to the bankrupt is materially guided by the favourable or adverse statements contained in such reports. The advice of the official assignee should be frequently asked by the bankrupt, and his directions implicitly attended to. The bankrupt should punctually attend at the assignee's office when desired, cheerfully assist in disentangling confused items, and give straightforward explanations of any apparent discrepancies.

Trade Assignees are persons generally, but not necessarily, creditors of the bank-

rupt, chosen at the first public sitting by the vote of the major part in number and value of the creditors of the bankrupt, who have then proved debts to the amount of £10 and upwards. If it be an opposed bankruptcy, the choice of the trade assignees is the grand point of struggle between the bankrupt and his opposing creditors as to which shall have the future management of the bankruptcy; as the opposing creditors, if not seeking the appointment themselves, elect some persons over whom they have influence; while the bankrupt, on the other hand, is anxious that the election should fall upon those persons whom he believes to be most friendly disposed towards him. All property of the bankrupt, or such as may come to him before he obtains his certificate, vests in the trade assignees; except household furniture and implements of trade, to be selected by him, not exceeding the value of £20. They may be called upon to elect, whether they will accept a conveyance, or lease, or agreement for lease; and if after fourteen days' notice they shall decline to elect, may be ordered to give up possession of the premises; and if they enter upon the property, or keep the bankrupt there, to carry on the business for the benefit of the creditors, or until the effects are sold, and deliver up the keys immediately after, they become chargeable with the covenants in the lease. With the leave of the Court they may institute or defend actions or suits, and compound for debts due to the estate, or submit disputes to arbitration.

ASSIGNMENT.—The technical name of the deed, by which personal property is transferred from one person to another. Thus there is an assignment of a lease of a house. No interest in land can be assigned without a deed. An assignment of a debtor's property to trustees to wind up his affairs, may stipulate that they divide the proceeds rateably amongst the creditors, or suffer the debtor to remain in possession and continue his business, whilst he pays a certain sum to the trustees monthly or quarterly, as may be agreed upon.

ASTER.—This plant comprises numerous species, all of which are especially valuable as flowering late in autumn. There are seven species in common culture which bloom in August, six which bloom in September, eleven which flower in October, and three which continue in bloom from the 1st of November until Christmas. The propagation and culture of all these species are of the easiest kind, and they will grow in almost any soil. The *China Aster* is a well known annual. It should be sown the first week in April, in order to get the plants strong and forward, either in pots or seedpans, keeping the sorts distinct; the pots may then be placed in a cold frame till the plants spring up. When they are sufficiently advanced, they may be transplanted into the beds or border where they are to flower.

ASTHMA is a functional affection of the respiratory organs, frequently depending on constitutional causes, but seldom the result of organic disease. Asthma generally attacks persons of advanced years, and of a weak and lax system; it is, when not hereditary, often the result of sudden changes of temperature, disorder of the digestive organs, or of mental anxiety. An attack of asthma is usually indicated by a sense of constriction or tightness round the chest, a fulness of the stomach, lassitude, drowsiness, and headache. All these symptoms become more urgent towards evening, accompanied with laborious breathing and difficult expiration, attended at the same time with a wheezing noise in the chest and windpipe at every inspiration. As night approaches a hard dry cough succeeds to these symptoms, while the oppressed breathing and sense of suffocation become so acute, as the paroxysm reaches its climax, that the patient is compelled to spring up in bed, or rush to the open window, from fear of instant suffocation. Asthma generally attacks the patient in the night, and most frequently the severity of the fit endures for three or four hours, usually terminating about two in the morning, when, after a free expectoration of frothy mucus, the symptoms gradually subside, and the patient, after much anxiety and suffering, falls asleep. A succession of such paroxysms occur for several consecutive nights before the symptoms give way, and allow the exhausted patient time to recover his strength and tone. *Treatment*—The first endeavour must be directed to shorten the fit and to relieve the most distressing symptoms: the next, to remove the exciting and predisposing causes. Where the patient is strong and not far advanced in life, an emetic, composed of ten grains of ipecacuanha and one grain of tartar emetic, mixed in a cup of warm water, should be given in the first stage of the attack; followed up for some hours by nauseating doses of antimony and squills, as in the following mixture:—Antimonial wine, one ounce; water, four ounces and a half; tincture of squills, three drachms. Mix; and take a tablespoonful every hour so long as the urgency of the symptoms continue. When the attack is slight, and devoid of the marked features of a paroxysm, and the difficulty of breathing and sense of tightness in the chest are the chief symptoms, much benefit will be derived from taking from five to ten drops of hydrocyanic acid in a tablespoonful of water every two hours, for three or four times.

The asthma of old age, however, must be treated very differently: here, instead of debilitating, it becomes necessary to support and stimulate the patient under the exhaustion of the paroxysms. For this purpose, warmth should be early applied to the body and extremities, by the hot bath or bottles of hot water. The chest and pit of the stomach should be rubbed for a few minutes with hartshorn and oil; hot coffee, or small doses of brandy-and-water, administered occasionally; and the following mixture, according to the age and sex, given in doses of one or two tablespoonfuls every two or four hours, as the state of the patient may demand:—Carbonate of ammonia, one scruple; Dover's

powder, half a drachm; peppermint water, six ounces; mix, and add tincture of squills, spirits of lavender, and sulphuric ether, of each one drachm. When asthma has been induced by a derangement of the digestive organs, it will be necessary to give a dose of castor oil or an alterative pill; while for the shortness of breath and difficulty of breathing that often precedes and follows the full paroxysm, a poultice, composed of equal parts of mustard and flour, and applied warm to the chest for ten or fifteen minutes, will yield considerable relief. As an aperient, two compound asafœtida pills will be found of the utmost benefit, especially to those advanced in life.

ASTRINGENT MEDICINES are those substances that act on the human system, by drawing together, contracting, or binding the pores or tissues of the body. Some astringents are applied externally, as in the form of collyrium to the eye, or lotion to an inflammatory action or swelling; but by far the greater number are employed internally, to check relaxation or undue action in the alimentary canal. While other medicines are dissolved in the stomach, or carried by absorption to the blood and nervous system, astringent medicines, as a general rule, act only mechanically; requiring no absorption to produce their effects, which are attained by the mere contact of the medicine with the surface to which it is applied. Astringents are divided into two classes—the mineral and the vegetable. The most important articles that come under the denomination of mineral astringents are, iron, zinc, copper, lead, antimony, chalk, lime, alum, and muriatic and sulphuric acid. Of the vegetable; oak bark, gallnuts, kino, catechu, logwood, whortleberry, alkanet, pomegranate, bistort, rose leaves, and tormentill root, are the chief, and in a medical point of view, the most important.

ASTRONOMY, in a literal sense, signifies *the law of the stars;* but in its more general application, it bears reference to the various phases, movements, and general phenomena of all the heavenly bodies. It is by a study of this science that much valuable knowledge has been arrived at in connection with many arts conducing to the happiness and well-being of mankind, particularly in agriculture and navigation. Books: *Christie's Practical Astronomy; Guy's Elements; Arago's Popular Astronomy; Moseley's Lectures; Herschell's Treatise; Galbraith & Hangston's Manual; Lardner's Popular Astronomy; Hind's Illustrated London Astronomy.*

ASYLUM.—See BLIND, DEAF AND DUMB, IDIOT, ORPHAN, &c.

ATROPHY is that condition of the system where, from diseased action of the whole or part, the entire body, or a portion or member of it, loses its nutrition and vitality, and becomes gradually thin and emaciated. When atrophy is general, it is regarded only as a symptom of some other disease, as of scrofula, tubercles, tabes mesenterica, &c., and is called marasmus. It is a disease not confined to the muscles and soft tissues of the body, but equally attacks the bones, vital organs, and even the brain itself. The causes of atrophy, apart from the predisposing one of diseased action, are the disuse of the body, or parts of it, through sedentary habits, paralysis general or local, inaction, the consequence of a bedridden position, pressure from ligature or bandage, and an imperfect nutrition. *Treatment.*—In *local atrophy*, or that wasting and emaciation which is confined to a part or limb, and which may be the result of pressure or disease—as exemplified in the loss of substance in an arm or leg that has been long bandaged, or where paralysis has deprived the part of its natural use or action—the treatment must be deduced from the cause that produced the disease. This must be removed; and if it be the consequence of compression, expose the limb to air and light to recover its elasticity. At the same time friction, with stimulating embrocations and exercise, must be employed to give impetus to the vessels, and restore tone to the part. In *general atrophy* or *marasmus*, where the whole body is wasted, the treatment must be dictated by the primary disease that caused it: but in general, a rich and abundant diet, with a due admixture of animal and vegetable food, and a just proportion of wine or stout, must be adopted. At the same time the occasional use of the warm bath, with daily friction of the flesh-brush, must be employed as a collateral means. As regards medicine, that must depend on the character of the disease that has caused the atrophy; but if the result of mere functional derangement, a simple alterative, with a full diet, the warm bath and friction, will be sufficient; for this purpose one of the following pills may be taken three times a day, intermitting every three days:—

Precipitated sulphuret of antimony	24 grains.
Grey powder	12 grains.
Powdered aloes	15 grains.
Powdered ipecacuanha . .	2 grains.

Castile soap, sufficient to make into a mass, divide into 12 pills.

ATTACHMENT.—The name of the process, to bring before Her Majesty's judges at Westminster a party in contempt, to be punished at the discretion of the Court: as a witness not appearing when subpœnæd—refusing to be sworn and examined, or prevaricating in his evidence when sworn—non-observance of an award duly made—perverting the proceedings of the Court to private malice—extortion or injustice—speaking or writing contemptuously of the Court, or a judge acting in his official capacity—printing a false account (or even a true one, without proper permission) of a case then depending in judgment; and by anything, in short, that demonstrates a want of that regard and respect which, when once a Court is deprived of, degrades and destroys its authority among the people.

A creditor having obtained a judgment in one of the superior courts at Westminster, may have an order to attach a debt due to his judgment-debtor from a third person; and if such person (called the garnishee) disputes

his liability, the creditor may sue him for the amount alleged to be due to the debtor.

A *Foreign Attachment* is peculiar to the cities of London and Exeter, and may issue immediately after a suit has been commenced in the Mayor's or Sheriffs' Court. It is a notice served upon the garnishee not to part with any monies or effects in his hands belonging to the debtor, without license from the Mayor's Court. It is the speediest and most efficacious mode of recovering a debt, when it can be resorted to, which is in any case where the garnishee can be served with the notice before described, within the city; even walking in the street, although he has no residence or office within the city, and the goods or monies are not in the city. For example: If Brown has monies in a branch bank at Birmingham or Brighton, the principal establishment of the bank being in the city of London, and is indebted to Jones; Jones may, by giving a notice from the Mayor's Court to a partner in the Bank in London, compel payment of his claim to the extent of Brown's monies in the branch bank at Birmingham or Brighton.

ATTEMPT, IN LAW.—Anything which manifests an *intention* to commit, or to aid another in committing, an offence against the law; for example, were a party to place bad money upon a table for a person to buy it, this would be an attempt to utter.—See SOLICITATION.

ATTESTATION.—The subscribing of a name as a witness to the signature of any other person to a legal instrument. Thus the signature of a testator to his will must be attested by two persons, who, by writing their names opposite to his, certify that they were present at the same time, and saw him sign his name thereto.

ATTORNEY.—One who is duly authorized to prosecute and defend suits for other persons in the courts of law. He is faithfully bound to exercise care and skill in the management of his client's affairs; and if, through his negligence, or want of skill, his client sustain any pecuniary loss, an action may be brought against him and damages recovered. He may do all acts for his client necessary for the due conduct of the business upon which he is engaged, and his client is bound to abide by what he so does. He is not permitted to disclose in evidence any matter communicated by his client to him as an attorney. Payment or tender to him, is payment or tender to his client. Any person employing an attorney, should appoint him to each particular business by writing. Pending a suit a client cannot change his attorney without leave of the Court; and if he be changed, he will not in general be restrained from acting for the opposite party. An attorney is entitled to insist on an advance of money by his client, not only to the amount out of pocket, but for his own costs at any stage of the proceedings, and may abandon the cause on the ground of want of money, upon reasonable notice of his intention to do so. Any unqualified person acting in any respect as an attorney, may be imprisoned for one year.

ATTORNEY, LETTER OF, frequently called a "power of attorney," is an instrument in writing under seal, whereby a principal delegates another person to act for him in his absence; such as to receive debts and legacies, and give receipts, to settle accounts, compound debts, bring or defend actions, submit claims to arbitration, execute deeds, grant leases, distrain for rent, accept bills, and do any other act, necessary and proper, for the general management of his affairs.

ATTORNEY, PROFESSIONAL EDUCATION FOR.—In order to become an attorney, a person must be articled, in the first instance, to a practising attorney or solicitor, whom he must serve as a clerk for, and during the term of, five years. Having duly served his clerkship, he must be finally examined and sworn in. The clerk may, however, serve one year of his time as the *bonâ fide* pupil of a barrister or special pleader, or as clerk to the London agent of his original master, if he be articled in the country. An exception is made in favour of persons who have taken the degree of B.A., within six years of matriculation, or of Bachelor of Laws, within eight years after matriculation, in any of the universities of Oxford, Cambridge, Dublin, Durham, or London, and who enters into articles within four years after taking the degree. These persons are required to serve only three years.

First-class attorneys, when taking articled clerks, generally demand a heavy premium, varying from £300 to £500. The articles of clerkship also require a stamp of £100. These form the principal items of expense, other minor ones being incurred by law books, fees, &c. It must also be borne in mind, that, as the articled clerk generally lives away from his family, and receives no remuneration during his five years' clerkship, an annual sum of at least £100 or £150 will be required for his support.

Before being admitted an attorney, the articled clerk has to pass an examination, which is by law under the management of the judges, but is, in fact, controlled by an institution known as the Incorporated Law Society. This society consists of about 2000 members of the profession, and is governed by a president, vice-president, and council, who are delegated by the judges, and authorized by Act of Parliament, to examine into the fitness and capacity of all applicants for admission to practise as attorneys and solicitors. The examinations are conducted by four members of the council, over whom one of the masters of the courts presides. The following is the course of procedure adopted:—On the appointed day in each term, candidates for examination repair to the hall of the institution, in Chancery Lane, and each having a number given him, takes his seat at a table on which such number is placed. A paper of questions is then delivered to him, with his name and number upon it, containing questions to be answered in writing. The answers must be on separate papers for each class of questions, and the candidates are expected to finish their papers by four o'clock. After the examination is

begun, no candidate is allowed to leave the hall, (without permission obtained from the examiners) until he shall have delivered his answers; and any candidate who leaves the hall without permission will not be allowed to return. The questions propounded have been from time to time published, and are of great assistance in preparing a student for his examination. Lectures are given in the hall of the society by gentlemen of the bar appointed for the purpose, the attendance on which is voluntary. Articled clerks are admitted to the library of the institution on payment of £1 annually; and the students have a room appropriated to them, free of expense, for the discussion of legal questions among themselves.

The profession of an attorney or solicitor is one that affords the person who adopts it the opportunity of an early and ample competence. It is possible for an attorney to make as much as £2000 a year by the practice of his profession exclusively; but independent of this source of income, there are many opportunities of making money presented to the legal man of business in the way of buying, borrowing, and lending, in connection with property, respecting which he frequently has the first and most valuable information. The influence of his position, and the nature of his employment, also enable him to form an accurate judgment on speculations that are safe or unsafe. But to achieve such a position as this, an attorney must work laboriously, endure much anxiety, and undertake great responsibility. Books: *H. B. Thomson's Choice of a Profession; G. Thompson's Suggestions to Young Attorneys; Warren's Moral Duties of Attorneys and Solicitors; Buckland's Letters to Attorneys' Clerks; Hobler's Exercises for Attorney and Clerk; Gardener's Articled Clerks' Assistant; Willeburn's Guide to Articled Clerks; Wharton's Manual for Articled Clerks; Wood's Attorneys' and Solicitors' Book-keeping; Carrighan's Guide to Chancery Students; Serjeant's Conveyancing Aid for Students; Phillips's Conveyancing Student's First Book; Law's Student's First Book; Law's Student's Guide; Wharton's Student's Manual; Law's Student's Questioning Book; Warren's Introduction to Law Studies; Wright's Advice on Law Study; Fulbeck's Direction for the Study of the Law; Slack's Hints on the Study of the Law; Williams's Study and Practice of the Law; Petersdorff's Student's Commonplace Book; Barnham's Questions for Students.*

ATTRITION.—See FRICTION.

AUCTION.—A method employed for the sale of property through the medium of competition. Sales by auction are conducted on various principles, differing according to the custom attached to particular trades, localities, or effects. The most general mode adopted, however, is for the auctioneer to offer the property for disposal in lots, whereupon biddings are made, and the person who makes the highest bid before the fall of the hammer becomes the purchaser. The following are the usual *Conditions of Sale:* 1. If any dispute arise between two or more bidders, the lot in dispute to be put up again for sale. 2. No person to advance less than sixpence when the lot is under one pound; above one pound, one shilling; above five pounds, two and sixpence; and so on, in proportion. 3. The purchasers to give their names and places of abode, and to pay down five shillings in the pound as deposit (if required), in default of which the lot or lots so purchased will be put up again and re-sold. 4. The lots to be taken away, with all faults and errors of description, within three days after the sale. 5. If the property purchased is not cleared within the time mentioned, it shall be put up and re-sold, and the deficiency (if any), together with all expenses, to be made good by the purchaser of the unclaimed property. These conditions, which are usually appended to catalogues, constitute the terms of the bargain, and purchasers are bound to abide by them. As several questions of law have from time to time arisen in reference to sales by auction, the following decision, affecting both buyer and seller, should be noted:—A bidder may retract his bidding at any time before the fall of the hammer. If a person, by any statement or other means, prevents other persons from bidding against him at a sale, he cannot compel the delivery of the lot, even though he should have paid a deposit. If a vendor employs agents at a sale, to bid solely for the purpose of exciting competition, and without any view of purchasing, he must announce it, or the sale is void. If after purchasing the goods, the purchaser discovers that the description has been wilfully misrepresented in the catalogue, the auctioneer is bound to return the purchase-money, or such part of it, as shall make good the deficiency. For instance: if an auctioneer puts up a lot, as a *gold* watch and a *gold* chain, and if the purchaser discovers that the watch only is gold, and the chain counterfeit, the value of the chain must be returned; but if the lot is described simply as "a gold watch and chain," the auctioneer can only be made liable for the watch, and not for the chain, the latter not being individually specified as gold.

At sales by auction, articles can be bought at a much lower rate than at shops, especially personal effects and household furniture. The latter, when made of good materials and well constructed, is bought more advantageously at second-hand than when new, being what is termed "seasoned," or more fit for use. Purchasing advantageously at an auction, however, depends greatly upon the purchaser, who ought to have some knowledge of the value of the articles, and their adaptability. Failing this knowledge, recourse should be had to the experience and advice of some other person. Another precaution to be taken, in connexion with sales by auction, is not to lay out more money than was intended to be expended; persons attending sales are extremely apt to do this; for in the first place, they are unable to resist the temptation of buying articles they do not stand in need of, simply because "they are such great bargains;" and, in the next place, they frequently give more than they determined on giving, owing to their judgment being carried away by the excitement of

competition. When persons attend a sale, therefore, they should mark in the catalogue the articles they wish to purchase, and place against them the sum they intend to give; by this they should be strictly governed, and not overstep the limits defined, no matter how strong the inducement or how great the temptation. The most advantageous sales by auction are those which take place at private houses, the articles generally being genuine property, and sold without reserve; whereas the sales held at auctioneers' rooms have frequently articles introduced, made expressly for sale, to be bought in by the auctioneer himself if the bidding does not reach the desired amount. All sales are attended by "brokers," who undertake to purchase articles for persons, in consideration of receiving a commission of five per cent. (a shilling in the pound) on the amount of purchases. The common practice among brokers is to enter into a mutual arrangement not to bid against each other, so that when any one of them indicates the articles he has a commission to buy, the other portion of the fraternity refrain from bidding, and the articles are consequently purchased at a much lower rate, through not being subjected to competition. On the other hand, if a person attending a sale declines the services of a broker, and determines to act for himself, the fact is immediately whispered about, and the whole of the brokers bid against this person upon an organised system of opposition. The result generally is, that the bidder, who is thus unfairly opposed, becomes annoyed and irritated, and falls into the trap laid for him, by resisting the opposition at a great pecuniary sacrifice. It is obvious, therefore, that however pernicious this system of combination may be, the best course is to allow a broker to transact these matters, rather than for a person to act for himself, for the mere gratification of protesting against an irremediable injustice.

AUCTION, MOCK.—A well known species of nefarious venture which, though employing the same machinery as genuine auctions, has a very different object in view. The mode of procedure is as follows:—A number of dishonest persons league themselves together, and occupy premises conspicuously situated in one of the leading thoroughfares. A collection of articles is then exposed to view, such as writing-desks, plated articles, watches, pictures, &c., manufactured for the purpose of sale, and so artfully "got up," that the unwary are easily persuaded that the articles are what they are represented to be. At intervals during the whole of the day, and evening, one of the confederates of this organised gang assumes the character of an auctioneer; another accomplice, termed a "barker," stands on the threshold haranguing the passers by, and inviting them within; while the other impostors connected with the concern, termed "puffers," attired in every variety of costume, to represent clergymen, country squires, city merchants, &c., eagerly bid for the worthless articles as they are handed round, and make such remarks as are calculated to incite the unsuspecting to become purchasers. The trash once bought, no subsequent discovery will tend to the return of the purchase-money. The complaints of the unfortunate dupe are only laughed at, and he is compelled to sustain, as best he may, the loss entailed by his unfortunate bargain.

AUCTIONEER.—A person licensed to sell property by public biddings. Printed particulars cannot be varied by any statement of the auctioneer. He is the agent of both the seller and the buyer, and, as such, may bind both. He is as a stakeholder entitled to retain the deposit until the contract is complete without paying interest; and he is personally liable for it if he pays it over before. If both parties set up a title to the deposit, he must compel them to interplead, and establish their right. He has a special property in the goods sold, and may maintain an action against the buyer for the price. If he sells without saying on whose behalf he sells, the buyer is entitled to look to him for the completion of the contract.

AUGUST, GARDENING FOR.—The list of plants and roots in the *Kitchen Garden*, which requires particular attention during this month, is as follows:—*Alexanders*, sow. *Angelica*, sow. *Aromatic* herbs, gather for drying and distilling. *Artichokes*, break down. *Asparagus beds*, weed. *Balm*, plant, gather for drying. *Beans*, plant. *Brocoli*, plant. *Cauliflowers*, plant out and sow. *Celery*, plant out under-crops. *Coleworts*, plant and sow. *Cardoons*, earth up. *Carrots*, sow. *Cress (American)*, sow. *Cucumbers*, plant or sow; attend to advancing. *Dill*, earth up, gather. *Endive*, plant, sow; blanch advancing crops. *Fennel*, sow, plant. *Hoeing*, attend to. *Kidney Beans*, sow. *Leeks*, plant. *Lettuces*, sow, plant out. *Melons*, attend to. *Mint*, gather for drying. *Mushroom beds*, make, attend to. *Nasturtium berries*, gather. *Onions*, sow. *Parsley*, sow. *Peas*, sow. *Radishes*, sow pods, gather for pickling. *Shalots*, take up. *Savoys*, plant. *Seed*, gather, as ripe. *Salad (small)*, sow. *Spinach*, sow, stir between plants in rows. *Turnips*, sow. *Watering* and *Weeding*, attend to. *Wormwood*, plant.

General Remarks.—In this month all weeds must be got rid of before they incline to seed. The weather generally is fine, and favours gardening operations, which, if properly conducted at this period, exercise a beneficial influence on the spring and winter crops. Watering demands especial attention; for instance, for fifteen days after sowing, this should be done twice each day, morning and evening, and for ten days subsequently, every second day.

Flower Garden.—*Anemones*, sow. *Auriculas*, sow, transplant, and pot. *Autumnal Bulbs*, plant. *Canterbury Bells*, plant. *Carnations*, plant, and propagate by suckers. *Dahlias*, tend and tie up. *Pinks*, thin out, and plant. *Polyanthuses*, sow. *Ranunculuses*, sow. *Rockets*, propagate by slips and suckers. *Roses*, prune and manure. *Stocks*, plant. *Sweet Williams*, plant. *Wallflowers*, plant.

General Remarks.—This is the month for clipping and cutting hedges, especially such as are only cut once a year. Trim edgings

and box-borders, and keep them low and narrow. Mow grass walks and lawns once a fortnight, and keep them close and even. Weed and sweep gravel walks, and roll them once or twice a week. Hoe and rake carefully borders and flower-beds, so as to loosen the surface and destroy weeds. Tie up all irregular and straying shoots and branches, and remove decayed stalks and dead leaves. Gather the seeds of the flowers that are ripe, dry them in the sun, and put away in bast or boxes.

AUGUST—THINGS IN SEASON.—*Fish.*—Carp, cod, craw-fish, eels, flounders, haddock, herrings, lobsters, mackarel, mullet, oysters, pike, prawns, thornback, skate.

Fruit—Apples, currants, figs, filberts, gooseberries, grapes, melons, mulberries, nectarines, peaches, pears, plums.

Meat.—Beef, buck, lamb, mutton, veal, venison.

Poultry and Game.—Chickens, ducks, fowls, geese, leverets, pullets, pheasants, pigeons, plovers, rabbits, wheat-ear, wild ducks.

Vegetables.—Artichokes, beans, cabbage, carrots, cauliflowers, celery, cucumber, endive, herbs of all sorts, kidney beans, mushrooms, onions, parsley, potatoes, radishes, salad various, shalots, spinach, sorrel.

AURICULA.—This flower is propagated either by slips or seed. *The best time for taking off the slips* is the first week in August. This should be done by removing only as much of the parent bulb as can be done without injury to the root; and the operation can be best performed with a blunt piece of wood or with the fingers. The pots into which the plants are placed should be provided with the same compost as they have been accustomed to. By the beginning of November the plants will have become

established, and with the return of spring will have attained a vigorous growth. The surest and best method *to obtain fine auriculas from seed*, is to provide young, healthy, and strong plants, which, on the approach of bloom, should be removed to a remote part of the garden, and there exposed to the sun, air, and rain; but they must be protected from an excess of the latter by small hand-glasses or a covering of matting. The time for sowing seed is the end of February or the beginning of March. This should be done in pots of about an eighth of an inch in depth. The soil should be properly prepared with a warm manure, and each pot covered with a square glass and shading until the seedlings appear. When the seedlings can be easily handled they should be pricked out into a bed, about five inches apart, supplied with a frame so as to winter there, and potted the following year. *The characteristics of a good auricula* are, stem long and erect; tube round and of a yellow colour; footstalks strong and elastic; and flower-leaves or pips round at the edges; the eye or interior circle, round, and very white; the exterior with a ground colour rich and uniform; and the green edge or margin, in equal proportion with the ground colour. The truss or cluster of flowers upon one stalk, to consist of not less than five blown pips, or more than ten, and these should show boldly without overlapping.

AUTHOR.—Under this general term are comprised writers of original works, compilers, translators, and journalists. The profession of literature bears the reputation of being precarious and unremunerative, but in reality it is not more so than any other employment depending on mental capacity and bodily health. Although there is no regular training for an author, he should as a matter of course possess certain attainments, natural or acquired, fitting him for his peculiar walk in life. *A writer of original works* must be a person of liberal education, extensive reading, and varied information; as well as possessing many natural gifts, of which imagination and fancy are the foremost.

The most popular class of works is that devoted to educational purposes. The second class, that blending instruction with amusement, such as history, science, or domestic economy, conveyed through the medium of narrative or dialogue. The third class, of a moral and religious tendency, comprises stories based on scripture history, or tales illustrating the career of virtue and of vice. But whatever department of literature an author occupies himself in, he should, if writing with a view to pecuniary recompense, take care that the title of his work be attractive, the subject popular, and treated in such a comprehensive and interesting manner as shall entitle it to universal acceptation. *Compilers* are employed in producing, from scattered sources, a class of works fitted, by condensation and simplicity of arrangement, for popular use. Such books are frequently the speculations of publishers, who remunerate the compilers at an agreed rate according to the nature and amount of the work performed. At some establishments a staff is permanently maintained, while at others any proposal is listened to, even from a stranger, and rejected or

adopted according to its merits. Compilations generally should be undertaken with a view of interesting a large class of readers. *Translators* are employed upon terms somewhat similar to compilers; they are required to be quick and industrious to an extraordinary degree, for it frequently happens that the same work is being translated by two or more rival establishments, and on such occasions priority of production is of course the grand aim. A compiler or translator may frequently succeed in obtaining employment by advertising in the journals allied to literary interests, such as the *Athenæum*, *Literary Gazette*, *Critic*, *Publishers' Circular*, &c.

One of the most efficient aids to the literary man of the present day is that afforded by the British Museum Reading Room for the purposes of study. In this noble apartment a ready reference is permitted to hundreds of thousands of works, a separate desk supplied with writing materials is provided for each reader, and everything that can assist the literary man in his pursuits is most liberally accorded. A ticket, which will entitle the holder to visit this room daily, and remain in it, if he so pleases, during the day, may be obtained upon application to the chief librarian, Mr. Panizzi, accompanied by a reference to a clergyman, or some other responsible person.

Journalism is the branch of literature connected with the public press; it employs a large number of persons, from the writer of leading articles to the fabricator of paragraphs; all more or less requiring a keen perception, retentive memory, and facile pen. The latter is especially needed, as the journalist is frequently called upon to write against time, and to report events almost simultaneously with their occurrence. A person who intends adopting journalism, therefore, as a profession, should endeavour to qualify himself previously, by taking down speeches, sermons, &c., during delivery; tasking himself to write a certain amount of original matter within a given time, and otherwise exercising unremittingly every faculty that is likely to be called into requisition. A journalist may by dint of industry earn a good income, and, if he possesses even moderate ability, secure constant employment.—See COMPOSITION; LIBRARIES PUBLISHING.

AUTHORITY.—See AGENT; CLERK; MARRIED WOMAN; PRINCIPAL AND AGENT; SERVANT.

AVERAGE is the generalization of numbers or quantities from varying items. To find the average of any number of quantities, add them together, and divide by the number expressing the aggregate of those quantities. Thus:—39, 17, 62, 23, 54, make together 195; divide this total by 5: that being the figure which expresses the number of the items, the product 39 is the average. This rule applies so far as simple quantities are concerned. In commerce it frequently occurs that several lots of goods of the same class, are bought at various prices, and in order to regulate the selling price, and ascertain the ratio of profit, it is necessary to know the average price at which the goods have been bought. To arrive at this, each quantity must be multiplied by its price; these results must be added together, and the total divided by the number representing the total of the quantities. The product given will be the average. Example:—B buys the following: 6240 yards of calico at 3¾d.; 7960 yards, at 4d.; 8230 yards at 5¾d.; 6420 yards at 7½d.—what is the average price per yard?

Yards.			d.
6240	at	3¾d.	20280
7960	„	4d.	31840
8230	„	5¾d.	47323
6420	„	7½d.	48150
28850			147593

144250) 5d.

3343 / 28850 or $\frac{1}{9}$th

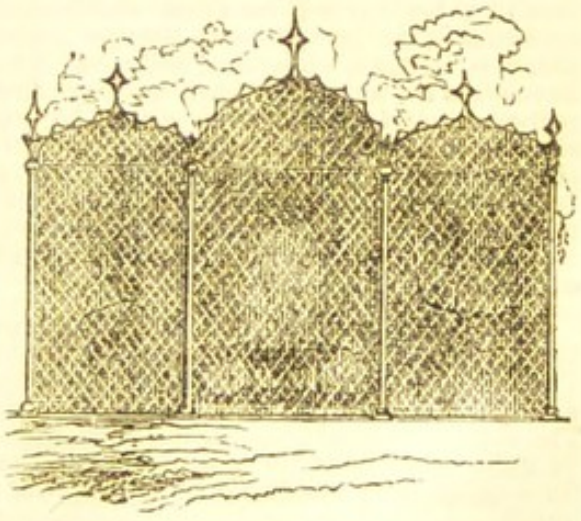
Answer:—5$\frac{1}{9}$d. per yard.

To prove the correctness of this result, multiply the total by the average, thus:—

$\frac{1}{9}$)	28850	
	5	
	144250	
	3205	
	147455	Total of prices . 147593

It will be seen that there is a slight difference between the two products. This is occasioned by the fractions which it is the very province of average to ignore. The conclusion arrived at is sufficiently satisfactory for all practical purposes.

AVIARY.—A place where birds are kept. The availability of this picturesque addition to a house depends upon a person's means,

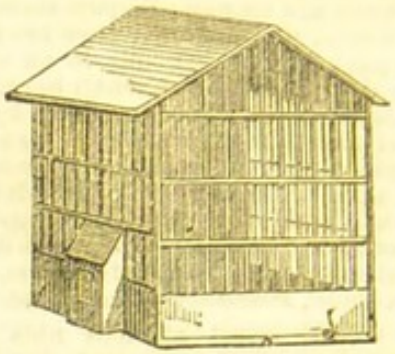


and the space he has at his disposal. In some instances a portion of the garden is wired over, and converted into an aviary; and in other instances, one end of the conservatory, or

greenhouse, is partitioned off as required, and made to serve this purpose. The aviary most favourable to the health and cheerfulness of birds is as follows:—In that part of the garden where shrubs and trees most abound, mark out a space 15 feet long by 12 wide. Fix up boarding at the extreme end, so as to form the back of the aviary, and let the height be 15 feet. To this, attach the wire-work, and cover the whole with a flat zinc roof, provided with a properly adjusted gutter, to let off the rain. The style of architecture and degree of ornamentation are purely matters of taste and fancy; the preceding engraving will, however, convey some idea of a pleasing style of construction. The flooring of the aviary may be made of wood, or of earthen tiles; but if of wood, a bed of shingle, or rough gravel, 8 inches deep, should be laid beneath, to prevent the burrowing of rats and other vermin. The perches of the aviary should consist of four poles, about 12 feet high, and an inch and a-half in diameter. These should be securely nailed to the floor, and on the top of them square perches should be fastened, in such a manner as to meet each other, and thus form a kind of gallery around. At intervals of five or six inches apart, round perches, about half a foot in length, and a quarter of an inch in diameter, should be inserted. In the centre space, a fountain may be introduced, for the double purpose of utility and effect. Other perches should be disposed in various parts of the aviary most favourable to light, sunshine, and warmth. The door of the aviary should be made of glass, and open outwards, and all the interior fittings well and strongly painted. As birds are peculiarly susceptible to cold, the aviary must be kept warm in winter, and to accomplish this, cover the wire-work with green baize, and introduce an Arnott's stove, regulated to a proper temperature. A curtain should also be constructed, to be drawn partially or wholly down in damp and foggy weather. The occupants of an aviary may be comprised of blue tits, bullfinches, canaries, chaffinches, goldfinches, hedge-sparrows, linnets, mules, redpoles, titlarks, wheatears, and woodlarks. From this association of birds the blackbird, redbreast, and jenny wren must be excluded. The natures of the two former are too pugnacious and cruel to admit of their being domesticated with other birds, while the jenny wren is so tender and delicate as to be unfit to live in the midst of so much excitement and bustle.

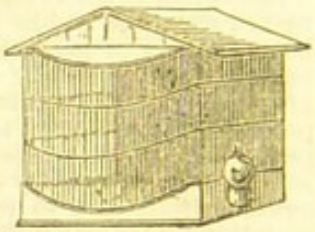
Cages, being aviaries to a limited extent, form the next subject for consideration. These habitations vary, according to the different dispositions and habits of birds. The cage for a blackbird, for instance, would be quite unsuitable for a canary; and that for a nightingale would be ill adapted for a linnet.

The Blackbird's Cage should be made of mahogany or other wood, in the form of the accompanying engraving, having wicker rails running through cross-bars in front and at the two sides; the back of wood; a drawer at the bottom to facilitate cleaning; and two small receptacles for food and water project-



ing from the sides. This cage is also suitable for thrushes.

Canaries' Cages, used also for bullfinches, goldfinches, chaffinches, and Linnets, are made in a variety of forms—Gothic, Chinese, arched, cottage, &c. The materials sometimes consist wholly of brass, and at other times of brass and wood. These cages generally have three perches—one near the floor, to enable the bird to reach the water-bottle, another in the centre, and a third near the top.

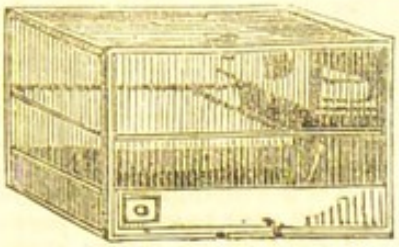


The *Lark's Cage* has a boarded roof and back, with wire-work on each side, and in the front a projecting bow, raised about an inch from the bottom, with a circular wire front. In this bow a piece of fresh turf is placed, from time to time, upon which the lark sits and sings. For this cage no perch is required, and the door is made to open at the back or side.

The *Nightingale's Cage* has a roof, back, and sides of wood, the front only being wired. It has one perch extending from side to side, padded with green baize, while a small perch is supported by two stems in the centre of the front part of the cage, just below the bottom of the wires. An inch or two beneath the roof, a false top of baize or other soft material is stretched across, so that if the bird, as is its custom, dash upwards in its song, it may not hurt itself; for this reason the perch is also padded. In both of the front corners a little shelf is fixed, and in these a round hole is cut for the reception of the cups containing the food and water. The cages are also furnished with a sliding drawer for cleaning, and the door is made at the back or side.

A *Breeding Cage* may be made of a double or single form, with the usual conveniences for

food and cleaning, and the doors placed where deemed most convenient. The size of the perches should be proportioned to the size of the cage, and they should be placed at inter-



vals most fitting for the birds. In a single cage the top, front, and sides should be of wire, and the back of wood; but if it be a double cage, then both ends of wood. A shelf, within a few inches of the top, should be made to project from the back, and a partition run up from the edge of the shelf to the upper wires. On this shelf two square open boxes, about two inches deep, are to be placed for the birds to build in, the entrance into which is from two holes made in the partition. A net-bag, filled with moss, hair, down and feathers, suspended from the roof near the perches, completes the fitting of this habitation.

Within the last few years a great improvement has taken place in the design and construction of fancy bird cages, and a new material is largely employed, consisting principally of zinc, coated with enamel, which excludes all vermin.

The health and happiness of birds depend greatly on *cleanliness*: to promote this, every week, or fortnight at the farthest, the floor and perches of the aviary or cage should be thoroughly cleansed, and fresh sand strewn on the floor. If this be neglected, not only do the birds suffer in health and spirits generally, but they contract a disease in their feet, frequently resulting in lameness, or the loss of one or more of their claws. A difficulty is sometimes experienced in taming birds to a sufficient degree to set them at liberty from the cage, and allow them to fly about the room. The following is the most approved method for accomplishing this:—Cut from the inner plume of the pen-feathers a larger or smaller portion, according to the wildness of the bird; then touch the nostrils of the bird with bergamot, or any other odorous oil, by which it is rendered so stupified for a time as to perch quietly on the finger, or to hop from one finger to another. As soon as it sits quietly on any one finger, another finger must be placed in such a position as to cause the bird to step upon it; and so soon as it is accustomed to hop quietly from one finger to another the chief difficulty is overcome; for the bird, gradually arriving to a sense of consciousness, and perceiving that it is not treated roughly, is brought to pay obedience to its master's commands. The *food* of birds should be as near a resemblance to their natural diet as possible. Canaries, bullfinches, goldfinches, linnets, &c., eat seed only. Larks, yellow-hammers, and the various kinds of tits, eat both seeds and insects. Nightingales, redbreasts, thrushes, blackcaps, &c., eat insects and berries. Wagtails, field-larks, white-tails, &c., eat insects only. To meet this difficulty, all the dead flies found on window-sills and in corners should be collected, and these, added with a few meal-worms, will supply the want specified. Canaries prefer a mixture of canary, summer-rape, and crushed hempseed; goldfinches, poppyseed, now and then mixed with a little crushed hempseed; Linnets and bullfinches, rapeseed alone. Larks prefer barleymeal, mixed with cabbage and water-cress, cut small; chaffinches, rapeseed, occasionally mixed with a little hempseed. The various kinds of tits prefer hemp seed, oats, and meal. The following are two *receipts for a paste* suitable for birds generally. Thoroughly soak in cold water the crumb part of a stale loaf, press the water out, pour milk over the bread, and mix it with two-thirds of its own weight of barleymeal. Or, grate a carrot, which has been kept in a cool place for a whole year, then thoroughly soak a penny roll in water, strain the water off, and mix the bread and carrot with two handfuls of barleymeal. These pastes, must, however, be made every day, as after that time they become sour. All birds need a *fresh supply of water* every evening to quench their thirst, as well as to bathe with; and if a considerable number of birds inhabit the same room, the water should be placed in an earthen vessel, 8 inches long by 2 wide, divided into several compartments. Cage birds are subject to a variety of diseases, foremost amongst which is the *pip*. This disorder is a cold, in which the nostrils are stopped up, and the external skin of the tongue hardened by inflammation. A pill of butter, garlic, and pepper, with occasionally sipping of infusion of speedwell, will soon effect a cure; and, to assist the remedy, a fine feather should be drawn gently through the nostrils. The symptoms of this disorder are a yellowness at the root of the beak, dryness of the tongue, roughness on the feathers of the head, and a frequent gasping as if for breath. *Moulting* may be considered a disease. It is of annual recurrence, and its cure mainly depends on time and attention. During this time the food of the bird should be wholesome and varied; all drafts and cold should be excluded, and the most scrupulous cleanliness observed. *Tympany* is a disease in which the skin of a part, or the whole of the body, is puffed up and tightened by an accumulation of air beneath. The simple remedy is to prick the skin with a needle, and let out the confined air. *Pairing fever* generally attacks cage birds in the month of May. The birds affected cease to sing, allow their feathers to become and continue rough, and waste away. One of the best remedies for this is to hang the cage before a window, by which means the bird becomes cheered and enlivened, and resumes his wonted blithesomeness. *Epilepsy.*—This disease is brought on by a plethoric habit of body; and results from an excess of food, and a deficiency of exercise. A few drops of olive oil are frequently beneficial, but if this prove inefficacious, dip the bird once or twice in ice-cold water, and cut the claws so closely

that they let blood. *Giddiness* is rather the result of bad habit than a disease. It sometimes happens that birds acquire the habit of looking upwards to such an extent, as frequently to turn round backwards on the perch;—the best means of preventing this, is to cover the top of the cage with a cloth, by which the upward look is effectively checked. *Decline.*—The symptoms which betray the presence of this disease are general roughness of the feathers, and an inordinate appetite, coupled with a gradual wasting of the flesh. The most effectual remedy is to force the bird to swallow a spider, and to put a rusty nail into its water, which imparts vigour and strength to the stomach. Green food should be chiefly given during the prevalence of this disease, and more particularly watercress. *Costiveness* may be cured by the administering of a worm bruised with saffron and linseed oil; and *cold* should be treated with a pectoral elixir in an infusion of speedwell. See BLACKBIRD, CANARY, GOLDFINCH, LARK, LINNET, PARROT, THRUSH, &c.

AVOIRDUPOIS WEIGHT is the common system of weight in England, now applied to all goods except medicines and the precious metals. The avoirdupois pound is divided as follows:—

Grain.	Dram.	Ounce.	Pound.
27 11/32	1		
437½	16	1	
7000	256	16	1

28 pounds make one quarter.
112 pounds, or 4 quarters, one hundred weight.
20 hundred weight, one ton.

The usual contractions are as follows:—

Ounce.....oz.	Hundred weight..cwt.
Grain.....gr.	Pound .....lb.
Dram .....dr.	Quarter .....qr.

To reduce a large number of pounds to hundred weight roughly, *from the first three figures deduct the first two*, the remainder gives the hundred. Thus, 13,263 will give in this way 119 hundred weight:—

132
13
119

The exact equivalent of the above number of pounds is 118cwt. 1qr. 19lbs.

A ready mode of ascertaining *the price of an ounce* is to deduct the fourth from the price per pound in shillings, and the remainder will be the price per ounce in pence, as follows:—

2s. per pound.	3s. per pound.
½ deduct	¼ deduct
1½d. per ounce.	2¼d. per ounce.
4s. per pound.	**5s. per pound.**
1 deduct	1¼ deduct
3d. per ounce.	3¾d. per ounce.

To arrive quickly at the price per pound of of an article sold by the hundred weight, divide the number of shillings by 9, and it will give the price in pence per pound, thus:—45s. per cwt., 5d. lb.; 81s. per cwt., 9d. lb. When the number cannot be divided exactly, add a farthing or a halfpenny, according to its relative position to the intervening figures, thus—70s. cwt. would be 7¾d. lb., because 70 is seven figures distant for 63, which would be 7d. lb., and two figures present 72, which would be 8d. lb. The relative price of the pound to that of the ton may be ascertained in the same manner, thus—£18 per ton, 2d. per lb.; £27 per ton, 3d. per lb.; £36 per ton, 4d. per lb., and so on. As a matter of course, this method is not arithmetically correct, but it is sufficiently near to guide a person *when he wants to know on the instant* about what the retail price of an article will be as compared with the wholesale. The positive difference between the price arrived at by this method, and the price which is strictly correct, is an excess of from a farthing to a halfpenny per pound, ranging from 10s. per hundred weight to £5. If this fact, therefore, is borne in mind, and the excess allowed for, the result will be as near the precise amount as possible.

AWAKING PERSONS.—There can be no question that to rouse a person abruptly out of sleep by sudden violence or noisy exclamation, is a cause of serious injury to the brain and nervous system; this is particularly the case where the frame and organization is delicate and weak; and dangerous, if not fatal effects, have resulted from the mental terror evoked by a sudden and undefined noise startling the nerves before the judgment has had time to analyse the nature of its alarm. Few persons enjoy such perfect health as to admit of the total quiescence, in sleep, of all the nervous systems; and the brain in most persons is kept in a sort of torpid consciousness, easily accessible to strong emotions. Instances have been known where the imagination has been so worked upon during sleep that the unconscious slumberer has obeyed the voice of a mischievous friend in performing all the actions of swimming, rowing, and hauling, till under the violence of the muscular power put forth, the body has been covered with perspiration, and the sleeper, when at last awoke, was perfectly exhausted from the effort with which he buffetted the imaginary waves in a supposed struggle for life. In whatever state the brain may be, it is always wrong to use sudden noises to arouse a sleeper. A gentle or rough shake with the hand is always a safe and better means; or the application of burnt feathers or hartshorn to the nostrils may be adopted where the sleep is particularly heavy; but shouting in the ear should never, on any account, be resorted to, except in cases of coma or apoplexy.—See SLEEP.

AWARD—Is the decision of the arbitrators or umpire upon a reference to arbitration reduced into writing. It must be stamped with a 35s. stamp, and it is a principle of law, that arbitrators should all execute an award, at the same time and in the presence of a witness. Publication of an award, is the giving notice to the party in whose favour it is made, to take it up. A judge has an absolute power to enlarge the

time for making an award; but the order for so doing must be obtained before the award is made.—See ARBITRATION.

AXLE-TREES.—These important agents in the mechanism of a carriage were formerly of wood, but are now almost universally constructed of iron. To secure the wheel from coming off, an iron collar, called the axle-tree nut, is placed on the small or outer end of the arm, and through this and the axle arm the linch-pin passes; both of these require to be well lubricated with grease, and they should also be tested from time to time, and if ever so slightly out of order, immediately repaired. For common coarse axles, such as those of waggons and carts, a thick unctious grease is best adapted; but for axles that are made to fit with greater nicety, oil, either animal or vegetable, of the purest kind, and free from all mucilage or jelly, should be applied. To prevent friction in wooden axles, soap or black lead are the best materials.

AZALEA.—The American or hardy azaleas are to be found growing in shrubberies with ordinary plants. They frequently thrive in the common garden soil, but generally they grow better in soil with which peat earth has been incorporated. They may be raised from seed sown in beds in the open air, but it is considered preferable to sow them in pans or wide-mouthed pots. When they have attained a proper growth they should be planted out in peat beds, six inches apart, the second year taking out every alternate plant, and placing it elsewhere to allow room; and this system should be pursued as the growth of the plant increases. Their propagation, however, is chiefly by layers, and cuttings of the last years' wood will take root readily in sand. The *Indian Azaleas* are evergreen greenhouse shrubs of great beauty, raised by cuttings in sand under a bell of glass, and with moderate bottom heat. The cuttings should be severed up to a joint, the lower leaves to the extent of an inch stripped off, and the stem fixed an inch deep in clear silver sand, and covered with a bell glass. When struck, they must be potted off into small pots, and shifted as they require more room.

B.

BABY.—See INFANT.

BABY LINEN.—The provisions which every expectant mother ought to make under this head comprise the following list:—Six night gowns, six shirts, four long flannels, two flannel squares, four barrows, three swathes, three dozen diapers, three flannel ditto. The *night gowns* are made of long-cloth, from 8d. to 10d. per yard; the *shirts* of lawn, at 1s. 4d. per yard; the *long flannels* and the *barrows*, or *baby flannels*, at 1s. 6d. per yard; the swathes, fine Welsh flannel, 3s. per yard; the diapers, 8d. per yard; but for this purpose old table-cloths cut up will answer equally as well. The total expense of these articles, supposing the mother makes them, is about £3; to which must be added other sundries, such as boots, brushes, binding, tape, &c., amounting to about 10s. No mention has been made of robes, as they may be considered luxuries, and their number and quality entirely depend upon the means of the parents. All these articles may be purchased ready-made, but as a matter of course the cost is much greater, and the articles not proportionally good.

BACHELOR'S KETTLE. — This is a useful invention, by which boiling water may be obtained in a few minutes, without the trouble and expense entailed by the ordinary mode. The apparatus, as seen in the engraving, consists of a minature grate

and a shallow kettle, which takes on and off. Beneath the kettle a bundle of patent wood is placed, which is sufficient to make the water boil; and beyond igniting the wood, no further attention is required. The merits of this domestic contrivance are obvious, so many emergencies arise, such as illness in the night, sudden accident, early departure for a journey, &c., where hot water is in immediate request, that any mode which supplies the demand, without the difficulty and delay so generally experienced on these occasions, cannot fail to be acceptable. The other advantages in connection with this invention are cleanliness, and an economy of fuel, as by this means the necessity for keeping the fire in, during the summer time, for the express purpose of obtaining boiling water, is obviated.

BACK, MALFORMATIONS OF, arise from a weakened and imperfect development of the organization, which exposes the child to the readier influence of accidental causes in infancy, when from a fall or undue pressure that part in the system already preternaturally weakened or predisposed gives way, and either displacement or absorption of certain parts takes place. Thus, in the spine some of the vertebræ, or bones of the back, are forced from the line of their true axis, either in the form of a bow outwardly, or like the letter S laterally, and a permanent deformity becomes the result. Or the malformation may proceed from suppuration, or ulceration of the cartilages of the vertebræ, excited, as not unfrequently happens, by some injury received during the birth, which, unobserved and unsuspected at the time, only becomes evident when the evil

has taken place. In this way a deformity may be established in some part of the spinal column, that only shows its real nature when all hope of arresting or curing the disease is at an end.

Malformations of the back may occur in any part of the column, though the portions more liable to become the seat of organic disease are the vertebræ comprising the neck and loins. Rickets are often the immediate cause of curvature or twisting of the bones of the spine, giving that peculiar deformity known as hunch-back. In this state the spine is shortened, the shoulders are thrown up, the breast protrudes, and the ribs become depressed, narrowing the natural cavity for the heart and lungs, and thereby greatly impeding their healthy action.

Another variety of malformation of the back is called the "cloven-spine," a disease generally born with the infant, and in which one or even more of the bones are deficient, and their place filled up by a fluid swelling, or a bag containing serum or lymph.

Though malformations of the back sometimes arise in scrofulous infants from injury during birth, by far the greater number, as before observed, are the result of "caries," or death of one or more of the bones of the spine or vertebræ, and the interposing cartilage or gristle that lies like a pad between every bone of the back. But besides these cases of deformity arising from disease, there is a third, or what may be called a natural malformation, where, without any actual disease, from a loose and slovenly way of carrying the body in fast-growing girls, a deformity of the back and shoulders may be, and is very often, contracted.

The *symptoms* that usually precede and accompany malformation at an early age are, that the child is first observed to be languid, listless, and easily fatigued, becoming gradually sluggish and unwilling to move, frequently stumbling without any assignable cause, the legs often crossing each other involuntarily and without notice, throwing the child suddenly down. The patient, as the disease progresses, totters at the knees, and cannot stand without support; while to advance or set the foot down firmly is a matter of extreme difficulty. These symptoms are succeeded by twitching pains in the thigh, drawing in or under of the toes, and a slow but increasing loss of power in both limbs, terminating in total insensibility and all power of motion. Loss of appetite, with a painful sense of constriction or tightness of the stomach, follows, with a hard, dry cough, difficult breathing, quick sharp pulse, and all the attendants of hectic fever; at the same time the functions of the bladder and bowels are rendered involuntarily, and the patient's situation becomes lamentable, being reduced to a powerless and incapable mass. It is not till these symptoms are all established that the deformity begins to show itself; the absorption of some and the death of other parts finally produce the displacement, and constitute the curvature, sometimes outwardly and sometimes inwardly, of the spinal column.

The *treatment* in curvature of the spine is extremely simple, but, from the length of time necessary to effect a cure, both disheartening and tedious. In the first place, absolute rest for an indefinite number of months is imperatively demanded; the second object is to establish a steady and constant drain from the affected part; and, lastly, to support the system, under the double exhaustion of the disease and the discharge, by nutritious food and tonics.

To effect the first object, the patient must be kept constantly on his back on a firm bed or hair mattress, so as to take off the weight of the rest of the body from the diseased part. For the second, two large issues must be made, one on each side of the spine, in the following manner:—Take two pieces of adhesive plaster, and having cut an even slip out of each, of from one to three inches in length, and half an inch wide, according to the age of the patient, and the extent of the malformation, apply them warmed on each side of the diseased spine, leaving about three fingers width between each slit, or all the width of the skin over the actual ridge of the spine. Then take a stick of caustic potass, or the "potassa fusa," and wrapping a piece of flannel round one end to prevent its corroding the fingers, dip the other in warm water, and rub it freely over all the cuticle within the margins of the two slits, continuing the application till the part beneath the caustic becomes of a dark or brownish colour. The potass is then to be washed off both sores with lint and warm water, and a poultice of sufficient heat applied, and continued to both till the dead cuticle is thrown off. When this is effected, lay a string of three or six issue peas on the sores, apply sticking-plaster to keep them in their place, then a pledget of lint, with a piece of firm card between the folds, and press all in their place by a tight bandage. As the peas sink deeper into the flesh, suppuration follows, and the issue is established. The wounds are to be washed every day, the peas laid afresh, and the compress and bandage reapplied. After a time the health gradually improves, the patient sleeps, the functions begin to act naturally, and spasmodic twitchings in the legs and feet indicate returning sensation to the limbs, which ultimately regain their vitality and use. The patient must then be fed on light digestible food, farinaceous and animal, with a small quantity of wine daily, the bowels kept open by an occasional aperients, and a course of such tonics as those prescribed below, persisted in, one being substituted for the other, as the stomach becomes weary of the repetition.

No. 1. Quassia raspings, 2 drachms; boiling water, 1 pint; infuse for six hours, strain off the liquor, and add muriatic acid, 30 drops. Mix. For an adult, a table-spoonful every 8 hours.

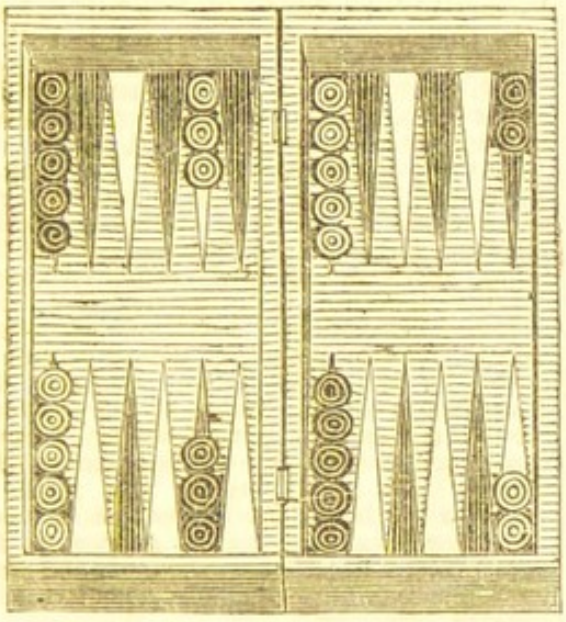
No. 2. Gentian root, cut small, 2 drachms; cardamom seeds bruised, 1 drachm; cascarilla bark and ginger, of each 1 drachm; boiling water, 1 pint: infuse for 6 hours; strain, and add carbonate of soda, 2 drachms. Mix, and take a tablespoonful every 4 or 6 hours.

No. 3. Sulphate of quinine, 15 grains; water, 1 pint; diluted sulphuric acid, 1 drachm. Dissolve and take a tablespoonful three times a day. To protect the teeth from the action of the acid, Nos. 1 and 3 should be sucked through a quill or reed.

For the species of malformation termed natural deformity, the best treatment is air and exercise, assisted by such mechanical means that, while calling into play opposing muscles, shall render no part of the body torpid by pressure or restraint. For the stooping and round back and shoulders, so common with growing girls, the best and most certain cure is to wear a boa, loaded at both ends with lead, increasing the weight from half a pound at each end to two or three pounds. This must always be worn whether sitting or walking. The principle upon which this application acts, is to call into action an opposite set of muscles to those weakened or diseased, and keep them in a state of exertion by the pendulous weight of the loaded boa. When that weight or exciting cause is removed, the muscles having nothing to resist will contract powerfully, and force up the prevously drooping head and shoulders. An exemplification of the practical truth of this statement is furnished in the erect walk and open chests of all tailors, whose occupation calls into greater activity the muscles of the neck and back, to prevent the body falling forward while sewing; the consequence is, that when they leave the board, the head and chest leaps up like an unstrung bow. See SPINE.

BACK, PAINS IN.—See LUMBAGO; RHEUMATISM.

BACKGAMMON.—A game played on a board, divided into two parts or tables, connected by a hinge which enables it to



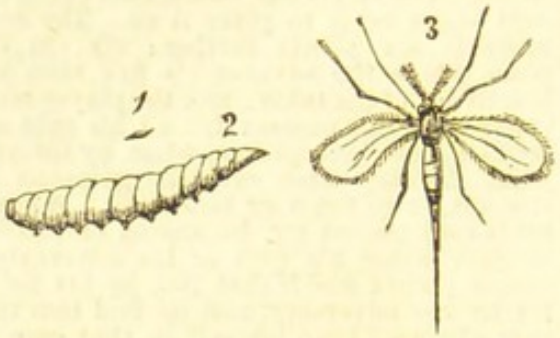
shut up like a box. Every table possesses twelve points, six at each end; and these are coloured black and white alternately. Each player has fifteen men, black and white, to distinguish them, and they are disposed in the following manner:—Supposing the game to be played on the right-hand table, two are placed upon the ace point in the adversary's table, five upon the six point in the opposite table, three upon the cinque point in the hithermost table, and five on the six point in the right-hand table. Each player is then to endeavour to bring the men round into his right-hand table, by throwing with a pair of dice those numbers that contribute towards it; and at the same time to prevent his adversary from doing the like. The first best throw upon the dice is esteemed ace. When the player carries his men home, in order to lose no point, he must carry the most distant man to his adversary's bar point, that being the first stage he is to place it on. The next move is six points further; viz., in the place where the adversary's five men are placed out of his table; and the player must progress in this manner till all his men are brought home except two, when, by losing a point, he may often save the gammon by throwing two fours or two fives. When a hit is only played for, he should endeavour to gain either his own or his adversary's cinque point; and if that fail, by his being hit by the adversary, and he find him further advanced than himself, in that case he must throw more men into the adversary's table, which is done in this manner:—He must put a man upon his cinque or bar point; and if the adversary neglect to hit it, he may then gain a foward game instead of a back game. But, if the adversary hit him, he should play for a back game; and then the greater the number of men which are taken up, makes his game the better, because by these means he will preserve his game at home. He should then endeavour to gain both his adversary's ace and trois points, or his ace and deuce points, and take care to keep three men upon the adversary's ace point, that, in case the latter hit him from thence, that point may remain still secure to himself. The *rules of backgammon* are as follow:—1. When a man is taken from any point, it must be played. 2. A man is not supposed to be played till it is placed upon a point and quitted. 3. If a player have only fourteen men in play, there is no penalty inflicted, because by his playing with a lesser number than he is entitled to, he plays to a disadvantage for want of the deficient man to make up his tables. 4. If he bear any number of men before he has entered a man taken up, and which of course he was obliged to enter, such men so borne must be entered again in the adversary's table, as well as the man taken up. 5. If he have mistaken his throw and played it, and his adversary have thrown, it is not in the choice of either of the players to alter it, unless they both agree so to do. Books: *Hoyle's Games; Bogue's History and Practice of Backgammon; Handbook of Games by Amateurs.*

BACON AND CABBAGE.—Boil some streaky bacon in a small quantity of stock, with eight or ten sausages; in the same stock boil some white cabbages for about two hours; add salt and spices, and serve very hot.

BACON AND EGGS.—Cut a quarter of a pound of streaky bacon into thin slices,

and put them into a stewpan over a slow fire; while cooking, turn them frequently; when sufficiently dressed, pour the melted fat of the bacon into a dish, break over it six eggs, add two spoonfuls of gravy and a little salt and pepper; stew the whole over a slow fire, and serve.

BACON BEETLE.—This insect infests hams, bacon, and all kinds of dried meats, into which it eats small holes; and this is chiefly done when the insect is in its larvæ, or grub state, as seen in fig. 1; when full fed, it becomes a chrysalis, fig. 2; which ultimately changes into a small beetle, fig. 3—



about the third of an inch long, of a dusky-brown colour, with the upper half of the wing cases, whitish or ash-coloured, marked with black specs. The grub, from lying concealed in the meat, cannot be effectually removed; but, by watching the time when the perfect insects appear, they may be destroyed, and a recurrence of the evil in a great measure prevented.

BACON, BOILED.—Bacon will boil better, and swell more freely, if the rind is stripped off before it is dressed. It should be boiled gently, from a-half to three-quarters of an hour being allowed to each pound, according to the thickness. When done, strew bread raspings over it, and place it before the fire to brown.

BACON, CURING OF.—The hogs intended for bacon are kept till full grown, and are usually killed between the months of October and March. The next process after killing is to *remove the hair*, which is better done by singeing than scalding, and is performed in the following manner:—Cover the hog thinly with straw, and set light to it in the direction of the wind. As the straw becomes burnt off, renew it; but, at the same time, carefully avoid scorching the skin. After both sides have been thus treated, scrape the whole body clean, but without using water. The *cutting up* should be accomplished by first taking off the head, then removing the back-bone, and cutting across the ribs; the two sides, or flitches, intended for salting will then be flat; after these have been well dried with a cloth, rub the inside of each flitch with salt, and place them one above each other in a tray having a trench round it to drain off the brine. Change the salt every four days, and reverse the order of the flitches, putting the one that has been at the bottom on the top, putting that again at the bottom, and so on. The *interval of salting* is about six weeks for a hog of twelve score. In this process common salt only is generally used, but a finer flavour is imparted by a mixture in these proportions:—Salt, 4lb.; sugar, coarse and brown, 1lb.; saltpetre, ¼lb. *Smoking* is a preferable method of cure to drying, and is thus effected:—Rub the flitches thoroughly with bran, and then hang them in the chimney in such a position that they shall be protected from the rain and not injured by the fire. With a constant and perfect heat, a month's smoke will be sufficient. The smoke for this operation must either be of wood or peat; the quality of the wood influences the flavour of the bacon, oak and beech being the most preferable. Bacon may be *preserved* in wood ashes, or in very dry sand.

BACON FRAZE.—Beat eight eggs into a batter with a little cream and flour; fry some thin slices of bacon and dip them into it; lay the bacon in a frying-pan, and pour a little of the batter over them; when one side is fried turn, and pour over more batter. When both sides are of a light brown colour, put into a dish and serve hot.

BACON FRIED.—Line the frying-pan with clean white paper, cut the bacon into thin slices, remove the rind, and lay the bacon on the paper; fry till brown.

BACON GRILLED.—The slices should not be cut more than an eighth of an inch thick, and will eat much mellower if soaked in hot water for a quarter of an hour, and then dried in a cloth previously to grilling. If it is desired to have the bacon curled, cut it in slices about two inches long, roll it up, and put a little wooden skewer through it; cook in a Dutch oven for eight or ten minutes, turning it as it gets crisp. The ordinary method is, however, the best, as it is crisper and more evenly done.

BACON OMELET.—Cut some streaky bacon which has been boiled for half an hour into the form of dice, and fry it with a small piece of butter. Beat up a dozen eggs, which pour over the bacon when it begins to get crisp, stir all well together, and when thoroughly mixed and browned, serve.

BACON—PROPERTIES AND USES OF.—As a food by itself, bacon is not to be recommended for habitual eating, especially for weak and delicate stomachs, because the fleshy fibres having been rendered tough by the smoking and salting, the meat becomes exceedingly hard of digestion. Bacon, however, especially the fat part of it, possesses the property of assisting the assimilation of other meats of a dry nature, for this reason veal, liver, fowl, &c., become much easier of digestion when eaten with bacon. The chief *uses* of this meat, in addition to those before specified, are as a relish for breakfast, tea, or supper, or for supplying an impromptu repast in the place of other meats which are procured with greater difficulty.

BACON RELISHES.—Cut cold bacon into thin slices, powder both sides with bread raspings, and put them before the fire in a Dutch oven. In three minutes one side will be done, and in three minutes more the other.

BACON TOAST.—Cut some slices of bread

thin, and about three inches long; chop some streaky bacon into small pieces, and dip them into a raw egg, which has been beaten up with shred parsley, shalots and pepper; fry the bacon and bread together over a slow fire, and serve with clear sauce with a little vinegar in it.

BACON—To Choose.—The fat of good bacon will feel oily and look white, the lean of a fresh red colour, and firmly attached to the bone; if it be young, the rind will be thin and tender, and if old, thick and tough.

BAGATELLE is a game played upon a board, with balls, and a cue or mace. It is an amusing parlour-game, and as such is preferable to billiards, on account of the table being of a more convenient size, and much less expensive. The size of the table ranges from five to ten feet in length, and from eighteen inches to three feet in width; it is lined with green or blue cloth; and a slip of thin wood is placed in a semicircular form inside the upper end. There are nine cups, consecutively numbered 1 to 9, sunk in level with the cloth; into these cups the balls are to be driven, when playing the games known as La Bagatelle and Sans Egal. The board has also a bridge with small arches likewise numbered 1 to 9, through these arches the balls are to be driven in playing the two games called Mississippi and Trou Madame. There are also two small cushions, placed against the sides of the board, when used for the game of Mississippi. The following are the various rules of the four games ordinarily played:

La Bagatelle—1. Any number of players may join in this game, and use either the mace or the cue, as may be agreed upon. 2. Each player strikes a ball up the board, and whoever obtains the highest number is entitled to the lead, and takes possession of the nine balls. 3. The black ball (which counts for double), is placed on the white spot in front of the holes, at the beginning of every round, and must in the first instance be struck by one of the other balls before there can be any score. 4. The striker's ball must be placed on the white spot nearest the other end of the board, and is to be struck with the mace or cue at the black ball, the object being to put it into one of the holes. The rest of the balls are to be played up in the same manner, either at the outstanding balls, or for the holes. 5. Any number of rounds may be played for the game, as may be agreed upon at its commencement. 6. The player who obtains the greatest number—counting the holes into which he puts the balls, according to the figures marked within them—wins the game. 7. Any ball rebounding beyond the centre, or being driven off the board, cannot be used again during that round.

Sans Egal.—1. This game is played by two persons, and numbers 21 or 31, according to agreement. 2. The player who leads (which is decided as in La Bagatelle) chooses four balls of either colour, and places the black ball on the mark in front of the holes, and he begins by striking one of his balls up the board. 3. The adversary then strikes one of his balls in the same manner, and so on alternately. 4. The player who holds the black ball counts it towards his game, as also all that he may hole of his own colour. 5. If a player hole any of his adversary's balls, it counts for the owner of the balls. 6. The player who marks the greatest number of points in each round takes the lead in the next.

Mississippi. — 1. The bridge must be placed close up to the circle, and the small cushions against the sides. 2. Each player strikes one ball only, through the bridge, and he who obtains the highest number, leads off, and plays the nine balls in succession. 3. Every ball must strike one of the cushions, previously to entering the bridge, otherwise the number reckons for the adversary. The game to consist of as many points as may be agreed on at its commencement.

Trou Madame.—This game is played in the same manner as the preceding, with the exception of the balls being played straight from the end of the board through the bridge.

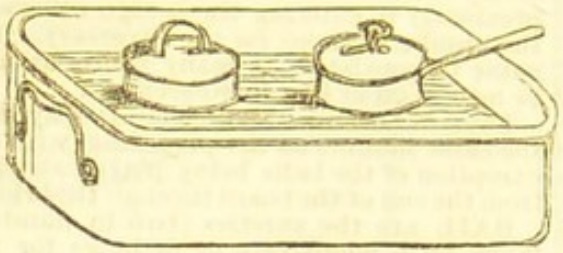
BAIL are the sureties (two in number) taken by a magistrate or a judge for the appearance, upon a given day and time, of a party arrested in a civil suit, or in custody for a criminal offence. Every housekeeper may be bail. Each bail must prove himself upon oath to be worth double the amount of the debt. A man bailed may be taken at any time by his bail, even on Sunday, and kept in custody and rendered to prison.

In misdemeanours, justices are bound to take bail. A very important case occurred at the time of the Chartist riots in 1842, when the magistrates of Staffordshire determined amongst themselves to refuse bail, and acting on that decision, denied it to one O'Neil; and although they were acquitted of any perverse or partial motive, and had decided in the legitimate exercise of their office that such a person ought not, in the then state of the country, to be admitted to bail, yet their refusal was held to be contrary to their duty as magistrates, and they were censured and condemned in costs.

In cases of felony, two justices may admit a person to bail, notwithstanding he has admitted the charge, the principle being, that justices in admitting to bail should be guided by the probability of a party appearing to take his trial, and not by his supposed guilt or innocence; but a justice admitting to bail where he ought not, is punishable as for a negligent escape, and if excessive bail is required, it is punishable as an offence against the liberty of the subject. In general, no notice of bail is requisite, but justices may order the prosecutor to have twenty-four or forty-eight hours' notice of bail. When a party, to avoid being apprehended, voluntarily goes before a magistrate and offers bail, no notice is requisite. The prosecutor or his attorney may examine the bail as to their qualification. Personating bail is punishable with transportation for life, or not less than seven years, or by imprisonment for a term not exceeding four years nor less than two years. The party bailed is considered legally in the custody of his sureties, who are his keepers, and they may therefore re-seize him and get themselves

discharged, but he may find new sureties. The persons of the bail are not liable under recognizance. The bail may bring an action against the party for money paid upon recognizances. A party cannot be bailed when taken in execution on a judgment or after conviction.

BAIN MARIE, or WATER BATH.—A culinary utensil, used when it is necessary to keep the contents of a vessel hot without suffering them to boil. This contrivance is especially adapted for keeping viands warm when a repast is delayed beyond the appointed hour through the non-arrival of the



invited guests, or from other accidents; for by this means the warmth is retained without the quantity being diminished or the quality deteriorated. The application of the *Bain Marie* is exceedingly simple, and fully explained by the accompanying illustration.

BAIT, FOR ANGLING, is composed of numerous and various substances, living and dead, natural and artificial. *Animal* baits, such as rats and mice, are not much used, although they will be taken by *pike*, and even by *trout* occasionally.

Fish baits are used for *pike*, *trout*, *perch*, *chub*, and *eels*, and those are chiefly roach, dace, gudgeon, loach, minnows, and small chub, barbel, and perch; the larger baits for the first mentioned and the smaller for the latter, although large trout will feed upon all descriptions of *white* fish. These fish baits are obtainable at the tackle shops, or must be angled for or taken with a casting, or other net, at convenience.

Frogs, in the absence or scarcity of fish baits, may be used for pike, and occasionally trout, chub, and perch may be taken with them; these baits are used either dead or alive, according to the predilection or convenience of the angler, and are also imitated by ingenious persons: mother-of-pearl, glass, tin, gold and silver wire, and tinsel, being principally the materials of which these artificial baits are composed. The American "spoon bait" and the Archimedian "screw bait," or "otter," have been recently introduced to the angling fraternity, and are made of copper, plated with silver, in the shapes indicated by their nomenclature. The natural dead fish may be kept bright in colour and inoffensive to the smell by being immersed immediately after capture in a mixture of common and bay salt.

Insect baits are very numerous—worms, grubs, larvæ, grasshoppers, gentles, wasp-grubs, cockchafers, cockroaches, and flies of every description, form the principal food of the inhabitants of our rivers, lakes, brooks, and ponds.

Worms are of various kinds. The lob or garden worm, which is an excellent bait for trout, barbel, chub, perch, carp, tench, eels, and even for roach, dace, and gudgeon, is found in abundance in our gardens and fields, and may be obtained by digging, by following the plough (taking a hint from the rooks and crows), or in larger numbers, and for a greater certainty, in the evening after rain, and during the whole of warm moist nights, at which times they leave their holes, either partially or entirely, in search of food; to obtain these worms, a lanthorn should be procured: arrived at the place of search, the ground should be closely and quietly scanned, and when found, the worm should be carefully taken between the fleshy parts of the fore-finger and thumb, so as it may not be injured by pressure or by the nails; if the worm is only partly out of its hole great care must be observed not to attempt to drag him thence by force, but after grasping it in the manner directed to prevent it escaping back into its hole by simply "holding your own," and the worm will shortly yield to the gentle and sustained strain. *Red worms* (for carp, tench, trout, perch, barbel, chub, roach, dace, gudgeon, &c.), are found amongst old rich soil, under large stones or planks and baulks of timber, in moss or grass growing on the edge or side of wood-work frequently saturated with water. *Brandlings* (for perch particularly, and all the sorts of fish that will take the red worm), are to be found in dung-heaps.

These are the three principal sorts of worms, although all can be used to advantage. *To preserve worms*, they should be placed as soon after being taken as possible in a wooden tub or bowl, or unglazed earthenware pan, and left therein for from three to six hours, according to the number, in order that they may cleanse themselves from slime, clay, and dirt; and then be placed in another bowl, tub, or pan with damp moss, from which have been carefully removed all leaves, thorns, pieces of stick, and other foreign substances; care must be taken that all the dead or mutilated worms are thrown away; they must be examined every day, or every other day at farthest, and the dead or sickly ones removed, and every six or seven days be placed in fresh damp moss, or removed from that in which they are, and the moss carefully and effectually rinsed in water, clear of all dirt and impurities. Some persons recommend a small quantity of fresh milk and yolk of egg beaten together, or the scum of a pot in which fresh meat has been boiled, being from time to time dropped into the moss, and well disseminated amongst it by turning over.

Of the *larvæ* baits, the *caddis*, *cad* or *straw* bait, is the most numerous and the most sought for by trout, chub, barbel, roach, dace, carp, bleak, &c. It is the chrysalis state of the "ephemeræ," green and grey drake, or May-fly, and of the stone fly, and is to be found in clear shallow streams, under stones, or in the eddies behind obstructions to the current, in a cylinder, formed by fastening together scraps of

straw, stick or bark, and weighting it with sand or gravel, so as to carry these buoyant substances to the bottom. *To preserve these*, peel the green bark from a withy bough, six or seven inches round, and about a foot in length; turn both ends into the form of a hoop, and fasten them together by the aid of a large needle and thread; stop up the bottom with cork, and bore the back full of holes with a thin red-hot wire; tie over it a coleswort leaf, and lay it in the grass every night; keep it in a cool place during the day.

Wasp-grubs are obtained by finding the nest of the swarm in some bank or hedge-row, or on the bank of a stream or pond, and in the evening, when they are all hived, applying lighted straw to the entrance, amongst which gunpowder and powdered sulphur has been strewn, so as to fill the hole in which the comb is built with smoke, to suffocate the wasps; or, strew some powdered sulphur in a dish, pan, or saucer, and place it in the entrance of the hole lighted, and as soon as the fumes of the sulphur begin to penetrate to the nest, and the wasps evince an intention of escaping, plug up the entrance with straw or a sod, or some clay, and be careful that this is efficiently done, or you may have cause to rue your neglect. When sufficient time has elapsed to suffocate the wasps, dig out the comb, in which the larvæ sought for will be found.

Gentles may be procured at the tackle shops, and sometimes from butchers or tallow chandlers; but if it is desired to breed them, take a piece of bullock's or sheep's liver, a chub, or roach of about a pound weight, a rook or moorhen, or any similar substance, and hang it up for a day or two in a place shaded from the direct rays of the sun, where it will be visited by the blue and green bottle-flies, which will deposit their ova therein; after the expiration of three or four days gentles will begin to appear, when a wooden bowl or unglazed earthenware pan, in which is some sand or bran, or both mixed, must be placed under the blown substance, into which the gentles will fall; when the food is gone, or all the gentles have left it, the bowl or pan must be removed, and kept in a cool place, and the gentles taken from it as required. They can be kept through a great part of the winter season by immersing them in mould, with which a small quantity of moist cowdroppings has been mixed, and then burying them in the earth. Gentles are a good bait for all sorts of fresh water fish, except pike.

Grasshoppers are excellent bait for trout, chub, and large dace, they may be caught by the hand amongst grass, and will afford some amusement in their pursuit.

Cockchafers are to be caught whilst they are flying about in the evening, or in the day time, by shaking them from the trees to which they may have resorted to seek food, shelter and rest; horse chestnut, and lime and willow trees are those most delighted in by these insects.

Cockroaches are to be caught in the traps known as black beetle traps; bakers' cellars and sugar-bakeries are their chosen resorts. The two baits last enumerated are excellent for trout, chub, and large dace, and may be most effectually used as a dipping or dapping bait, under overhanging trees or over bushes partly immersed in water.

Flies, both natural and artificial, will be treated of in a separate article under the head "FLIES."

The *vegetable* and the *animal* kingdom each contribute materials more or less manipulated, out of which bait is formed for the finny tribes, viz., *wheat*, *malt*, *bullock's pith*, *cheese*, *greaves*, *paste*, *salmon roe*, &c., &c.

Wheat and malt require to be parboiled before using, and are a good summer bait for roach, dace, bream, carp, and tench.

Bullock's pith is the marrow found in the spinal bone, and is a good bait in the winter months for chub. You will find two skins on it, the outside very thick and tough, which take off altogether, after slitting it up with a pair of scissors, being careful not to drag the inner skin away with the outer one. Slip this inner or under skin up on one side with a pair of scissors, and lay it flat; you will then have skin on one side, and none on the other. Wash it clean, and let it boil in water one minute.

Cheese is a bait used for barbel and chub, and should be made white and tough, without salt, from old milk (unskimmed), and cut up into squares about the size of dice.

Greaves, a substance to be procured from tallow chandlers, is the sediment from the melting pot, and is an excellent bait for barbel, chub, carp, tench, and bream; it should be broken small with a hammer, care being taken not to break pieces that appear likely to make a bait for the hook, then put it into a saucepan with sufficient water to cover it, and allow it to boil for twenty minutes, frequently stirring to prevent its burning by the particles adhering to the interior surface of the pot. If it gets stiff, add more water to make it of a sloppy consistence. When taken off the fire it should be placed in a cool spot to settle.

Pastes are made of flour and water, and of bread, stale or new, to which are added honey or sugar to sweeten them, vermillion or red lead to give them a pinky colour, and cotton wool to make them adhere to the hook, all according to the fancy of the angler. Take the crumb of new bread, well knead it in a piece of linen or cotton rag to keep it clean and to prevent the perspiration of the hand from giving it a flavour; this will not easily wash off the hook even in a swift stream. The crumb of a milk roll makes a very white paste, but it is not so adhesive as that of bread made with water. If new bread cannot be procured, take a piece of stale, and squeeze it well in the hand *before* dipping it into water for an instant—an instant only—then well knead this, as previously directed.

Salmon roe for trout, perch, chub, roach, dace, and indeed for most fish, is a very

effectual bait, if properly prepared and used. The following is a good plan:—Immerse a pound of spawn, the peas of which should be as large as can be got, in very hot water, remove the membrane, skin, film, &c., rinse with cold water, and hang up to drain in a bag or cloth for twenty-four hours; then put to it two ounces of bay salt with a quarter of an ounce of saltpetre, finely powdered, and again hang up for twenty-four hours; then spread it out on a dish in the sun, or before the fire, until it gets dry but not parched up; pot it down, pound some melted lard over the surface, and cover over with bladder. This *will* keep for two years, but it will be better to use it, and to make it year by year.

Ground-baits are used for casting into the water to draw and to keep the fish together in one spot, and of course are only available for those kinds of fish that are to be taken at the bottom. For roach and dace, bran and clay mixed together in lumps about the size of a walnut, into which a few gentles may be sometimes placed, or to the former some bread crumbs may be added; these will also do for carp, tench, and chub, but the best ground bait for carp and tench is worms, both lob and red, chopped up into three or four pieces, and (without any clay) thrown into the place intended to be fished 24 or 30 hours before fishing. Worms thus chopped up are a good ground bait for chub and barbel, but should be deposited about 20 hours before the time chosen for fishing. Worms for ground-bait are the better for not being previously scoured. *Cheese* is also a good ground-bait for chub and barbel. *Carrion gentles* make a good ground-bait for carp, tench, bream, roach, dace, and barbel; they may be procured at the tackle shops, or at the knackers, or skin dressers. *Grains* (fresh) also make a good ground-bait for bream, carp, tench, and roach. *Brains*, either bullock's or sheep's, well cleaned and then scalded for a minute or two, and chewed and dropped into the water, is an excellent ground-bait for chub, particularly when bullock's pith is used for the bait on the hook. Books: *Davy's Salmonia; Walton's Angler; Salter's Guide; Hoffland's Manual; Bailey's Instructor.* See FLIES.

BAKEWELL PUDDING.—Cover a dish with thin paste, and spread it with jam of any kind, half an inch thick. Beat together until thoroughly mixed the yolks of eight eggs, the whites of two, a pound of sugar, the same quantity of butter melted, and a dozen pounded almonds. Pour into the dish, and bake in a moderate oven for an hour.

☞ Eggs, 8 yolks, 2 whites; sugar, 1lb.; butter melted, 1lb.; almonds, 12; paste and jam, sufficient.

BAKING.—This is a cheap and convenient mode of dressing food, and is especially acceptable to persons with small families and to the poorer classes. Although the process of baking deteriorates the flavour and tenderness of some joints, there are others which taste equally well baked as roasted; among these are legs of pork, shoulders of mutton, and fillets of veal. Certain kinds of fish are also better dressed in this manner, particularly pike and red mullet. Hams also, when covered with coarse paste and baked, have a finer flavour and are more juicy than when boiled. Baking may either be performed at the baker's or at home. In London, the former mode is usually preferred; because for a few pence the expense and trouble that would be otherwise incurred are obviated. When a dinner is sent to the bakehouse, the hour at which it will be required should be named at the time when it is left, and it should not be allowed to remain at the baker's beyond that time, otherwise the meat becomes soddened and the potatoes clammy. On Sunday there are more dinners baked in London than all the rest of the week put together, and the generally understood interval for the process of baking is from eleven o'clock till one. If the baking is performed at home, a good fire should be kept up so long as the joint is in the oven; the time required varies with the nature of the meat, and the size of the joint, but, as a general rule, a quarter of an hour for each pound will not be found unsuitable. While the meat is cooking, the oven should be opened as seldom as possible, otherwise the temperature is disturbed and the cooking considerably retarded. To prepare meat for baking, it should be placed in the dish on a stand, so as to allow room for potatoes underneath; a few spoonfuls of water should be mixed with the potatoes, and a little salt sprinkled over them. In order to prevent the meat from being too much dried by the heat of the oven, two sheets of paper spread separately, with a thick coat of butter or clarified marrow, should be fastened on the outside of the joint.

A receptacle for joints intended for baking has been invented by M. Soyer, which admits of a joint of meat, a dish of potatoes, and a pudding, being baked at one and the same time. This simple contrivance consists of an open framework of wire, which lies upon a deep tin or earthenware dish, in two stages, so that as the meat is raised above the potatoes, and these again are above the pudding, dripping falls on both.

One of the most useful appliances of baking is that known as the Nottingham jar, as shewn in the accompanying illustration. This is adapted for cooking rice, meat, fish, or fruit, and is extremely useful in keeping edibles hot, and at the same time retaining their juices. Food for invalids is recommended to be dressed in this way, as the entire amount of nourishment contained in the food is thus preserved. When this jar is used for baking it should be well pasted down, covered with a fold of thick paper, and placed in a gentle oven. *Pies, cakes, &c.*, require various times for cooking, according to their size, but the degree of brownness they present, gives unmistakable indications

of the stage they have arrived at. Objections are urged against baked meats, and with a great deal of truth, that they are not so wholesome as roasted; the reason of this is, that the process does not admit of the passing off of the vapours, so rapidly as boiling or roasting; the fat is also more retained, and becomes converted, by the agency of the heat, into an empyreumatic oil, so as to render the meat less fitted for delicate stomachs, and more difficult of digestion generally. As a partial provision against these consequences, the meat should not be taken immediately from the oven to the table, but placed on a dish for a few minutes before the fire, so as to allow some of the gases it contains to escape.—See OVEN.

BALANCE, IN COMMERCE, comprehends those figures that remain when a smaller number or quantity is subtracted from a larger. The importance of keeping balances regularly in commercial accounts cannot be too highly estimated Debtor and creditor accounts should be balanced periodically, so as to ascertain, on the instant, how much is either owing or owed. Cash accounts should be balanced weekly or monthly, in order to arrive at the relative amounts of the expenditure and receipts, for future governance; and accounts and books generally should be balanced half-yearly or yearly, so that a person may judge of the progress he is making, and how he stands with the world. Balancing also acts as a check upon ordinary account-keeping, and serves to detect any error that has been committed and escaped observation.—See BOOK-KEEPING.

BALCONY.—In a house where there are children, care should be taken that the balconies, and especially those of the nursery, are constructed in such a manner that it is impossible for a child either to fall through the bars or to be fixed in them; nor should the top rail be so low that a child may climb up and tumble over. For the want of these precautions many frightful accidents have occurred.

BALDNESS.—The proximate cause of the falling off of the hair is an insufficiency of nourishment in the pores of that part of the skin where the hair has been accustomed to grow. This will be the more clearly understood, when it is known that each hair has a separate existence in a tubular form, which, in order to sustain its vitality, imbibes a certain amount of moisture given out by the pores of the skin; when this sustenance is from any cause withheld, the hair withers and falls away, in the same manner that the stem of a plant, when deprived of its sap, droops and decays. Baldness is ordinarily accepted as one of the natural indications of approaching age; but when it occurs in the early stages of life, it is then unnatural, and assumes the form of a disease. Sometimes it shows itself by a general falling off of the hair, while at other times the diminution is partial, and confined to round or irregular patches. Under these circumstances, the disorder is more frequently the result of a want of mere local vigour, than the consequence of constitutional decline; and the remedy mainly depends upon stimulating applications energetically and unremittingly employed. *General baldness* is preceded by an unusual loosening of the hair, which, upon combing or brushing, comes off in large quantities. In order to arrest this, persons who have short hair, should immerse the head in cold water morning and night, dry the hair thoroughly, and then brush the scalp until a warm glow is produced. With females, however, who wear the hair long, this mode of proceeding is almost impracticable, on account of the difficulty experienced in drying the hair; it is better, therefore, in these cases to brush the scalp until redness and a warm glow are produced, and then rub in among the roots of the hair a lotion compounded as follows: Eau-de-cologne, two ounces; tincture of cantharides, two drachms; oil of lavender, and rosemary, of each ten drops. Apply this to the head once or twice daily, until the growth of the hair is restored. But if the scalp become sore, the treatment must be discontinued for a time, or practised at less frequent intervals. When the *baldness occurs in patches*, the skin should be well brushed with a soft tooth-brush which has been dipped in distilled vinegar, and afterwards brushed in the manner previously pointed out. Both these modes of treatment are prescribed by Dr. Erasmus Wilson, who has for many years made the diseases of the skin and the hair his peculiar study. Persons afflicted with baldness should scrupulously avoid having recourse to the many advertised specifics for restoring the hair; for in many instances these nostrums not only fail to effect the remedy they pretend to, but also produce injurious results by the application of deleterious ingredients, which corrode the pores and irritate the scalp.—See HAIR, PRESERVATION OF, and SCALLED HEAD.

BALLACHONG.—An Indian mixture, made as follows:—A pint of picked shrimps, and a pint of apples, slightly ripe, cut the apples into small pieces, and dry them in a stew-pan a little over the fire. Mix two pounds of butter, two cloves of garlic, one onion, chopped, and a tablespoonful of seasoning, comprised of curry, pepper, salt, and cayenne, proportionably mixed. Fry the onions and garlic in the butter, then add the other ingredients, and fry all together; when cold, put in a jar, cover close, and when wanted, fry in small quantities dipped in butter.

☞ Shrimps, 1 pint; apples, 1 pint; butter, 2 lbs.; garlic, 2 cloves; onion, 1; seasoning, 1 tablespoonful.

BALLOT.—A method of voting, employed upon occasions when it is considered expedient to preserve secrecy in regard to the opinion of each voter. The modes of performing this kind of voting vary in some respects according to the object to be attained: as for instance, in the case of an election to an office, where the choice can fall upon only one candidate, or upon a smaller number of candidates than are put in nomination. In the latter it is usual to deliver to each voter a list of the names of the candidates, from which he erases the

names of the candidates he opposes, and after folding up the list so as to conceal the name left, deposits it in a glass or urn, from which the votes are taken when all collected, and counted in order to determine in whose favour the greatest number of votes has been given. In cases where a simple affirmative or negative is alone required the same method is sometimes adopted, and then the papers deposited in the urn or glass bear only the word "Yes" or "No." A third method, and the one that is most usually employed by clubs and societies, for the election of a member or an officer of the establishment, is to have a ballot-box with two compartments, which are severally indicated externally by "Yes" and "No." Between the two compartments is an aperture through which the arm may be put to some depth; each voter is furnished with a ball, which he drops into one of the compartments, but the whole process is so regulated that it is impossible to detect in which compartment the ball has been deposited. Sometimes the original mode is adhered to, each voter being furnished with a white and back ball, the former denoting assent, and the latter dissent; hence comes the expression "to black-ball." In this mode, however, the difficulty of satisfactorily disposing of the unemployed ball, lays the process open to many well-founded objections.

A black-ball, in its general signification, counts more than one vote, being sometimes considered equal to three, five, &c., according to circumstances. In elections at the London clubs, each ball found in the compartment "No" of the ballot-box usually counts as ten.

This mode of election is now almost universally resorted to in England by clubs, benefit societies, and public institutions; the directors of the Bank of England and the East India House are also thus chosen. The leading feature of the ballot is, that it enables a voter to record his opinion without placing himself in avowed antagonism to the candidate against whom he votes, and thereby shields him from those unpleasant consequences which open voting so frequently entails. Supposing, for instance, in the election of a club member the black-balls should be in the minority; it may easily be imagined that if the names of the dissentients were known to the candidate elected in spite of the opposition, no friendly intercourse or cordiality could possibly exist between the contending parties; whereas, by adopting the ballot, the adverse voters being unknown to the elected member, the harmony of the establishment remains undisturbed, and in the event of the opposition having been the result of mere prejudice, a closer intimacy and juster estimate of character may ultimately lead to transforming the foe into a friend.

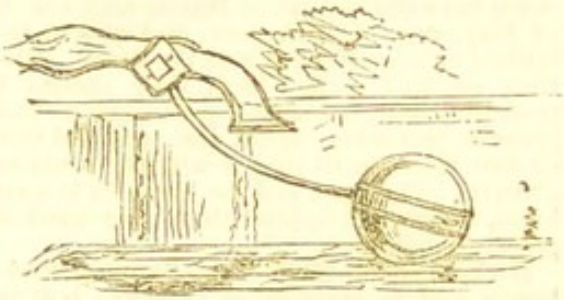
In England the ballot has, up to the present time, been withheld from the people for political elections. Vigouros efforts are, however, being made to have it constitutionally recognised as the system by which members of Parliament shall be elected. At an election for Reigate (1858), the principle was adopted under the following circumstances:—For this seat there were four candidates, one being in the Conservative interest, and the remaining three Liberals; it was therefore evident that the dividing of the Liberal interest among so many candidates was calculated to prevent individual success, and in effect to give a majority to the other side. It was agreed, therefore, among the Liberal candidates, that cards, bearing their several names, should be sent to all such voters as were known not to have pledged themselves to the Conservative candidate. From these cards each voter was requested to erase two of the names, retaining the one whom he wished to vote for. When the cards were returned, an account was to be taken: he who had the greatest number of votes standing for the seat, the two others retiring.

BALL ROOM.—The invitations for this class of entertainment should be issued from seven to ten days previously. They are sent in the name of the lady of the house, and if intended for a family where there are grown-up sons and daughters, one card should be sent for the master and mistress, a second for the daughters, and a third for the sons. Any guest staying with a family should also have a distinct card. Answers should be returned on the next day or the day following. At a *private dance* the lady of the house generally opens the ball, but when prevented from doing so, her husband takes her place, usually leading off the first dance with the lady of the highest rank, or the greatest stranger. Should the hostess dance, she must avoid participating in the amusement to any great extent, and not exceed two or three dances. The host should also observe a like limit and act as a sort of private master of the ceremonies, taking care, amongst other duties, that the ladies are provided with partners and seats. Married ladies are usually attended by their husbands, but this is not absolutely necessary; unmarried ladies, however, cannot well go alone, but should always be accompanied either by their mother, a married sister, or an elder lady. In private parties, a lady may not refuse to dance with a gentleman unless previously engaged, and on no account is she to dance with any gentleman when she has refused another for the same dance. In dancing, a lady should deport herself with grace and ease, not displaying either an excess of sprightliness or a deficiency of it; while all her movements should be dictated by refinement and modesty. A gentleman, on entering the ball room, first addresses the lady of the house, and, after her, the nearest acquaintances he may recognise. If a friend be introduced, he should first of all be presented to the hostess and host, and then made acquainted with the names of the chief persons present. When a gentleman conducts a lady to a *public ball*, he hands her to a seat, and then, from the programme which he has received on entering, he proceeds to make his engagements for the evening. If he wish to dance with

any lady with whom he has no previous acquaintance, he must seek an introduction through the master of the ceremonies, one of the stewards, or a mutual friend. While a gentleman is dancing he should pay exclusive attention to his partner, and engage her in light and agreeable conversation; at the conclusion of the dance he should lead her to a seat, and ask her to take refreshment; he may then leave her with a bow, or if she please, converse for awhile; he should, however, immediately retire, when another gentleman advances to claim the lady for the next dance. No lady is justified in refusing to dance unless previously engaged, and on no account should she dance with a gentleman at a public ball without the usual ceremony of introduction having been gone through. Some difference of opinion exists as to the extent to which a lady may decline or accept the proffer of refreshment; in this, however, a little judgment must be exercised, and the example of the chief ladies present, noticed and followed. A gentleman should not dance too frequently with the lady whom he has escorted to the ball, nor, indeed, with any other lady; such a proceeding giving the appearance of exclusiveness, and a contempt for the remaining portion of the assembly. A gentleman should pay some attention to those ladies who are otherwise neglected, and lead them out quietly and unostentatiously, without endeavouring to make it appear that he is conferring a favour, or undergoing a personal sacrifice. When dancing, a gentleman should hold the hand, and encircle the waist of the lady as lightly as possible; a contrary mode of deportment is both rude and vulgar. The style of dancing should not savour too much of the academy, nor, on the other hand, should it be careless; but quiet, easy, and graceful. The *top* of the ball room is at the same end with the orchestra, but where the music occupies the centre of the room, the top is then at that end nearest the door. A gentleman should always endeavour to place his partner as near to the top as possible. It is ill-bred, however, to take a place previously engaged, or when forming a country dance to push in at the middle, or upper end; the proper station under such circumstances is below the last couple who are standing up. At private parties, refreshments are frequently handed round, and it is the duty of a gentleman to see that the lady, in whose company he is at the time, is provided with the refreshment she desires. At a public ball, a supper is usually spread in another room, to which a gentleman escorts the lady whom he brought, his partner in the last dance, or an unaccompanied lady; having placed her at the table, he waits upon her until she has finished her supper, hands her back to the ball room, and returns to procure his own refreshment. When any guests wish to retire from a private dance, they should bid the host and hostess a quiet farewell; or if this is impracticable, leave without doing so. After a ball—say, during the course of a week—the host and hostess should be visited, but the visit must be limited to a short duration. Any acquaintance formed at a dance does not extend beyond the ball room; and a lady is justified in passing, without recognition, on the folowing morning, her partner of the night previous.

Full dress must be worn at all balls, both public and private. That worn by the lady should be light, and as little cumbersome as possible, so that she may be free in her movements, and not embarrass her partner. The dress of the gentleman should be a black dress coat and trowsers, a white waistcoat, white cravat, and patent leather boots. White or primrose kid gloves should invariably be worn both by ladies and gentlemen, and not taken off during the whole of the evening, except at supper time. A supplementary pair of gloves, carried in the pocket and put on after supper, will be found greatly conducive to comfort.

BALL-TAP.—The regulator of the water supply to a cistern. This contrivance, although very simple, is apt to get out of order: sometimes it is fixed either upwards



or downwards and will not move, and the supply of water becomes consequently interrupted. These defects, however, generally admit of an easy remedy, the application of a little oil, or the tightening of the nut seen in the engraving being in most cases all that is required.—See CISTERN, FROST, LEAD, ZINC.

BALM, IN BOTANY.—A herb frequently used for medicinal and culinary purposes. This is one of the most common and well known plants in the kitchen garden; it has a fragrant smell, and its root creeps rapidly and grows abundantly. It grows in the poorest soil, and never requires manure. It is readily propagated by parting the roots, two or three buds being preserved to each piece, or by slips. If offsets are employed, they may be planted at any time during the spring; eight or ten inches apart. If propagated by slips, they must be inserted during the month of May or June in a shady border; and in September or October transplanted into the beds, where they are to remain. During the summer, all the attention they require is occasional watering and weeding; in the autumn the beds must be dressed, the old leaves and stalks cleared away, and the soil loosened by the hoe. When balm is intended for drying, it should be gathered just previous to flowering, and at such time as the leaves are perfectly free from dew or moisture. The leaves are better dried in the shade than in the oven; when cool, they may be pressed into packages, and wrapped up in white paper ready for use. As a medicine, balm is used

in conjunction with more powerful drugs to supply a moderate stimulant, and to induce profuse perspiration.

BALM TEA is made by simply pouring boiling water over some of the leaves in a teapot, and letting them infuse. It should be drunk a short time previously to going to bed.

BALM WINE.—Put a bushel of leaves into a large vessel, and pour over them eight gallons of boiling water; mix thoroughly together, and let them stand for twenty-four hours; then strain, add twenty pounds of sugar, and bottle off. It will be fit to drink in six weeks, but greatly improves by keeping.

☞ Balm, 1 bushel; water, 8 gallons; sugar, 20lbs.

BALSAM, IN BOTANY.—The varieties of this flower are infinite, the seed from one plant scarcely producing two alike. Double flowers are the most highly esteemed, especially those striped similarly to the carnation. It is chiefly raised from seed, but may be propagated by cuttings. The seed may be sown between the 1st of March and the 1st of May, very thin in pots, and placed in a hotbed as near the glass as possible. When they are five inches high they should be transplanted into larger pots; and as their growth increases, again transplanted three or four times until they reach their utmost growth. The best soil for balsams is a rich loam, somewhat lighter than that used for growing melons.

BALSAM OF HONEY.—To one pound of honey add a teacupful of vinegar; boil and skim well; when cold stir in one ounce of elixir of paregoric, and bottle. This is an excellent remedy for a cough: *dose*, one tablespoonful three times a day.

☞ Honey, 1lb.; vinegar, 1 teacupful; paregoric elixir, 1oz.

BALSAMIC VINEGAR.—Take a handful each of sage leaves, lavender, hyssop, thyme, and savory; two heads of garlic, and a teacupful of salt. Infuse them in a sufficient quantity of the best white wine vinegar, and after standing for a fortnight, strain and bottle close. This is a simple and efficacious application for bruises, contusions, &c.

BALSAMIC VINEGAR, AROMATIC.—Take rue, sage, mint, rosemary, and lavender, of each a handful, cut them small, put them into a stone jar, pour upon them a pint of the best white wine vinegar, cover close, and let them stand for seven or eight days in the sun, or a warm room; then strain off, and dissolve as much camphor as it will absorb. This liquid, either sprinkled about the chamber of a sick person, or heated with a red hot poker, will refresh the air, revive the patient, and tend to prevent contagion.

BALSAMS are vegetable substances, of a gum-resinous nature, obtained from incisions made in the plant or shrub, or by boiling the twigs in water and skimming off the balsam as it rises. Balsams, with but one or two exceptions, are composed of resin, benzoic acid, and volatile oil. They have an agreeable smell, warm aromatic flavour, and an acrid taste. Those employed in medicine are benzoin, Styrax, Tolou, Peruvian balsam, and liquid amber, Mecca, copaiba, Riga, and Canada balsam, and probably the balm of Gilead, though the last is now obsolete. The medicinal action of balsams is that of a stimulant and expectorant, forming, when in combination with other substances, admirable remedies for coughs, hoarseness, and colds. The Mecca balsam is a valuable gum resin, brought from Arabia, and formerly used as a stimulant to weak digestions, and in some cases of asthma. The *balm of Gilead* is the dried juice of a shrub growing in Abyssinia and Syria, very rare and very valuable, no plant yielding above sixty tears a day. *Riga balsam* is a sort of spruce, very hot and resinous, and not unlike a spirituous turpentine. It was in great repute fifty years ago as a styptic for internal and external bleeding; but is now superseded by the composition called friars' balsam, having the name of the compound tincture of benzoin in the Pharmacopeia.

BAMBOO.—A cane which grows in India and China. Although it possesses the combined property of lightness and strength, it is but little used in England as an article of furniture, owing to the difficulty of procuring sufficient quantities for manufacture. The Chinese sailors employ the bamboo as a life-preserver; for this purpose four canes are united in such a manner as to admit of their being readily slipped on and off the body, and the simplicity of the contrivance, together with its efficiency, render it worthy of being more generally adopted.

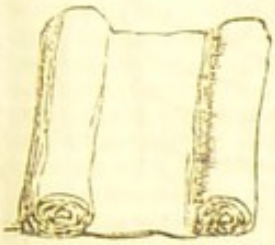
BANBURY CAKES.—Mix well together a pound of currants cleaned and dried, a quarter of a pound of beef suet, finely minced, three ounces each of candied orange and lemon peel shred small, a few grains of salt, a quarter of an ounce of cinnamon and nutmeg mixed, and four ounces of ratafias rolled to powder; make a light paste of a pound of flour, and fourteen ounces of butter, roll out one half into a very thin square, and spread the mixed fruit and spice equally over it, moisten the edges, lay on the remaining half of the paste rolled equally thin, press the edges securely together, mark the whole into regular divisions of two inches in width and three in length, bake in a well heated oven for half an hour, divide into cakes while still warm, and dust with powdered sugar.

☞ Currants, 1lb.; suet, ¼lb.; orange peel, 3ozs.; lemon peel, 3ozs.; salt, few grains; cinnamon and nutmeg mixed, ½oz.; ratafias, ¼lb. *Paste:* flour, 1lb.; butter, 14ozs.

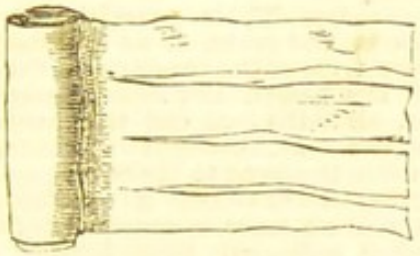
BANDAGES—Are those surgical appliances, made of linen, calico, or flannel, either in long narrow strips called rollers, in belts, fillets, or triangular sections: they are used to keep dressings in a proper situation, to compress blood-vessels, and check dangerous bleeding, to rectify deformities, maintain fractures in their position, and to unite wounds and breaches in the continuity of parts. Bandages of whatever material made should be strong enough to bear extension, and support the part to which they are applied; and sufficiently supple and elastic to fold with ease and yield to the expansion of the tissues below them. They should be

without either seam or selvage, and have smooth unravelled edges. Bandages are either simple or compound. A *simple bandage* is a long narrow piece of linen, calico, or flannel of any length, from three to nine yards, and of a width varying from two to six inches. When such a strip is tightly and evenly rolled up, it is called a bandage or roller.

When rolled from both ends, and the two heads meet in the centre, the bandage is called a *double-headed roller*.



Compound bandages are those where several pieces are sewed together in different forms or shapes, as in the more simple one of the letter T, or when the bandage is torn at the end into several strips, in which case it is called a many-tailed bandage.



The *handkerchief bandage* is very useful to retain light dressings on the head, or to cover and keep in position bags of ice, or cold applications, where evaporation is not required. For this purpose, take a large silk handkerchief, throw it over the head and face, carry the back ends under the chin, and tie them securely, as at (*a*); then

neatly fold back the loose portion over the face, and making the fold grip the forehead, lead the ends to the nape of the neck, and there crossing, secure them in front of the throat.

In applying a simple bandage to the leg or arm, the envelopment of the limb must commence with the foot or hand, and requires to be performed with neatness and regularity, for if the pressure or tightness is greater in one part than another, the limb will become unevenly marked by swollen and contracted ridges, causing both pain and mischief. Having carefully made a beginning by passing the roller a few times round the foot or hand, making every revolution cover a third of the former, it is in the same order carried up the limb from hand to hand, providing for the increasing size of the part by making a fold of the bandage; turning it sharply back on itself, and laying it smoothly down, each succeeding fold being made in the same line; when the whole limb is enveloped, either pin or sew the end to the folds beneath, or split the end of the bandage, and tie in a knot.

The *application of the double-headed roller*

is for wounds or bleeding at the temple. After applying a compress (*a*)—(a piece of lint or linen should be doubled square as many times as is required, and of a size commensurate with the purpose for which it is employed. The operator takes a head of the roller in each hand, and opening the bandage a short length, commences on the opposite side to the wound, and bringing both ends round (*b*) to the compress, gives them a twist, and carrying one over the top (*c*) of the head and the other under the chin (*e*), makes them meet where he began,

and giving another twist, carries them horizontally, one over the forehead and the other round the back of the head, meeting again over the pledget, (*a*) where the same operation is to be repeated, and the ends either tied on the top of the head or pinned over the temple.

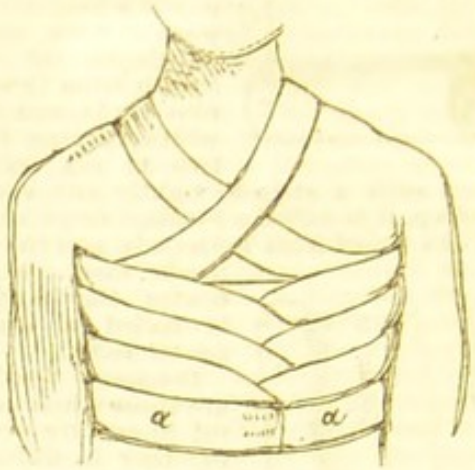
Annexed is a *roller bandage* for the eye, to keep the dressings firmly in position; after making a few oblique turns over the eye

and cheek so as effectually to cover the eye (*a a a*), the bandage is to be doubled back and pinned in its place behind the head, and then carried horizontally round the head (*b b*), to keep the oblique folds in position, and then secured by a couple of

pins over the forehead. Each circle should lie, by the width of a hem, farther back than the preceding one, as shown in the engraving.

The above represents a bandage for injuries to the chin. A piece of calico about six inches broad and a yard long is to be split down each end to within four inches of the centre. The unsplit part is then applied over the dressings on the chin, the outer margin overlapping the point of the jaw; the two outer tails are then carried to the crown of the head and tied, while the inner tails are led in like manner to the forehead, and there secured. The nightcap drawn in the illustration is a precaution to make the grip of the knots more secure.

The next engreving represents a *bandage round the chest for fractured ribs.* This is applied by means of a double-headed roller, which, commencing over the top of the breast bone, is carried round to the back, and then led one over each shoulder, made to cross on the breast, passed under the armpits, cross each other at the back, and gradually tightening as they descend, cross again in front, till a sufficient depth is obtained, when one end is to be pinned over the other (*a a*). But a much simpler and less elaborate bandage for fractured ribs is made out of a broad piece of jean or holland



sewed tightly over in front by a strong needle and thin twine; cross straps, like braces, may be added, to keep the whole in place. When a bandage is thus adjusted it will keep its position, without slackening, for weeks.

The *bandage* T, is generally used for wounds in the groin, or as a suspensory; the cross arms of the bandage on the top of the T are passed and secured round the middle, while the long end is conveyed between the legs, brought upwards, and fastened in the front to the other part.

BANDOLINE. — Boil a quarter of an ounce of Irish moss in one quart of water, and when sufficiently thick, bottle; a teaspoonful of rectified spirit should be put into each bottle to prevent mildew. This mixture is used for the purpose of keeping the hair fixed and smooth.

BANKING.—A system in commerce, in which one party deposits, and another receives, monies and other valuable considerations for safe keeping. The advantages derived by the commercial community generally in connection with banking are numerous and important; but the three leading objects achieved are, a saving of money, labour, and time. It has been estimated, that supposing the whole monetary transactions of Great Britain were obliged to be in actual coin, the cost for manufacturing and the loss by depreciation would amount to no less a sum than three and a quarter millions annually. Again: the expense, labour, and delay incurred in conveying large sums of money from one part of the country to the other would seriously impede the operations of commerce, and raise insuperable barriers to their extension. In short, without the intervention of the process of banking, it would be utterly impossible to conduct satisfactorily one tithe of the business that is now transacted.

The conveniences and advantages of banking are best illustrated by their individual application. Firstly, banks are useful as places of security; money lodged under the owner's own roof is subject to thieves, fire, and other contingencies, against which it is

not always easy to guard. Secondly, there is by this means a great saving of time in money transactions. The man who keeps a banker, instead of having to count out so many pounds, shillings, and pence when he pays an account, simply writes a draft for the amount, which occupies him only a few seconds. Thirdly, the keeping of a banking account spares the trouble and expense of presenting those bills or drafts which a merchant or tradesman may draw upon his customers, or which he may receive in exchange for his commodities: these he pays into his banker's hands, and has no further trouble than to see the amount entered to his credit in his banker's books. Fourthly, a banker will not only take care of his customer's money, but also of anything else committed to his charge. Thus, leases, policies of insurance, deeds, and other documents, and even plate, may be permanently left in the banker's care, or deposited with him every evening and taken away again on the following morning. Fifthly, the keeping of a banking account furnishes a check upon accounts generally, inasmuch as the banker's book is an authentic record of cash transactions, so that receipts and payments may be traced and vouched for even after a lapse of years, and disputed accounts readily adjusted which could not otherwise be settled.

In addition to these and many other minor benefits, there are also personal advantages derivable from keeping a banker, among which are the following:—It confers upon a person a certain standing in society, and primarily furnishes evidence of substance and respectability. It enables him to give a constant reference to those with whom he is transacting business, and also facilitates his inquiries into the credit of others. And in the event of a person wishing to travel, it also supplies him with available means for doing so in the convenient form of "letters of credit," which not only enable a person to draw the necessary funds at the various places through which he passes, but also acts in some sort as letters of introduction, first to the banker himself, and through him to the most considerable persons of the neighbourhood. There is no difficulty in opening a banking account, but in doing so it is usual to have an introduction through some person who is already a customer of the bank, or to give a reference.

Banks are chiefly divided into two classes, private and joint-stock. A private bank is usually managed by one or more partners, who are limited by law to six in number. At many of these, accounts are kept without either charging the customer for the trouble he gives or allowing interest for the money he deposits. It is usual, however, to make the clerks a present annually, according to the extent of business transacted; and with regard to interest, arrangements may be entered into for its allowance, subject to certain conditions. At many of these banks it is laid down as a rule that a certain sum shall be deposited at the time of opening the account, and that a balance, which the banker deems sufficient, shall uniformly be left in hand.

Joint-stock banks offer, in some respects, greater facilities and advantages than private banks. At these establishments, more particularly than at private banks, there are two kinds of accounts permitted, namely, a drawing account and a deposit account. A *drawing account* may be opened without promising to keep a large balance or even any balance at all, but in the latter case a small sum is charged for commission.

A *deposit account* permits a person to lodge any sum of money from £10 upwards; interest being allowed for the same. The rate of interest is proportioned to that which is charged by the Bank of England for the time being; there is also a difference made between sums below £500 and sums above. When a person goes to a bank to lodge any sum upon interest under £1000, he has simply to hand over his money to one of the clerks behind the counter, and receive a deposit note for the same. This deposit receipt is not transferable, and the depositor must attend in person and withdraw the amount lodged. No portion of a deposit can be withdrawn, so that if a depositor wishes to use a part only, and to let the other part remain, he must withdraw the whole, and relodge the remainder. Except in cases when monies are deposited for fixed periods, no notice of withdrawal is required, ordinarily any amount may be taken out of the bank immediately. Although no less a sum than £10 is taken in the first instance, any subsequent deposits may be as low as £5. When this is done the old receipt is cancelled, and the interest on it is either paid in money, or added to the amount of the new receipt, as most agreeable to the depositor. The interest is calculated from the day of deposit to the day of withdrawal. Drawing accounts are, under certain conditions, treated as de-deposit accounts, that is to say, interest is allowed upon a specified balance of drawing accounts extending over a certain term, the *minimum* amount of balance during the term being regarded as *the* balance upon which interest is to be allowed.

The books used by a person who keeps a banking account are a pass-book and a cheque book; in the former are entered all the amounts received and paid on behalf of the owner of the book. This book should be frequently made up at the bank, and compared with the account books at home. The cheque book is a collection of blank drafts, intended to be filled in, as occasion may require. When a cheque is drawn, the name, date, and amount should be invariably entered on the foil or counterpart, and these items should be compared with the cheques when they are returned. Both these books should be kept under lock and key, to prevent their being tampered with. All private accounts should be kept distinct from business accounts, and whenever cash is wanted for personal expenditure, a separate cheque should be drawn. When money is lodged at a bank, the total amount in cash, together with the name of the person who lodges it, should be given in with the parcel on a slip of paper.

When a person makes up his mind to open

a banking account, he should, if ignorant of such matters, consult some commercial friend, who may be enabled to give him information and advice on the subject. Public banks issue prospectuses containing the list of their directors, the amount of paid-up capital, and their rules for transacting business. A prospectus may be obtained from each establishment, and the choice determined accordingly. Persons should be very cautious of opening an account with any doubtful concern; for, in the event of failure, the depositor becomes simply a creditor, as in any other commercial transaction, and he is compelled to accept such dividend as the estate may realize. Even if the bank should not fail, its insecure state prejudices the reputation of those doing business with it, their cheques being accepted with distrust, and cashed at the earliest possible moment. Books: *Gilbart's Elements of Banking*, and *Practical Treatise*.

BANK FOR SAVINGS.—A popular establishment designed for the safe keeping of small sums, deposited by the poorer classes. Banks of deposit generally will not receive a less amount than £5 or £10; and the difficulty which persons of very small means experience in accumulating a sum comparatively large to them, as well as the temptations that continually offer themselves to expend the money while attempting to save, render a bank for humble savings a welcome auxiliary to the provident endeavours of the poor man The management of savings banks is vested in a president, vice-president and trustees, none of whom receive any benefit either directly or indirectly from the deposits received on the produce thereof; neither, on the other hand, are they personally responsible for any misappropriation of monies deposited at the bank. As some sort of guarantee to the depositors, however, there is an act of Parliament ordering all money to be paid into the banks of England and Ireland, and finally to be invested in Bank Annuities or Exchequer Bills; while at the same time all the subordinate officers engaged in the institution are compelled to give good and sufficient security, which becomes forfeited in the event of defalcation.

The following are the principal rules for the regulation of savings banks:—1. Deposits of not less than *one shilling*, and not exceeding *thirty pounds* in the whole, exclusive of compound interest, from any one depositor during each year, will be received and invested until the sum shall amount to *one hundred and fifty pounds* in the whole; and when the principal and interest together shall amount to *two hundred pounds*, then no interest will be payable on such deposit, so long as it shall continue to amount to that sum. 2. The interest allowed is at the rate of £3 0s. 10d. per cent. per annum, which, at the end of the year, will be placed to the depositor's account as cash. Interest is allowed up to the day on which notice of withdrawal is given, but in no case is interest allowed on the fractional part of a pound sterling 3. In order to withdraw deposits, fourteen days' notice must be given; the money can only be paid to the depositor himself, or to the bearer of an order under the hand of the depositor signed in the presence of the minister or churchwarden of the parish, or a justice of peace for the county, or a manager of the bank. 4. The deposits are entered in the books of the bank at the time they are made, and the depositor receives a book with a corresponding entry therein, which book must be taken to the bank every time a further sum is deposited, also when the notice is given for withdrawing money, and when it is paid. Every person on becoming a depositor is required to make a declaration of his residence and calling, and sign a declaration that he is not benefited in any way, directly or indirectly, by any deposit in any other Savings Bank in England or Ireland, and in the event of such declaration being discovered to be false, the depositor loses all right and title to the deposits so made.

This principle of depositing small savings has been extended still further by the establishment of *Penny Banks*, which, as their title imports, receive the pence of the poor, under conditions somewhat similar to those that govern savings banks generally.

The total number of accounts open at all the Savings Banks throughout the United Kingdom on the 20th November, 1856, was 1,331,369; the total amount owing to depositors, £34,760,933 (of which nearly all was invested with the public debt commissioners). The average rate of interest paid on deposits was £2 18s. 8d. per cent.; the number of payments to depositors, 791,762; and the number of receipts from depositors, 1,543,762. The average amount of receipts from depositors was £5 0s. 1d.

BANK NOTE.—A species of promissory note issued by the Bank of England, payable on demand. Gold and silver can always be obtained for notes upon any day in the week from ten till four. A bank note is a legal tender for the payment of any amount above £5. If a bank note be destroyed by fire or otherwise, and satisfactory proof be given to the directors of the Bank of England of the fact, together with sufficient security to indemnify them in the event of their being afterwards called upon to pay it, a note of equal value to the one destroyed will be given by the authorities.

The *holder* of a bank note is, *primâ facie*, entitled to its prompt payment, and cannot be affected by the previous fraud of any former holder in obtaining it, unless evidence be given to show that he was privy to such fraud. In the words of Lord Tenterden, "If a person take a bill, note, or any other kind of security, under circumstances which *ought to excite suspicion* in the mind of any reasonable man acquainted with the ordinary affairs of life, and which ought to put him on his guard to make the necessary inquiries, and he do not, then he loses the right of maintaining possession of the instrument against the lawful owner." When a person loses a bank note, or has one stolen from him, he should immediately forward the particulars of the note to the Bank of

England, and advertise in the public papers that the payment of the note is stopped; and should it be presented at the bank, notice of the fact will be sent to the loser, and the note detained to allow time for inquiry.

If a person finds a bank note, and after advertising for the owner unsuccessfully, applies it to his own use, he cannot be proceeded against criminally should the owner afterwards establish his claim, but is nevertheless compelled to refund the amount.

The following *precautions in connection with bank notes* are worthy of observation. When a bank note is remitted by letter, one half should be sent first by itself, with a request for an acknowledgment of its receipt; when this comes to hand, the second half may be forwarded. Bank notes should not be left lying carelessly about a room, on chairs, tables, drawers, &c., as they are liable to be swept into the fire, or out of the window; neither should they be carried loosely in the pocket. The best method is to keep them in a pocket-book, and to have them folded in such a manner that the amount at the corner appears outwards, and by thus disclosing its value to the eye, prevents a note of a larger amount being mistaken for one of a smaller. Country bank notes should not be taken in payment in London, unless made payable at some London bankers. When a bank note is taken in payment, the name and address of the person who pays it, together with the date of payment, should be written on it; at the same time a memorandum should be taken of the amount, number, and date of the note. Although notes are forged, which at a casual glance nearly resemble those of the Bank of England, none have yet been counterfeited which, upon due examination, could possibly escape detection. The *genuine bank note* has certain characteristics and distinctive features, which the forger is utterly disabled from producing, not having the requisite appliances. The knowledge of these marks is of the utmost importance to all; and the following hints, if followed, will secure any one from ever taking a counterfeit note for a genuine one: 1. Every genuine note has three edges rough and one smooth. 2. Every note has a water mark. But in reference to this it must be explained that there are two kinds of Bank of England notes, the old and the new. In the centre of both the notes there is a series of waved lines, so arranged as to form a design of themselves. These lines are twenty in number, and the centre are coarser and heavier than the top and bottom. Above and below these lines the words, "Bank of England," appear in the form of a curve, the lettering of the top line in the NEW note being somewhat *smaller* than the bottom. In the new note these words are further from the left hand edge at the top than they are at the bottom. In the water-mark of the old note, the amount appears in letters in the centre, and figures, such as 38 or 48, are introduced on the right hand side. In the new note, the amount up to £50 appears also in letters in the centre, and in shaded figures at each end; in the new note, also, beneath the centre of the waved lines, is the fac-simile of the signature of M. MARSHALL, the present chief cashier of the Bank. In the new note there are several straight lines running horizontally round the entire edges. In the old note these lines run perpendicular at the top and bottom, and horizontal at the edges. All these distinctive marks may be easily seen in both the old and new note by holding them up to the light; and if any one of these characteristics is wanting, the note may at once be pronounced a forgery. Supposing, however, that it is possible to imitate the *mere arrangement* of the several water-marks, the water-mark *itself* may be tested by the simple and ready method of damping it against the tongue: if genuine, it will show more distinctly than before; if spurious, it will become fainter and gradually disappear. The reason of this is, that the forged water-mark is produced by simply pressing the surface of the paper, but the genuine one is produced by dies acting upon the paper when it is in the pulp. In addition to these marks, the paper itself also possesses peculiarly distinguishing features; the feel and colour is unlike that of any other paper, and although extremely thin, the strength is such that it will bear the weight of 50lbs., and sometimes as much as 75lbs.

BANK OF DEPOSIT.—Under this title there are several establishments in London, designed to receive and invest deposits under certain conditions and on peculiar principles. The plan of these banks is to lend the money that is lodged with them upon securities, which, although not immediately convertible, yield a larger amount of profit than ordinary investments. In order to effect these operations, however, it is necessary that the funds employed should be disturbed as seldom as possible, and the board of management accordingly reserve to themselves the power to require six months' notice before the deposits can be withdrawn. In practice this is not often rigidly enforced, the deposit being generally returned in a much shorter space of time—for instance, a week, fortnight, or month, according to the available means of the bank. The rate of interest is ordinarily fixed at 5 per cent. per annum, but at periods when money is either extremely scarce or abundant, the rate is proportionably decreased or increased. The interest is payable half-yearly, in the months of January and July. Accounts may be opened with sums of any amount, and be augmented from time to time at the convenience of the depositors.

BANK OF ENGLAND.—This establishment, justly regarded as one of the most influential institutions of the country, had its origin in a number of private speculators lending a sum of money to Government upon securities connected with the public revenue, and on these principles the business of the bank still continues to be conducted. The affairs of the bank are managed by a governor, deputy-governor, and twenty-four directors, who are elected annually from among the chief merchants and bankers of the city. The commercial

undertakings of the bank are confined to dealings in bills of exchange, gold, and silver. Besides lending money to Government, the Bank of England also assists other banks and traders generally, and is thus enabled to keep several interests bound up in one. The Bank of England, by reason of its pre-eminent position, controls and regulates the monetary transactions of this and many other countries, thereby preventing those fluctuations in the money market which would otherwise prove injurious to commerce. The Bank is empowered to issue promissory notes from £5 and upwards, payable on demand. The total amount of paper issue is limited to £14,000,000 upon securities, and whatever paper may at any time issue over and above this maximum amount of securities, it must have an equal amount of coin and bullion in its coffers. On more than one occasion, when a panic has prevailed, this restriction has been temporarily relaxed, in order to ease the pressure which the money market has been labouring under. The *method of conducting business* with the Bank is as follows:—Drawing accounts are opened with individuals on the same terms as those of a private bank; there is no fixed sum with which a drawing account must be opened, nor is there any fixed balance required by the Bank to be kept at the depositor's credit, as an indemnification for the trouble in answering drafts, &c. A person having a drawing account may have a *discount account*, but no person can have the latter without at the same time having the former. The peculiar privilege of a discount account at the Bank of England is, that it enables a person to obtain cash in exchange for his bills, &c., at a lower rate of interest than is charged through any other medium. When a discount account is opened, the signatures of the parties are entered in a book kept for the purpose, and powers of attorney are granted, authorizing the persons named in them to act for their principals. No bill of exchange drawn in the country under £20, nor London note under £100, is discounted by the Bank in London, nor should the date be longer than three months.

BANKRUPT.—A trader debtor who, being unable to meet his engagements with his creditors, has been proceeded against in the Court of Bankruptcy.

All persons are liable to be made bankrupts who use the trade of merchandise by way of bargaining, exchange, commission, consignment, or otherwise, or who seek their living by buying and selling, or by buying and letting for hire, or by the workmanship of goods; but no farmer, grazier, common labourer, or member of an incorporated society, is liable as such to be made a bankrupt. Immediately upon his being declared bankrupt, he must deliver up to the official assignee, upon oath, all books of accounts, papers, and writings belonging to his estate, and upon every reasonable notice in writing, attend the official assignee, and assist him in making out the accounts of his estate. Before passing his last examination, he may inspect his books at any time, and bring two persons to assist him. After he has obtained his certificate, he is entitled to five shillings per day for settling any accounts, or for assistance rendered in getting in his estate. A bankrupt cannot be arrested in coming up for examination, and if in custody for debt only, he will be discharged, and his person protected; and if arrested afterwards, the officer must discharge him immediately upon taking a copy of the order for protection, under a penalty of £5 per day. The bankrupt, or his wife, may be examined at any time touching his estate, or the disposal thereof, whether he has obtained his certificate or no, and he is liable to be committed for refusing to answer the questions put to him; and in case he is keeping out of the way to avoid being served with a summons, a warrant will be granted for his apprehension. All letters addressed to the bankrupt, the Post Office authorities will be ordered to deliver to the official assignee.

A bankrupt cannot be assignee of his own estate, nor can the solicitor to the commission, or his partner. The assignees may appoint the bankrupt to superintend the management of his estate, or to carry on the trade for behoof of the creditors, and in all or any other respects to aid them in administering the estate in such manner and on such terms as they may think best for the benefit of the persons interested therein.

It is probable that the functions of the Bankruptcy Court will be, ere long, considerably extended, a new law having been proposed by Lord Brougham, to abolish imprisonment for debt, and to bring insolvent debtors within the same jurisdiction that now applies to bankrupts only.—See ARRANGEMENT, ASSIGNEE, INSOLVENT, &c.

BANK STOCK.—See FUNDS, PUBLIC.

BANNS OF MARRIAGE.—The publishing of the banns of marriage is the giving public notice of a matrimonial contract, and the intended celebration of the marriage of the parties in pursuance of such contract. The design of the church in publishing these banns is to satisfy itself that the parties so asked may be lawfully joined together in matrimony. In former times all marriages that were not published beforehand in the church were considered clandestine, and were in danger of being invalidated. The banns of marriage are usually published by the officiating clergyman immediately after the second lesson in the Sunday morning service. The concluding words used are, "If any of you know just cause or impediment why these two persons should not be joined together in holy matrimony ye are to declare it." But should any person have an objection, it is not necessary for him to declare it in the face of the congregation, the purpose being equally as well answered by communicating with the clergyman privately at the conclusion of the service.

The impediments to lawful marriage in England are—1. A preceding marriage or a precontract still existing. 2. Relationship either by blood or marriage. 3. Want of

the consent of parents or guardians in cases of minority. The banns of marriage must be published on three several Sundays previous to the marriage taking place. The contracting parties may, if they choose, be wedded on the day following the third publication of the banns; but, if at the expiration of three months they are not married, the banns must again be published three times before the marriage can be solemnized. The banns of marriage must be published in the parish where the parties reside, and if they reside in different parishes the publication must be made in each parish. According to the ecclesiastical law, residence in a parish signifies the dwelling within it for four weeks immediately preceding the day of marriage. All marriages by banns must be solemnized in the place of worship where the publication has been made, and *in no other*. When persons are desirous of having the banns of marriage published, it is necessary to furnish the names, ages, residences, &c., seven days previously. For this purpose it is customary for the man to wait upon the parish clerk, who makes a formal entry of the particulars, and for which he charges a fee of 1s. 6d.—See MARRIAGE, MARRIAGE LICENCE, and MARRIAGE BY REGISTRATION.

BANTAM.—There are numerous varieties of this species of domestic fowl, the most valuable of which are the seabright, the nankin, the game, spangled partridge, &c. Bantams were formerly prized according to the amount of feathers on their legs, but this is now considered their greatest defect. The characteristics of a well-bred bantam are a beak short and curved, the head narrow, with rounded forehead, bright eye, small ear lobes, short back, breast prominent, round full body, and carriage erect. A rose comb is considered essential in most varieties, and always to be preferred. The male bird should not weigh more than twenty ounces, the female not more than fifteen. The mode of rearing and keeping bantams does not differ in any material point from that adopted for the domestic fowl generally. From their size, and the tenderness of their flesh, they may be sometimes substituted for chickens when these are not to be obtained; and their eggs are at all times considered a delicacy for weak and deranged stomachs. Bantams are comparatively inexpensive to keep, and in addition to being prolific layers, they are particularly useful for sitting upon the eggs of partridges or pheasants.—See FOWL and POULTRY YARD.

BARBADOES WATER.—To two quarts of proof spirit add syrup to taste; orange peel, one ounce; lemon peel, four ounces; cloves, half a drachm; coriander, one drachm. Distil in a bath heat till above half is drawn off, and add a little white powdered sugar to sweeten it.

☞ Proof spirit, 2 quarts; syrup, to taste; orange peel, 1oz.; lemon peel, 4ozs.; cloves, ½dr.; coriander, 1dr.

BARBEL.—A fish so called from its having four barbs or beards, two depending from the corners of the mouth, and two rather shorter at the snout. It is also distinguishable by the prominence of its upper jaw, which extends considerably beyond the lower. Its general colour is a greenish brown, becoming yellowish green at the side, and silvery grey on the belly; the dorsal fin is short, and armed with a strong jagged edge, which frequently cuts the net, severs the line, and unless handled with great care will wound the angler. The tail is forked, and of a dull purple colour, the lateral line straight, and marked with minute black dots. It sometimes measures three feet in length, and weighs from fifteen to eighteen pounds. The barbel chiefly abounds in deep and still ponds, or in sluggish rivers that have but little current; it lurks under the shadow of shelving banks, in the mud beds of deep waters, in hollows surrounded by rising ground, and near piles, locks, and bridges. In the hot summer months it occasionally abandons these haunts, and makes excursions into the shallower parts of the stream. A shoal of barbel may be frequently seen distinctly underneath bridges, and counted one by one, and while thus lying, they will suffer themselves to be caught by hooks fixed on a lead, which, dropping among them, fastens one in what is termed a *foul* manner. In winter they are almost in a state of torpidity, and so inanimate, that fishermen push them into their nets with a pole, and bring them to land without a struggle. Their habits are nocturnal, and it is chiefly during the night that they are in motion seeking their food. The barbel inhabits all the English rivers and streams, but in the Thames and the Lea especially they are found in large numbers; so much so, that both at Shepperton and Walton 250 pounds weight have been known to be taken in five hours. In the river Lea the range which the barbel takes is from Hackney Marshes to Waltham Abbey, and is seldom to be met with beyond these limits.

The *best kind of rod* is a light one of cane or bamboo, with a whalebone top, the *line* of plaited silk, and the *hook* of a smaller size and stouter materials than those ordinarily used for other fish. The reason for this is, that although the barbel is at times unsuspecting, in bright weather he is extremely shy, which necessitates the whole of the hook being covered with the bait; also, the mouth of the barbel being very small, permits them to suck in a large bait without touching the hook, whereas a small bait on a small hook would entice them to bite readily.

The principal *bait* for barbel are the lob and red worm, the cad or straw bait; greaves are also made use of, particularly in bright weather and in clear waters. When worms are used, they should be two in number; and if greaves, the hook should be carefully covered with an uniform mass. Barbel may also be taken with salmon roe and cheese paste, but these baits cannot be used successfully in strong currents. In the Thames, barbel fishing is generally practised from flat-bottomed

boats, called punts, which are moved about from place to place in the direction of the haunts of the fish.

The *most favourable season* for barbel fishing is from March to November, and the *best time of the day* is either very late or very early. In wet weather they are more easily caught than at any other time, especially if there has been no rain for some days previously. As an edible the barbel is not very highly esteemed; the flesh is coarse and unsavoury, and it is chiefly eaten among the poorer classes and the lower order of the Jews.

BARBEL—To Dress.—If intended as a principal dish, stew it with wine and water, a slice of butter, onions, turnips, carrots, and parsley, and season with pepper and salt. When done, drain thoroughly, and serve on a napkin, garnished with green parsley. If for a side-dish, streak the sides slightly with a knife, and steep it half an hour in oil, mixed with pepper and salt; then put it on a gridiron, basting it from time to time with the oil that remains, and when done, serve with any appropriate fish-sauce.

BARBERRY CONSERVE.—Take out the seeds from a pound and a half of very ripe barberries; put some water into a deep pan, and drop in the barberries as you seed them; then boil them with one ounce of pounded fennel, until the barberries are broken; afterwards press them in a seive, so as to extract the juice from them, clean the vessel in which the barberries were first placed, and pour into it the juice just extracted from the fruit; add two pounds of boiled sugar, boil the whole together, remove from the fire, and stir with a spoon until the sugar bubbles up, then pour into moulds.

☞ Barberries, 1½lbs.; fennel seed, 1oz.; sugar, 2lbs.

BARBERRY CREAM.—Warm over a clear fire a pint of cream mixed with the peel of a small lemon, half a pound of barberry jelly, and half an ounce of fine isinglass. Stir the whole thoroughly until the jelly and isinglass are well mixed with the cream; then remove from the fire, sweeten to taste, beat it up till frothy, and then pour into a mould to set.

☞ Cream, 1 pint; lemon peel, 1; barberry jelly, ½lb.: isinglass, ½oz.; sugar to taste.

BARBERRY—Culture of.—An indigenous, thorny shrub, bearing bunches of pale yellow drooping flowers in May, which are succeeded by oblong scarlet berries, ripening in September. The barberry is of a hardy nature, and will grow on any kind of soil. It may be *propagated* by seed, or by layers, which should remain undisturbed two years before they are removed. If the shrub stands singly, the gross shoots should be pruned away, and it will fruit better. The barberry is commonly introduced into shrubberies, as it is both useful and ornamental, but on account of its offensive smell, when in blossom, it should never be planted near the house. Respecting this shrub, it is also stated, that corn grown near it becomes mildewed, and proves abortive, and that this influence will extend to the distance of 300 or 400 yards across a field.

BARBERRY DROPS.—Mix the juice of ripe barberries with powdered and sifted loaf sugar till they become a soft paste; heat this over the fire, stirring it all the time, but not letting it boil. Remove from the fire, add a little more sugar, stir well, and deposit it in drops on a tin, or a sheet of paper. Dry the drops in a nearly cold oven.

BARBERRY JAM.—Boil two pounds of refined sugar with half a pint of water until it becomes white, and falls in masses from the spoon; throw in two pounds of thoroughly ripe and sound barberries, and stir the whole over a clear fire for five minutes; skim thoroughly, pour into jars, and cover down.

☞ Sugar, 2lbs.; water, half a pint; barberries, 2lbs.

BARBERRY JELLY.—To one pint of the juice of barberries, add one pound of powdered white sugar; boil down to a jelly. This is a valuable remedy for colds, sore throats, &c.

BARBERRY MARMALADE.—Put a pint of water into a stew-pan, and throw in three pounds of ripe barberries, boil them three several times; then remove from the fire, beat the fruit into a pulp, and put over the fire again until the moisture is absorbed; add to the pulp three pounds of boiled sugar; boil the whole together, stirring well in the meantime, and then pot.

☞ Water, 1 pint; barberries, 3lbs.; sugar, 3lbs.

BARBERRY PICKLE.—Boil the bruised berries of six branches in salt and water; strain, and add one gill of the liquor to a quart of vinegar, with an ounce of salt, a quarter of a pound of loaf sugar, a quarter of an ounce of pounded ginger, and a small portion of horseradish, sliced: boil and strain, then pour it hot over the berries, which have been previously placed in jars; when cold, cover closely with bladder.

☞ Barberries, 6 branches; brine, 1 gill; vinegar, 1 quart; salt, 1oz.; sugar, ¼lb.; ginger, ¼oz.; horseradish, a few slices.

BARBERRY—Properties and Uses of.—Barberries are of an agreeable, cooling, astringent taste, calculated to create an appetite; and the juice extracted from them when diluted in water is found to allay thirst in fevers. The leaves, in salad, serve the same purposes as sorrel; conserve made from the fruit is good; and it also makes an excellent pickle and preserve. The inner bark, with alum, dyes a bright yellow, and is used in some countries for colouring leather, dyeing silk and cotton, and staining wood for cabinet and other purposes.

BARBERRY TART.—Put into a moderate sized dish three quarters of a pound of barberries, and half a pound of sugar, in alternate layers; pour in a teacupful of water, cover with a light paste, and bake for half an hour.

☞ Barberries, ¾lb.; sugar, ¼lb.; water, 1 teacupful.

BARBERRY WATER.—Put two tablespoonfuls of barberry jam, with the same quantity of the juice of two lemons, and a

gill of syrup, into a basin, dilute with water, and strain through a fine sieve.

☞ Barberry jam, 2 tablespoonfuls; lemon juice, 2; syrup, 1 gill; water, sufficient.

BARBERRIES PRESERVED IN BUNCHES.—Take the finest barberries, without stones, that can be procured; tie them together in bunches of four or five sprigs, and for each half pound of the fruit, boil one pound of fine sugar in water for twenty minutes; skim this thoroughly, throw in the fruit, and let it boil gently for ten minutes; remove from the fire, and when cold, put into jars and cover with parchment. The barberries, thus prepared, make an agreeable garnish for sweet dishes, or for puddings.

☞ Barberries, ½lb.; sugar, 1lb.; water, ½ pint.

BARGAIN.—See BUYING AND SELLING.

BARILLA.—The commercial name given to the impure carbonate of soda, obtained by the burning of certain sea-weeds, cultivated for the purpose, or otherwise procured from the ashes of burnt kelp. In either case the product of burning is the same: an ash of a greyish-blue appearance, in irregular masses, or a heavy, coarse powder, which consists, chemically, of carbonate and sulphate of soda, with a small proportion of the base "sodium," and other alkaloid compounds and impurities. Barilla is of different strengths and commercial value, according to the nature of the plants from which it is obtained.

BARITONE.—In music, a male voice, the compass of which partakes of the common bass and the tenor.

BARK, COMMERCIAL USES OF.—Bark is largely employed for a variety of purposes in connection with the arts and manufactures. Oak-bark is applied to hides previously to their undergoing the process of tanning, in order to remove from them the hair, epidermis, and fleshy and fatty excrescences. The substance known as cork is the bark of an evergreen oak which grows in Portugal, Spain, Italy, and the south of France. The barks of certain trees are severally used for the manufacture of cordage, matting, and paper; and lastly, it is put into requisition as a manure, for which it is well adapted, especially when mixed with farm-yard refuse.—See CORK, MANURE, &c.

BARK, MEDICINAL PROPERTIES OF.—This general title is in medical practice understood to refer especially to the rind of a South American tree, and was formerly distinguished by the name of Peruvian, or Jesuit's bark. It has strong bitter qualities, and is extensively administered as a tonic and a febrifuge. In fever, and many other diseases where the frame has become weakened, bark is of eminent utility in restoring strength and vigour; it is also useful in some cases of gout, and in recovery from acute diseases; but in indigestion it is not so serviceable as purer bitters, such as camomile, gentian, and columba. Bark is administered in the form of powder, decoction, infusion, or tincture. Powder is the form in which it is most efficacious, but the compound tincture is the most generally approved preparation, and sufficiently effectual. The extremely bitter taste of this medicine may be disguised by milk, or a strong solution of liquorice; in all cases, the dose should be taken immediately after it is mixed.—See FEBRIFUGE, QUININE, TONIC, &c.

BARKING OF TREES.—The process of stripping off the bark or rind. This operation is performed in England, during the months of May and June; the rising of the sap, at that season, rendering the bark easier of separation from the wood. Good hay weather is good barking weather. Gentle showers are rather beneficial than otherwise, but heavy rains are productive of much evil. During the continuance of wet weather the strong pieces of bark should be so placed, as to preserve the more tender portions dry. The tanner, or merchant, judges of the value of bark by its astringent effect on the palate when tasted, and by the brown colour of the inner rind; both of which properties may be lost through neglect, or by the vicissitudes of the weather.

BARK-STOVE.—The range of temperature which bark-stove plants can endure is from 63 to 81 degrees of Fahrenheit, the instrument being in the middle of the house, at a considerable distance from the furnace, and out of the reach of the sun's rays. When meridian summer is felt, the temperature must keep pace with the increase of heat in the atmosphere. The maximum heat in the house, during July and August, may in general be kept down to 90 degrees, by free admission of air, and by evaporation from the water given to the plants; although the force of the season will sometimes prevail to 95 and 100 degrees.

BARLEY — CULTURE OF. — There are several species of this grain; but the two kinds chiefly cultivated are the spring barley

in the southern and eastern districts; and the winter barley in the North of England and in Scotland. The *best soil* for all kinds of

barley is that of a siliceous, dry, light nature; which must be well prepared by previous harrowings and ploughings, a thorough pulverisation being required, to allow the minute and delicate fibres of the root to penetrate the soil more easily in search of nourishment. The growth of barley is influenced more by the nature of the soil than almost any other grain. This fact will be more clearly shown by the accompanying engravings; illustrating a root of barley taken from a rich light soil; the same from a poor stiff soil. In *choosing the seed* regard must be had to the soil and climate; always remembering that the winter barley is the most hardy, and the spring barley the earliest. If intended for malting the seed should not be sown in the same land where it has grown: and in any case it should be changed constantly: if not, the crop will be both deficient and coarse. The seed should be plump and full-bodied, free from blackness, and of a pale yellow colour intermixed with a bright whitish cast. In dry weather, it will be found of great use to steep the seed in water, for a day before it is sown. The *quantity of seed to be sown* in every acre depends on the character of the soil, the broad principle being, that for poor soils more seed is required and for rich soils less. With a favourable soil, however, properly prepared, the average quantity of seed, is from two to three bushels, according to the method adopted for sowing. The *mode of sowing* is broad-cast or in rows by the drill. It is considered that the latter method economizes the seed, and by being deposited in the soil more uniformly, favours a more certain and regular growth of the crop. The *time for sowing* is generally fixed at the early part of April, but in very dry seasons may be as late as the middle of May: when it is thus deferred a quick growing seed should be selected, and a larger quantity allowed. In England the winter barley is frequently sown in autumn and withstands the severest winters. After the seed is sown, and even after it has grown a few weeks, the action of a light roller will be required to pack the soil round the grain, and to protect the roots when grown from being parched. In the *rotation of crops*, barley succeeds best to turnips that have been fed off by sheep. Tares, potatoes, carrots, mangold-wurzel, peas and beans, are also favourable to its cultivation. *Barley is ripe* as soon as it loses its purple hue, and acquires a light straw colour; or when the ears droop, and fall as it were double against the straw. In *the harvesting* of barley more care is required than with any other white crops, owing to the brittleness of the straw after it has reached a certain stage, as, when it is suffered to stand longer, much loss is sustained by the breaking of the heads. On that account it is cut when the grain is soft, and the straw still retains a great proportion of its natural juices; it consequently requires to remain in the field before either the grain is hardened, or the straw sufficiently dry. Barley *may be cut* either by the sickle or the scythe, and placed in sheaves or shocks. When stacked, air passages should be left in the stacks to prevent their heating and the grain from becoming musty. These passages are usually made by placing a large bundle of straw in the centre of the stack, when its building commences, and as it rises the straw is drawn up after it, leaving a hollow behind. The *separation of the grain from the husk* is performed by three processes, threshing, shaking, and winnowing. Some difficulty is experienced in detaching the beard from the ear. To accomplish this, a machine called a hummeller is frequently had recourse to; or when not used, it is customary to put the grain, accompanied by a portion of threshed straw, a second time through the machine. While this is going on, the heaps should not be suffered to accumulate too largely; the grain should be examined from day to day, it being very apt to heat; and the chaff should be thoroughly cleared up. The *diseases to which barley is subject* are the burnt-ear, smut, blight, and mildew: but its greatest enemy is a wet harvest, as it is so liable to germinate with the least continuance of moisture, that even before it is reaped, the ears are often seen in full vegetation. It is thus rendered unfit for malting, and only of use for feeding fowls and pigs. The *produce of barley* is from 28 to 60 bushels per acre, weighing from 45 to 60lbs. per bushel according to the quality: the average produce being about 32 bushels weighing 50lbs. per bushel. Fourteen pounds of barley yield twelve pounds of meal.—See BLIGHT, BURNT-EAR, MILDEW, SMUT, &c.

BARLEY—PROPERTIES AND USES OF.—As an article of human food barley is less nutritious than wheat or even oats. For the process of malting it possesses certain favouring constituents, more especially a fixed oil of so permanent a nature, as to escape alteration in the progress of fermentation and distillation. Barley also possesses important medicinal virtues, its chief characteristic being that of nourishing without exciting the circulation. The *uses of barley* are various. In many parts of the North of England, and the West of Scotland, it constitutes the bread of the majority of the population. Preparations of it are used as a food for the sick, and also for culinary purposes. In its green state, it forms an excellent spring food for milch cows. Mixed sparingly with the food of horses, it acts medicinally in the place of physic. For sheep it is more nourishing than rye, and comes in earlier. For fattening hogs and poultry it has no equal. Its most important use is its conversion into beer, ale, porter, English gin, whiskey, &c. The *straw* is employed partially for fodder, but chiefly for litter; it is lighter than the straw of oats or wheat and less esteemed than either.—See ALE, BREWING, DISTILLATION, FERMENTATION, MALTING, PORTER, &c.

BARLEY BANNOCKS.—Mix barley meal with water, add a little salt, then roll it out to a paste three quarters of an inch thick, divide it into cakes of the form desired, and bake before the fire or in the oven to a light brown colour.

BARLEY BREAD.—See BREAD.

BARLEY BROTH.—Chop a leg of beef to pieces; put to it three gallons of water, a crust of bread, and a carrot; let it simmer very slowly, till it is reduced to half the quantity; then strain off, and put it into a pot with six heads of celery, cut small; half a pound of barley, a bunch of sweet herbs, two or three sprigs of parsley, cut small; and a large onion. Let this boil for an hour. Then put a large fowl into the broth, and let the whole boil till the broth is very good; take out the sweet herbs and the onions, and serve with the fowl in the middle.

☞ Beef, leg; water, 3 gallons; bread, crust; carrot, 1; celery heads, 6; barley, ½lb; sweet herbs, 1 bunch; parsley sprigs, 2 or 3; onion large, 1; fowl large, 1.

BARLEY CREAM.—Boil a quarter of a pint of pearl barley in milk and water till tender, strain off the liquor, and put the barley into a quart of cream; let it boil slightly. Then beat up the whites of five eggs and the yolk of one, with a tablespoonful of flour, and two teaspoonfuls of orange-flower water. Remove the cream from the fire, mix the eggs in by degrees, and set the whole over the fire to thicken. Sweeten to taste and pour into cups for use.

☞ Pearl barley, ¼ pint; cream, 1 quart; eggs, 5 whites, 1 yolk; flour, 1 tablespoonful; orange-flour water, 2 tea-spoonfuls; sugar, to taste.

BARLEY GRUEL.—Wash four ounces of pearl barley, boil it with two quarts of water and a stick of cinnamon, till reduced to a quart; strain, and add sugar, and wine or spirits, to taste.

☞ Pearl barley, 4oz.; water, 2 quarts; cinnamon, 1 stick; sugar, wine, or spirits to taste.

BARLEY MEAL is the grain reduced to powder. It is remarkably deficient in gluten, and when submitted to the action of water, becomes in a great measure washed away. The starch contained in barley is very similar to that of wheat-starch; but after long boiling in water barley has still a portion of its substance called *hordeine*, remaining undissolved, whilst wheat-flour treated in the same way, is entirely taken up by the water.

BARLEY, PATENT.—The pearl barley ground to flour, and chiefly used for making barley water expeditiously.

BARLEY, PEARL.—The small round kernel that remains after the skin and a considerable portion of the barley have been ground off. For this purpose the spring barley is chosen: it is steamed to soften the skin, dried, and passed between mill stones to take off all the husks, excepting that lying in the deep furrow of the seed, and which causes the short dark line to be seen in pearl barley. Besides its use for broth, it is sometimes boiled in water, and eaten with milk.

BARLEY POSSET.—Boil half a pound of pearl barley in three pints of milk; when sufficiently boiled, add three pints of cream, a stick of cinnamon, and sugar to taste; let it stand until it is lukewarm, then pour in a pint of white wine, beat it into a froth, and serve.

☞ Pearl barley, ½lb.; milk, 3 pints; cream, 3 pints; cinnamon, 1 stick; sugar, to taste; white wine, 1 pint.

BARLEY PUDDING.—Mix half a pound of pearl barley well washed with three pints of new milk, a pint of cream, a quarter of a pound of crystalized sugar, half a nutmeg grated, and half a saltspoonful of salt: put them into a deep pan and bake slightly in a moderate oven: then take it out of the oven, and add four eggs, three ounces of beef-marrow, and two ounces of grated bread, after beating them well together, add them to the contents of the pan, and mix all thoroughly together, bake again to a light brown, and serve.

☞ Pearl barley, ½lb.; milk, 3 pints; cream, 1 pint; sugar, ½lb.; nutmeg, ½ of 1; salt, ½ saltspoonful; eggs, 4; beef marrow, 3ozs.; bread, grated, 2ozs.

BARLEY SUGAR.—Clarify the quantity of sugar required, and boil it to that degree, that upon dipping in a wooden stick and plunging it into cold water, the sugar becomes crisp and will snap; flavour with lemon juice, or oil of lemons; rub a little fresh butter over a stone or marble slab, and pour the sugar along it in narrow strips; twist it to a spiral form while warm; and when it becomes cold, mark it across with a knife, and it will break into any lengths desired.

BARLEY SUGAR DROPS.—Clarify and boil sugar as for barley sugar, and boil with it the thinly pared rinds of one or two lemons. Have ready a large sheet of white paper, covered with a uniform layer of sifted sugar. Pour out the boiled sugar in drops the size of a shilling; when cold, fold them separately in paper, and twist it at the end.

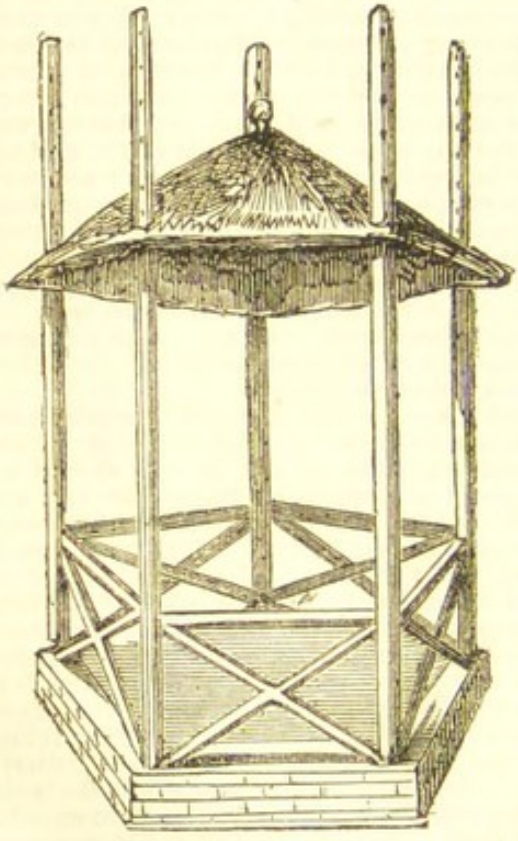
BARLEY WATER.—Wash two ounces of pearl barley thoroughly, and boil it for a few minutes in half a pint of water; then strain the water off, throw it away, and boil the barley in two quarts of fresh water until it is reduced to one quart; strain, and add lemon-juice and sugar to taste. This decoction is extremely nutritious and soothing in cases of fever, inflammatory diseases, pulmonary complaints, colds, coughs, &c.

☞ Pearl barley, 2ozs.; water, 2 quarts; lemon-juice and sugar, to taste.

BARM.—See YEAST.

BARN.—A building where agricultural produce is stored to protect it from the weather and for safety. A barn should not be built unnecessarily large, but of a size sufficient to contain a rick of unthreshed corn of the size that such ricks are generally made on the farm. The size of the ricks, and the capacity of that part of the barn which is to contain the unthreshed corn, should be accommodated to each other; and the size of that part of the barn which is to contain the straw after it has been threshed, if the straw-room is not a separate building, should be accommodated to both. Barns are built of brick, stone, and wood, the latter being generally considered the most suitable for corn. Sometimes the walls are constructed of earth mixed with chopped straw, and if properly made, and covered with a coat of mortar or gypsum, will last many years. The foundations, and for two feet out of the ground, are best made of brick or stone, on account of greater solidity and

protection from vermin. The roof is usually made of either slates, tiles, or thatch: slates are expensive, but the most secure; tiles suffer the snow and rain to lodge and drop through on to the grain; and thatched straw forms a shelter for the rats, mice, &c. The best covering of any is one of reeds, which will last for a long time, keep out the wet, and harbour no vermin. The roof should project considerably beyond the walls, to preserve them dry, and also to admit of carts and waggons with grain, &c., being drawn up underneath. Barns are usually built with two large double folding-doors facing each other, one on each side of the building, for the convenience of carrying waggon-loads in or out; as this constant heavy traffic, however, is apt to damage the floor, the best mode for unloading is through a *pitch-hole* made in a convenient part of the building. The circulation of air is indispensable for the preservation of corn, the walls therefore should have numerous windows or vent holes let into them to ensure a free current of air. The *situation* of the barn should be on the north or north-east side of the farm-yard, so that the sun at noonday may shine on the threshing-floor; and the leantoos for stock in the yard be thus only open to the south. Another reason is that as the buildings of a farmery generally form a shelter to the cattle-yard, and as the barn is the highest of these buildings, it is most advantageously placed for this purpose, on



that side from which the coldest winds blow. The *position* of the barn relatively to the other buildings of the farm-yard, depends on the position of the stables, and cattle-houses; it should always adjoin or be central to them, and be close to the rick-yard.

Dutch Barns are in general use in Holland for storing hay. This contrivance, as seen in the foregoing engraving, comprises a floor of a pentagon form, a roof slenderly built and covered with thatch, and upright poles so contrived that they may regulate the height of the roof as required. The purpose of this barn is, that hay may be stored in it, in large or small quantities, the roof being raised or lowered, according to the increase or decrease of the supply; by means of a jack, such as is used for lifting wagons when the wheels are taken off. — See Granary, Threshing-floor, &c.

Barometer. — This philosophical instrument, in general use, indicates the approaching changes in the weather according to the variations in the pressure of the atmosphere. A barometer consists of a narrow glass tube, upwards of 30 inches in length, open at one end and closed at the other. This tube contains quicksilver; and when the pressure of air on the open surface increases or decreases, the quicksilver falls and rises responsively.

The principle on which the mechanism of the barometer acts is explained by *fig.* 1. Thus, A is the glass tube; between A and E there exists a vacuum caused by the weight of mercury pressing downwards. This vacuum renders the barometrical column more sensitive, as there is no internal force to resist or modify external pressure. E represents the height of the column of mercury; C, the open end of the tube; F, the weight resting on the surface of the mercury; P, the pivot over which the string passes, and on which the hand turns; W, the weight which forms the pulley with the other weight, F. This mechanism is placed within a case; the only part of the instrument exposed to view, being a dial-plate engraved with the words "fair, change, rain," &c.; and index hands which point to these words agreeably to the action of the instrument.

The first point of importance in a good instrument is the mercury itself, which, in order to give accurate indications, must be perfectly pure and clean. As commonly sold at the shops, it is adulterated to a great extent with tin lead, zinc, and bismuth, all of which must be removed before the mercury can be advantageously employed. This is effected by agitating it in a glass bottle, containing fine sand or powdered loaf sugar, opening the bottle from time to time in order to blow out the impure air, and afterwards straining it through chamois leather. The metal must then be boiled, to extricate any air it may contain; and when poured into the tube, it should again be heated to boiling-

point, in order to expel moisture, and any particles of air which may still remain. To ascertain whether the vacuum above the column is perfect, the barometer should be held in the hands and suddenly inclined from its vertical position. By these means the mercury will be driven against the top of the tube. If the blow thus given has a hard dry character, the vacuum is in all probability good; if on the contrary, the blow sounds dull and imperfect, it is certain that the space above the liquid contains air.

When accuracy is an object, the barometer should be corrected by a thermometer, since heat, as well as change in the atmospheric density, will influence its indications. For this purpose, a small thermometer should be set in the barometer case, so that the correction can be made, and the proper reading ascertained at once. A barometer should not be exposed to the varying heat of a fire, or of a frequented room, it must also be protected against draughts. The best position is a sheltered nook in a passage; but any tolerably dry and uniformly-heated place will do. With a good instrument at the outset, and a little precaution and care afterwards, the barometer may be rendered a very trustworthy and useful, though not absolutely certain weather-glass. In *noting barometrical indications*, more attention should be paid to the *tendency* of the mercury at the time of the observation, than to the actual state of the column, whether it stands high or low. The following rules of barometric reading are given as generally accurate, but liable to exceptions:—*Fair weather* is indicated by the rise of the mercury. *Foul weather*, by the fall of the mercury. *Thunder*, by the fall of the mercury in sultry weather. *Cold*, by the rise of the mercury in spring, autumn, and winter. *Heat*, by the fall of the mercury in summer and autumn. *Frost*, by the rise of the mercury in winter. *Thaw*, by the fall of the mercury during a frost. *Continued bad weather*, when the fall of the mercury has been gradual during several fine days. *Continued fine weather*, when the rise of the mercury has been gradual through several foul days. *Bad weather of short duration*, when it sets in quickly. *Fine weather of short duration*, when it sets in quickly. *Changeable weather*, when an extreme change has suddenly set in. *Wind*, indicated by a rapid rise or fall unattended by a change of temperature. The mercury *rising* and the air becoming *cooler*, promises fine weather; but the mercury rising, and the air becoming *warmer*, indicates that the weather will be changeable. If the top of the column appears convex, or *curved upwards*, it is an additional proof that the mercury is rising; and fine weather may be expected. If the top of the column is concave, or *curved downward*, it is an additional proof that the mercury is falling; and bad weather may be calculated on.

BAROMETER, CHEMICAL.—This description of storm-glass is very elegant and economical, and from its simplicity and lowness of price, together with the fidelity of its prognostications, is worthy of more attention than it has yet received. This instrument may be purchased at any philosophical instrument maker's, but one that will answer the purpose equally as well may be prepared as follows:—Take two drachms of camphor, half a drachm of pure nitrate of potash (saltpetre), and half a drachm of ammonia; triturate them together until they are thoroughly pulverised, add proof spirits two ounces, and water two ounces. Put the whole into a long narrow bottle, such as eau-de-cologne is sometimes sold in; cork the bottle close, wax the top, and make a very small aperture in the cork with a red hot needle. The bottle may then be hung or placed in any stationary position towards the north, otherwise a shade of some sort must be put up to protect it from the sun, which would soon prove injurious to it, and cause the liquid to become oily. The *indications* which it gives are of this nature:—If the atmosphere be dry, and the weather promises to be fine, the solid part of the composition will be closely collected at the bottom, and the liquid above will be quite clear; but on the approach of *rain*, the solid matter will appear gradually to rise, and small crystalline stars will be observed to float about in the liquid, which, however, will remain otherwise pellucid. On the approach of *winds*, flakes of the composition, apparently in the form of leaves or feathers, will appear on the surface of the liquid, which in this case will seem thick, and in a state of fermentation. These indications often begin to exhibit themselves twenty-four hours before the actual breaking of the storm, and after a short experience in observing the changes of the materials in the glass, not only the degree of violence of the coming storm may be readily estimated, but also its direction, for the quarter of the compass from which the wind blows will be indicated by the solid particles lying more closely to the side of the glass opposite to that whence the tempest comes. During the winter the composition is rendered white by the multitude of small white stars which are continually floating about in the liquid. If during frost, the top becomes covered with a film, upon which small oily-looking drops are seen, the frost will not last long. Should the oil in the glass, on the contrary, increase, and large sharp feathers be seen shooting down from the top, this is a proof that the frost will increase in severity. As a general rule, sharpness in the feathers is a sign of fine weather, and when these have a dull and blunt form, unsettled weather or rain may be expected. In summer, when the weather is warm and serene, the liquid is clear, and the solid matter lies at the bottom of the glass. The leading principle of these indications is the solubility of camphor in alcohol, and its insolubility in water, combined with the well known meteorological fact that the drier the atmosphere, the more aqueous vapour does

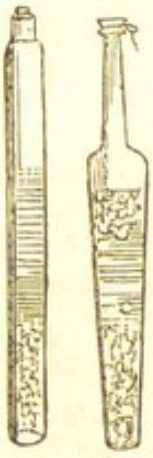
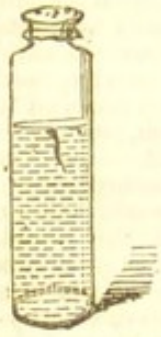


Fig. 1. *Fig.* 2.

it take up, and *vice versâ*; when, therefore, the weather is warm and dry, a quantity of the water of the menstruum is drawn off in the form of vapour, and consequently more of the camphor enters into solution; and, on the contrary, when the air is surcharged with moisture, that moisture begins to be deposited, and the menstruum will again be weakened, and a quantity of the camphor is precipitated from the solution in the form of little crystalline stars. *Fig.* 1 is a storm glass as sold at the shops, price 8*s.* 6*d.*, and is represented as indicating fine weather. *Fig.* 2 is a storm glass prepared according to the foregoing instructions, at the cost of 1*s.* It is drawn as indicating wind and rain.

BAROMETER, LEECH.—Put into a common two ounce phial, three parts filled with pure water, a healthy leech; cover the mouth of the bottle with a piece of linen rag. Change the water in winter once a month, and in summer once a fortnight; and under these circumstances, the leech will give the following prognostications of the weather:—



1. If the weather prove serene and beautiful, the leech lies motionless at the bottom of the glass, rolled together in a spiral form. 2. If it rain, either before or after noon, it is found crept up to the top of its lodgings, and there it remains until the weather is settled. 3. If we are to have wind, it gallops through its limpid habitation with amazing swiftness, and seldom rests until the wind begins to blow hard. 4. If a remarkable storm of thunder and rain is to succeed, for some days before, it lodges almost continually without water, and discovers uncommon uneasiness, in violent throes and convulsive-like motions. 5. In the frost, as in the clear summer weather, it lies constantly at the bottom; and in snow, as in rainy weather, it pitches its dwelling near the mouth of the phial.

BARON, in its general signification, applies to one who holds the rank of nobility next below that of a viscount. *Barons of the Cinque Ports* are the freemen of those ports, and probably so called for the same reason that the citizens of London and other privileged places have that title conferred upon them. *Barons of the Exchequer* are the four judges in that Court, one being the Chief Baron.—See CINQUE PORTS and EXCHEQUER.

BARONET.—A dignity or degree of honour next below a baron, and above a knight, having precedence of all knights except those of the Garter, and being the only knighthood that is hereditary.

BARQUE.—A ship distinguished by having a gaff topsail instead of the square mizen-topsail.

BARREL.—A cask or vessel for holding liquids, particularly ale and beer. The barrel contains 36 imperial gallons. The term barrel was formerly used to denote in a rough way, other sorts of goods. Thus, a barrel of salmon was 42 gallons; a barrel of soap 256lbs.—See CASK.

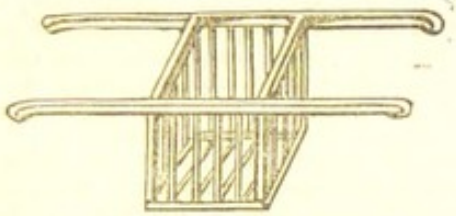
BARRENWORT.—A perennial root growing a foot high, which is found in Yorkshire, Cumberland, and near Edinburgh and Glasgow. It blooms in April and May in a cluster of very handsome and singular drooping flowers, whose dark red petals are contrasted with the pale lemon-coloured nectaries, which are full of honey and very peculiar. It is a native of the South of Europe, and loves shade and moisture, frequenting mountain thickets. It may be propagated by parting the roots.

BARRISTER.—A counsellor admitted to advocate or defend the interests of clients in the courts of law. In order to encourage due freedom of speech, he is not answerable for any matter spoken by him, relative to the cause in hand, suggested in his client's instructions, although it should reflect upon the reputation of another, and even prove absolutely groundless; but if he mentions an untruth, of his own invention, or even upon instructions, if it be impertinent to the cause in hand, he is then liable to an action from the party injured. Counsel guilty of deceit or collusion are punishable by imprisonment for a year and a day, and perpetual silence in the courts. He is privileged from arrest whilst in attendance on the courts.

BARRISTER, PROFESSIONAL EDUCATION FOR.—For this profession all persons are admissible with the exception of attorneys at law, solicitors, writers to the signet, or writers to the Scotch courts, proctors, notaries public, clerks in Chancery, parliamentary agents, or agents in any court; original or appellate clerks in Chancery, clerks of the peace, clerks to any justice of the peace, or of or to any officer in any court of law or equity, or person acting in the capacity of any such clerk. No one of these excepted persons can be admitted to the bar until he has ceased to act in any of the capacities mentioned. There is no limit as to age except in the Inner Temple, where no member is admitted under fifteen. Every candidate for admission is required to furnish a written statement of his age, residence, and condition in life, which must be signed by two barristers, and the treasurer of the society, or in his absence, by two benchers. After admission the law student commences "keeping his terms." Every member of the four societies, of the Inner Temple, Middle Temple, Lincoln's Inn, and Gray's Inn; must keep twelve terms before being called to the bar, which will occupy a period of three years except under extraordinary circumstances. The student is also required to attend the lectures of two readers during one whole year, or satisfactorily to pass a public examination. There are also classes for students in which instruction is given in a more detailed and personal form; every student is permitted to attend these classes regularly, and the fees do not exceed three guineas a year. Each student proposing to submit himself for examination previously to being called to the bar, is required to send his name to the treasurer of the Inn of

Court to which he belongs. The examination lasts three days, and is conducted partly by written questions, and partly by oral examination. A student may present himself at any number of examinations, until he obtains his certificate. No student can be called to the bar before he has attained the age of twenty-one. The expenses attending the profession are very heavy; during studentship between £200 and £300 a year is at least required; nor does the expenditure cease here. A call to the bar costs £100, and even when admitted, it is necessary that a barrister should possess a private income of £300 or £400 a year; as the chances of immediate employment are but small, and yet notwithstanding he must maintain his position, and provide for contingencies. Books: see ATTORNEY.

BARROW.—An agricultural implement, the common kinds of which are universally well known. In modified forms, however, it is used for various specific purposes. The *halm-barrow* is an open box or case, of

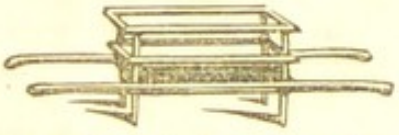


wicker or other work, placed on, or suspended from a pair of handles, sometimes made with a wheel and sometimes without; it is useful for carrying litter, leaves, haulm, spray, prunings of hedges, &c.

The *Normandy wheel-barrow* has two handles

or trams nearly fifteen feet in length, by which, when loaded, nearly all the weight is thrown on the axle; so that the operator, who usually wears a shoulder-strap, has simply to propel the load before him.

The *flower-pot barrow* is a kind of hand-



barrow, on which plants, pots, or leaves are placed, it is useful and almost indispensable for transporting plants, &c., from one part of the garden to the other.

The *hand-barrow* is a frame of wood carried by two levers which form four handles; and is used, in gardening, for removing large pots or tubs of trees, in blossom or in fruit, which wheeling might shake or otherwise injure.

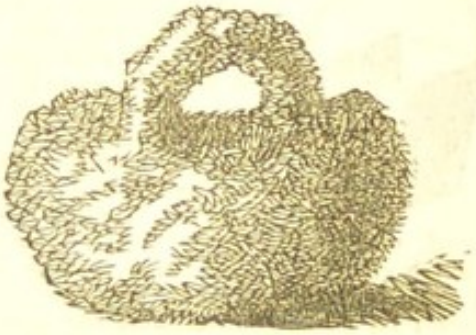
BASIL, SWEET.—A culinary aromatic exotic used in salads and soups; the peculiar flavour of mock-turtle soups is chiefly derived from this valuable pot-herb. There are two species commonly cultivated. The sweet-scented and the dwarf-bush, both annuals, and originally coming from the East Indies. They thrive best in a rich light soil, entirely free from any overshadowing body; but they require, especially for the early plants, a shady border. In wet earth the seed always rots.

BASILICON OINTMENT is made by melting together over a slow fire certain proportions of lard or oil, and yellow wax, and stirring slowly in powdered rosin, till the whole is smoothly incorporated. This ointment was formerly much used as a cure for chronic ulcers, and wounds of a sluggish or indolent character. A better practice now prevails, ointments and all greasy applications being nearly expunged from the vocabulary of medical compounds.

BASIL VINEGAR.—Sweet basil is in full perfection about the middle of August, when the fresh green leaves should be gathered and put into a wide-mouthed bottle. Cover the leaves with vinegar, and let them steep for ten days. If it be wished to have the infusion very strong, strain off the liquor, put in some fresh leaves, and let them steep for ten days more. A small portion of this mixture forms an agreeable addition to soups and salads.

BASKET is a well known receptacle made principally of the interwoven twigs of willow, osier, birch, &c.; but frequently also of grass, rushes, splinters of wood, straw, &c. —See FISHING BASKET, GAME BASKET, GARDEN BASKET, MARKET BASKET, &c.

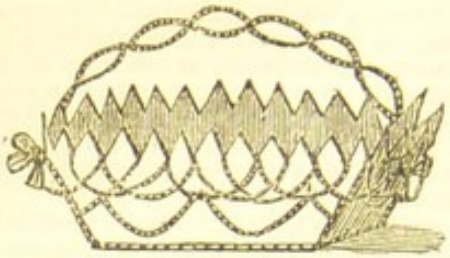
BASKETS, FANCY.—A great variety, at once ornamental and useful, may be made from various materials. The *moss basket* is made of a foundation of pasteboard, shaped round or oval, with or without a handle



according to fancy. It should be neatly lined, and covered on the outside with pale green paper, in order that any little interstices among the moss may not appear incongruous. The handle should be sewn on the outside, so that the parts where it is joined may be hidden by the moss. A great variety of dry mosses may be mingled together, and will thus produce a very pretty effect. They may be fastened on with gum, glue, or paste; but, as they are apt to fall off occasionally, the safest method is to sew them on. An *imitation of moss baskets* may be made of unravelled worsted, of different colours, sewn on thickly in bunches. Each bunch should comprise three or four shades and colours, and so mingled as to

avoid any striped or spotted appearance. The varieties of green, brown, and light blue, are the most appropriate. The effect of these baskets is rendered still more pleasing by placing in them coloured birds' eggs, real or imitated.

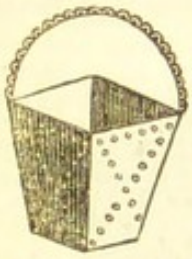
The *Allspice Basket.*—Allspice berries should be previously soaked in brandy to soften them, and then have holes made through them. They are then strung on a slender wire, and twisted into any fanciful form. A



gold bead between every two berries gives a rich appearance to the basket. Around the top are sometimes twisted semicircles of berries, from which are suspended festoons of berries, also strung on silk and drooping over the outside. The foundation may be made of any material, ornamented and lined agreeably to taste.

Rice or Shell Baskets may be made of a pasteboard frame, either white or coloured, and neatly lined; it should then be covered with grains of rice, or very small delicate shells, fastened on with gum, and arranged in picturesque figures.

The *Wafer Basket* is made of card-board and bound neatly at the edges with gilt paper. Then procure the smallest wafers, reserve a whole one for the ground-work, and cut another in halves; wet the edge of one of the halves, and stick it upright through the middle of the whole one; cut the other half into two straight quarters, wet the two sides, and place them on each side of the half wafer; this will form a kind of rosette. When a sufficient number is prepared, wet the bottoms of the wafers that are whole, and fasten them on the basket in any form you please. The *whole* wafers should be of one colour, and the rosette of another. If stars are preferred to simple rosettes, they can be made by placing six quarters around the half instead of two. The wafers should be of one size, and cut perfectly even. The handle may be decorated in the same manner as the basket; but, if it be liable to much handling, it will be more suitably ornamented with ribbon.



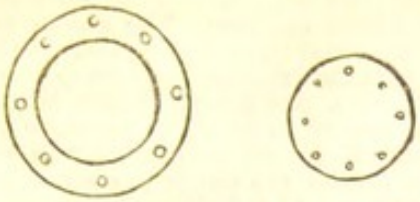
The *Alum Basket.*—Dissolve alum in a little more than twice as much water as will be necessary for the depth of the basket, handle included. Put in as much alum as the water will dissolve; and when it will take no more, pour it into a pipkin, and let it slowly boil until it is nearly halfevaporated. The basket should be then suspended from a little stick, laid across the top of the pipkin, in such a manner that both basket and handle will be covered by the solution. It must be put by carefully in a cool place, where not the slightest motion will disturb the formation of the crystals. The framework of the

basket is usually made of thin wire woven in and out, but a common willow basket will do as well; whether it be wire or willow, a rough surface must be produced by winding every part with thread or worsted. Bright yellow crystals may be produced by boiling gamboge, saffron, or turmeric, in the solution; and purple crystals by a similar use of logwood. Blue crystals may be obtained by preparing the sulphate of copper, commonly called blue vitriol, in the same manner that alum is prepared. In order that the crystals may be clear and unblemished, the solution should be strained through muslin before it is boiled. In making this basket, success in some measure depends upon chance; for the crystals will sometimes form irregularly even when the greatest care is taken.

The *Feather Basket.*—Select any variegated feathers and cut off the quill part with the exception of the smallest portion. Make the bottom of the basket of cardboard; at the edges perforate it with little holes, through these holes pass the feathers, taking care that the quill part is cut perfectly even, so that the basket may stand well. For the top, bend a piece of wire into the same shape as the bottom, but rather larger, wind it round with coloured sewing-silk; then fasten the feathers to it at regular distances. A wire or pasteboard handle may be made, if fancied, covered with small feathers.

The *Straw Basket.*—Procure a small bundle of straws of an equal size; cut them the length that you intend the height of your basket to be; for this purpose sharp scissors must be used, and the straws handled most delicately: for if the straws are broken or split, they are useless. Cardboard must form the top and bottom of the basket; the bottom must be whole, and the top cut out in a circle about half an inch wide near the edges; holes must also be made for the reception of the straws. If it is desired to have the basket of the same size top and bottom, the cardboard must be of the same

size, but if it is wished to have the bottom smaller than the top, the cardboard should be cut thus. It will be seen that although



the bottom is smaller than the top, yet each must have the same number of holes in them. The number of holes should be *even*, or else when the ribbon is passed in and out two straws will come together. The straws should be put through the holes, and if any of them are found loose they should be fastened with gum; let them protrude half an inch beyond the cardboard, both at top and bottom. The edges of the cardboard may either be bound with gilt paper, or cut into vandyke or other forms. After the straws are fitted, take very narrow ribbon of any colour, and pass it over and under the straws alternately; always observing that the straw passed *under* in the *first* row must be passed *over* in the *second* row, and so on. Handles of cardboard may be made to correspond with the top and bottom; bows of ribbon being attached to conceal the fastening. The basket may be further beautified by painting the bottom and margins.

The *Lavender Basket* is made somewhat in the same way as the preceding, from lavender stalks, and posssesses the further advantage of emitting an agreeable perfume.

The *Clove and Bead Basket.*—Take whole cloves, and soak them either in hot water, brandy-and-water, or brandy alone; with a fine shoemaker's awl, called a "closing awl," or with a large needle having a cork fixed at the end to protect the hand, perforate each clove, and string them on twelve pieces of fine wire six inches in length passing two wires through each clove. When you have put two cloves on to each double wire, put on a bead of any colour to fancy; then a single clove on a single wire, as it passes out from the bead; then pass each wire through a bead with the wire coming upon the left or right hand side next to it; then another clove and a bead at the end, unite the two wires by twisting a little loop in them, so that they fasten in the manner of hook and eye. The smaller these fastenings are, the neater the basket will be; and for the purpose of cutting, and turning the wires, it will be found convenient to have little cutting nippers, with a sharp point on one side, and a round one on the other, such as watchmakers use. The bottom of the basket is similarly formed, with the exception that only *four* wires are required. When the stand is made, it is attached to the basket in the same manner as the wires are joined at the ends.

The *Paper Ball Basket.*—The frame is made of cardboard; little rolls of paper about the thickness of a quill, and the length of the nail, are fastened on in every direction, with gum or paste, in the same manner as shells. The papers, in order to be effective, should be differently coloured.

The *Berlin Wool Basket* may be made of any pattern or shape according to fancy: a very pretty one, adapted for the library or work-table, is as follows:—Draw four separate branches of roses on a wicker basket, and embroider them alternately with three shades of rose colour, and three shades of crimson berlin wool; except that in the respective flowers the brightest shades should be of floss-silk. The foliage in green. The ground of white wool or silk. The basket should be lined with green or cherry colour sarsanet, the top trimmed, and the handles covered with white chenille to correspond.—See BEAD WORK, WAX, &c.

BASKET, WASTE.—This is a convenient article to have in a room where writing, needlework, or other employments are being carried on, for the purpose of receiving all the scraps and remnants that are considered as useless; by this means the apartment is not only kept tidy, but anything that has been hurriedly or accidentally thrown aside may be easily recovered.

BASSET.—A game with cards in which the players are a dealer or banker; his assistant, who supervises the losing cards; and the punter, or any one who plays against the banker. The rules of the game of basset are as follows: 1. The banker holds a pack of fifty-two cards, and having shuffled them, he turns the whole pack at once, so as to discover the last card; after which he lays down all the cards by couples. 2. The punter has his book of thirteen cards in his hand, from the king to the ace, and out of these he takes one card or more at pleasure, upon which he lays a stake. 3. The punter may, at his choice, either lay down his stake before the pack is turned, or immediately after it is turned, or after any number of couples are down. 4. Supposing the punter to lay down his stake after the pack is turned, and calling 1, 2, 3, 4, 5, &c., the places of those cards which follow the card in view, either immediately after the pack is turned or after any number of couples are drawn; then, 5. If the card upon which the punter has laid a stake come out in any even place except the first, he wins a stake equal to his own. 6. If the card upon which the punter has laid a stake come out in any even place except the second he loses his stake. 7. If the card of the punter come out in the first place, he neither wins nor loses, but takes his own stake again. 8. If the card of the punter come out in the second place, he does not lose his own stake, but only one half; and this is the case in which the punter is said to be *faced*. 9. When the punter chooses to come in after any number of couples are down,

if his card happen to be but once in the pack, and is the last of all, it forms an exception to the general rule; for, although it comes out in an odd place, which should entitle him to win a stake equal to his own, yet he neither wins nor loses from that circumstance, but takes back his own stake.

BASSINET.—The cradle into which an infant is usually put immediately after it is born. It is simply a basket with a hood to it which may be made to fall backward, if required. It is generally lined with glazed calico, with a soft mattress, and a small soft

pillow. It is very convenient for carrying about a child without awaking it, and is much warmer than a large cradle or a bed. The position of the bassinet should be regulated according to the prevailing temperature; in winter it should be protected from draughts of cold air, and in summer it should not be too closely covered up.

BAST MAT.—A material woven from the inner bark of trees, generally of the lime. It is used in horticulture, for a great variety of purposes: for protecting wall trees by being hung before them; for sheltering espaliers and standards by being thrown over them; for protecting more delicate shrubs by covering an envelope of hay or straw; and for fostering tender plants coming through the ground, by being spread on the surface, or supported on hooped framing. It is used to cover hot-beds, hot-houses, handglasses, &c., to shield plants from the wind or shade them from the sun.

BASTING ROAST MEATS, &c.—A well known culinary operation, and one that forms an important feature in the roasting of meats. As the natural juices become dried by the action of the fire, they require to be replaced by artificial ones; were it not for this, the meat would be rendered dry and comparatively tasteless: on the other hand, meat should not be too much basted, or it becomes sodden and loses its firmness. A certain degree of intelligence is required to be exercised in this particular. As a general rule, mutton should be basted sparingly, beef moderately, and veal continuously. Basting may be made simply of a mixture of butter, salt, and water; but a more savory kind is made from minced sweet-herbs, butter, and claret mixed together.

BAT, CRICKET—Is generally made of willow. Its whole length should not exceed thirty-eight inches. The blade should be about twenty-eight inches long, commencing at the shoulder with a width of four inches, and gradually increasing downwards to four inches and a quarter. The face of the bat should be perfectly smooth and slightly convex. The back should be more acutely rounded than the face. The handle should be thickest near the shoulder, but not thicker at any part than the hand can grasp perfectly. A bat, when put away, should be rubbed with linseed or sweet oil, to preserve it from splitting: it should also be kept in a place that is neither too damp nor too dry; for, when exposed to a different temperature, it is liable to crack.—See CRICKET.

BAT-FOWLING.—See BIRD-CATCHING.

BATH BRICK is formed from a mixture of sand and clay deposited on the banks of the river Parret, at Bridgewater. It is employed in almost every English household for the purpose of cleaning knives and forks, &c. For the more precious metals, such as silver and gold, Bath brick should never be used, as its particles scratch the surface.

BATH BUNS.—Beat together in a bowl a quarter of pound of flour, four yolks, and three whites of eggs, with four spoonsfuls of solid fresh yeast, set before the fire to rise; then rub into a pound of flour, ten ounces of butter; add half a pound of sugar, and two ounces of carraway comfits; mix them well in, roll out into the required shape, strew with carraway comfits, and bake on tins.

☞ Flour, ¼lb; eggs, 4 yolks, 3 whites; yeast, 4 spoonfuls; flour, 1lb.; butter, 10ozs.; sugar, ¼lb.; caraway comfits, 2ozs.

BATH CAKES.—Take two pounds of moist sugar, a quarter of a pound of butter, four pounds of flour, and a pint of water; mix thoroughly, and roll into a paste; divide with tin cutters; wash over the tops with milk, and insert a few currants; set aside for a quarter of an hour, then bake in a brisk oven.

☞ Sugar, 2lbs.; butter, ¼lb.; flour, 4lbs.; milk and currants, as required.

BATH CHAIR—A species of small carriage drawn by the hand, especially adapted for invalids, cripples, and aged persons. The peculiar construction of the bath chair admits of its being brought into the hall or even the room, so that a person may be placed comfortably in it, without being exposed to the cold. It may also be drawn round a garden-walk, or on a lawn, enabling a person to have the advantage of carriage exercise within sight of his own home. It should also be remembered that bath chairs are privileged to enter on any public parks and gardens from which carriages drawn by horses are excluded. Bath chairs, together with men to draw them, are generally let out on hire at livery stables.—See INVALID CHAIR.

BATHING.—The great importance of bathing must be obvious, when it is considered that the well-being of the whole frame depends in a great measure on the healthy condition of the skin. It is, therefore, absolutely necessary, in order to ensure perfect health, that the entire surface of the body should be at frequent intervals subjected to the action of water. Bathing may be divided

into various temperatures, cold, hot tepid, &c., and be applied in a variety of forms.

THE COLD BATH.—The temperature of the blood and interior parts of the body is about 98 degrees, while that of such parts of the surface as are usually clothed is about 90 degrees. If, therefore, the body be immersed in water below 90 degrees, there is a sensation of cold, a shrinking and paleness of the skin, a hurried respiration, and a violent beating of the heart. Provided the bather be in good health, these symptoms are almost immediately succeeded by a universal sensation of warmth, which rapidly increases to a certain point, so as to cause the surrounding water to feel comfortably warm. This is called the reaction of the system, and results from the increased activity which the various organs of the body exercise to counteract the first shock produced by the cold water. The cold bath, when used by persons in health, increases the tone of the stomach, strengthens the digestive organs, and by diminishing the sensibility of the whole system, particularly of the skin, renders the body less susceptible to atmospheric impressions from cold, wet, and sudden changes of temperature. If, after coming from a cold bath, no glow or pleasurable sensation is experienced, but, on the contrary, the bather feels dull and chilly, sick at the stomach, oppressed with headache, languid, drowsy, and averse to food and exercise during the remainder of the day, it is certain that cold bathing does not agree, and it should be immediately discontinued. It should also be studiously avoided in all those cases where the heat of the body is below the natural standard, where profuse perspiration exists, where there is any considerable degree of fulness of the blood-vessels, or a determination of blood to the head, or where there is a predisposition to inflammatory affections of the lungs. *The interval for a person to remain in a cold bath*, should not at any time, and in the most robust health, exceed ten minutes, or a quarter of an hour; and in winter not more than five minutes. The *best period of the day for taking the cold bath* is about two hours after breakfast. There are exceptional cases where persons bathe before breakfast, but as a general rule it should be avoided. *Out-door bathing* may be best indulged in from June to September. *In-door bathing* may be continued throughout the year, with the precaution that the thermometer in the apartment stand at from 50 to to 60 degrees of Fahrenheit, and that the water be exposed to this atmospheric temperature at least six hours (when that is possible), or be raised to from 45 to 55 degrees, if below it. In almost all cases the use of *the cold bath for new born, or very young infants, is objectionable.*

THE TEPID BATH is more important for the purpose of cleanliness, and the general preservation of health, than as a remedy for disease; although in the latter case it is occasionally very valuable. The range of temperature extends from 85 to 92 degrees; and it is sometimes employed previously to the cold bath, the bather lowering the degree of heat gradually each time, until he arrives at that of the cold bath. For the mere purposes of ablution the tepid bath is the best, choosing the particular degree that is most desirable. It is very refreshing after fatigue and travelling, and is equally serviceable occasionally to persons of sedentary habits.

THE WARM BATH has a temperature ranging from 92 to 98 degrees; when the heat is 92 degrees, though the first effect is slightly stimulating, yet, when time is allowed for that influence to subside, it is gradually succeeded by soothed and tranquillized sensations throughout the whole nervous system. At a higher temperature, but under 98 degrees, it raises the spirits, increases the pulse, and invigorates the whole frame. The warm bath modifies the texture of the skin; excites the pores to increased action, and equalizes the circulation of the blood. It is especially grateful after excessive muscular action, fatigue, or travelling. It is also useful after long mental excitement, and in a variety of nervous and spasmodic disorders. For infants during teething, it constitutes an admirable remedy; and in cramp, measles, and other complaints incidental to infancy, it is of the greatest benefit. The temperature of a warm bath for children should not exceed 96 degrees: generally from 92 to 94 degrees will be found the safest range. A child should not remain in the warm bath longer than five minutes, and as a general rule two or three minutes will be sufficient. On removing the child, it should be carefully dried and wrapped in a blanket warmed to equal heat.

THE HOT BATH is exceedingly valuable in relieving certain diseases, chiefly by producing perspiration, and thus acting on the circulating medium. It has a remarkably tranquillizing effect upon the nervous system, producing a strong tendency to quietude and sleep. It also acts as a powerful anti-spasmodic, and by determining the blood to the surface of the body, tends to relieve inflammation and congestion. In chronic affections arising from the action of cold and damp, and from exhausted energy; in stiff joints, rheumatism, neuralgia, diarrhœa, and numerous other affections, its effects are invariably beneficial. The temperature of the hot bath ranges from 98 to 112 degrees. It is a powerful stimulant, and should never be used by a person in perfect health. The *period of immersion* should not exceed ten or fifteen minutes.

THE DOUCHE BATH consists of throwing a stream of water with more or less force on any desired point. It is frequently used in sprains, chronic rheumatism, stiffness of the joints, &c.; the advantages derived from it depend upon the amount of percussion upon the part affected. This form of bath possesses the merit of great simplicity, as it may be applied from the mouth of a pump, the spout of a tea-kettle, or any other domestic contrivance, by which the rapid and uniform descent of a body of water can be effected.

THE SHOWER BATH, independently of its general invigorating effects, is frequently employed with advantage where there is a tendency of blood to the head, giddiness,

apoplexy, &c.; in cases of debility and nervousness also, it will, when taken with proper precautions, often be found highly beneficial. The morning, immediately after rising, is the time best adapted for its use; but it may be employed at any time excepting the first hour after a repast. The water may be either cold or tepid, and an addition of salt is sometimes an improvement. When necessary the feet may be immersed in warm water, and if it is desired to keep the head dry while the body is submitted to the action of the water, an oil skin cap may be put on. This bath should never be resorted to by weak and delicate persons without previous medical advice.

THE VAPOUR BATH is of two kinds; the steam chamber, as employed in the East; and the solitary bath for one person, as used in this country. This bath is found to be efficacious in many chronic diseases, in rigidity or insensibility of the skin, and in such cases it is preferable to the ordinary warm bath.

MEDICATED BATHS are of many kinds, almost every substance which acts upon the body internally, being capable of introduction to it through the instrumentality of the skin. Usually they are confined to three or four in number. 1. The *Chalybeate Bath*, an artificial production of the natural springs found on the continent. It is made from the scoriæ of iron, either by throwing them into hot water as they come from the furnace, or by heating them anew, and exposing the body to the action of either the fluid or its vapour. 2. The *Sulphur Bath*, formed by confining the body, save the face and head, in a chamber heated to 96 or 97 degrees, and exposing it to a stream of sulphuric acid gas from beneath. 3. The *Nitro-muriatic Acid Bath*, made either like the preceding, or simply by mixing nitro-muriatic acid with water, and applying the solution with a sponge. It has been found useful in affections of the liver, but great caution must be observed in its application, as its fumes are most deleterious to the lungs. 4. The *Ammoniacal Bath*, made by the addition of a pound of carbonate of ammonia to an ordinary warm water bath. In many diseases of the skin, particularly those of a scorbutic order, it will be found extremely beneficial, the properties of ammonia being in a high degree purificative.

SEA BATHING.—The most natural and beneficial mode of cold bathing is that afforded by the ocean, its waters possessing a peculiarly bracing influence, which imparts a tone and vigour to the system. Some precautions however are necessary. No infants or children of tender years should be immersed in the sea; as the shock occasioned by the cold temperature, as well as the terror imparted, both act prejudicially. Children above six years of age may be bathed with less precaution; but even then they should not enter the water when their bodies are either cold or hot. A warm glow on the skin, produced by a gentle walk, is a test of the condition most advantageous for entering the water. For children two or three plunges will suffice; and those of more advanced years, should never remain above ten minutes or a quarter of an hour in the water. An hour or two about noon will usually be found *the most advantageous time* for sea-bathing; as the sun's rays then exert a sufficient influence upon the temperature of the water, without producing any injurious effect upon the head of the bather, especially if it be kept cool by frequent submersion. Sea bathing at the commencement should be practised twice or thrice a week. Afterwards it may be used daily with advantage: but not oftener. It may be continued for one, two, or three months, but seldom with advantage beyond the latter period. A flowing instead of a receding tide is to be preferred as more agreeable, salubrious, and less dangerous; the water being purer before it has commingled with the refuse of the beach, and the person in less danger from the reflux of the wave. Persons of consumptive and scrofulous tendency should resort to sea bathing with extreme caution, and not without medical advice. Adults upon entering the sea, should immerse the head immediately, on account of the apoplectic tendency that might otherwise be induced. Persons in more advanced life should not attempt sea bathing without medical advice; and even then the period of immersion should never exceed five minutes.

The following are *general precautions to be observed in bathing*. Do not bathe the lower extremities first. The immersion should be complete at once. Never leap into deep water feet foremost and in an erect position. The best method is to drop into the water, the body and limbs being bent together. Do not stand still or remain motionless in the water. Do not remain long enough in the water to become chilled. Leave the water on the first indication of cramp. Apply a brisk towel all over the body as soon as you leave the water; and dry yourself thoroughly and as expeditiously as possible. Dress yourself as soon as you are thorougly dry. Do not indulge in violent exercise immediately after a bath, but take a brisk walk, just sufficient to heat you.

BATH PUDDING.—Boil six ounces of ground rice in a pint and a half of cream till tender, and set it to cool. Add to it six yolks and two whites of eggs well beaten, with half a pound of powdered sugar, half a pound of butter, forty sweet almonds blanched and pounded, and two tablespoonfuls of brandy. Mix all the ingredients thoroughly together, and bake for twenty minutes.

☞ Ground rice, 6ozs.; cream, 1½ pints; eggs, 6 yolks, 2 whites; sugar, ½lb.; butter, ½lb.; sweet almonds, 40; brandy, 2 tablespoonfuls.

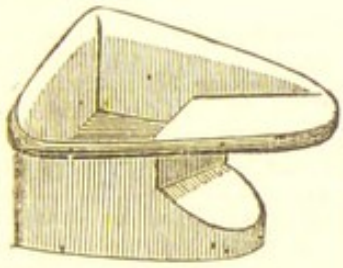
BATHS, CONSTRUCTION OF.—*The Cold Bath* may be introduced into any apartment of the house, but it is preferable that the room should be light and airy; and as a matter of convenience that it should be situated near both the sleeping apartment and the dressing-room. It should also be fitted with two pipes, one by which the water is supplied from the main source, and the other admitting of the waste water being

carried off. The size of the bath should be sufficiently large to allow of a free exercise of the limbs, and in order to ensure perfect cleanliness it should be lined with white enamel. *The Warm Bath* may be most advantageously introduced into ordinary establishments by having them fitted up in some room on a level with the kitchen or scullery floor, so that when the bath is wanted, the water heated in the copper of the kitchen or scullery may be readily conveyed to the bath by pipes or otherwise. Warm baths generally should be of a large size and with a wide opening, so that the body may not be constrained to one position, which is especially irritating and irksome to invalids.

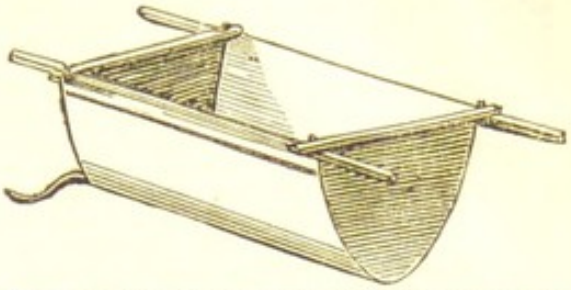
The Hip Bath is fitted to receive the hips only, and is sloped in such a manner as to afford support to the back. It is frequently recommended to weak and delicate persons, for daily use immediately after rising, and is at all times refreshing and invigorating. It has the advantage of requiring very little water, as the bulk of the part immersed raises the water on each side so as to cover the hips; it is also easily removed from place to place, or from room to room, and by means of a ring attached to it may be hung up when not in use.

The Leg Bath is extremely well adapted for immersing the legs and feet especially when the lower limbs are affected with any rheumatic or chronic complaint, for this bath not only concentrates the heat near the parts immersed, but alsoprotects them from the action of the cold air. The leg bath is usually made as high as the knee, with a projection at the bottom to allow room for the feet.

The Foot Bath is generally a tin or earthenware vessel of an oval form and sufficiently large to admit of the feet with ease. An improved kind, with a rest for the foot for drying it, as shown in the annexed engraving. The bathing of the feet in hot water is a domestic remedy for many ailments, and may generally be resorted to with safety. In cases of cold, inflammatory diseases of the and head throat, determination of blood to the head, &c., it will generally afford relief; and when the symptoms are aggravated, the operation of the hot water will be materially assisted by the addition of mustard. It is a bad practice however to bathe the feet in hot water too often under ordinary circumstances, as a tenderness of the feet is frequently induced, so that even moderate exercise with the usual pressure of the boot is attended with blisters and sores.



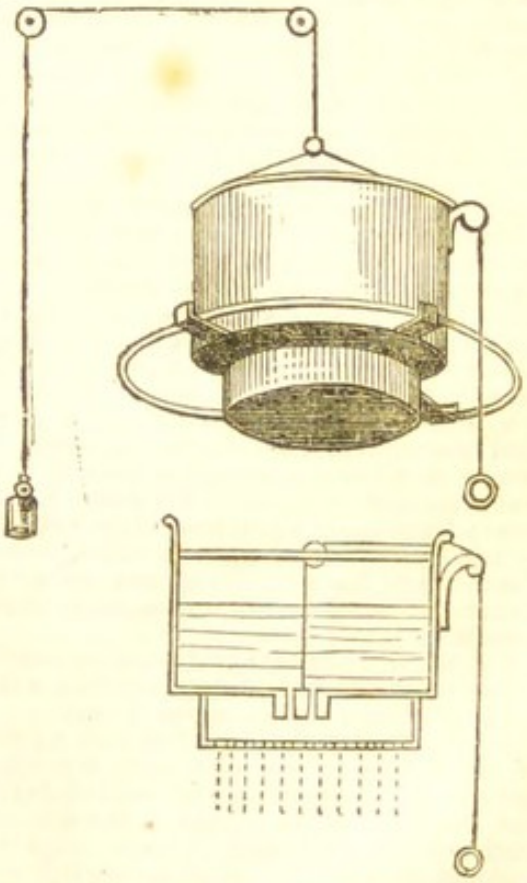
The Portable Bath for either cold or warm water consists of a piece of waterproof cloth made up into the form of a sailor's hammock; it is kept extended by two poles passed through a broad hem on each side, and further secured by two cross pieces of wood at the ends. The apparatus may be supported by tressels, chairs, or any other contrivance as circumstances admit. It is fitted with a flexible tube beneath, by which the water may be easily drawn off. The advan-



tages of this bath, in addition to its simple and ready mode of application, are, that it may be packed up and carried about in a small compass. Also, that owing to its peculiar construction, it does not require so much water as an ordinary bath.

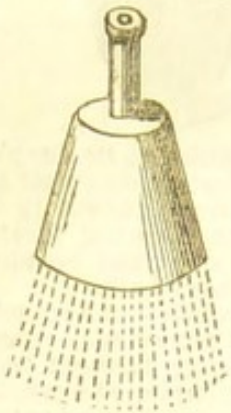
The Sponge Bath usually consists of a round, shallow vessel, in which a person may stand upright and apply the sponge, without fear of wetting the carpet. Sponging the whole surface of the body, both in winter and summer, should form a part of the toilet of every person in a moderate state of health; and for this purpose cold or tepid water may be used according to the season.

The Shower Bath affords one of the most convenient methods of cold bathing; the apparatus occupies only a small space, and may be placed in any corner or recess of the bed-



room or dressing-room. The form of shower bath in general use is well known. But an improvement has been lately introduced much cheaper, and answering the purpose nearly as well. The cistern of this

apparatus is suspended from the ceiling by a line, and balanced by a weight. The valve in the interior is similarly regulated as in the upright shower-bath. An iron ring is attached to the cistern from which the curtains hang, and another ring, but larger, keeps out the bottom of the curtain. This apparatus may be had for a few shillings. *A shower bath for children* has been invented, which consists of a bell-shaped tin vessel, the bottom of which is pierced full of holes, a hollow tube rising from the top, the aperture of which can be closed by the pressure of the finger. When used, the bell must be sunk in a pail of water, and when it is full, the forefinger must be pressed hard upon the top of the tube so as to close it perfectly. The bell may then be withdrawn from the water, and by means of the pressure of the atmosphere it will continue full until it is raised over the head of the child; when by withdrawing the finger from the tube the water is discharged in a sudden shower through the numerous holes in the bottom of the bell.



Baths of every kind are let out on hire by furnishing ironmongers, by the week, month, or year. There is also a Portable Bath Company established, who send out not only the baths, but the hot water. These are conveyed into the chamber where the bath is to be used, and are removed when done with. The men sent with the baths are provided with slippers, so that their footsteps may not be heard; and their whole operations are conducted noiselessly, in order that a sleeping person, or an invalid, may not be awakened or disturbed by those noisy preparations which ordinarily create a sensation of dread.—See HYDROPATHY.

BATTER CAKES.—Put into a pan two pounds of sifted flour, a tablespoonful of lard, and a teaspoonful of bi-carbonate of soda, dissolved in a little warm water. Make the whole into a soft dough with half a pint of cold water, then thin to the consistence of cream by adding gradually a pint of warm water; continue to stir it for about half an hour; have ready a pan heated over the fire, and bake the batter on it, in cakes, turning them when brown. They may be served either hot or cold, and eaten with butter, treacle, or jam.

☞ Flour, 2 pounds; lard, 1 tablespoonful; bi-carbonate of soda, 1 teaspoonful; water, cold, half pint; water, warm, 1 pint.

BATTER, ENGLISH.—Put half a pound of sifted flour into a dish with a pinch of salt, two tablespoonfuls of melted butter, and the yolk of two eggs. Moisten and work up this with milk or water till it is of a proper consistence. Just before it is used have the whites of two eggs well whipped, and work them into the paste.

☞ Flour, ½lb.; salt, a pinch; butter, melted, 2 tablespoonfuls; eggs, 2 yolks and 2 whites; milk or water to moisten.

BATTER, FRENCH, FOR FRYING FRUIT, VEGETABLES, &c.—Cut four ounces of fresh butter into small pieces, pour on it half a pint of barley water, and when dissolved, add a pint of cold water; mix by degrees with a pound of fine dry flour, and a small pinch of salt. Just before it is used, stir into it the whites of two eggs beaten to a solid froth; use quickly, that the batter may be light.

☞ Butter, 4ozs.; water, ½ pint boiling, 1 pint cold: flour, 1lb.; salt, small pinch.

BATTER PUDDING.—Beat well together with a little milk, six ounces of fine flour, a pinch of salt, and three eggs; when this is the consistence of cream, pour into a buttered dish. It may be either baked or boiled. If baked, three quarters of an hour will suffice; if boiled, it should be put into a buttered and floured basin, tied over with a cloth, and boiled for an hour and three quarters.

☞ Flour, 6ozs.; salt, a pinch; eggs, 3; milk, sufficient.

BATTER PUDDING, WITH MEAT.—Make some English batter, and pour a little into the bottom of a pudding dish; then put meat of any kind into it, and a small onion, shred; pour the remainder of the batter over, and bake in a slow oven.

BATTER PUDDING, WITHOUT EGGS.—Mix six tablespoonfuls of flour with a little milk, and when quite smooth, add a quart of milk, a teaspoonful of salt, two teaspoonfuls of grated ginger, and two of tincture of saffron; stir together well, and boil it for an hour.

☞ Flour, 6 tablespoonfuls; milk, 1 quart; salt, 1 teaspoonful; ginger, grated, 2 teaspoonfuls; tincture of saffron, 2 teaspoonfuls.

BATTERY.—An injury inflicted by beating either with the hand or an instrument; throwing water on a person is battery. It is immaterial whether the act be wilful or not. Hence an action lies against a soldier who hurts his comrade while they are exercising unless he can make it appear that the injury done was inevitable and that he was not chargeable with any negligence. An action lies not only against him who commits the injury but against him also at whose command it is done. If A command B to beat another and B does it he is guilty as well as B. If a party has been indicted for a felonious assault and acquitted the party injured may notwithstanding sue him for damages in a civil action. Two justices may fine a party for an assault £5 but if they shall deem the assault justified and dismiss the complaint a certificate should at the time be obtained from them as a bar to any other proceeding, civil or criminal.—See ASSAULT.

BATTLEDOOR AND SHUTTLECOCK.—This well-known game, which may be played in or out of doors, affords an excellent recreation for children of both sexes, and is particularly beneficial in assisting the development of the muscles, and encouraging the full play of the organs of the chest. Children may play at this game until they

become thoroughly tired without injury, but *excessive fatigue* should be avoided.—See EXERCISE, PHYSICAL TRAINING, TOYS, &c.

BAY LEAVES have an aromatic, bitter, astringent taste, and a fragrant smell. They are said to be beneficial in nervous complaints and paralysis: in large doses they prove emetic. They should be dried, pounded, and kept in glass bottles ready for use. The green leaves applied to bee-stings tend to allay the pain and inflammation. Bay leaves are also used for giving a flavour to soups, gravies, pickles, &c.

BAY SALT.—The salt made naturally on the sea shore at St. Ubes and other bays, in the natural hollows of the sea shore, which are only overflowed at spring tides. The salt thus made at a low temperature, by the action of the sun and wind, is the strongest and best for butter, and for agricultural purposes.—See SALT and SALTING.

BAY-TREE.—This plant seldom exceeds fifteen or twenty feet in height. The bark is greenish, smooth, and aromatic; the leaves lanceolate, sharp pointed, wavy on the edge, and leathery and smooth on both sides; the flowers are four or six in a cluster, of a yellowish white, glandular and dotted; the fruit is about the size of a large pea, black and succulent. The *best situation* for this tree is one sheltered from the north and north-east winds, and it thrives remarkably well under the shelter of larger trees, where it is difficult to make other shrubs prosper—a fact that should be remembered in the laying out of plantations. A warm, dry, sandy, or gravelly *soil* is suitable for the bay, as is also a rich dark loam. To *propagate* this tree, the fruit should be gathered when quite ripe, which is not before January or February. The berries must then be preserved in dry sand until the middle of March, when they may be sown in a shady border of rich, loose, undunged earth. The berries should be dropped in, in rows, and covered with fine rich mould, about an inch thick. The young plants will require frequent but gentle watering for the first two years. The bay-tree may also be raised by cuttings, which should be planted in a moderate hot-bed, kept moist, and covered from the heat of the sun during summer, and from the frost in winter. April is the proper time to plant cuttings, but layers may be set either in March or August, which, by the second spring, will make good plants. The variegated bay is increased by budding it on the common sort. Neither the broad nor the narrow-leaved varieties are so hardy as the common bay.

BEAD-WORK.—This beautiful and fashionable work is perhaps the most simple of any of the accomplishments for ladies, yet the choice and arrangement of the colours and patterns demand both taste and judgment. A variety of articles at once ornamental and useful may be formed from beads.

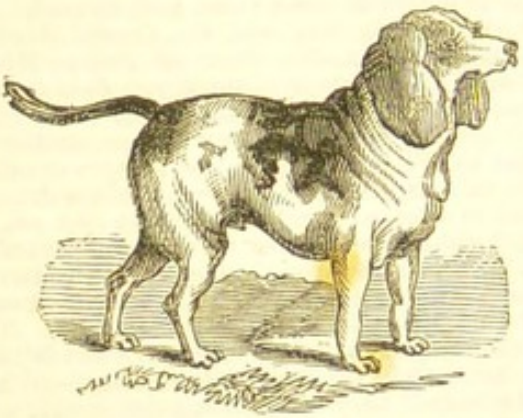
The *Bead Mat* for vases of flowers is one of the most suitable forms for this kind of work. The beads used are known at the shops as *mat beads*. There are two kinds commonly in use; one transparent, the other lined with one colour, and covered on the outside with clear glass—these are the best. For working, the materials required are two long needles and some very strong linen thread or crochet cotton. The process is as follows:—Select your colours and arrange them in a shallow saucer before you; then commence the centre of the mat by taking a long piece of thread and threading a needle at each end; then pass both needles through one bead, then one on each needle again, and so repeat until you have the required number; after which, work with one needle only, by taking a bead and passing your needle through each alternate or projecting bead, which will bring the fresh bead constantly into the opening, and so working from end to end until you get to the side. This will form one half; then, with the other needle, work the second half in the same way. In piercing your thread, be very careful to tie your knots firmly, otherwise the work will come undone. Let your ends be hidden in one of the beads, for if seen, they will appear very untidy. The fringes are always worked after the mat is done, by passing the needle through the outer beads. In this, as in all bead work, be careful not to draw the thread too tight in the first two or three rows, and, to make the work more lasting, use the thread double. Books: *The Ladies' Book of Fancy Work; Madlle. Riego de la Branchardiere's Bead Crochet Book; Mrs. Child's Girl's Own Book.*

The *Bead Bag* is made on canvas, similar to that used for marking. The flowers or other ornaments intended to be worked are drawn, and strings of beads are then sewn on, of such colours or shades as are most suitable to the pattern chosen. The spaces between the figures must all be filled up with beads of the same colour, to form a ground. The toilsome process of stringing the beads may be avoided in the following manner:—When purchased, they are strung on grass, and tied together in bunches; untie them carefully, wax a length of silk, pass the end of it through the finger nails till it is worn down fine and soft, then wax it, and twist it round the end of the grass firmly; then let the beads slip down from the grass to the silk. If care be taken, a whole string can thus be transferred in a minute.

The *Bead Basket* is made upon somewhat the same general principles as those described in the bead mat. Other materials are, however, used, such as wire, twine, and cardboard, according to the kind of basket that is to be made. The form of basket may either be pendant, as is usually seen hanging between window curtains, or as a handbasket to stand on drawing-room or work tables. The latter, as seen in the accompanying engraving, is the most useful form of the two, and costs less trouble and expense to make. They may be made with or without handles, according to the purposes to which they are to be applied.

BEAGLE.—A small, well-proportioned hound, slow but sure, having an excellent scent and most enduring diligence. It is generally considered that beagles are best adapted for an enclosed country, as they are good at trailing or default, and for hedge-

rows. There are several varieties of beagles, divided chiefly into the wire-haired and the smooth-haired. The former are generally preferred, having good shoulders, and being well filleted. Smooth-haired beagles are commonly deep hung, thick lipped, with large nostrils, but often so soft and bad quartered as to be shoulder-shook and crippled the first season they hunt. Beagles are extremely difficult of management, and require a clever huntsman to keep the couples well together. In point of height the beagle should be regulated by the country he is to hunt in; but he ought at any rate to be very slow. In a dry country free from walls he cannot be too slow; but when impediments exist, he should be larger, to prevent being stopped by fences; as also when the waters are out, the larger he is the better calculated he will be for swimming. The beagle is nimble and vigorous, and is so swift of foot that horses are frequently greatly distressed, and sometimes even killed in following them. This hound pursues the hare with impetuosity; gives her no time to double, and will easily run down two brace in as many hours. The form of the head of the beagle



should be large, round, and thick rather than long; there will then be more room for the expansion of the nasal membrane —that of smell—and for the reverberation of the sound, so peculiarly the characteristic of this dog.

BEAN, FIELD—Culture of.—The sorts usually cultivated in the fields are the tick bean, the horn bean, and the small Dutch, Heligoland, or prolific bean. Beans are *propagated* by seed, which may be sown broadcast, drilled, or dibbled. If sown broadcast, three or four bushels of seed per acre will be required, which should be ploughed or harrowed in; if drilled, two and a half or three bushels per acre will be sufficient. They should be sown at the end of February or the beginning of March. When the season is remarkably mild, early sowing is a great advantage. There are two modes of drilling beans. In one of these, the ridges are divided by the plough into ridgelets, at intervals of two feet or two feet and a half. Many farmers have long and advantageously adopted the practice of dibbling in their beans, by which a great saving of seed is effected; neither are they required to be planted so early. Both drilling and dibbling have advantages over the broadcast system, as by the latter method the land cannot be kept clean. The diseases to which beans are subject are the rust mildew that grows on the stems of leaves, and is caused by cold fogs and frequent sudden transitions of weather, and the black dolphin, or fly, called the *collier*, an

insect of the aphis tribe. For the mildew no remedy has yet been found. The most ready means of destroying the fly is to cut off the affected tops, put them in a bag, and throw them into the fire. It is useless to cut off the tops and leave them on the ground; the flies will soon re-ascend the plants and regain their former station.

BEAN, GARDEN—Culture of.—The following varieties are those principally cultivated:—the mazagan, dwarf-fan, long-pod, green China, dwarf red, and Windsor. For the earliest crop, mazagans should be planted in October, November, or December, in a warm border, under an exposure to the full sun. Set them in rows, two feet or two feet and a half asunder, about an inch and a half deep. The *most successful plan for nurturing a crop over the winter* is to sow the beans thickly together in a bed of light earth, under a warm aspect. At the approach of frost, protect the rising plants with a frame, hand glasses, or the half-shelter of an awning of matting. In February or March, as soon as the weather is mild, transplant them into a warm south border; ease them out of the seed-bed with their full roots, and with as much mould as will adhere; plant them at proper distances, and close the earth well about their stems. Some of the long-pod, and green Windsor beans, may also be planted in fuller crops in February, if the weather permit, both for succession and principal supplies. For early crops, the *quantity of seed* required is one pint for every eighty feet of row; for main crops, two quarts for every two huudred and forty feet of row.

The *method of sowing* is either by dibbling or drilling. As the plants come up, and advance from two inches to four and six, hoe up some earth to the stems on both sides of each row, cutting down all weeds. Repeat the hoeing as future weeds arise, both to keep the ground about the plants clean, and to encourage their growth by loosening the earth. In earthing up, great care must be taken that the earth does not fall on the centre of the plant so as to bury it, for this occasions it to rot or fail. As the different crops come into full blossom, pinch

off the tops in order to promote their fruiting earlier.

BEAN, KIDNEY—CULTURE OF.—Of this vegetable there are two species, the dwarf and the runner. The soil for them, should be a light mellow loam, even inclining to sand. For the early and late crops a sheltered border must always be allotted, or in a single row a few inches from a south fence, otherwise the situation cannot be too open. *Dwarfs* should be sown about the beginning of April. *Runners* towards the latter end of the same month or the beginning of May. The pods should be gathered while they are young, fleshy, brittle, and tender, being then in the highest perfection for the table.

BEAN PUDDING.—Boil and skin the beans. Pound them with pepper and salt, and a small piece of butter or suet. Put them in a buttered tin basin. Tie a pudding cloth round, and boil with pork for forty minutes.

BEAN TANSY.—Take two quarts of beans, blanch and beat them very fine in a mortar; season with pepper, salt, and mace; then put in the yolks of six eggs, a quarter of a pound of butter, a pint of cream, half a pint of white wine, and sugar to taste. Soak four Naples biscuits in half a pint of milk, mix with other ingredients; add two or three sprigs of tansy, and beat all well together. Pour into a buttered pan; bake it till of a light brown colour, turn on to a dish, and garnish with lemon and orange peel.

☞ Beans, 2 quarts; seasoning, sufficient; eggs, 6 yolks; butter, ¼lb.; cream, 1 pint; white-wine, ½ pint; sugar, to taste; Naples biscuits, 4; milk, ½ pint; tansy-sprigs, 2 or 3.

BEANS—PROPERTIES AND USES OF.—The common field and garden bean are coarse articles of food, only fit for persons who labour hard in the open air, and whose stomachs are accustomed to them. They are especially to be avoided by persons having delicate stomachs, and of sedentary habits, as they are in such cases extremely difficult of digestion, and create flatulency, heartburn, &c. Kidney beans, when young and well boiled, are easy of digestion, delicately flavoured, and less liable to produce flatulence than peas. The *uses of the bean* are various. The seeds when ripe, and deprived of the pod, are farinacious, and very nutritive, and form excellent puddings. The kidney bean, in its young state, is preserved in salt for winter use; they are also preserved as a pickle by themselves, and form an ingredient in mixed pickles. When ground they yield a meal from which bread may be made.—See HARICOT.

BEANS, A LA MACEDOINE.—Put some parsley, green onions, and mushrooms, all shred fine, with a piece of butter rolled in flour, into a stewpan; moisten with stock and white wine, adding a bunch of parsley, green onions, and savory; let this boil over a slow fire; then put in three artichoke bottoms, blanched for a quarter of an hour in boiling water, and cut in small squares, with a quartern of young garden beans; stew them, seasoning with salt and pepper; then take out the herbs, and serve the beans with the sauce thick.

BEANS, FRENCH, AS SALAD.—Boil the beans in salt and water, drain them, season with pepper, oil, and vinegar; cover them, and let them stand for three or four hours. Then having drained them again, mix them with salad of any kind, seasoning in the usual way.

BEANS, FRENCH, BOILED.—String, and cut them into four or eight. Lay them in salt and water, and when the saucepan boils, put them in with some salt. As soon as they are done, serve them immediately, to preserve the green colour. Or when half-done, drain the water off, put to them two spoonfuls of broth strained; and add a little cream, butter, and flour, to finish cooking them.

BEANS, FRENCH, FRICASSEED.—Boil the beans as for eating, and having strained off the water, put them into a pan, with half a pint of cream, dredge in, a little flour and grated nutmeg; serve hot.

BEANS, FRENCH, PICKLED.—Lay them in salt and water for nine days, then add a little vinegar, and boil them in the liquor; when they become green, drain, wipe dry, and put them into jars. Boil some vinegar, ginger, mace, cloves, pepper, and mustard-seed, all bruised, and while hot pour it over the beans. Cover close when cold.

BEANS, FRENCH, PRESERVED.—String them, and let them boil in water mixed with a sufficient quantity of salt, for ten minutes. Take them out and place them in cold water. When cold, drain them thoroughly, and put them into bottles, adding fresh brine. Pour over them clarified butter to the thickness of an inch, tie them down with parchment, and put by, in a cool dry place. They will thus keep for twelve months.

BEANS, FRENCH, RAGOUT, WITH POTATOES.—Boil two pounds of potatoes thoroughly; peel, and put them into a saucepan, with half a pint of milk, a teaspoonful of salt, and a quarter of a pound of butter; stir it constantly; when it becomes so thick that the spoon will hardly move, put it into a buttered-dish: flour, and add melted butter and bread crumbs; bake in the oven till brown, and serve with the ragout of beans round it.

☞ Potatoes, 2lbs.; milk, ½-pint; salt, 1 teaspoonful; butter, ¼lb.; melted butter, bread crumbs, sufficient; beans, as required.

BEANS, FRENCH, RAGOUT OF.—Cut the beans in two, fry, and drain them; shake over them a little flour. Put to them stock gravy, an onion, and a seasoning of cloves, cayenne, salt, and ketchup; boil them together, stirring in the meantime. Take out the onion, and serve the remainder hot.

BEANS, FRENCH, A LA POULETTE.—Boil the beans, drain them, and put them into a stew-pan with some butter, parsley, green onions, and a little savory; stir them over the fire, add a little flour and stock gravy. When done, put in the yolks of three eggs, and beat up with a little milk, warm again, and serve.

BEANS, FRENCH, MAIGRE.—Cut the beans, and put them into boiling water with salt; when done sufficiently, take them off, throw them into cold water, and drain after a few minutes. Then put them into a stew-pan with a piece of butter, a spoonful of flour, some chives and parsley chopped fine, some salt, and a glass of milk; let them boil for a quarter of an hour, and serve them with a mixture of eggs slightly dashed with lemon-juice.

BEANS, WINDSOR, BOILED.—Put them into plenty of salt and water, and boil for twenty minutes; serve with parsley and butter.

BEANS, WINDSOR, FRICASSEED.—When large, but not mealy, boil, blanch, and lay them in a white sauce ready hot; just heat them through in it, and serve.

BEARD.—The propriety and utility of wearing the beard has long been a vexed question in England. And such was the influence of opinion on this point formerly, that until the last few years, it was the universal custom to shave the chin scrupulously every day, and if any person neglected to do so, he was considered uncleanly and eccentric. Now, however, the wearing of the beard has resolved itself into a matter of personal convenience and comfort, and as many Englishmen are seen with the facial ornament as without. The only argument that could ever be adduced against the wearing of the beard was, that it gave a man a dirty and slovenly appearance; this, however, is easily overruled by the fact, that it is always easy to keep the beard trimmed and clean in the same manner as the hair of the head is attended to. The reasons why *beards should should be worn* are—1. That the Creator made the beard for a wise purpose. 2. That it is inconsistent to shave the chin and not the head. 3. That shaving is an irksome and sometimes painful operation. 4. That shaving entails a waste of time. And, lastly, that the beard acts as protection to the organs of the throat and mouth, and prevents the visitation of many bronchial and rheumatic affections, which otherwise affect persons who shave the beard. The reasons why *beards should not be worn* are—1. That unless they are carefully attended to, they present a disagreeable appearance, and therefore demand more time than the operation of shaving. 2. That long established custom has rendered the wearing of beards objectionable to the taste of English society. 3. That beards cannot be necessary for the health of man, any more than for that of woman.—See MOUSTACHE, WHISKERS, &c.

BEAR'S FOOT.—An evergreen, growing on chalky soils and the borders of woods and thickets. It produces flowers in March and April, and seed in June and July. The fresh plant has a fetid odour and bitter taste, and is so extremely acrid as to blister and excoriate the mouth and fauces. The root is used in veterinary surgery as a seton. A decoction of it administered chiefly in the form of an enema will destroy worms in the body: the proportions are, a drachm of leaves to a half-pint of water. It is of a poisonous nature, and therefore dangerous to be taken as a medicine.—See HELLEBORE.

BEAR'S GREASE.—See POMATUM.

BECHAMEL SAUCE.—Cut two pounds of the lean of a breast or knuckle of veal, and a quarter of a pound of lean bacon into small pieces. Melt some butter in a deep saucepan, and put in the meat to draw a little, and to *whiten*, not to *brown*. Mix two spoonfuls of fine rice flour very smooth, with pure water, and then put in a quart of clear stock made of veal, or as much water or milk. Let this stew very gently with the meat, over a chafing-dish, or by the side of the fire, for an hour and a half; having first seasoned it with a teaspoonful of white peppercorns, an onion, a few sprigs of parsley and lemon-thyme, and a bit of lemon-peel. Let the sauce settle, strain it, and stir in a cupful of hot cream. Boil it, and strain once more. This sauce is fit for adding to white ragouts, fricassees, and hashes of veal. It also forms the basis for all savory white sauces, and for dressings of vegetables.

BECOMING.—See APPAREL, DRESS, &c.

BED.—When it is considered, that, from a third to one-half the sum of human life is passed in bed, the necessity of regulating it in such a manner as shall best conduce to health and comfort cannot be too strongly insisted on. The *position of the bed* should be with the head to the wall and the feet to the window, as the sleeper will thereby escape any drafts, and yet have a free current of fresh air communicated to him. Beds should not be placed too near the floor, as the air of a sleeping apartment within one or two feet of the floor is charged with a pernicious gas, which is very unwholesome to breathe. *Curtains* are, generally speaking, both unnecessary and unhealthy, especially when they

are drawn all round the bed, and are made to cover the top. *Feather beds*, for ordinary use, are extremely injurious; for they imbibe the perspired vapours thrown out of the body, which are again taken into the system when the body becomes warm. This is especially the case when there is nothing but a thin sheet between the body and the tick; and it is therefore always necessary to interpose a stout blanket and thick cotton sheet. Except for the aged, feather beds should be used only in winter. *Mattresses* made of cotton and hair are both to be recommended: but care should be taken to procure them from respectable dealers, as cotton and hair of inferior qualities are subject to impurities. Spring mattresses are also comfortable and salubrious; they allow the perspiration of the sleeper to escape freely, and do not harbour insects, or stagnate the air. *Bedclothes* should not be too heavy, as they over-heat the body, and produce perspirations which are enervating, and ultimately productive of disease. Children, especially, should sleep under as few clothes as possible, consistent with the maintenance of a mild equable temperature. Aged persons, however, require warm bedclothing, in order to preserve and increase heat: many cases having occurred, of old persons being found dead in their beds in the morning, apparently from no other cause than the stoppage of circulation by the coldness of the night. A lath bottom to a bedstead is preferable to one of sacking; as the air does not circulate so freely through sacking as through laths, and sacking also harbours dust which encourages insects to collect and propagate. Beds should not be made until some hours after persons have left them; in the meantime, the clothes should be stripped off, the bed shaken, and the windows opened so that the air may blow upon them freely, and freshen them. Mattresses also should be turned at frequent intervals; for when left unturned, the side nearest the floor absorbs the damp and communicates it to the other side, whilst the side nearest the sleeper absorbs the perspiration from the body, which, from continual contact and want of ventilation, it is unable to pass off. A very high pillow, and very soft bed are frequently the causes of malformation; for the attitude into which the body falls during sleep is that of the loins sinking in the bed, the upper shoulder pushed out of its natural place, the back twisted, and the neck turned awry. The sheets of a bed, should be washed once a week; it is considered unwholesome to wash them either seldomer, or oftener. The blankets should be scoured periodically, as required. The tick of the bed should be renewed or washed from time to time, and the interior part cleaned once or twice a year. There are various modes of performing this operation, but the most economical method is to empty the contents of the bed into a bag of coarse hemp, or thin linen, which is to be beaten with rods for some time, when much of the dust accumulated will escape through the openings of the bag. The practice of *warming beds* is generally considered unhealthy, but this depends on the system. Getting into a cold bed is invigorating, where the system is sufficiently active, for after a few minutes the blood begins to circulate quickly, and a genial glow follows. With weak and sickly persons, however, bed warming is to be recommended, for the shock of a cold bed after leaving a warm apartment, is sometimes more than the system can bear without injury; with such persons equability of temperature is highly advisable. *Damp beds* are most dangerous to sleep in; not only from the fact of the body being at rest, and therefore unable to warm the surface by exercise, but also because when we are asleep, the body is more susceptible to any malign influence from cold or other causes. It is almost impossible to estimate correctly the serious consequences that may ensue from sleeping in a damp bed; many persons have lost the use of their limbs, or their voice, for life; while consumption, asthma, paralysis, and rheumatism, are commonly induced. Damp beds are generally met with at strange houses, and persons who travel much should be very cautious in this respect. When a person doubts whether the bed he is about to sleep in is well aired, or rather when he does not know for a certainty that it is so, he had better remove the sheets and sleep between the blankets; and if a sensation of chilliness is then experienced, it would be wiser to pass the night on a chair, or on the hearth-rug, rather than tempt the impending danger. In order *to detect dampness in a bed*, a person should have it well warmed, and immediately after the warming-pan is taken out, introduce a glass tumbler between the sheets in an inverted position; after it has remained there for a few minutes, it should be withdrawn and examined; if found dry and not tarnished with vapour, the bed is safe; but if the glass has vapour hanging about it, the bed is not fit to sleep in. Many persons who are in the habit of travelling take the precaution of carrying their own sheets about with them, but this only affords a partial immunity. The best insurance of any, against a damp bed, is always to sleep at the best and most frequented hotels, where, as a consequence, the beds are kept continually aired. — See BLANKET, COUNTERPANE, MATTRESS, PALLIASSE, PILLOW, &c.

BED BUG.—See BUG.

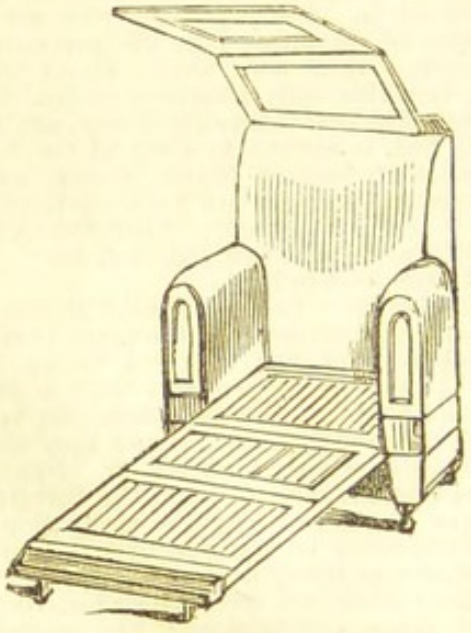
BED-ROOM.—This apartment should be large and lofty, situated in the upper part of the house, with the windows facing the east. It should be provided with a fireplace and chimney, and be thoroughly ventilated, in order that the sleeper may have a continuous supply of fresh air. Next to the regular admission of air, the furniture deserves attention. The free circulation of air should never be impeded by large sofas, easy chairs, or heavy draperies composed of absorbent materials, with which bed-rooms are so often encumbered. The curtains should not be of thick material, nor gathered up in elaborate festoons and folds, but should rather be thin, and loosely hung. Conveniences of every description there

should be, as a matter course; particularly a large wash-stand with plenty of water. The floor should be covered with a drugget of light, cheerful, and warm design; not nailed down, but simply fastened in such a manner that it may be readily removed. The walls of a bedroom should be covered with a paper of a light and airy pattern, such as designs of sprigs, flowers, &c. A bed-room should not have a fire lighted in it just before going to bed, if considered necessary at all, it should be lighted in the early part of the day and suffered to die out before the hour of going to rest. Flowers are unwholesome in a bedroom during the night; as they absorb *oxygen* which is necessary to human life, and emit *carbonic acid gas* which is noxious. Cleanliness cannot be practised too scrupulously in connection with bed-rooms; no impure water or soiled linen should be suffered to remain in them; they should be dusted every day, and thoroughly scrubbed with soap and water at least once a week. Book: *Housewife's Reason Why.* See SICK-CHAMBER, SLEEP, &c.

BED-SORES are occasioned by long pressure on the skin covering the prominent parts of the body, either in those who are confined to their beds, or those who cannot lie down at all. The best remedy is an application of spirits of wine or brandy mixing one part of the spirits with two parts of pure water. With this solution a linen pad must be saturated and kept next to the parts.

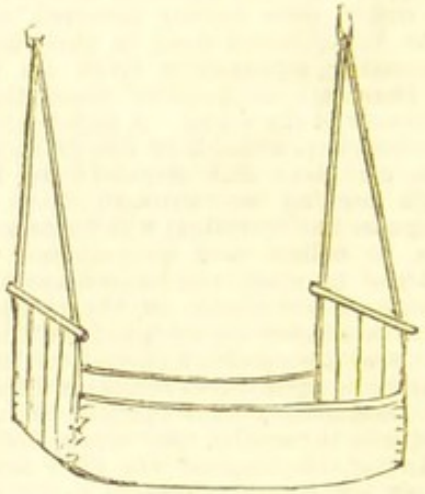
BEDSTEAD.—There are a variety of forms of this article of domestic furniture. The *four-post bedstead* is considered the most elegant and commodious, but it is adapted only for large rooms; in small rooms, by monopolising too great a space, and obstructing the air and light, they are both inconvenient and unhealthy. *French bed-*

Fig. 1.



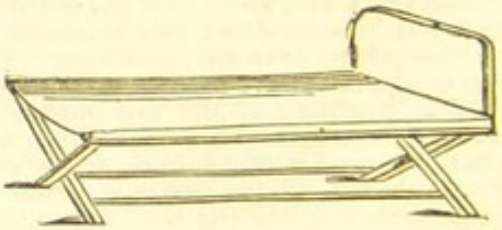
steads are of a convenient form, particularly on account of the curtains, which are made to fall at the head and feet, by being thrown over a short pole, fastened in the wall above the centre of the bed. The curtains may thus be put up or taken down in a moment without interfering with the bedstead. French bedsteads possess the further advantage of being constructed either on a plain or elaborate scale, so that they may be purchased from ten shillings upwards. *Tent bedsteads* are in very general use in England. They have four upright posts, into which a framework fits for the top. They possess nearly all the advantages of the four-post bedstead, without being so cumbrous or expensive. *Half-tester* and *press bedsteads*, are contrived so as to close up during the day, and resemble some piece of furniture of the sitting-room; although convenient they are not healthy, as the peculiarity of their construction deprives them of the necessary supply of air. Of this class the *Chair bedstead* (*Fig.* 1) is the most available, occupying less space, and more easily converted into use on any emergency. The *Cot bedstead* or *hammock* (*Fig.* 2) is an ingenious contrivance, and by some persons, especially those who have led a seafaring life, preferred to the ordinary bedstead. It consists of a wooden frame with canvass strained across,

Fig. 2.



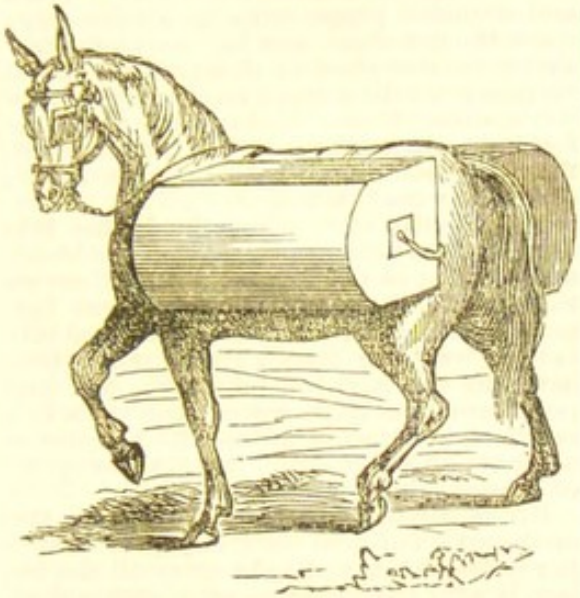
to the side of which two poles are attached; to these poles cords are fastened, and the whole is suspended from the ceiling by means of two strong hooks. The portable nature of the cot, and the small compass into which it may be packed, render it especially available to travellers. *The camp bedstead* (*Fig.* 3) chiefly used by military officers

Fig. 3.



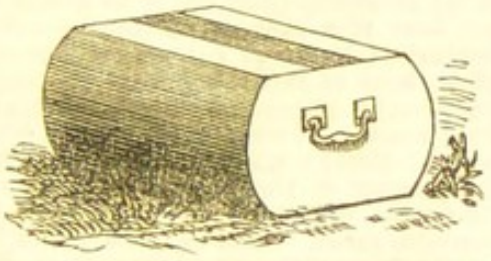
when on service, is both cheap and covenient It is formed simply by two frames connected by the sacking. When extended, it is kept open by the head-board, which has two pins that drop into holes in the side-rails. A foot-board, and curtain may be added if required.

This bedstead may be readily moved, and easily kept clean. Those made of wood cost only a few shillings, but there are others made of iron and brass, and as a matter of course are more expensive. *The portable military bedstead* possesses the advantages of commodiousness, economy of space, convenience of shape and ease of transport. In its whole, or partially distended form, it may be slung over a bullock or mule, It may

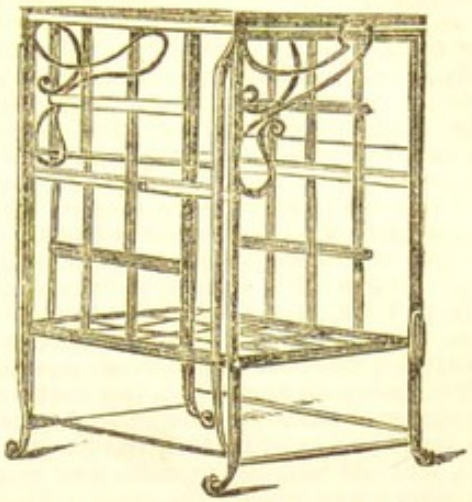


also be closed entirely and carried as an ordinary trunk or portmanteau, *Fig.* 5. The construction of this bedstead is very simple; between the two ends are moveable brass rods which close up and distend somewhat on the same principle as the telescope; over these brass rods a sacking is stretched, and a bolster is placed at the head; at each corner holes are left for the admission of curtain-rods, curtains being a matter of necessity where the mosquito and other troublesome insects exist. This bedstead may also be made available for the reception of clothes, books, &c., and may be

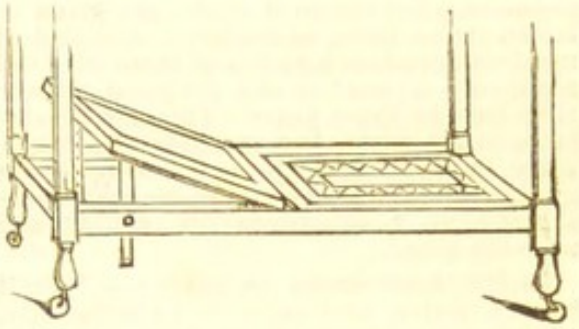
Fig. 5.



used during the daytime as a seat. *Iron bedsteads* are now introduced in many households; they may be obtained in a great variety of forms, and degrees of costliness, at proportionate prices. They are to be recommended on account of the greater facilities they afford to ventilation; they also encourage and harbour vermin less than wooden bedsteads, and may be easily examined and cleaned. *The folding iron bedstead* is less cumbersome and more portable than folding bedsteads generally; it is made to run on four castors: from its square and compact shape it is well adapted for standing in the recesses and corners of rooms, but with a covering, can be made a useful and ornamental piece of furniture. There



is a variety of *invalid bedsteads*, adapted to alleviate the bodily suffering of the sick and wounded; one of the simplest and most available forms of construction is that shewn below. It consists of an ordinary bed-



stead with a part of the sacking made to rise at the head, so as to support the back of the invalid; this may be elevated to any angle by two upright pieces, with holes and pins through the bedframe. Bedsteads should be kept scrupulously clean, and periodically examined. They should be dusted daily, especially the top part which is frequently neglected, dust suffered to collect, and vermin are thus bred. Every month during the summer season, and every two months during the winter, the bedstead should be taken to pieces, removed into the garden or yard, and there thoroughly washed with hot water and soft soap. If the bedstead is infested with vermin, from age and long use, the eradication of the evil is almost hopeless; and the best and wisest plan is to get rid of the bedstead altogether.—See COUCH, SOFA, OTTOMAN, &c.

BEECH.—A native forest tree, growing most commonly in the chalky districts of England. The wood of this tree is connected with many kinds of domestic articles, and a great variety of tools. The beech is readily raised by sowing the nuts, or mast, which should be gathered about the middle of September, when they are ripe, and begin to fall; previously to being sown, however,

they should be spread out on a mat in an airy place to dry. The most advisable method is to keep them dry in sand until the spring, as there is less danger of their being then destroyed by field mice or other vermin. When sown, they should be covered with loose soil about an inch thick. When they are five or six inches high, they should be sowed out on fresh ground, till large enough to be transferred to their final stations. Two or three bushels of seed are sufficient for an acre. The beech will grow in almost any soil, so as there is some portion of calcareous matter present; but it thrives best on clayey loams incumbent on sand or limestone. When the soil is tolerably good, beech will be fit to be felled in twenty-five years. The *leaves* of the beech, gathered in the autumn before they are much injured by the frost, are said to make better mattresses than straw or chaff, and are well adapted for beds for poor persons; they have a grateful smell, will not harbour vermin, and remain both sweet and elastic for years. The *nuts* or *mast* of this tree are used for fattening hogs, and are especially relished by deer. An oil is also obtained from them, equal in flavour to the best olive oil, with the advantage of keeping longer without becoming rancid. The cakes which remain from the pressure, after the oil is made, are given to fatten swine, oxen, or poultry. A bushel of mast will produce a gallon of clean oil; but a full crop of mast is not produced oftener than once in three years. This nut is palatable to the taste, but unwholesome when eaten in large quantities: when dried it is ground into meal, and may be used occasionally as a substitute for coffee, and wheaten bread.

BEEF, AITCHBONE OF, BOILED.—Place it in cold water, and suffer it to boil gently, allowing a quarter of an hour to every pound. Skim the pot three or four times. Pour half a pint of the liquor it was boiled in over it, and serve garnished with carrots.

BEEF, ALAMODE.—Cut four pounds of lean beef into pieces, with some rashers of fat bacon into long strips, have a seasoning ready, made of equal quantities of beaten mace, nutmeg, and pepper, and twice as much salt; dip the bacon into vinegar and then into the seasoning. Put the meat over the fire in a large pot, with a pint of stock gravy, two large onions, a bunch of sweet herbs, a gill of port wine, and some lemon-peel. Cover it down very close, and put a wet cloth round the edge of the lid, to prevent the steam escaping. When it is half done, turn it, and cover it up again. It will require four or five hours to do thoroughly. When done, if there is not sufficient gravy, add a little stock gravy. Serve with potatoes, or mixed salad.

BEEF AU MIROTON.—Cut some onions into slices, and fry them in butter; when nearly done, add a pinch of flour, and stir it till a deep brown; then moisten it with stock, and some white wine; add salt and pepper, and continue to stew till the onions are well done. Then put in a piece of beef that has been stewed, either whole or in slices; let it warm in the sauce a short time to take the flavour of the onion; stir in a spoonful of vinegar, and serve.

BEEF BOUILLI.—Have a shin-bone of beef sawed across in three different places without cutting the fleshy side. Place skewers in the stew-pot, and lay the meat on them, with as much water as will nearly cover it. When this is skimmed put in a bundle of herbs, a large head of celery cut, four onions, and a dessert-spoonful of black and Jamaica peppercorns in a spice-bag; cover the pot close, and let the meat stew slowly for three hours; then add carrots and turnips cut with a dozen small onions; stew for another hour. Make a sauce for the *bouilli*, by thickening a pint of the soup with flour and seasoning it with ketchup, spices, and a little made mustard.

BEEF BRAINS.—Put the brains into tepid water to cleanse them from the blood, and to remove the thin skin which covers them; take them out, and put them into more tepid water; afterwards put them into boiling water to blanch them; when they have lain five minutes, take them out, and put them into fresh water; boil them in a sufficient quantity of water, with the juice of a lemon, an onion cut in slices, a few sprigs of parsley, and some bay leaves.

BEEF BRAISED.—Cut away from two or three ribs of beef the fleshy part that is next the chine, and take away all the fat, lard it with fat bacon, season with spices, sweet herbs, parsley, young onions, a small quantity of mushrooms and truffles, shred very small. Then tie into a neat form with packthread. Have ready a stew-pan, lined with thin slices of fat bacon, with pieces of lean beef lying over them about an inch thick, the whole seasoned with spice, sweet herbs, onions, lemon-peel, bay leaves, pepper and salt. Lay the beef on this, with the fleshy part downwards, then season the upper part in the same manner as the lower; lay over it slices of beef, and over them slices of bacon; cover the stew-pan and close the edges with paste; then apply fire to the lid of the stew-pan, as well as underneath. When it is sufficiently stewed, take it up, and let it drain, then lay it in a dish and pour over it a ragout, as follows:—Veal, sweetbreads, livers of capons, mushrooms, truffles, tops of asparagus, and bottoms of artichokes, toss these up in a pan, with some melted bacon, and moisten with good gravy.

BEEF, BRISKET OF, STEWED.—Stew eight pounds of the brisket of beef until quite tender, in as much water as will just steam the meat. Take out the bones, and carefully skim off the fat. Take a pint of the liquor, put to it the third of a pint of port wine, a little ketchup, and some salt. Tie up in a piece of muslin some whole white pepper and mace, stew these together for a short time. Have ready three carrots and turnips boiled tender, and cut into the form of dice; strew a portion hot upon the beef, and put the remainder into a dish.

BEEF BROILED. Cut cold beef into slices, broil them over a very clear fire, and serve them with fried eggs, gravy, and any piquant sauce.

BEEF BROSE.—After any large piece of beef has been taken out of the water it was boiled in, skim off the fat with part of the liquor, and boil it. Have ready in a bowl, oatmeal that has been baked brown before the fire; pour in the boiling liquor, and stir it a little; if too thick, add more liquor, and serve quite hot.

BEEF BROTH.—Break a leg of beef in two or three places, and put to it a gallon of water, add three or four blades of mace, a little parsley, and a crust of bread; boil the beef till very tender, strain the broth, and pour it into a tureen; if agreeable, the meat may be put in with it; toast some bread and cut it into squares; serve in soup plates.

BEEF BROTH, WITH MUTTON.—Take part of a leg of beef, and the scrag end of a neck of mutton, break the bones in pieces, and put to it as much water as will cover it; add salt, an onion stuck with cloves, a bunch of sweet herbs, a nutmeg quartered, and some pepper. Let the whole boil together till the meat falls to pieces, and parts with all its nourishment, strain it off into jars, tie down closely, and keep for use.

BEEF, BUBBLE AND SQUEAK.—Cut into pieces of convenient size for frying cold roast or boiled beef; fry them with pepper and salt; when done, lay them on a hot drainer, and while the meat is draining from the fat used in frying them, have in readiness a cabbage already boiled in two waters; chop it small, and put it in the frying-pan with some butter, add a little pepper, and keep stirring it, that all of it may be equally done. When taken from the fire, sprinkle over the cabbage just sufficient vinegar to impart a slight acid taste. Place the cabbage in the centre of the dish, and arrange the slices of meat around it.

BEEF CAKES.—Pound beef that is underdone, with a little fat bacon or ham, season with pepper, salt, and a small quantity of onion; mix the whole together, and divide into small cakes. Fry to a light brown, and serve in rich thick gravy.

BEEF CECILS.—Mince some beef with crumbs of bread, a large proportion of onions, some anchovies, lemon-peel, salt, nutmeg, chopped parsley, and a bit of butter; mix these over the fire for a few minutes: when cool enough, add an egg, and make them up into balls; strew over them fine crumbs, fry them to a light brown, and serve with gravy.

BEEF, COLD, TO WARM UP.—Cut the meat in long and narrow slices of an inch thick, leaving a little of the firm fat upon each. Season with salt, pepper, and mixed spices, dredge them with flour, and heat them (without in any way approaching to frying) in the gravy saved from the cold joint. Season with a shred onion, and a little vinegar. Garnish with sippets, and serve.

BEEF COLLARED.—Lay the thin end of the flank of beef into a dish with salt and saltpetre; turn and rub it every day for a week, keeping it in a cool place in the meantime. Take out all bone and gristle, remove the skin of the inside part, and cover the meat with the following seasoning, cut small: a handful of parsley and sage, a few sprigs of thyme and marjoram, salt, pepper, and allspice. Roll the meat up as tight as possible, tie it round with broad tape, and boil it gently for seven or eight hours. Place the beef under a heavy weight while hot, and it will then assume an oval form.

BEEF COLLOPS, AU NATUREL.—Mince a pound of lean rump steak, season with pepper and salt, and stir it over a gentle fire until thoroughly heated. Simmer it in its own gravy for ten minutes, and if required, add more gravy or boiling water; stew for two minutes longer and serve.

BEEF COLLOPS, SCOTCH.—Mince lean beef, season it with pepper and salt, put it into small jars, and pour over it clarified butter, about an inch in depth. When required for use, put the clarified butter into a frying-pan with some shred onions, fry them; add a little water, and put in the minced meat. Stew for five minutes, and serve.

BEEF CULLIS.—Roast a piece of buttock of beef very brown; cut off the brown part, and while hot, beat it in a mortar, with some flesh of a fowl and crusts of bread; put it into a stew-pan with some rich gravy; season with salt, pepper, cloves, thyme, sweet basil, and lemon-peel; give the whole four or five boilings; strain, and put by in pots for use.

BEEF, EXTRACT OF.—Remove from a pound of good juicy beef all the skin and fat; mince it small, put a pint of cold water to it, and place it by the side of the fire to heat very slowly. Let it stand until it begins to simmer; then add salt, and boil it gently for a quarter of an hour. Strain into a basin, and let it remain until every particle of fat is skimmed off, and the sediment has subsided and left the soup quite clear; then pour it off gently into a clean saucepan, make it hot, and serve.

BEEF FILLET, ROASTED.—The fillet is the underneath part of the sirloin. Tie it up and trim it ready for dressing. Lard it well, and let it soak for twelve hours in a mixture of oil, salt, pepper, bay leaves, and sliced onions; after which roast it by a quick fire. It should not be too much done, and may be served with a sauce consisting of its own gravy, with a dash of vinegar, a shalot, salt, and pepper.

BEEF FRICASSEE.—Cut some thin slices of cold roast beef, shred a handful of parsley very small, cut an onion into quarters, and put them all together into a stew-pan, with a piece of butter, and some strong broth. Season with salt and pepper, and simmer very gently for a quarter of an hour. Mix into it the yolks of two eggs, a glass of port wine, and a spoonful of vinegar: stir it quickly, rub the dish with a shalot, and turn the fricassee into it.

BEEF FRIED.—Cut lean beef into steaks, and put them into the frying-pan with a piece of butter; set the pan over a moderate fire, turn the beef frequently, and pour off the gravy that runs from it; fry the fat by itself, then lay it on the lean; add to the gravy, onion, nutmeg, pepper, and claret; stew it slightly, pour it over the meat, and serve.

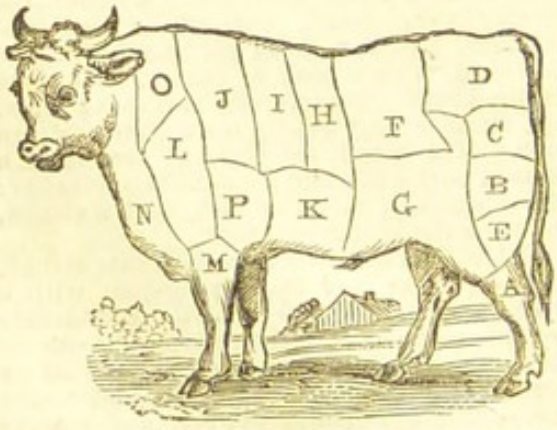
BEEF GRAVY.—Cover the bottom of a stew-pan with a slice of ham or lean bacon, four or five pounds of gravy beef cut into small pieces, an onion, a carrot, two cloves, and a head of celery. Add a pint of water, cover it close, and simmer it till the liquor is nearly exhausted. Turn it about, and let it brown slightly and equally all over. Put in three quarts of hot water, and when it boils up, skim it carefully, and wipe off with a clean cloth the scum round the edges and inside the stew-pan, in order that the gravy may be delicately pure and clear. Let it stew gently by the side of the fire for about four hours, till reduced to two quarts. Skim it well, strain it through muslin, and put by in pots. This gravy is almost indispensable for a variety of culinary purposes, more especially for made dishes. When required for immediate use add bread raspings, and serve in a butter-boat.

BEEF HAMS.—Select a fat leg of beef, and rub it thoroughly with saltpetre and salt; then make a pickle of an ounce of bay salt, an ounce of saltpetre, a pound of coarse sugar, and a pound of common salt. Rub this well in every day for a month; then roll it in bran or sawdust, and hang it in wood-smoke for ten days or a fortnight. Hang it in a dry place near the chimney for a week, and then keep it covered over with bran.

BEEF HASH.—Cut some thin slices of underdone beef with fat; put it into a small stew-pan with a little water, an onion, pepper, and salt. Add gravy, a spoonful of vinegar, and of ketchup. Simmer it till hot through, and serve with fried parsley.

BEEF HASHED, A LA FRANCAISE.—Put a piece of butter the size of a walnut, and a tablespoonful of flour, into a stew-pan, simmer them over the fire for a minute, and stir into them a finely-chopped onion and a dessert-spoonful of minced parsley; when thoroughly browned, add a seasoning of pepper, salt, and nutmeg, and put to it half a pint of water. Place in the beef, cut it into small but thick slices; let it stand by the fire and heat gradually; and when near boiling point, thicken the sauce with the yolk of three eggs, mixed with a tapblespoonful of lemon-juice. Serve with sippets.

BEEF, JOINTS OF—NAMES, SITUATIONS, AND QUALITIES.—By the aid of the



accompanying engraving, the names and situations of the various joints of beef, will become familarised to the eye. A is the leg. B the buttock or round. C the aitch-bone. D the rump. E the thick flank. F the sirloin. G the thin flank. H the wing or fore-ribs. I the middle ribs. J the chuck-ribs. K the brisket. L the chuck and leg of mutton piece. M the shin. N the clod. O the sticking-piece or neck. The ribs, the sirloin, and the rump, are the proper joints for *roasting*. The round, and the aitchbone, for boiling; the shin, the brisket, and the leg of mutton piece may be boiled or stewed. The neck is generally used for gravy, and the thin flank for collaring. The best steaks are cut from the middle of the rump, the next best from the chuck-rib.

BEEF, LEG OF, STEWED.—Cut a leg of beef into pieces, and put it into an earthen pipkin, add two onions, one carrot, one turnip, a head of celery, four or five cloves, pepper, and salt; stew the whole for seven hours. Cut into square pieces a second quantity of vegetables; then take the meat out, strain the liquor through a seive; lay the meat in the middle of a dish, the cut vegetables round it, pour over the gravy, and serve.

BEEF, LIKE GAME.—Cut some slices of beef into square pieces, put on each a strip of bacon, dredge flour over, bind each with twine, or skewer them into a rolled shape; fry them in butter: when brown, add shalots, a slice of lemon-peel, a spoonful of capers, two bay-leaves, salt, spice, a glassful of wine, half a glassful of vinegar, and a little water; stew till done.

BEEF, MINCED.—Chop lean cold roasted beef as fine as possible, put it into a rich gravy, warm up with a small piece of butter; and serve with soft-boiled eggs round it.

BEEF OLIVES.—Cut slices half an inch thick, and four inches square; lay on them a force-meat of crumbs of bread, shalot, a little suet, pepper and salt. Roll them, and fasten with a small skewer: put them into a stew-pan with some gravy made of beef bones, or the gravy of the meat; stew till tender.

BEEF PASTY.—Bone a small rump or part of a sirloin of beef, after it has hung several days. Beat it well with a rolling-pin; then rub in sugar, and pour over it a glassful of port wine and a glassful of vinegar; let it lie five days and nights: wash the meat and wipe it very dry, and season it with pepper and salt. Lay it in a dish, and to every ten pounds of meat add one pound of butter, spreading it uniformly over the surface. Put a light crust round the edges, and cover with a thick one; bake in a slow oven. Set the bones in a pan in the oven, with water sufficient to cover them, a glassful of port wine, a little pepper and salt; bake to a light brown, and serve the gravy with the pasty.

BEEF PATTIES.—Cut underdone beef into small pieces, season with pepper, salt, and an onion. Make a plain paste, and roll it out thin; fill it with the mince, close up, and fry to a moderate brown.

BEEF, POTTED.—Salt three pounds of lean beef, for two or three days with common salt; divide it into pieces of a pound each, and put it into an earthen pan just sufficient

to contain it. Pour in half a pint of water. Cover it close with paste, and set in a very slow oven for four hours: when taken from the oven, pour the gravy from it into a basin, shred the meat fine, moisten it with the gravy poured from the meat, and pound it thoroughly in a mortar with fresh butter. When it has become a fine paste, season with pepper and allspice; put it into pots, press it down as closely as possible; when cold, cover it with clarified butter, a quarter of an inch thick, and tie down.

BEEF, PROPERTIES OF.—The flesh of the ox is one of the best and most nourishing aliments; there is no meat that furnishes so much nutritious juice, and consequently none so well calculated to recruit the body when exhausted and fatigued from violent exertion. Beef, although not so easy of digestion as mutton, is considered to be next in the scale of flesh meat, in point of digestibility. When it is well cooked, and has been kept a sufficient time before dressing to become tender, it rarely disagrees with those who take it in moderate quantities.

BEEF, QUALITIES OF.—Oxen are generally considered to make better beef than cows, or even heifers. In some counties, however, ox-beef is not valued. Much depends upon the breed, the ox in some cases being harder and tougher than in others; much also depends upon the labours to which the animal is generally put. Thus, in the dairy districts, cow-beef is only killed when no longer of an age to be serviceable in the dairy, and as a consequence, the flesh is tough, stringy, and generally devoid of fat. On the other hand, the Hereford cow is often killed because she feeds so fast as to be a bad milker. The same remarks apply to bull-beef, which is commonly in its prime at two years old, at which age the bull is often killed in some districts; but if a five or six year old bull is slaughtered, he is only fit for soup. Small Scotch cattle rank the highest in the London market. The Hereford and Durham oxen are also prized, but their beef is large, and not so well suited for small families as the Scotch. A great deal of foreign beef is imported into this country, but it is not so good as the English, the mottled fat interlarded with the lean, which is so highly prized, is almost entirely wanting; the bone is larger, and the flesh generally coarser.

BEEF RAGOUT.—Take the bone from a rump of beef, cut the flesh into slices, dredge it with flour, and fry it; pour over it a quarter of a pint of boiling water, and a pint of small beer; add a carrot, an onion stuck with cloves, pepper, salt, lemon-peel, and a bunch of sweet herbs. Let it stew for an hour, then add some rich gravy. When the meat is tender take it out, strain the sauce, thicken it with a little flour, add a head of celery ready boiled, and a little ketchup; put the meat in this, and let it simmer up, and serve.

BEEF, ROUND OF, BOILED.—This may be boiled whole, or may be divided into two or three pieces, according to the size of the joint, and the number of the guests or family. Wash the meat, and if too salt, soak it in one or more waters till it be sufficiently freshened. Skewer it up tightly, and as round and even as possible, wrapping the flap or tongue-piece very firmly round; then bind it with strong broad tape. The pot should be roomy, and the water just sufficient to cover the meat. Heat gradually; take off the scum, till no more rises, throw in cold water to refine the liquor further, and skim again. Cover the pot close, and boil slowly, at an equal temperature, allowing a quarter of an hour to each pound, if the meat be under 12 pounds; and from seventeen to twenty minutes for each pound if it be above that weight. Turn the meat once or twice in the pot during the process. Put in carrots and turnips about two hours after the meat. Greens may be boiled in the same pot, or suet pudding. When the meat is dished, ladle up some of the liquor to wash it, and with a clean cloth moistened in the pot liquor, take off any scum or film that may be hanging about the meat; replace the skewer that holds the flap with a silver or plated one; garnish with large sliced carrots, and serve greens in a separate dish.

BEEF, RUMP OF, BAKED.—Bone and lard a rump of beef, as for *alamode*, put it into a stew-pan just large enough to contain it, together with half a pint of white wine, some green onions, mushrooms, pepper salt, and cloves. Close the edges of the pan with a strong paste, and let the meat stew in an oven for five or six hours, then serve with its own sauce strained.

BEEF, RUMP OF, ROASTED.—Cut from the rump, chump-end, a handsome roast of from seven to ten or twelve pounds. Bone and roll it up neatly. It will take from three to five hours to roast, according to its weight and thickness.

BEEF, SALTED.—Sprinkle the beef with salt, and a few hours afterwards hang it to drain This cleanses the meat from the blood, and preserves its flavour, then rub salt well in, and put it into a tub with a close cover; it should be turned every day, and if wanted soon should be rubbed daily also.

BEEF, SALTED, FOR IMMEDIATE USE.—The piece should not weigh more than five or six pounds. Salt it thoroughly just before it is put into the pot. Flour a coarse cloth and fold the meat up in it closely, put it into a pot of boiling water, and boil it as long as other salt beef. It will eat as though it had been salted for four or five days.

BEEF, SALTED RED.—Choose a piece of beef without bone, sprinkle it with salt, and let it drain for a day; then rub it thoroughly with a mixture of common salt and bay-salt in equal proportions, and a small quantity of saltpetre, rub the pickle into the meat every day for a week; after that, only turn it. In sixteen days, drain it from the pickle, and smoke it at the oven's mouth when heated with wood; a few days will smoke it.

BEEF, SANDERS.- Mince cold roast beef small, with onion, pepper, and salt; put it into saucers, so that they be three

parts full, and fill them up with potatoes mashed with a little cream; lay a piece of butter on the top, and brown them in the oven or before the fire.

BEEF, SIRLOIN OF, ROASTED.—Wipe away any moisture that there may be on the surface of the meat. Free the fat from kernels, and remove the marrow that runs along the backbone. Spit it evenly, that it may not be heavier on one side than the other; tie a piece of paper on it to preserve the fat, put a litle clean dripping into the frying-pan. Set the joint at first some distance from the fire, and draw it gradually nearer as it becomes warmed through. Baste the meat well as soon as it is put down, and every quarter of an hour during the whole time it is roasting, except the last half hour; then take off the paper, and brown the meat with a basting of butter, and flour and salt mixed in equal quantities; let it roast thus until quite brown. Dish it up, garnish it with horseradish, and serve. The time required for roasting is a quarter of an hour for every pound, but in hot weather twelve minutes will be sufficient.

BEEF, SIRLOIN OF, STEWED.—Tie it up tightly with tape; place it in a stew-pan, and partly cover it with stock gravy. Add three large onions, and a bunch of savory herbs; stew it gently for four hours. When done, dry it before the fire, and serve with rich gravy and stewed onions.

BEEF, SMOKED.—Cut the beef into large pieces and cover it with salt. At the expiration of two or three days, press it and hang it in a chimney where only wood is burnt, at a sufficient distance for the fat not to be melted by the heat. Let it remain until it is dry, when it may be eaten either in stew, slices, or grated.

BEEF, SMOKED, A LA HAMBOURG.—Rub the beef with saltpetre and brown sugar, let it lie for three days, strewing common salt over it from time to time, then press it, and hang it in the chimney, burning with green wood, a little juniper wood. This will give it a fine aromatic flavour.

BEEF SOUP.—Cut a shin or leg of beef into pieces, with six onions, two carrots, a head of celery, two turnips, a bunch of sweet herbs, pepper, salt, and allspice. Put the whole into a stew-pan together, and set it over a slow fire for an hour, then pour over it two quarts of boiling water; let it stew till the meat is tender. Then take out the best parts of the meat, and let the rest stew with the herbs until all the juices are extracted. Put in the best pieces again, simmer altogether, to near boiling-point, skim thoroughly, and serve.

BEEF SOUP, FRENCH.—Put into eight pints of water, six pounds of beef, cut into two or three pieces, bone included; one pound of mixed green vegetables, four teaspoonfuls of salt, one teaspoonful of pepper, one of sugar, and three cloves. Boil gently for three hours, and serve with a pound and a half of bread, cut into slices.

BEEF STEAK, or RUMP STEAK A LA FRANCAISE.—Season the steaks with salt and pepper, and spread a little butter lightly over them, and boil them over a clear brisk fire. Mix a teaspoonful of parsley minced as fine as possible, a slice of fresh butter, a little cayenne, and a small quantity of salt, When the steaks are done, put the mixture into the dish intended for them, lay them upon it, and garnish them plentifully with fried potatoes.

BEEF STEAK, BROILED.—Cut the steaks half an inch thick, beat them with a rolling-pin; season them with pepper and salt and put them over a clear fire; turn them often, and when done, rub a little butter over them, and add a little warm ketchup. Oyster sauce is frequently served with the dish. Also fried onions.

BEEF STEAK, FRIED.—Fry the steaks in butter for twelve or fifteen minutes, until they are of a fine brown. When done, place them in a hot dish before the fire; add to the gravy in the pan a wineglassful of port wine, pepper, salt, and a minced shalot. Give it a boil up, pour it over the steaks, and serve very hot.

BEEF STEAK, ITALIAN. — Score the steak transversely with a sharp knife, without dividing the meat. Lay it in a stew-pan, with a small piece of butter, season with pepper and salt, and strew over it a shalot, and a green onion chopped fine. Let it stew in its own gravy for three quarters of an hour, and serve.

BEEF STEAK PIE.—Select steaks that are not too fat. Mix some black pepper and salt together, season each steak well with it, and lay them in a pie-dish, put a teacupful of water into the dish. Cover with a crust, and bake it in a rather slow oven. When to be eaten hot, the crust is best made with suet; but if cold, butter should be used.

BEEF STEAK PUDDING.—Prepare and season the meat as for a pie, and put into a pudding basin previously lined with a moderately thick suet crust. Then close the crust over the top, and tie up in a cloth. It will require slow boiling for four or five hours, keeping the vessel filled up with boiling water as it wastes. When done, open a round hole in the upper part, and put in a bit of butter and a little boiling water. A small bullock's kidney is a great improvement to the beef with those who like the flavour.

BEEF STEAK PUDDING, BAKED.—Beat the steaks well, cut them into middling sized pieces, and season with pepper and salt. Make a batter of milk, eggs, and flour, lay a little of it at the bottom of the dish; then put in the steaks, pour the remainder of the batter over them, and bake to a fine brown.

BEEF STEAK, STEWED.—Fry the steak with a piece of butter till browned; then dredge with flour, and put in a little more water than will cover it. When it boils, season it with salt, take off the scum, and add one onion, two carrots, half a turnip, and a bunch of sweet herbs, chopped up; stew the steak gently for two hours and a half or three hours. A quarter of an hour before it is served, stir well with the gravy, three teaspoonfuls of rice flour, mixed with a little cayenne, two tablespoonfuls of ketchup, and a little spice.

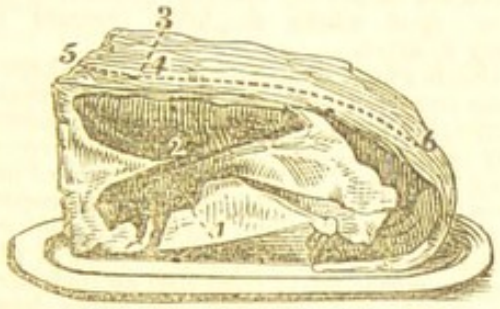
BEEF STEAK, WITH CUCUMBERS.—Pare and slice three large cucumbers, and two large onions. Fry them in water, and when browned add half a pint of gravy, and simmer. Beat rump steaks, season with pepper and salt, and fry them. Put them into a hot dish, and pour the cucumber sauce over them.—See ONIONS, OYSTERS, &c.

BEEF STEAK, WITH POTATOES.—Cut the steaks into thin slices, beat and season them with pepper and salt, dip them into a little melted butter and broil them. When done, put them into a dish before the fire, and fry potatoes to a fine brown colour, serve with the following mixture laid underneath: parsley chopped fine, a small piece of butter, pepper and salt.

BEEF STOCK.—Cut the chuck of beef into pieces, and set over the fire, in a saucepan with just enough water to cover it. While boiling, skim it thoroughly; add a bunch of parsley and thyme, carrot, onion, turnip, celery, and a little salt; boil till the meat is tender, and strain it through a hair sieve.

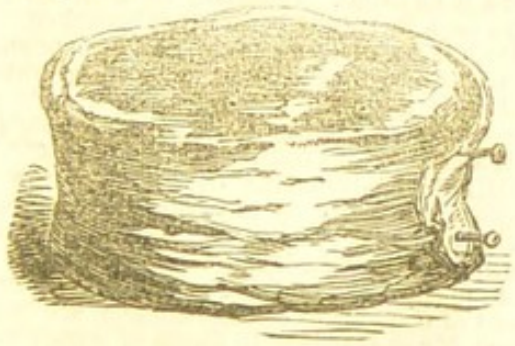
BEEF TEA.—Put one pound of the chuck of beef into a pint and a half of water; let it simmer gently by the side of the fire for an hour, add a teaspoonful of salt, and the same quantity of allspice and pepper.

BEEF, TO CARVE.—*The sirloin.* A very tender part of this joint lies underneath, and is called the fillet. The sirloin should be turned over, and slices cut from the fillet in the direction of 3—4. The meat



above the bone should be cut in the direction 5—6. The carver should ask the guests whether they prefer the upper or under cut. Slices of the thin end, 6, should be served with the other parts; and pieces of the rich fat 1, distributed with the lean.

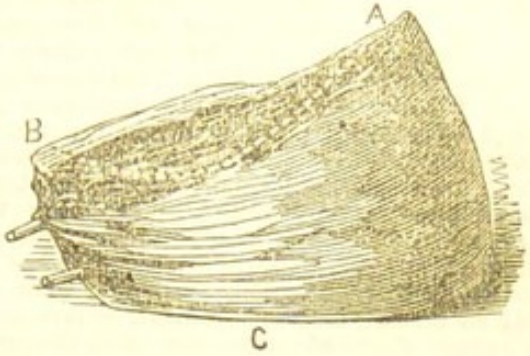
Chuck ribs, boned and rolled.—If the outside cut is preferred by any one, cut it thin off



the top of the joint; if it is not required, cut a thick slice off; by so doing you will come to the under-done part at once. Cut the slices thin, and do not give too much gravy, unless asked for. Be sure to put the guard upon your fork, for if the knife slips you will be almost sure to cut your hand.

Round.—To carve this well, a very sharp-edged and thin-bladed knife is required. A thick slice should first be taken entirely off the top of the joint and laid on one side, leaving it very smooth; it should then be cut as thin and as evenly as possible, and delicate slices of fat served with it.

Aitchbone.—Cut a slice of at least half an inch thick from A to B; then cut the slices



rather thin. Fat will be found to the right of A, and the soft fat on the other side of the joint. If be is required well dressed, turn the joint over and cut from C.

Brisket—Is cut down to the bone crosswise, in rather thin slices, and the fat and lean served equally.

BEEF—TO CHOOSE.—The grain of ox beef, when good, is loose, the lean red, and the fat inclining to yellow. Cow beef, on the contrary, has a closer grain, a whiter fat, and the lean of a paler red than ox beef. Inferior beef, whether obtained from ill-fed animals or from those which have become too old for food, may be known by a hard, skinny fat, a dark red lean, and a line of horny texture running through the meat of the ribs. When beef pressed by the finger rises up quickly it may be considered good, but when the dent made by pressure is filled up slowly, or remains, the meat is of inferior quality.

BEE HIVE.—See APIARY.

BEER—ADULTERATION OF.—This article, of such extensive consumption in England, is adulterated in a variety of ways, the following ingredients, with many others, being more or less used. Cocculus indicus, copperas, opium, strychnine, quassia, liquorice, grains of paradise, honey, hartshorn shavings, sugar, ginger, salt, orange-powder, mixed drugs, and water. Other practices are also had recourse to, such as mixing strong beer with table beer, converting mild beer into old by adding sulphuric acid or oil of vitriol; and, on the other hand, of turning old beer into mild by the addition of carbonate of soda, potash, or oyster-shell powder. Many of the articles enumerated are nearly harmless, while others, as cocculus indicus, copperas, opium, and strychnine, are highly deleterious. Cocculus indicus is one of the most injurious substances employed. Its detection in beer, and especially in porter, is attended with very great difficulty, and in

many cases, when employed in small quantities, it cannot be discovered by any known means.

Salt, is generally found in beer in considerable and unwarrantable quantities; it *may be detected*, and its proportion estimated, by means of a solution of nitrate of silver which in that case produces a precipitate, which is insoluble in water and in nitric acid. The precipitate may then be washed, dried, fused in a small porcelain crucible, and weighed. 134 grains of chloride of silver equal 60 grains of common salt. *Copperas may be detected* by filtering the beer through animal charcoal, the filtrate being tested by hydro-sulphuret of ammonia, will then produce a black precipitate; by ferricyanide of potassium a blue precipitate. On the other hand, if a solution of chloride of barium be added to another portion of the filtrate, a white precipitate of baryta will be produced, which may be filtered, washed, dried, ignited, and weighed. 117 grains of sulphate of baryta represent 139 grains of crystallised proto-sulphate of iron. The presence of *opium is detected* as follows:—The suspected beer is first to be decolourised as much as possible by animal charcoal; a portion of the filtrate is then poured into a conical glass, and a few drops of acetate of lead are poured in. In the course of about twelve hours, or sooner, a precipitate will be produced, which is separated from the supernatant liquor by careful decantation, and thirty or forty drops of sulphuric acid, and a like quantity of proto-sulphate of iron are then poured on the meconate of lead at the bottom of the test-glass. By this process the meconate of lead is decomposed and converted into sulphate of lead, whilst the liberated meconic acid, reacting on the proto-sulphate of iron, produces a beautiful red colour.

The three most common and principal adulterations of beer, however, are water—by which its strength is reduced and its bulk increased—and sugar and salt, whereby its colour and flavour are in a great measure restored. It has been proved by reliable tests, that beer is adulterated by almost every London publican, and the truth is all the more obvious from the acknowledged fact that the price which the publican pays the brewer for his beer would not leave a sufficient profit unless adulteration were had recourse to. From these particulars it may be easily understood why beer so frequently disagrees with persons, causing acidity of the stomach, heart-burn, &c., and this is especially the case with persons whose organs are already weakened by illness. Doctors frequently recommend porter or stout to patients recovering from illness, and to the naturally delicate. In such cases it is of the utmost importance to procure the porter or stout as genuine as possible. There is but one way to do this, and that is, to obtain the supply direct from one of the most celebrated breweries; for Dr. Hassall says, when treating of this subject, "It is interesting and important to notice, that *no case of adulteration has ever been proved against any of our great London brewers*."

BEER, BOTTLING AND FINING.—Casks should be sound, clean, and sweet. Beer and porter should be allowed to stand in the bottles a day or two before corked. If for speedy use, wiring is not necessary. Laying the bottles on their sides will assist the refining of the beer. Those that are to be kept should be wired, and set upright in sawdust. When not fine enough, draw off a jugful, and dissolve isinglass in it, in the proportion of half an ounce to ten gallons, and pour back through the bung-hole. Let it stand a few weeks longer. Tap the cask above the lees. When the isinglass is put into the cask, stir it around with a stick, taking great care not to disturb the lees at the bottom. Bung the cask up, and in a few days the beer will be fine.

BEER CELLAR.—The cellar should be situated to the north, as the temperature is much less variable in that than in any other position. It should be deep, and the temperature kept as equable as possible. It should be slightly damp, but never in excess, and where there is this tendency, openings should be made in the doors and walls to admit the air. The light should be moderate; total darkness is very injurious, as it contributes to decay. The cellar should be as much as possible in such a position as not to be affected by the circulation of carriage traffic, or any other shocks, as they are likely to turn the liquor. All green wood, vinegar, and other articles liable to ferment, should be excluded from it. Particular care should be taken not to construct cellars on marshy ground, or any other spot where mephitic vapours are likely to arise.

BEER FROM PEA-SHELLS.—The shells of green peas contain a considerable portion of saccharine matter; and a strong decoction may be made from them, very nearly resembling in odour and taste the infusion of malt known as wort. This decoction is capable of yielding an excellent beverage as follows:—Fill a boiler with the green shells of peas, pour on water till it rises half an inch above the shells, and simmer for three hours. Strain off the liquor, and add a strong decoction of wood-sage, or hop, so as to render it pleasantly bitter; then ferment in the usual manner.

BEER FROM SUGAR.—Put six pounds of coarse brown sugar, and four ounces of hops, into fourteen gallons of water; let the whole boil for three quarters of an hour, and work it as usual. It should be kept for ten days or a fortnight before it is broached.

BEER FROM TREACLE.—Put two pounds of treacle to four gallons of boiling water, add half a dozen bay-leaves and half an ounce of ground ginger. Boil the whole for half an hour, and ferment with yeast.

BEER, PROPERTIES OF.—This name is applied generally to any preparation from malt and hops. The properties of beer as an ordinary beverage, if it be not too strong so as to disturb the brain or create over-excitement of the nerves of the stomach, are quite equal, if not superior to those of wine; and when the proportion of hop is sufficient to give a good bitter, beer is at once a tonic

and a stimulant. The objections, which apply in common to all fermented liquors, have their weight as regards this beverage; but they apply more to the abuse than the use of the liquid. Beer, to be wholesome, must be well fermented, particularly if it be bottled; otherwise, the quantity of fixed air which in a subdued state would produce wholesome excitement, will, in excess, produce great injury. New beer also is unwholesome, from the saccharine matter which it contains in a comparatively raw state. The component parts of beer are water, saccharine matter, gluten, dissolved starch, carbonic acid, alcohol, and a volatile oil arising from the hop. Amongst these elements, those which check the fermentation are the alcohol, the carbonic acid, and the oil; and to these agents is principally owing the preservation of the beer. The saccharine matter chiefly promotes fermentation. The gluten and dissolved starch have a tendency to vitiate the beer, and the water favours the decomposition. Beer may undergo various changes. By its contact with the air it loses its carbonic acid: heat deprives it of its alcohol by evaporation, and consequently reduces its strength; the beer becomes insipid and vitiated, and has a tendency to corrupt and become sour; when beer thus weakened and inodorous, is exposed to the action of the air and heat, the acetous fermentation is hastened by the gluten and starch.—See ALE BREWING, PORTER, STOUT, &c.

BEER, TO PRESERVE.—When it is intended to keep beer a long time, it should be very carefully racked off; for nothing advances the decomposition so soon, after a certain time has elapsed, as the lees. *The clarification of beer* is very important for its preservation. This is done in various ways; such as with hartshorn-shavings, white of egg, or isinglass. Many things are used either when beer is first put in casks, to prevent its turning sour, or when it has already began to turn; few things however can be introduced for this purpose without rendering the beer vapid. One of the best means for preventing the turning of beer, intended for a voyage, or which may be liable from other circumstances to agitation or change of temperature, is to put stale eggs into the cask, in the proportion of one egg to four gallons of beer. The shell dissolves first, then the pellicle and the white, leaving the yolk intact. The albumen of the egg is said to act as an alkali, but without creating any effervescence which has a tendency to render beer vapid. For weak beer, oatmeal, burnt sugar, or a portion of very strong beer, may be added in the summer; and in brewing beer of all kinds, it will be found beneficial to suspend in the cask, at the commencement of fermentation, a linen bag containing raisins in the proportion of a pound to one hundred and seventy-four gallons of beer. Leave it thus for twenty-four hours, and then having withdrawn it, allow the beer to ferment in the regular course.

BEER, TO RESTORE WHEN MUSTY, SOUR, FLAT, &c.—When *musty*, rack the beer through some hops that have been boiled in strong wort, and afterwards work it with double the quantity of new malt liquor. But if the fault arise from the cask, draw off the beer into a sweet cask, and having boiled half a pound of brown sugar in a quart of water, add a spoonful or two of yeast before it is quite cold, and when this mixture ferments, pour it into the cask. When *sour*, take four or five gallons out of a hogshead, boil with it four or five pounds of honey, skim it well when cold, and put it into the cask again, then stop it up close, and by occasioning a slight renewal of fermentation, the liquor will be made to drink sweet and pleasant. When *flat*, rack the beer into two empty casks, and fill them up with new beer; or take a fine net and put in the proportion of one pound of hops to a butt of beer, with a stone or something heavy in it to sink it to the bottom. Tap in six months, but if wanted sooner, use hops that have been slightly boiled in wort.

BEES, SELECTION AND MANAGEMENT OF.—The person who intends keeping bees should purchase a proper number of hives either at the early or latter part of the year. The hives should be full of combs and well stored with bees. The purchaser should examine the combs, in order to know the age of the hives. The combs of the current season are white, those of the former year are of a darkish yellow; the latter should be rejected, because old hives are most liable to vermin and other accidents. The summer is an improper time for buying bees, because the heat of the weather softens the wax, and thereby renders the combs liable to break, if they are not very well secured. The honey, too, being then thinner than at other times, is more apt to run out of the cells; which is attended with the double disadvantage of the loss of the honey and the daubing of the bees, whereby many of them may be destroyed.

The management of bees, according to the exigencies of the season, may be gleaned from the following *Monthly Manual*. *October.*—Examine and weigh the hives; and after cleaning the stools, fasten them down for the winter. See that the coverings are clean and weather-tight; and finally remove what combs can be spared. *November.*—Inspect the hives and clean the stools, contract the entrance, and see that the coverings are clean, and the hives so secured as not to be blown off by the wind. *December.*—In very cold and snowy weather close the mouths of the hives as much as possible, and clear away any snow that falls upon the table. *January.*—Towards the latter end give the bees more air. *February.*—Enlarge the entrance of the hive, and in mild weather inspect the hive and clean the stools. This is a good month for purchasing hives. *March.*—Remove all incumbrances from the mouth of the hive, and make every part thoroughly clean. Supply the bees with fresh water. Make an addition to such hives as are strong and heavy, and extract such combs as are old and discoloured. Feed weak hives. *April.*—Destroy moths and butterflies. Watch for the signs of swarming; and towards the latter end make artificial swarms,

where desirable. Destroy wasps, especially the queens. *May.*—Frequently inspect the hives, and clean away everything offensive. Make preparations for hiving swarms, and keep a good look-out in fine weather. *June.*—Feed new swarms in rainy weather, and enlarge such hives as are numerous and active. *July.*—Remove part of the produce of the bees. Destroy wasps' nests and inspect the hives for vermin. *August.*—Examine and weigh the hives, and take combs from such as exceed 30lbs. *September.*—Transport hives to more abundant pastures. Assist in killing drones. Furnish new coverings when necessary. Inspect the hives, clean the stools, and destroy vermin. —See APIARY.

BEE STING.—The sting of a bee, unless on the throat or in the mouth, though very painful—especially where the skin is delicate—is never dangerous; unless indeed several should settle on one part at the same time. The pain inflicted from a sting, is the result of a subtle poison injected into the wound, and no time need be lost in removing the sting when left behind, as that can be taken out when the inflammation and pain subsides. Wet the part stung immediately with extract of lead (the liquor plumbi of the shops) and keep a rag soaked in the extract for a few minutes on the puncture, when all pain will have been removed. Hartshorn is sometimes used for the same purpose, spirits of wine, or a solution of sal ammoniac; but no application will be found so certain or efficacious as the extract of lead.

Should faintness follow the sting, a little spirits of lavender and salvolatile may be given in water, but in all ordinary cases if the pain is speedily subdued, nothing beyond the application to the part will be needed.—See BITES OF INSECTS.

BEES' WAX.—This useful substance is obtained from the honey-comb after the honey has been removed. The best sort is of a bright yellow colour, having the flavour of honey when new; with age it loses its colour, and in a great measure its smell. Its constituents are carbon, hydrogen, and oxygen. Its chief use is as a principal ingredient in cerates and ointments.

BEETLE.—The generic name given to a class of insects, of which there are a great many species, all of them having elytra or sheaths over their wings, evidently designed to defend them from hard bodies which they may meet with in making their houses or nests. These insects are extremely destructive to many sorts of crops, and to vegetation generally.—See CABBAGE-FLY, TURNIP-FLY, WEEVIL, WIRE-WORM, &c.

BEETLE, HOUSE.—There are several methods of exterminating these domestic pests. 1. Place a few lumps of unslacked lime where they frequent. 2. Set a dish or trap containing a little beer or syrup at the bottom, and place a few sticks slanting against it sides, so as to form a sort of gangway for the beetles to clim up by, when they will go headlong into the bait set for them. 3. Mix equal weights of red-lead, sugar, and flour, and place it nightly near their haunts. This mixture, made into sheets, forms the beetle wafers sold at the shops.

BEET ROOT, BAKED.—Wash and wipe it dry, but neither cut nor break any part of it; then lay it into a coarse earthern dish, and bake it in a gentle oven for four or five hours, until it is tender quite through. Pare it quickly if it be served hot, but leave it to cool first, when it is to be sent to table cold.

BEET ROOT, BOILED.—Wash the roots very clean, but neither scrape nor peel them or their colour will be impaired. Throw them into boiling water, and according to the size which varies considerably, boil them from one hour and a half to two and a half, or longer if requisite. Pare and serve them whole, or cut into thick slices and tastefully dished send melted butter to table with them.

BEET ROOT, CULTURE OF.—Of this root there are two kinds, the red and white. *Red beet root* requires a light but rich soil, of considerable depth, that has not recently been manured. The ground should be trenched or deeply dug, and broken small with a spade. The seed is sown in April, in drills an inch deep and fifteen inches asunder. In lifting it, great care must be taken not to injure or break the roots, and the leaves should not be cut off within an inch of the top of the root. The *white beet* is chiefly cultivated in England for its leaves, which are used as spinach. The seeds are sown in the beginning of March, in an open spot of ground. When the plants have put out four leaves, they are hoed and thinned out to at least four inches asunder. A month afterwards a second hoeing is given, leaving the plants about eight inches apart. The outer leaves are first picked off in August or September, and a succession is afforded for the whole season.

BEET ROOT, PICKLED.—Wash it perfectly clean, but do not cut away any of the fibres; boil in a large quantity of boiling water with a little salt, for half an hour; if the skin will come off easily it is done enough. Lay it upon a cloth, and with a coarse one rub off the skin. Cut it into slices, put it into a jar, and pour over it a hot pickle of white vinegar, a little ginger, pepper, and horseradish sliced. Cover close.

BEET ROOT, PRESERVED.—When taken from the ground, do not remove the mould about the root. Keep it in layers of dry sand for winter use.

BEET ROOT, PROPERTIES AND USES OF.—The red beet root is more nutritive than any other esculent except the potatoe; but it extricates so much gas in the bowels as to prevent it being much used as an article of diet. Beet root contains a large proportion of sugar, and for this purpose large quantities of it are used on the continent. For edible purposes beet root is chiefly used for salads, having an agreeable and cooling taste. It may however be cooked in a variety of ways the same as any other esculent. The juice of red beet root is frequently used for colouring soups and sauces.

BEET ROOT SOUP.—Boil till tender two roots of beet, and rub off the skin with a coarse towel, mince them finely with two or three onions; add this to five pints of rich gravy soup, then stir in three or four tablespoonfuls of vinegar and one of brown sugar; let it boil, and throw in some fricandellas about the fourth of the size of a cork, then serve.

BEET ROOT, STEWED.—Boil them tender with the skin on; slice them into a stewpan with some small onions, and add a spoonful of vinegar; simmer till the gravy is tinged with the colour. Take off the skin just before it is served.

BEGGARS.—Under this head are included several classes of vagrants who subsist by levying contributions on the public. It has been estimated that one out of every hundred of the population of England live by begging, and although among these there may occasionally be meritorious cases, the majority are idle, worthless, and dissolute characters, who would rather live by soliciting alms under a variety of pretexts than by honest labour. The total amount given to beggars has been estimated at £1,375,000 annually, each begging family receiving on an average £55. Begging is resorted to as a profession, and in the practice of it an infinity of disreputable schemes are employed, in order to extract money from the tender-hearted. Some go about with their arms or legs tied up, said to be injured by lightning or by some other deplorable accident. Others affect fits, and in order to favour the deception have small pieces of soap in their mouths, the lather from which is intended to resemble frothing at the mouth. Another mode of deception is the applying blistering ointment to the arms, causing them to have the appearance of having been badly scalded. Others pretend to have bad wounds, and beg for linen rags and small bottles to contain medicine necessary for their cure. In this way a beggar will collect as many as twenty pounds of rags in a day and six dozen bottles, both of which sell well. Then there are blind beggars, deaf and dumb beggars, and a variety of others, who simulate every infliction that it is possible to conceive. Children are also extensively made use of in this disreputable mode of obtaining alms, babies are let out to beggars at sixpence or a shilling per day, and the usual custom is for a woman to sit on the step of a certain door with one, two, or even three infants in her lap. Children who are older are sent out in different directions to beg, each receiving particular instructions as to what he shall say and how he shall say it; nor dare the child return until he has succeeded in obtaining a specified amount. But the begging-letter department is the most successful of any. This is done through the medium of professed begging-letter writers, who have regular offices established for the transaction of business, and whose charges are regulated by a certain scale. At these places an interleaved copy of the *Court Guide* is also kept, with annotations indicating ready victims, and useful hints of various sorts, for consulting which a fee is cheerfully paid. The sums earnt by means of begging-letters is enormous, some gaining as much as two or three pounds per day, and few less than five or ten shillings. In addition to the letters, the beggars are also supplied with documents, pretended to be signed by magistrates, clergymen, or other gentlemen of position; they are also provided with subscription books, in which well-known names are entered, with liberal amounts opposite to them. The characters assumed include burnt-out tradesmen, shipwrecked sailors, distressed foreigners, servants out of place, maimed colliers, unemployed weavers, reduced gentlemen, &c. Nor is systematic begging confined to London alone; at certain periods of the year the beggars regularly visit provincial towns and watering places. Generally speaking, they start with good clothes, and travel in them from town to town if there are not many houses in the way. Before they enter the town they take them off, as well as their shoes and stockings, put on their Guernsey jackets or ragged shirts, send the bundle forward to the lodging-house they intend to pass the night at, and commence begging at the first house they come to. Lodging-houses for the express accommodation of beggars are established in London and in almost every country town; the keepers of these houses are always ready to purchase every description of property begged or stolen, and also furnish the beggars with matches, songs, laces, and many other petty articles, which are hawked about as an excuse for vagrancy, thereby avoiding direct begging; this also gives them opportunities of going down areas, and creeping in at back doors, by which they have every chance of pilfering any article that may be inadvertently exposed, and, what is of greater consequence, observing the fastenings, and noting other circumstances that may lead to robbery, for the professional beggar is also a thief. At the provincial lodging-houses books are kept, in which the various roads are indicated, and the houses marked as *bad* or *good*, according as the occupants are liberal or not to beggars. Saturday night is regarded as the most profitable of any time during the week. On these occasions may frequently be seen a man with a child in his arms, and with a woman who passes for his wife, leading two or three other children near him, accosting the solitary passenger in a lamentable voice, to the effect that they have "Neither money nor food for to-morrow." Begging is more successful at such a time on account of many of the middle and lower classes, especially females, going to market. When the beggars have done their labours for the day they resort to low houses of entertainment, where they spend the proceeds of the day in eating and drinking, and pass half the night in riot and debauchery, occasionally amusing each other with an account of the day's adventures, and jeering and mocking at those who have assisted them. Nine beggars out of every ten answer to the description here given; persons, therefore, who give indiscriminately to every beggar who importunes them do three un-

wise things:—1. Bringing down future annoyance upon themselves and families. 2. Offending against society at large by fostering beggars as a public nuisance. 3. Encouraging idleness and crime by assisting to render the beggar's earnings considerably larger than that which is gained by many labouring families by honest industry.

Some sort of check upon this vagrant fraternity is afforded by the Mendicity Society, which has a regular staff of officers attached to it, who make it their business to inquire into the circumstances and character of beggars generally, and who are thus enabled to detect imposition, and spare many intended victims. If any person therefore feels disposed to respond to the appeal of those who are utter strangers to him, he should take down the name and address of the person asking for charity, and forward it to the Mendicity Society with a request for the necessary information. Enquiries will at once be instituted, and an immediate report forwarded, by which the charity asked may be dispensed or withheld accordingly. Beggars are liable to be imprisoned and kept to hard labour for three months, as rogues and vagabonds, but owing to the laxity of the police the act is almost inoperative.

BELLADONNA, OR DEADLY NIGHTSHADE, is a small flowering plant indigenous in this country and Europe generally. The shrub, though, growing wild in lanes and chalky banks, is sometimes cultivated in our gardens, though from the extremely tempting appearance of the ripe fruit or berries, the practice is a very reprehensible one, especially where children or persons unacquainted with the deadly nature of the

plant, have access. There are several varieties of the nightshade, as the common, the woody or dulcamara or bitter-sweet, and the deadly or the atropa belladonna; which, like every species of plant belonging the order "solanacea," is strongly narcotic and virulently poisonous.

As a medicinal agent, belladonna possesses powerful narcotic and sedative properties, but it is now only retained in the pharmacopeia as an external remedy, being a valuable application in diseases of the eye, such as inflammation of the iris, amarosis, and certain conditions of cataract. In cases of imperfect vision, from contracted pupil, or immobility of the iris, the result of close study, or advanced age, the extract of belladonna applied to the eyebrow, or rubbed over the upper lid, exerts a certain and beneficial effect.

The atropa belladonna grows to the height of three feet, and flowers in June and July. The fruit, at first scarlet, becomes, when ripe, purple, and in size and appearance resembles a small black cherry.

The symptoms evinced by poisoning from belladonna are extremely rapid, and commence with a dry pricking feeling in the mouth and gullet, difficulty of swallowing, attended with considerable dilatation of the pupil, indistinct or double vision, the tongue becomes tremulous, and the speech difficult. These premonitory symptoms quickly give place to giddiness, stupor, drowsiness, insensibility, and coma. The pulse sinks to a small feeble thread, the breathing is low and hardly perceptible; the face is pale and shrunk, and the countenance cadaverous; the limbs become relaxed and the muscles flaccid; a few convulsions, like sudden spasms, vibrate through the extremities, and the sufferer expires.

Treatment.—Emetics, in all cases of poisoning, are the first and most important means of relief, and should be given as early as possible, though in cases of poisoning by belladonna their efficacy is less signal than in other virulent drugs. Still, though not exclusively to be depended upon, they are to be given; and the best emetic for the purpose is the white vitriol or sulphate of zinc. To a child up to 12 years of age, the dose is from 10 to 15 grains dissolved in half a cupful of warm water, while for an adult from 30 to 40 grains, in the same vehicle, will be the due proportion. The chief dependence, however, must be placed on the use of the stomach pump, after which the patient should be given frequent draughts of vinegar and water, and the juice of lemons or oranges, to neutralize the poison; mucilaginous drinks, honey or treacle. At the same time he must be kept in constant motion by walking, the nervous system roused by dashing cold water over the face and head, and in the absence of electricity, the spine rubbed vigorously with an embrocation made of equal parts of hot turpentine and brandy. To accelerate the action of the heart and rouse the sinking powers, occasional doses of ether, ammonia, and brandy, must be given in the following proportions:—Salvolatile, 30 drops; brandy, 2 drachms or a desert spoonful; hot water, 1 ounce or two tablespoonfuls; and ether, 10 drops, added last, and the whole drank the moment it is mixed.

These means must be persisted in with energy and perseverance, or death will anticipate every exertion.

BELL-FLOWER. — Of this little wild herb or flower there are ten varieties. The annuals should be sown in the borders in March and April, the seed being very slightly covered on account of its small size.

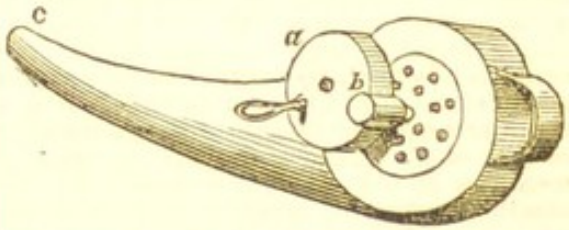
The perennial hardy kinds are increased by seeds or divisions, and require no peculiar treatment. The biennials are sown in May or June, for blooming the following year. Good garden soil suits them all. — See CAMPANULA and CANTERBURY BELL.

BELL GLASS.—An instrument used in horticulture for shading and protecting culinary plants, for striking cuttings, or for retaining a moist atmosphere about seed. A glass of a peculiar shape is used expressly for the culture of the cauliflower, by the London market gardeners. These hand-glasses are usually blown of green coarse glass 18 inches in diameter and 20 in height, with a glass knob at top, answering the purpose of a handle.

The crystal bell or receiver is employed in striking tender cuttinngs in the exotic departments, especially heaths; they are generally from three to eight inches in diameter, and from four inches to one foot in height.—See HAND-GLASS.

BELL METAL.—A compound of copper and tin, which becomes not only more sonorous, but heavier than either of the ingredients apart. The proportions differ; ordinarily, however, 23 pounds of tin are mixed with 100 pounds of copper: the latter being somewhat increased when the bells are larger. Brass, spelter, and even lead are sometimes added; and, more rarely, silver, which is considered much to improve the tone of the metal.

BELLOWS. — A well-known domestic contrivance, which, by circulating gusts of air among half-kindled embers encourages them into a blaze. It should be borne in mind, however, that in proportion to the artificial vitality thus excited, so does the fire become deadened when the application is withdrawn. Bellows, therefore, should only be used on an emergency. When the bellows is employed to revive a fire, it should be held from four to six inches from the fireplace, and be worked gently. For if too strong a current of cold air be driven upon a dull fire, it will extinguish it by bearing away the heat. On the other hand, too strong a wind, directed upon a fire of moderate briskness, drives away the gases of the fuel in an unconsumed state, and occasions a waste of fuel. Clarke's patent blowers are a great improvement upon the old-fashioned bellows, as they revive the fire by a gentle and continuous current of air, and are free from the unpleasant clacking noise of the bellows. They consist of a tin tube, having attached to it a barrel, in which is contained a circular fan, and which is driven round by a wheel, *a*, rubbing against a smaller one, *b*, fixed on the axis of the fan. The air enters at the holes on the sides of



the barrel; and the leaves of the fan reaching close to the interior circumference of the barrel, the air is expelled in a continued stream through the tube, *c*. Book: *Housewife's Reason Why.*—See BLOWER.

BELLS.—Without these domestic conveniences a house can be scarcely said to be complete; and indeed, for the maintenance of comfort, order, and regularity, they are absolutely necessary. Bedrooms especially should always have a bell communicating both with the servants' sleeping-room, and with the kitchen, with the handle conveniently placed that a person may ring it without getting out of or disturbing himself in bed. Many accidents and deaths have doubtless been owing to the inability which the person afflicted has experienced in communicating his situation to others. Each room should have a separate bell corresponding with it, and each bell should possess a distinct sound, so that the servant may not be in doubt as to the room where attendance is required. Bells, by careful management will last many years, but if used roughly they are soon broken and disordered. When the bell is rung, the handle should not be jerked too violently, nor allowed to fly back suddenly. It should be pulled with moderate force, and accompanied back to its starting point with the hand still resting on it. Young children should never be told to ring a bell, as they become accustomed to regard it as a plaything, and by that means

it is frequently broken; for this reason, it would be better if bell-handles were placed in such a position that they could be reached only by grown-up persons. Substitutes for bells hung in the ordinary way, are provided in instruments rung or pressed by the hand; these, however, seldom answer the end satisfactorily, for, generally speaking, the summons has to be repeated several times before it can be heard.

BELT. — A portion of wearing apparel generally fastening round the waist. Care should be taken that it does not fit tightly as it is thus liable to derange the stomach, and interfere with the digestive organs. Belts are sometimes worn under the dress by way of support, but their habitual use, except in cases of deformity and confirmed weakness, is to be condemned; as by compressing the parts they come in contact with, and keeping up an undue heat, their prejudicial effects on the system generally far outweigh any local benefit which may be derived from them.—See SWIMMING BELT.

BENCH.—See GARDEN SEATS.

BENEFIT SOCIETIES are associations of persons, chiefly in the humbler classes, for the purpose of making provision, by mutual contribution, against those contingencies in human life, the occurrence of which can be calculated by way of average. The principal objects contemplated by such societies are the following:—The insuring of a sum of money to be paid on the birth of a member's child, or on the death of a member or any of his family; the maintenance of members in old age and widowhood; the administration of relief to members incapacitated for labour by sickness or accident, and the endowment of members or their nominees. Benefit societies are therefore associations for mutual assurance, but are distinguished from assurance societies—properly so called—by the circumstance that the sums of money which they insure are comparatively small, the Act of Parliament providing that no society of this nature shall assure the payment of an annuity exceeding £50 per annum, nor a sum payable on the death of any person, or any other contingency exceeding £200. The importance of these associations is obvious. A labouring man with a family to provide for, is, as a general rule, unable, even with his utmost industry and frugality, to make a sufficient provision against a time of necessity; but as a member of a friendly society, he can, with comparative facility, accomplish this desirable object, and without subjecting himself, or those who are dear to him, to any severe privations, he is enabled to look forward to adequate and substantial aid in the event of sickness or other unavoidable evils of a natural kind. Benefit societies are required to be enrolled by Act of Parliament, and to submit their rules for the approval of an officer appointed for that purpose.

Persons who intend joining a benefit society should, previously to doing so, take care to ascertain that such society is enrolled, for if not, he will have no guarantee for its stability, good faith, and proper conduct, which, in regularly enrolled societies, the Act of Parliament specially enforces.

The *rules* adopted by the different benefit societies vary in many particulars of minor importance; but the following abstract comprises most of the practical points aimed at by such institutions. *Rule* 1. The object of this society is to assure to persons between the ages of twenty-one and fifty-five, who may become members thereof, firstly, an allowance not exceeding 20s. per week during sickness until the age of 70; secondly, an allowance not exceeding, in the whole, £2 per month, from and after the ages of 55, 60, 65, or 70, as may be previously agreed on, to continue during life; thirdly, a payment at death not exceeding £20. *Rule* 2. The contributions for these assurances shall be paid monthly, and shall be regulated by the ages of the members at the time of admission, conformably to tables inserted at the end of the rules. Each member assuring an allowance during sickness to pay an additional contribution of 2s. per annum to entitle himself to medical attendance and medicine when needed. *Rule* 3. A single contribution may be paid on admission, or at any subsequent times, which contribution shall redeem the whole of the monthly contributions which would otherwise have been payable. *Rule* 4. Provides for ascertaining through the examination of the surgeon, the state of health of persons applying to become members, and further provides for the periodical visits of the same officer to every member while receiving an allowance in sickness, for the purpose of ascertaining the state of his health. *Rule* 5, Relates to the admission of members. All candidates must be recommended by two members, and upon admission must produce a register of baptism, or other satisfactory proof of age; together with a certificate signed by the surgeon of the society, stating his opinion as to the health of the candidate. He must also sign a declaration of the kind and amount of insurance for which he intends to provide by his monthly contributions, and also his acquiescence in, and adherence to, the rules of the society. *Rule* 5, disqualifies members from claiming any allowance in sickness until one year after admission to the society, or until all contributions that may be due shall have been paid up; and provides for withholding the allowance where the disease or infirmity has been contracted through profligacy, quarrelling, or drunkenness, or if the member should be imprisoned under any criminal conviction. *Rule* 6, suspends the allowance in sickness if the claimant refuses to be seen by the medical or other officers of the society; or if by any wilful act or misconduct, such as drinking in a public house, he shall delay the recovery of his health. *Rule* 7, provides that the sum assured at death shall be forfeited if the member die by his own hand, or by the hand of justice. *Rule* 8, provides that, if any member shall be convicted of felony, or shall by any false or fraudulent representation, or demand, obtain or attempt to obtain, any allowance from the funds of the society, or

if he shall enter the army or navy, or go abroad, he shall be excluded from the society, and all his interest and monies therein shall be forfeited; but those members who have been excluded because of their joining the army or navy may be re-admitted on the cause of exclusion ceasing, provided their health is good, and the contributions for the time of exclusion be paid, with interest. *Rule* 9 facilitates the transfer of insurances from one benefit society to another, in the event of any member removing beyond the limits of the original society. *Rule* 10 enables the trustees of the society to pay the relatives of persons dying intestate, and for whose effects no letters of administration shall be taken out, the amount which may have been insured, in such manner as they shall think most beneficial.

The tables containing the rates of monthly contributions are not applicable to the circumstances of all benefit societies, but will be found very near to the average rates generally adopted.

TABLE showing the sum to be contributed monthly, by persons of the following ages when admitted, *to entitle them to receive* 20*s. weekly during sickness*, at any time after one year from the time of admission to the age of seventy.

Age next Birthday.	Monthly Payment.	Age next Birthday.	Monthly Payment.	Age next Birthday.	Monthly Payment.
	s. d.		s. d.		s. d.
20	2 1	32	2 9¾	44	4 2¾
21	2 1½	33	2 10¾	45	4 5
22	2 2	34	2 11¾	46	4 7
23	2 2½	35	3 1	47	4 9½
24	2 3¼	36	3 2¼	48	4 11¾
25	2 4	37	3 3½	49	5 2½
26	2 4½	38	3 4¾	50	5 5¼
27	2 5¼	39	3 6¼	51	5 8¼
28	2 6	40	3 7¾	52	5 11½
29	2 7	41	3 9½	53	6 3
30	2 7¾	42	3 11¼	54	6 6¾
31	2 8¾	43	4 1	55	6 10¾

If it be desired to insure for less than 20*s.* per week during sickness, the contributions must be made in proportion. To entitle the member to receive 15*s.* per week, the payment must be three fourths of the above rate. For 10*s.* per week one half, and so on. This rule is likewise applicable to the two following tables.

TABLE showing the sum to be contributed monthly by persons of the following ages when admitted, *to secure the payment to them of a monthly annuity of* £2, to commence from their attaining the respective ages of either 55, 60, 65, or 70, as agreed at the time of joining the society; the contributions to cease when the annuity commences.

Age next Birthday at the time of admission.	To begin at the age of 55.	To begin at the age of 60.	To begin at the age of 65.	To begin at the age of 70.
	s. d.	s. d.	s. d.	s. d.
18	3 8½	2 2¾	1 3	7¾
19	3 11	2 4¼	1 3¾	8
20	4 2	2 5¾	1 4¾	8½
21	4 5¼	2 7½	1 5¾	9
22	4 8½	2 9½	1 6¾	9½
23	5 0	2 11½	1 7¾	10
24	5 4	3 1¾	1 9	10¾
25	5 8	3 4	1 10½	11¼
26	6 0¾	3 6½	1 11½	1 0
27	6 5½	3 9¼	2 1	1 0¾
28	6 11	4 0¼	2 2¾	1 11½
29	7 5	4 3½	2 4¼	1 2¼
30	7 11½	4 7	2 6¼	1 3¼
31	8 6½	4 10¾	2 8¼	1 4¾
32	9 2½	5 3	2 10¼	1 5¼
33	9 11	5 7½	3 0½	1 6½
34	10 8¾	6 0¼	3 3¼	1 7½
35	11 7½	6 5¾	3 6	1 9
36	12 7½	6 11¾	3 9	1 10¼
37	13 9	7 6½	4 0¼	2 0
38	15 0½	8 1¾	4 3¾	2 1½
39	16 5¾	8 9¾	4 7¾	2 3½
40	18 1½	9 7	5 0	2 5½
41		10 5¼	5 5	2 7¾
42		11 4¾	5 10¼	2 10
43		12 5¾	6 4¼	3 0¾
44		13 8½	6 10¾	3 3¾
45		15 1½	7 6¼	3 7
46			8 2½	3 10½
47			8 11¾	4 2½
48			9 10½	4 7
49			10 10¾	5 0
50			12 0¾	5 5¾
51				6 0
52				6 7½
53				7 3¾
54				8 1¼
55				9 0¼

TABLE showing the sum to be contributed monthly by persons of the following ages when admitted, *to insure the payment of the sum of £20 at the time of death.*

Age next Birthday at the time of Admission.	Monthly Contribution.	Age next Birthday at the time of Admission.	Monthly Contribution.
	s. d.		s. d.
16	0 6¼	36	1 0¾
17	0 7	37	1 1¼
18	0 7¼	38	1 1¾
19	0 7½	39	1 2¼
20	0 7¾	40	1 2¾
21	0 8	41	1 3¼
22	0 8¼	42	1 3¾
23	0 8½	43	1 4½
24	0 8¾	44	1 5
25	0 9	45	1 5¾
26	0 9¼	46	1 6½
27	0 9½	47	1 7¼
28	0 9¾	48	1 8¼
29	0 10¼	49	1 9¼
30	0 10½	50	1 10¼
31	0 10¾	51	1 11½
32	0 11¼	52	2 0¾
33	0 11½	53	2 2
34	1 0	54	2 3½
35	1 0¼	55	2 5¼

By these tables it will be seen that for a comparatively small monthly payment, which nearly every working-man in full employment might conveniently spare, provision is made for sickness, old age, and death. — See ANNUITY; BOOKS: *Becher's Constitution of Friendly Societies; Ansell's Treatise; Becher's Tables.*

BENZOIN.—A resin or balsam obtained chiefly from Sumatra. Benzoin has a pleasant aromatic odour, and is used both as a perfume and a medicine.

BERLIN WOOL WORK. — A well-known species of fancy needlework, chiefly practised by ladies as a pastime. The foundation for this work is termed Berlin canvas, it may be obtained of most colours; white, black, claret, and primrose, are those generally employed, but there is very little durability in any except white. The light colours quickly fade, and the dark colours soon become shabby, on account of the small quantity of silk that covers the cotton threads which compose the canvas. Berlin canvas being an article of expensive manufacture, is frequently made of an inferior quality; great care and judgment are therefore required in its selection; that which is clearest and freest from knots, and of a firm and uniform texture is to be preferred. Needlework on Berlin canvas requires greater neatness in finishing the stitches at the back than that intended to be grounded; the wools or silks must not be carried across from one part to another, but cut off as closely as possible; otherwise, when the work is mounted they will show through the meshes of the canvas, and greatly detract from the general appearance. German, or *Berlin wool*, is adapted for working all kinds of Berlin patterns. The manner in which it is skeined, or knotted, in small quantities, renders it the most convenient, and, comparatively speaking, the least expensive description of wool for this purpose; the brilliancy and variety of the shades are also further recommendations in its favour. The wool may be split and worked on the finest canvas, and doubled and trebled on the coarsest. For working on canvas, a needle sufficiently large should be employed to form a passage, through which the wool may pass without dragging. Berlin wool should not be wound on a card, or winder, as it is partially deprived of its elasticity by pressure.

Books: *Miss Lambert's Practical Hints on Decorative Needlework; Mrs. Warren's Berlin Wool Work Instructions; Brook's Ladies Berlin Work; Cassell's Ladies' Work Book; Clarke's Work Table; Trübner's Berlin Wool Treatise; The Ladies' Companion;* also the *Lady's Newspaper.*

BERRIES. — See BILBERRY, BLACKBERRY, CRANBERRY, GOOSEBERRY, RASPBERRY, STRAWBERRY, &c.

BEVERAGES. — See BARLEY WATER, BISHOP, EGG-HOT, GINGER BEER, LEMONADE, PUNCH, SODA WATER, WHEY, &c.

BIBLE—from Biblia, meaning *books*—is the name which was given in the fifth century by Chrysostom to the collection of sixty-six writings, which are recognised by Christians as divine. To these sixty-six are sometimes added about fourteen apocryphal writings, so that the total number amounts to about eighty, of which thirty-nine are in the Old, and twenty-seven in the New Testament. The Old Testament was divided by the Jews into three classes, the *Law*, the *Prophets*, and the *Hagiographa* or *Holy Writings*, which last division includes more particularly the *poetical* parts. The Law comprehends Genesis, Exodus, Leviticus, Numbers, and Deuteronomy. The Prophets, Joshua, Judges, Ruth, Samuel, Kings, Isaiah, Jeremiah, Ezekiel, and the twelve Lesser Prophets. The Hagiographa, or Holy Writings, are nine, namely, Job, Psalms, Proverbs, Ecclesiastes, Song of Songs, Daniel, Chronicles, Ezra with Nehemiah, and Esther.

The New Testament, like the Old, is a compilation of books written by different inspired individuals, and put together in such a manner as to exhibit a regular account of the birth, actions, and death of Christ. The historical books are the four *Gospels* and the *Acts of the Apostles;* the doctrinal are the Epistles of Paul, and some others; and the prophets, the *Book of Revelations.*

The Apocrypha consists of the following books:—*First and Second Esdras, Tobit, Judith,* the rest of the chapters of the Book of *Esther,* the *Wisdom of Solomon, Ecclesiasticus, Baruch,* the *Song of the Three Holy Children,* the *History of Susannah,* the *Story of Bel and the Dragon,* the *Prayer of Manasses,* and the *First and Second Book of Maccabees.* The term Apocrypha is Greek, signifying *hidden* or *con-*

cealed, and is applied to these books by the compilers of the English bible because their origin is regarded by them as obscure, and their authenticity doubtful.

The Bible in England originally existed in manuscript only. The New Testament was first printed in 1526, and the whole Bible in 1537. Since that time the Bible has continued to be printed in all languages and all parts of the world; and some indication of its widely spread and universal operation will be furnished by the fact that the British and Foreign Bible Society, alone, has been the means of distributing nearly fifty million copies of the Scriptures, printed in a hundred and seventy different tongues.

BILBERRIES, TO PRESERVE.—Put the berries into a bottle, cork and seal it, place it in a kettle of cold water, and gradually let it boil. As soon as it boils, take it off and let it cool; then take the bottles out, and put them away for winter use.

BILBERRY.—A small shrubby plant, frequently found in woods and upon heaths. There are several species of this shrub, all of which are worth cultivating; some for the sake of the fruit, and others for ornament.

The bilberry succeeds well in peat soil or very sandy loam. It may be raised from root suckers, creeping roots, trailing rooting stems, or from seeds. The bilberry resembles the red currant, both in size and colour; it is cooling and astringent, and used medicinally and for culinary purposes.

BILE is one of the most important secretions in the animal economy; for on its due strength and quantity depends not only the separation of the aliment that supports life from the inert refuse, but also furnishes the blood with the chyle, which may be called the very principle of life. At the same time by its stimulating properties, it promotes that unceasing action by which the alimentary canal is enabled to expel from the system the ejesta that remains after the digestion of the nutrient matters received into the body for its support. The secretion of bile from the refuse of blood, and the power it exercises over the economy of animal life, are remarkable and strange. The organs subservient to the formation of bile are the liver and gall bladder; and the following is the mode in which the function of the secretion of bile is effected:—Running from every part of the bowels, and the membranes that surround them, are innumerable small veins which converge into branches, and finally, as they approach the liver, into one large trunk, called the *portal vein*, entering the substance of the liver; this vessel immediately divides and subdivides till it diffuses itself in the finest filaments over its entire surface. From the minute terminations of this vein, which carries the darkest and most impure blood in the body, arise a set of equally small vessels called *biliary tubes*, whose office it is to secrete from the blood brought from the bowels, bile, and which tubes uniting into one larger vessel, called the *hepatic duct*, conveys the secretion to the elongated neck of the gall bladder, from which it passes into the small intestines, near the junction with the stomach.

The food having been digested by the stomach, is passed into the small intestines in a soft pulpy mass called *chyme*. Upon this digested food the bile is suddenly emitted, when, like the effect of rennet on milk, the bile separates the food into two parts; a solid mass which is thrown down, and a fluid creamy substance called *chyle*, which is immediately taken up by proper vessels, and carried to the heart to become blood, while the grosser matter is propelled along the intestines. Bile is of a greenish-yellow colour, thick and viscid; it has a rank heavy smell, and a bitter acrid taste: and its organic elements yielded by analysis, is a portion of free soda, water, albumen, resin, picromel, yellow matter, salts of potass and soda, phosphate of lime, and oxide of iron.

BILIOUS COMPLAINTS.—Persons are said to be bilious, when bile finds its way from the small intestines into the stomach, and there, mixing with the digesting food and irritating the coats of the stomach, becomes absorbed into the blood, on which it acts like a species of poison, producing a constitutional disturbance of more or less severity. The symptoms that prognosticate this kind of malady are intense pains in the head, weight and tenderness of the stomach, nausea and sickness, fœtid breath, a bitter or coppery taste in the mouth and throat, a coated tongue, and a quick, sharp pulse. The skin is dry, there is considerable thirst, and also occasional shiverings.

Treatment.—The effect of bile on the stomach should be considered in the light of a chain of symptoms excited by the presence of some foreign or unhealthy substance: and the rational view of the treatment of such symptoms consists in expelling the intruding mischief as quickly as possible; and, as it is always better to make the bile take its natural course of exit—downwards—than urge it out of the system in an opposite direction, the treatment should commence by taking such aperients as will excite the whole alimentary canal, and carry it out of the stomach through the bowels: at the same time avoiding by every means its expulsion by vomiting. To carry off the bile by aperients, and allay the sickness, is,

in fact, all that has to be done, for when these objects are achieved, every other symptom will, as a natural consequence, subside. As the nausea and headache are the most urgent and distressing symptoms, they are the first to demand relief. A small blister, the size of the round of a wineglass, should be laid on the pit of the stomach, and a dose of the subjoined effervescing mixture given every half hour; taking advantage of the first lull in the retching to give two of the aperient pills, which are to be repeated every six hours, till their action on the bowels shows that the object for which they were taken has been obtained. For females and persons of delicate constitution, one pill instead of two should be taken as a dose. If the patient is in bed, bottles of hot water should be kept at the feet; and as an after corrective, the tonic mixture, prescribed below, is to be taken twice a day for about a week; at the same time the convalescence will be facilitated, and the tone of the stomach improved, if a little toasted bacon is eaten for breakfast, and a dry biscuit and glass of stout taken for lunch.

Effervescing Mixtures. — Take two twelve-ounce bottles, labelled No. 1 and No. 2. Fill No. 1 with water, and in it dissolve 2 drachms of tartaric acid. Half fill No. 2 with water, and dissolve in it 1 drachm of carbonate of ammonia, or volatile salts, and 1½ drachm of carbonate of soda; then add ½oz. of syrup of orange peel, and 1 drachm of laudanum; and fill the bottle up with water. Measure into a tumbler two tablespoonfuls of No. 2, and in a wineglass, the same quantity of No. 1; then pour the last on the first; stir, and let the patient drink instantly while effervescing. This is to be repeated every half hour, or as it may be necessary; should the draught be frequently rejected, let the mixtures be drunk once or twice, separately—the acid, or No. 1, first, and the saline, or No. 2, after it, allowing the effervescence to take place in the stomach.

Aperient Pills.—Take of the compound extract of colocynth, 2 scruples; blue pill, 1 scruple; extract of hyoscyamus, 12 grains; mix well, and divide into twelve pills. Two to be taken as soon as the stomach is quiet, and two every six hours till the bowels have been sufficiently relieved.

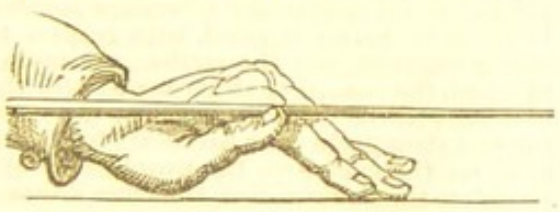
Tonic Mixture. — Take half a dozen dandelion roots, wash, and cut into chips, and boil, with a small piece of soda, in three pints of water, slowly down to two pints, adding, about a quarter of an hour before removing from the fire, one drachm of bruised ginger, and the same of gentian-root cut small; strain the liquor, and when cold, take a wineglassful three times a day.

Bilious complaints assume a variety of forms, and give rise to a multiplicity of symptoms; but as a general rule, those already described are the chief and most regular, though circumstances and habit of body may partially modify or exasperate all or particular ones; the severe, splitting headache, coated tongue, unpleasant metallic taste in the mouth, sickness, and dimness of sight, being, however, the most general and characteristic. Some persons are so constituted, that the slightest exertion or change of air and food will at once cause an undue action of the biliary organs, creating such an abundant secretion of that fluid that it forces an entrance into the stomach, giving rise to the chain of symptoms just described. For persons so predisposed, it is useless to fly always to medicine as a means of relief; medicine too often, by relaxing the tone of the system, and weakening particular organs, only increasing the tendency to other attacks; the better plan is to resort to a system of diet and regimen, and by a course of healthy and natural stimulants, endeavour to brace and invigorate the digestive organs. Regularity in the hours of eating is the first consideration, and the breakfast should be regarded as the most important meal of the day. At this meal let the patient eat dry toast with tea, and a rasher of bacon—for stomachs that cannot endure butter, can take the fattest bacon with ease and impunity. The great advantage of taking bacon is, that it stimulates a languid appetite, and compels the eating of a large quantity of bread or toast; and as *bulk* is the natural stimulant of the stomach, too much can hardly be taken. For lunch, a dry biscuit, with or without cheese, and a glass of the best bitter ale, or a little stout, should follow, four hours after breakfast, and for dinner, three hours afterwards, any light boiled or roasted food, beginning and concluding the meal with one dish, whatever that may be; but carefully avoiding both broths and pastry, or at least till the stomach is of sufficient strength to digest either without flatulence. It will be better to avoid all vegetables, and eat only bread with the dinner; the beverage can consist either of bitter ale, or sherry and water, or a little brandy and water; but when malt liquor is taken, it should be the strongest and the best; at the same time the bilious person should shun soda-water, as the gas it contains is more apt to disorder than benefit the stomach. Where the digestion is still weak, about ten grains of soda in a wineglass of water, with a teaspoonful of tincture of hops, may very advantageously be taken half an hour before dinner, or even after, if any inconvenience is felt. The evening repast should consist of dry toast, or very thinly buttered crusts, which, demanding much more mastication, ensures a favourable condition for digestion, and never more than two small cups of tea—in fact, as little liquid as possible at every meal.

BILLETING—is the quartering of soldiers in inns, livery stables, ale houses, and victualling houses throughout the kingdom. In a licensed victualler's beer license is the the following clause: "And all provisions for billeting officers and soldiers in victualling houses contained in any act for punishing mutiny and desertion, and for the better pay of the army and their quarters, are to extend and apply to the house and premises mentioned in this license." An Act of Parliament is passed annually for the maintenance of the regular forces, without which the army would be disbanded at the expira-

tion of every year. It authorizes all constables of parishes to billet the officers and soldiers in Her Majesty's army, and their horses when on their march, in a just and equal proportion, upon the keepers of all victualling houses within one mile of the place mentioned in the route, although some of such houses may be in the adjoining county, and every such licensed victualler is to furnish them with proper accommodation; and if he has not room in his own house, then in some sufficient quarters to be provided by him in the immediate neighbourhood. If a licensed victualler shall have an undue proportion of soldiers billetted at his house, a justice, upon complaint being made, has power to order such soldiers to be removed; and if he has horses billetted upon him, and has no stables, two justices may order him to pay a proper allowance to the person furnishing the requisite accommodation. He is bound to furnish a soldier billetted upon him for every day on the march, and for a period not exceeding two days when halted at an intermediate place; and for the day of the arrival at the place of final destination one hot meal in each day, to consist of one pound and a quarter of meat previous to being dressed, one pound of bread, one pound of potatoes, or other vegetables, and two pints of small beer, also vinegar, salt, and pepper, for which he is to be paid tenpence a day, and except when on the march and entitled to the hot meal, he must furnish such soldier with candles, vinegar, and salt, and allow him the use of fire, and the necessary utensils for dressing and eating his meat, for which he is to be paid one halfpenny a day, and for hay and straw for each horse ninepence a day. The paymaster of the regiment must every four days (if they shall remain so long), settle the just demands of all persons upon whom officers and soldiers are billetted. Her Majesty's footguards may be billetted within the City and Liberties of Westminster, and places adjacent (except the City of London). No officer or soldier may be billetted in England in any private house, or upon persons who keep taverns only, being vintners of the City of London, admitted to the freedom of the Vintners Company in right of patrimony or apprenticeship.

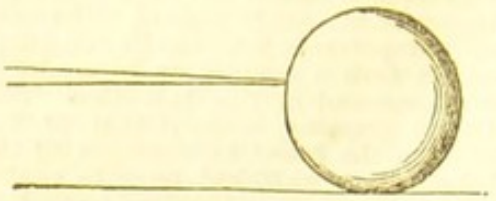
BILLIARDS.—A game played upon a table with balls propelled by a long round stick, termed a cue, and occasionally assisted in long or difficult strokes by a jigger or rest. In learning this game the first thing to be attended to is the *Bridge*, or support



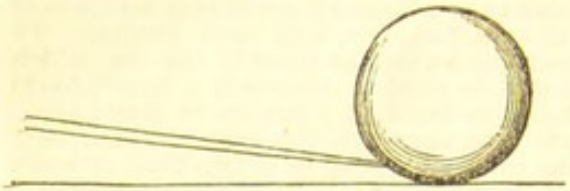
upon which the cue is to act. This is formed by the left hand of the player being placed firmly upon the table, at a distance of from six to nine inches from the ball that is to be struck, and drawn up until the hand rests only on the wrist and the points of the fingers; the latter being bent up to such an angle as to leave the palm considerably hollowed, at the same time that the thumb is elevated above the level of the knuckles, so as to form a furrow between it and the forefinger for the cue to slide in. The next matter of importance is to handle and adapt the cue in such a manner as to render it perfectly free and easy in its motion. This consists in grasping it about four or five inches from the broad extremity with the right hand, with sufficient force to enable the striker to use an adequate strength in his stroke, and yet free enough to allow of a considerable extent of motion. The bridge being made and the cue adapted, the next point to be attained is *how to strike the opposing ball* in a full, fair, and even manner. To accomplish this, the point of the cue (which should be rubbed over with a little chalk) ought, in the first place, to be made accurately to approach the centre of the ball. The cue should then be drawn four or more inches backwards, according to the strength required, slightly depressed towards the cloth, then gradually elevated till perfectly horizontal, and lastly forced against the ball, so as to drive it onwards, with more or less velocity, as occasion may require. The stroke should be made freely from the shoulder, and not in a cramped manner from the elbow, and the arm should be parallel to the side, not at an angle. Before making the stroke the learner should not only know where the balls will strike, but he should endeavour to calculate where they will be left. In order to accomplish certain strokes the position of the cue must be regulated accordingly, as seen in the engravings.

Attention to various circumstances is necessary, in order to play the game of billiards with delicacy and correctness; namely, the particular modification of the action of the instrument, with which the impulse is given to the ball, the proper regulation of the eye of the striker, the position he assumes in striking, and the mode in which he accommodates the instrument to his hand; the precise point of the distant or object ball, or of the cushion which is made to receive the stroke; and lastly, the degree of strength necessary to be employed in order to obtain the desired end. The accuracy of every stroke will very materially depend upon the proper regulation of the eye of the striker; and this requires a great degree of nicety. There are two objects to be attentively regarded nearly in the same instant; namely, the cue ball, or that to be struck with the instrument, and the object ball, or that to be struck at, in order to effect the desired hazard or canon. The position of the object ball should first be attentively marked, the cue is then to be adapted to the bridge formed by the hand, as before directed, and upon this the eye should be suffered to rest until the moment of striking: previous to the act of which it should be again carried to the object ball, and remain intently fixed on it until the stroke is com-

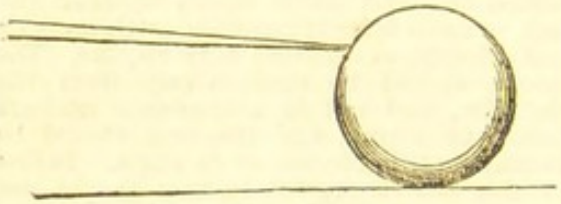
pleted. *The position in which the striker stands*, while in the act of playing, is also of essential importance; he should stand firmly on the right leg with the left slightly in advance and a little bent, the body nearly erect, or



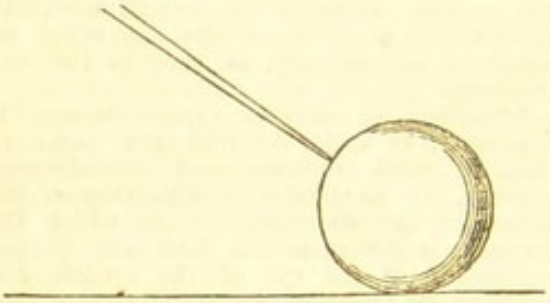
CENTRAL STROKE.



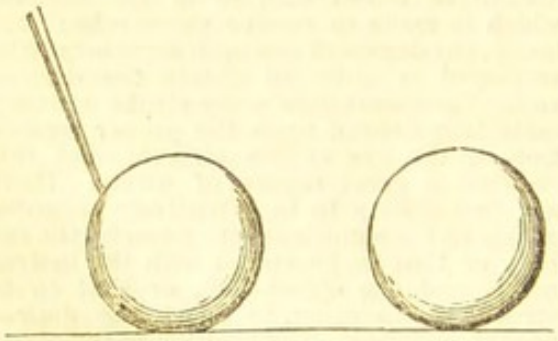
CUE FOR THE TWIST.



CUE FOLLOWING BALL.



POSITION OF CUE FOR JUMPING THE BALL.



PERPENDICULAR POSITION OF THE CUE FOR A TWIST WHEN ONE BALL IS NEAR ANOTHER.

not more inclined forward than may be necessary for the left hand to rest with ease upon the table. This position should be steadily preserved until the stroke has been completed, and the arm be the only part moved during the act of striking. Particular attention should be paid by the novice to what are termed *the angles of the table*, or, in other words, the course which the balls describe by reverberation from the elastic cushion. A little practice with a single ball will soon bring the student into acquaintance with these principles. A very good plan to proceed upon is to make a chalk spot on the side or top cushion, and strike at it repeatedly with various degrees of strength, first from one and then from the other side of the angle. In this way the truth of the stroke will be proved, and it will soon be discovered how the different strengths and sides given to the ball affect the angles produced. Two or three hours' practice in this way will be sufficient to acquire the requisite knowledge. Then take two other balls, the white and red, and, placing them in the line of the angles observed, endeavour to produce the various canons that lie within those angles. As soon as you have acquired a little intimacy with the more common canons, you can increase or decrease the distance between the balls, and so vary the practice in an infinity of ways. After the learner has mastered the angles of the table, his next preparatory step should be to make himself master of the several common winning and losing hazards. For this purpose he will find it expedient to begin with the *winning*, which may be considered as a key to billiards, generally speaking, for whoever can make a good winning hazard will find little difficulty in effecting every other which the table may present to him. The full or (straight) winning hazard should first be practised; beginning by placing the two balls near to each other, precisely in a line, and in the direction of a pocket, and upon that precise point directing the stroke of the ball. After a little practice has enabled him to strike this with ease at a short distance, he is to remove the balls farther asunder, and in the end make the extent of his stroke the whole length of the table. The learner should then proceed to practise the other winning hazards, namely, the three quarter ball, half ball, third ball, quarter ball, and eighth ball. *Losing hazards* must occur more or less frequently in every game; and after the different degrees of strength and fulness requisite for each stroke have been once acquired, they are, of all other hazards, the most easily played, requiring only a little practice and attention to enable the striker in every instance to ensure success. It must be borne in mind, with respect to losing hazards, that the farther the pocket in which the hazard is to be made, and the two balls recede from the parallel, the more full and strong will it be necessary to strike; and, on the contrary, the nearer they approach to the straight line, the more fine and softly must they be played.

There are several games of billiards, but that known as the winning and losing carambole game is the established and recognised one in England. This game is played with three balls, white, spot white,

and red; and the following are the principal rules. 1. On commencing the game the red is placed on the spot, and the players string from the baulk circle. The ball that stops nearest to the cushion wins the lead, and gives the choice of balls. 2. The usual game is fifty up; but it may be played at any greater or less number of points. 3. A miss must in all cases be played with the point of the cue. 4. In reckoning the points a white winning or losing hazard scores two; a red winning or losing hazard three; a miss one; a coup three; pocketing the two white balls four; pocketing a white and a red ball five; a white hazard and canon four; a red hazard and canon five; pocketing your own and the red ball six; your own, the white, and a canon, when the white is first struck, six; your own, the white, and a canon off the red, seven; the red, your own and a canon; all the balls, when the white is first struck, seven; all the balls, when the red is first struck, eight; all the balls and a canon, when the white is first struck, nine; and when the red is first struck, ten. 5. No ball must be struck till it has done rolling. 6. All strokes are fair with the point of the cue. In pushing strokes, if your cue leaves the ball and touches it again, it is a foul stroke. 7. When your own ball touches the object ball you cannot score; you therefore run into a pocket or canon, when the red is again placed on the spot, and the next player goes on from baulk, your ball being in hand. The object ball and the red touching are playable. 8. Foul strokes are made in the following ways:—Touching a ball when rolling; moving a ball when in the act of striking; playing with the wrong ball, or when the red is off the table, or with both feet off the ground; touching both balls with the cue; wilfully knocking a ball off the table; when in hand, playing at a ball in baulk; blowing upon a ball; shaking the table or floor; touching any other ball than your own with hand or cue, or wilfully altering its course. *Exceptions.*—Accidentally touching a ball when taking aim; knocking a ball off the table by accident or through fault of the table; when with a wrong ball, when told it is your own by the marker or your adversary; if impeded in your stroke by the player, marker, or bystander. 9. Penalties for foul strokes are taken by the striker losing his stroke; by the non-striker calling a foul stroke, and breaking the balls; or the non-striker may let the balls remain, or compel the striker to remake the stroke. In the case of a changed ball, the non-striker may either have the balls changed again, so that each player has his own ball; or he may insist on the game going on as the balls then stand, the striker losing any score he has made with the last stroke; or he may play with which ball he pleases; or he may claim for foul, and insist on the striker breaking the balls. If, however, the change of balls be not discovered before a second stroke has been made, the game must go on as the balls then stand, and any score made must be counted. 10. A line ball cannot be played at. 11. Knocking the object ball off the table does not score; forcing your own ball off the table, after having struck another, involves no penalty; knocking your own ball off the table, without striking another, is a coup, and scores three against you. 12. The player who throws up his cue, or refuses to play, loses the game. 13. All disputes to be decided by the marker, and, in case he is unable to decide, by the majority of the company. 14. If a ball be accidentally moved, it must be replaced as nearly as possible. The following items of caution and advice are also worthy of attention:—Be attentive to your game, and lose no fair opportunity of scoring. Do not stand over the pocket or ball your adversary is playing at, nor put your hand or cue near the pocket a ball is likely to run into, pretending to guide it, neither indulge in boasting or loud talking; or make wry faces when taking aim; these antics, with many others, are excessively vulgar and ungentlemanly. Do not canon from a white ball, unless the stroke be nearly certain, as your own is likely to be left in danger. Do not pocket your adversary, except the red be in baulk, or a two-stroke ends the game; as, besides leaving only one ball to play at, it is not considered the high game. When the white is safe under the cushion, it is not good policy to disturb it. Never strike the balls at random, but always have some direct object in view; many points are lost from inconsiderate play; while, on the contrary, many an inferior player wins a game by sheer force of careful play. If there be really no score on the balls, then play for safety, by leaving your own and the red as far apart as possible, or giving a miss; when your adversary's ball is off the table play for baulk rather than risk a doubtful stroke; when near the end of the game do not disturb the red, if it be safe, without there is a good chance to score off it. Do not vary your strength, or play high or low, without there be an obvious necessity for so doing. When under a cushion, and your adversary and the red be safe, it is better to give a miss than to risk an unlikely stroke. Never play the losing hazard at the white in baulk, when the red is also in baulk, without you are certain of bringing the white out; nothing tends to the success of a game so much as a careful consideration of the ultimate position of the balls after the stroke. In playing the red winning hazard use sufficient strength to bring it away from the cushion, so as to leave another stroke off it; on the contrary, it is generally best so to play the white winning hazard as to leave it under the cushion after your stroke. Do not attempt canons round the table without careful consideration as to the strength of your stroke and the angles of the table. And, lastly, never forget that common strokes with careful play stand a better chance than the most brilliant hazards without it.

Books: *Captain Crawley's Billiards, its Theory and Practice; Bohn's Handbook of Games; Kentfield's Billiards Explained; Mingaud's Treatise; Roy's Science; Mardon's Treatise; Handbook of Billiards.*

BILL OF COSTS—is a bill of fees, charges, and disbursements for business done by an attorney or solicitor. To prevent the possibility of an overcharge against a client, an attorney is obliged to send by post, or leave for him at his counting-house or dwelling-house, a detailed statement of the particulars of the business done for him, with dates and items. This is called the attorney's bill of costs, and must be either subscribed by himself, or be accompanied by letter so subscribed, one month at least (unless the party to be charged therewith is about to quit England) before he can maintain an action for the recovery thereof, to enable the party to tax the same before the proper officer, called the taxing master of the court to which he belongs; but if the party shall not make an application for an order to tax such bill of costs until after the expiration of one month, then the judge may impose terms upon him—that is to say, that he do pay the amount of the bill into court to abide the event of the taxation.

No order can be made to tax an attorney's bill of costs after a verdict has been obtained in an action for the recovery of it, nor after the expiration of twelve months after such bill shall have been delivered, except under very special circumstances, such as fraud or very gross overcharge. In the absence of fraud or misconduct, no bill of costs which has been paid will be referred for taxation unless it appears that it has been paid under pressure, and the bill contains overcharges also. The costs of taxing an attorney's bill of costs frequently amount to a large sum; it is therefore provided that where less than one-sixth part of an attorney's bill of costs is disallowed, the party chargeable therewith shall pay the costs of taxation, but where more than one-sixth is disallowed, the attorney himself shall pay the costs of taxation.

BILL OF EXCHANGE.—A writing on paper previously stamped, whereby one party, who is called the drawer, requires another party, who is called the acceptor, at a certain future day, to pay to his order or bearer a sum of money named in the bill, and such bill becomes negotiable by the drawer writing his name on the back (whereby he becomes indorser as well as drawer), and may be afterwards transferred by delivery only, but it is usual in practice to require the party passing it to indorse it, whereby he renders himself liable to pay it when it becomes due; and every new indorser is, in effect, a fresh drawer of the bill. The holder giving time to the acceptor, without the consent of the other parties, discharges them from their liability upon the bill. It is always presumed to have been given for a valuable consideration. Any person having ability to contract may be a party to a bill of exchange. It may be dated on a Sunday, and if undated, it dates from the day it was made, and the date may be inferred from circumstances. Any attempt to evade the Stamp Laws in the making a bill, renders the party liable to a penalty of £100, and the bill itself is incapable of being used as evidence of a debt between the parties. The amount of the stamp is not increased by interest, though reserved from a day prior to the date of the note. It must be for the payment of money alone; an order to pay "in cash or Bank of England notes" is insufficient; and if there is a difference in the amount between the words and figures, the words must be attended to. If the name of any person is inserted without the words "or bearer," or "or order," it will not be be transferable; if to bearer, it may be transferred by mere delivery; if to order, it will require indorsement. If no time for payment is mentioned, it is payable on demand. If payable at a certain time after sight, it must be presented, that such time may begin to run. If payable at an uncertain time, or out of an uncertain fund, or to an uncertain person (as to the secretary "for the time being of a company"), it is no bill or note, and is not negotiable; but if it be made payable at ever so distant a day, yet if it be a day that must come, it is no objection. An indorsement cannot be for a portion of the amount of a bill, unless it be for the residue remaining unpaid. An indorsement rendering it payable on certain conditions will deprive it of the character of negotiability, but an indorsement merely referring to an agreement has not such an effect. All negotiable bills or notes made in England for less than twenty shillings are void, and if any person negotiates one upon which a less sum than twenty shillings remains due, he is liable to a penalty not exceeding £20 nor less than £5, recoverable before a justice of the peace for twenty days after the offence is committed. Bills or notes for more than twenty shillings or less than five pounds (except drafts by a man on his banker) are also void, unless they specify the name and abode of the payee, are attested by one subscribing witness, bear date at or before the time of issue, and are made payable within twenty-one days after date, but not to bearer on demand, and they are not negotiable after the time of payment. The utterer of a note not complying with the above requisition is liable to a penalty of £20. In case of an action upon a lost bill of exchange, the judge may order the plaintiff to give an indemnity against the claims of any other person. A bill or note becoming due on a day appointed by proclamation for fast or thanksgiving, or any public holiday, is payable on the day preceding. A summary remedy has lately been passed by the Legislature for the recovery of money due upon a bill of exchange where the action is commenced within six months after the bill becomes due.

Foreign bills are drawn in *sets*, at so many days or months after sight; and these bills must be dated when accepted, as the term of payment commences from the date of acceptance. *A set of exchange* consists of two or three bills all drawn at the same time, and of the same tenor and date, to be transmitted by different conveyances or posts; and when any one comes to hand, and is accepted or paid, the others are null and void. When a bill is presented for acceptance in

London, it is generally left till next day, and if acceptance be refused, it is given to a Notary Public, and noted for non-acceptance. If an accepted bill be refused payment, it is noted or protested accordingly, and returned to the drawer, by which he or any of the indorsers are liable to pay the bill with all costs; but if the holder made any unnecessary delay in returning it, he can sue the acceptor only. Inland bills must not be kept longer than fourteen days; and foreign bills should be returned, with the protest, in course of post, or at latest within three posts. After a bill has been protested for non-payment, it is sometimes accepted by a third party, to save the credit of the drawer or of an indorser, and such an acceptance is termed an acceptance *supra protest*. If the party on whom a bill is drawn have doubts about the drawer, he may protest it, and afterwards accept it for the honour of one of the indorsers. In this case the protest must be sent without delay to the indorser for whose honour it was accepted. When a bill is drawn at so many months, *calendar* months are understood. Three days grace are allowed on all bills payable in Great Britain and Ireland, except on bills payable at sight, which must be paid or protested when first presented. No bill is valid unless written upon stamped paper, of such value as is required by law; a stamp of *less* value affects its validity, but one of *higher* value will not. An erasure in the date, term, or sum of a bill, unless by the consent of the parties and authenticated by their initials, completely destroys the validity of it. Although the words "value received" are essential for obtaining the benefit of the statute, giving interest, damages, and costs, yet the want of them does not otherwise affect the bill. In writing out a bill the stamp should be completely written through, the sum expressed in words as well as figures, and no space left either at the beginning or the end of the lines; serious consequences have resulted to the acceptor from inattention to these things.—See ACCEPTANCE, ACCEPTOR, DISHONOUR, DRAWER, INDORSER, PROMISSORY NOTE.

BILL OF FARE.--At large dinner parties, where there are several courses, it is well to have the bill of fare neatly inscribed upon small tablets, and distributed about the table, that the diners may regulate their appetite and determine their choice accordingly.—See DINNER.

BILL OF LADING.—When a merchant puts sundry goods on board a ship, the owner or master of the ship gives a written receipt for them, whereby he acknowledges the receipt of the goods on board, and contracts to carry them on the voyage, and deliver them to the consignee in good order, upon the consignee paying freight for the carriage. This receipt is termed a bill of lading. It should be made out in three parts: one, after signature, to be remitted by post to the consignee; the second on a stamp to remain with the shipper of the goods; and a third for the master of the vessel. Bills of lading are transferable or negotiable by the custom of merchants, so as to vest the property in the goods in the assignee by mere delivery, without any indorsement, and such transfer will be good against all the world except an indorsee of a bill of lading for a valuable consideration. The delivery of a cargo to a shipowner, like goods to a carrier, vests them in the person to whom they are to be conveyed.

BILL OF SALE.—A deed by which the ownership or property in household furniture, or other personal chattels, is transferred from one person to another. It may either be an absolute sale or by way of mortgage; that is to say, the party selling may be at liberty to buy them back again. A bill of sale is looked upon with great suspicion of fraud, as it enables persons to keep up the appearance of good circumstances and the possession of property after they have executed a bill of sale. A sale for good consideration is not void merely because it is made with the intention to defeat an expected execution; but if the writ were in the hands of the sheriff before the bill of sale was executed the bill of sale would be void, or if it were made *fraudulently* for the purpose of delaying, hindering, or defrauding creditors, it would be void as against them. It is valid as to marriage settlement, under which the party takes an interest for life; or if the sale be notorious, as by a sheriff, under an execution, or by public auction.

BINDING.—Various kinds of needlework have binding set on them in preference to hemming, or stitching. Flannel is generally bound with tape or sarsanet ribbon. The binding is so put on as to show but little over the edge on the right side, where it is hemmed down neatly; on the other side it is run on with small stitches. In putting on binding care should also be taken to work the whole uniformly, or if there is any irregularity, it will pucker and curl up, and have a very awkward appearance.

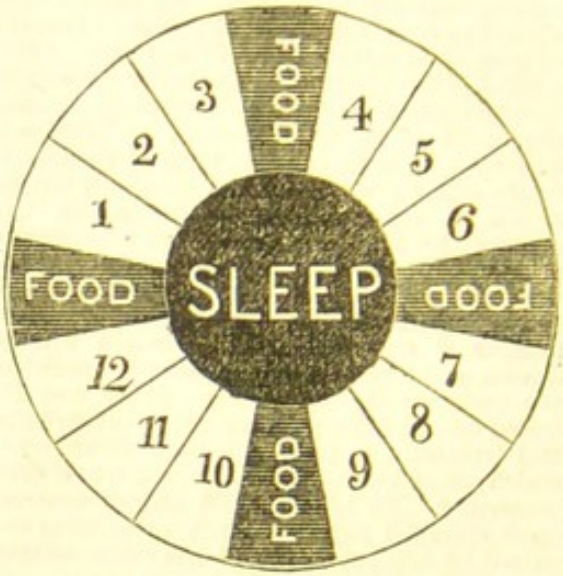
BIOGRAPHY.—A term formed from the Greek (*bios*) "life" and (*graphe*) "writing." It is that department of literature which treats of the actions and fortunes of individuals. Various collections of individual lives within one compass have been from time to time published under the title of "Biographical Dictionaries." The first of these in the English language, was published in 11 vols. 8vo in 1762, as the "English General Biographical Dictionary;" this work has appeared in successive editions, being gradually enlarged in its progress, and the latest edition was published in 32 vols. 8vo in 1817, under the name of "Chalmers' Biographical Dictionary." A second work consists of 10 vols. 4to, begun in 1799, and finished in 1815, entitled the "General Biographical Dictionary." The most modern biographical work is "Rose's Dictionary," in 12 vols. 8vo, published in 1857. Of the smaller works of this description, that by Gorton, in 2 vols. 8vo, is the best. The following list also comprises a number of miscellaneous works of this kind: — *Cox's Biography and History; Anderson's Biography for the Young; Dod's Annual Biography; Taylor's*

Beginnings of Biography; Farr's Bible Biography; Cyclopædia of Bible Biography; Mrs. Child's Biography of Good Wives; Mrs. Sigourney's Biography of the Great and Good; Lodge's British Biography; Maunder's Select British Biography; Smith's Dictionary of Classical Biography; Malcolme's Curiosities of Biography; Rich's Cyclopædia of Biography; Allison's Guide to English Biography; Taylor's European Biography; Kendrick's Biography for Young Ladies; Parker's Readings in Biography. Among the works devoted to the Biography of Individuals, the most interesting are Boswell's Life of Dr. Johnson; Southey's Life of Lord Nelson; Lockhart's Life of Sir Walter Scott; Margaret Roper's Life of Sir Thomas More.

BIOSCOPE.—A term composed of two Greek words—*Bios*, life, and *Skopeo*, I observe or survey. The bioscope, as suggested by Granville Penn, consisted of a dial or scale marked in such a manner as to indicate the general measure and progress of human life. This dial, comprising seven-eighths of a circle, was divided into seventy degrees, answering to the allotted number of the years of human life. The seven decimal divisions of the scale, representing the seven decimal divisions of life, were characterized by certain qualities belonging properly to some part of each of those seven divisions or periods, in their order or progress, thus:—1, *Childhood*; 2, *Youth*; 3, *Manhood*; 4, *Vigour*; 5, *Maturity*; 6, *Decline*; 7, *Decay*. The space between the two extremities of the scale was marked by *Eternity*. Lastly, a moveable index or hand was affixed, which might be directed to any degree marked upon the scale. The aspect of this alone presented to a mind capable of any serious reflection, tended to awaken new and unexpected sensations. But when from this general survey the index was directed to that particular degree upon the scale answering to the actual year of a person's own age, a new and livelier interest was calculated to be awakened. The bioscope was divided into two parts, answering to the time past and the time future of life; which parts are always varying their proportions, because they are only divided by the moveable and constantly advancing index; whilst the moveable index itself represents that constantly fleeting impression which we call NOW, in which alone consists the time that can properly be called present.

With the same general object in view, but upon a more concentrated plan, a diagram illustrative of the proper division and distribution of time, is shown in the accompanying engraving.

The circle represents a day of twenty-four hours; one third of which, or eight hours, is allotted to represent night and sleep; leaving sixteen hours for the duties of life, and for food and relaxation. The diagram is divided into four equal sections of three hours each, each hour being numbered in accordance with the arrangements and divisions of the day. The four hours that are devoted in the diagram to "food" must not be understood to be wholly occupied with eating and drinking, but by the pursuit of food for the mind, as well as for the body. The advantage of this diagram is that, from its simplicity, it is always as it were present to the eye, and as it represents a day, those who adopt it should determine what they will do through the day, and *associate each duty resolved upon with one of the numbered sections; when therefore the mind reverts to the diagram, and to any particular number thereon, a person is at once reminded of the duty he has resolved upon to perform.*



This diagram, though exceedingly simple, is capable of a very varied application. For instance:—Suppose it is resolved to pass the hours 1, 2, 3, in a uniform business application, it will be remembered that during those hours there is nothing on the diagram but business; the whole and sole attention is, therefore, naturally applied to the one pursuit, and will not be diverted therefrom by a number of unsettled resolutions. Then follows an hour's relaxation, during which food is to be taken, with perhaps half an hour's reading. With this section of the diagram, a person could scarcely fail to identify the book he might be in the course of reading at the time, and when that hour arrives, the mental perception of the diagram would as readily remind a person of the book, as of the food or rest he is about to take. Supposing, during the next hours, numbered 4, 5, and 6, a person had a series of duties to perform, he would identify them with those particular hours or numbers thus:—4. Call at A— B—'s and purchase ——— for stock.—Point out error in previous account.—On to Fenning's Wharf, and ascertain the cause of delay in delivery of goods. The mere words "A— B—'s," "error," and "Fenning's," associated with that section, would be a sufficient reminder of the matters to be attended to within that time. The same method may be applied to any hour and every hour throughout the day. As although a person may write down upon a memorandum-book the things he has to do, and refer to that, he has not the assistance, in that case, of a perfect DIAGRAM OF THE DAY being before him, reminding him of all his duties, and warning him of the waning hours. Such a diagram,

engraved upon the mind, and frequently referred to, exercises a strong *moral influence*, which no memoranda, even though aided by frequent references to a watch, would supply. At night, when the hour arrives to review the duties and actions of the day, reference to the diagram will at once bring before the mind what has been done, what omitted, and will present at the proper time an effective impression of a day well spent, or, a day partially lost. The stimulus afforded to the mind by the constant action of this mental monitor will have the certain effect of excluding those idle and unprofitable thoughts which constantly press around us when our ideas are undisciplined, and to the relaxing effects of which we may attribute the loss, for any useful and ennobling purposes, of the better half of our time.

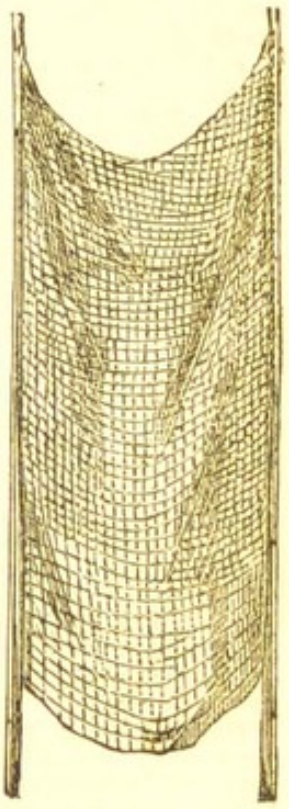
The diagram need not be adopted exactly as represented in the engraving, but may be framed upon that principle adapted to a person's peculiar pursuits. It will be very easy to draw a circle, and to divide it into certain sections, numbering those sections according to the hours of the day, as may be most suitable. After looking upon that diagram a few times, it will become impressed upon the memory, and frequent reference to it, mentally, will make the perception of it quite as tangible as reference to the drawing itself. Book: *Life Doubled by the Economy of Time.*

BIRCH.—Of this tree there are several species, but that best known and most commonly cultivated is the common birch. It will grow in any soil, and thrive upon land where other timbers fail. The birch is propagated by seed, which are easily taken from bearing trees, by cutting the branches in August, before they are quite ripe. The seed may be threshed out like corn, as soon as the branches dry a little; they should then be kept in dry cool sand until they are sown, either in the autumn or spring. A great deal of care and attention is required in rearing the birch from seed; they must be sown in the shade, and covered very lightly with soil made as fine as possible, and watered according to the wetness or dryness of the season. The planting out of this tree is performed in the same manner as in the ash. If planted for underwood it should be felled before March, to prevent its bleeding. The tree bears removing with safety after it has attained the height of six or seven feet; and is ready to plash as hedges in four years after planting. Birch timber is used for a variety of purposes, more especially for the manufacture of casks, tubs, barrels, hoops, &c. It is also used for turners'-ware, agricultural implements, and carriage-wheels. The shoots are converted into brooms and hurdles.

BIRCH WINE.—The season for procuring the liquor from the birch tree is in the beginning of March, while the sap is rising, and before the leaves shoot out; for where the sap has come forward and the leaves appear, the juice, by being long absorbed by the bark, grows thick and discoloured. The method of procuring juice is by boring holes in the middle of the tree and inserting fossets, which are made from the branches of the elder, the pith being taken out. The tree, if large, may be tapped in four or five places at one time, and by that means save from a number of trees several gallons every day; if sufficient juice is not drawn off in one day, the bottles into which it drops must be corked close and sealed until the next occasion of drawing off. To prepare the wine, put to every gallon of liquor four pounds of sugar and the peel of a lemon, boil it as long as any scum arises, skimming all the time; then put it into a clean tub, and when it is nearly cold set it to work with yeast, spread upon a crust; let it stand for five or six days, stirring it often; then take a cask of a suitable size, set light to a large match dipped in brimstone, and throw it into the cask, stop it close until the match is extinguished, turn the wine, lay the bung on lightly till it has finished working; stop it close, keep it three months, and then bottle off.

BIRD CAGE. See AVIARY.

BIRD-CATCHING.—There are many excellent and ingenious methods invented for bird-catching, the greater part of which are practised by day, but a few require the assistance of night. Among the latter the principal are by bat-fowling, and by the use of a species of net called a trammel net. The *net used for bat-fowling* should be made of the strongest and finest twine, and is to be extended between two poles of ten feet long. The person who takes the management of the net keeps it extended opposite the hedge in which the birds are supposed to be, by stretching out his arms to the utmost. Another of the party carries a lantern, which by means of a pole he holds up at a short distance behind the centre of the net. One or two others place themselves on the opposite side of the hedge, and by beating it with sticks disturb the birds; they, being alarmed, fly towards the light, but are intercepted in their flight by the net, which is immediately folded upon them. Fifteen or twenty small birds, such as sparrows, linnets, goldfinches, &c., are not unfrequently caught in this way by a single fold. This sport cannot be followed with much success, except when the nights are very dark, nor until very late in the autumn, when the trees having lost their leaves, the birds are driven for shelter to the hedges. *Trammel nets* are generally between thirty and forty yards long, and above five or six wide, and

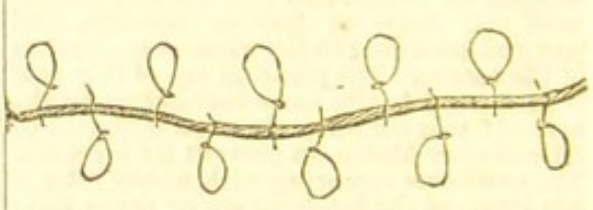


a light pole of the same length as the width o fthe net is fixed to each end in order to keep it extended. The net is then drawn by two men over the stubble, heaths, &c., the bottom being suffered to drag lightly on the ground; this rouses the birds and causes them to flutter up against the net, which motion being felt by the men, the net is immediately dropped and the birds are secured. This is the most destructive method of catching birds, and one which is seldom adopted, except by poachers, as it not only takes larks, fieldfare, &c., but also all other birds that roost on the ground, such as snipes, woodcocks, quails, partridges, and grouse, the two last of which are taken in great numbers by poachers, during the months of August and September. Sometimes a setter is used with a very small lantern fixed to its neck, by which means instead of dragging the whole field, the poachers are enabled to walk directly to the spot where the birds lie, and then by drawing the centre of the net over the dog's back, and dropping it a few yards before him, they often take the whole covey.

In the day-time birds are taken principally by means of nets, springes, traps and bird-lime. The method adopted in the suburbs of London is most ingenious. The nets used are generally twelve yards and a half long, and two yards and a half wide. The bird-catcher provides himself with *call-birds*, usually consisting of five or six linnets, two goldfinches, two greenfinches, a woodlark, a redpole, a yellow-hammer, titlark, and perhaps a bullfinch. These are placed at short distances from the nets in little cages. He has besides what are called *flur-birds*, which are placed within the nets and are raised upon a moveable perch, which the bird-catcher can raise at pleasure by means of a long string fastened to it, and gently let down at the time the wild bird approaches. The flur-birds generally consist of a linnet, a goldfinch, and a greenfinch, secured to the flur by a contrivance called a brace, which secures the birds without doing any injury to their plumage. When the bird-catcher has laid his nets, he disposes of his call-birds at proper intervals. The instant that the wild birds are perceived, notice is given by one to the rest of the call-birds, and they all raise their voices in a loud and cheerful chorus, which arrests the wild birds in their flight and attracts them down to the spot near which the nets are placed; and the bird-catcher watching his opportunity closes his nets upon them.

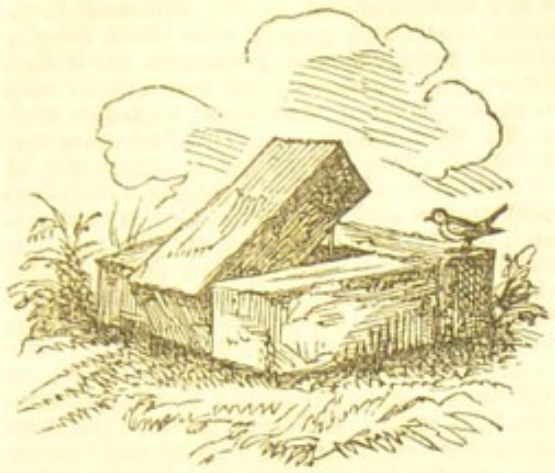
The *Springle* is a somewhat complicated apparatus, but very effective as a bird-catcher, it consists of five parts, as follows.—1. The *Stump:* a small stout stake of wood about five inches in length, which is fixed firmly in the ground, with its head about an inch above the surface. 2. The *Spreader:* a small bent switch, having a notch at its thicker end; it is kept in its bent position by a piece of small cord whipped over its smaller and larger end, and united just above the notch. 3. The *Bender:* a piece of pliant withy or hazel, of about eighteen inches long; both ends of it are fixed into the ground so as to form a kind of arch. 4. The *Springer:* a hazel rod of about four feet in length, thick at one end and tapering at the other; to the tapering end is fixed a piece of string. 5. The *Catch:* a sound piece of wood fixed at the end of the string of the springer; it is above half an inch long, a quarter broad, and the eighth of an inch thick. It is slightly bevelled off at one end, so as to adapt it to the notch of the spreader. 6. The *Noose:* a knot formed of horsehair, fastened below the catch. In *setting the springle*, the following directions are to be attended to:—Drive the stump firmly into the ground. Place the spreader around the stump, so that its bight is in contact with it. Fix the bender into the ground at about the length of the spreader from the stump; then

fix the thick end of the springer in the ground at a little distance from the bender, and the small end of it bent down till one end of the catch is placed upwards and on the outside of the bender. Raise the spreader about an inch from the ground, and put the small end of the catch into the notch. Finally, arrange the horsehair slip-knot loosely around the bender, and the trap is set. Scatter a little seed within, and for some distance around the spreader, and watch at a short distance to seize the bird as soon as it is ensnared, otherwise it will flutter itself to death or be strangled. Birds may also be caught by means of *horsehair-loops*. To accomplish this, tie a large number

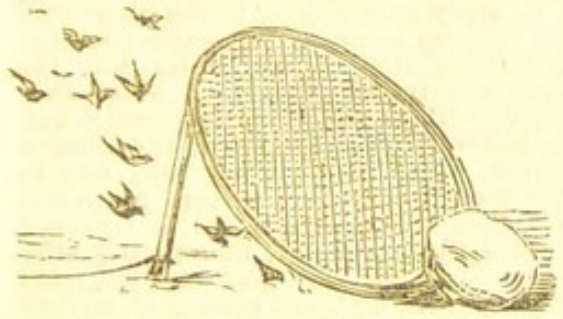


of loops upon a long string, the longer the better, and lay this string in a series of rings winding outward from the centre, so that the ground will be completely covered with them; then lay the trap, with the loops properly opened, on a spot resorted to by birds. When a bird gets its feet into a loop, it is almost certain to draw the loop tightly about its legs, and is thus caught. The common brick trap is well known; it consists of four bricks arranged as in the engraving, two lengthways, upon their edges or narrow sides, one in front, and the fourth between the two side bricks; this is so placed that it will fall and lie easily upon the front brick. Within the trap a stout peg is driven into the ground, upon which a forked twig is

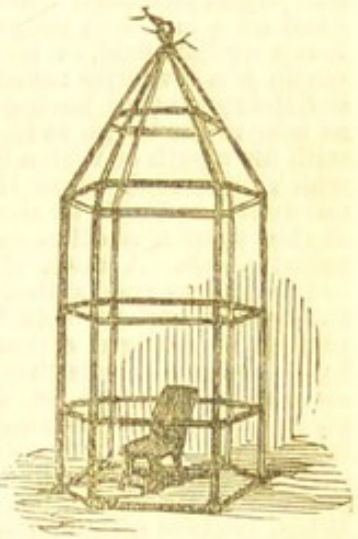
placed horizontally; above this a stick is placed, one end being on the twig and the other end supporting the brick in a slanting position. The end of the twig that rests upon the peg is cut flat to give it a better hold. The bait is strewn upon the ground



inside of the trap. When the bird flies to the trap he generally perches for a moment on the forked twig and causes it to give way by reason of its weight, the brick that has been propped up then falls upon the front brick, enclosing and securing the bird. In preparing this trap caution should be used in setting the upper brick, so that it does not fall between the two side bricks unsupported by the front brick, as in such a case the bird would be crushed to death. The *Down-fall* is an effective trap for taking fieldfares, thrushes, redwings, blackbirds, larks, sparrows, starlings, and all birds that congregate upon the ground. It is most effective when snow lies upon the ground, for then the birds being hungry, are less shy than is their wont in the pursuit of food. The trap consists of an iron or wooden hoop covered with a net, formed of meshes of about one inch. The lighter the net the better. The hoop is put to stand at an angle, as in the engraving,

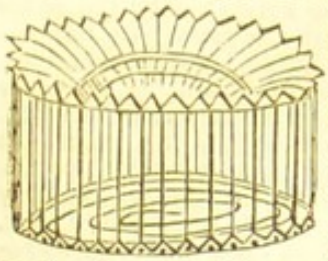


and is propped up by a piece of stick about two feet in length. At the bottom of the net, and lying upon that part of the hoop which rests upon the ground, is placed a heavy stone, in such a manner that directly the stick is withdrawn the net will drop down suddenly upon the birds. A long string is tied to the stick, and is held by the person, who keeps as far away from the trap as is compatible with his being enabled to see when the birds are under it. It is better not to drop the trap when a single bird enters, as it will serve as a decoy, and a little patience will be rewarded by the capture of a number of birds instead of one. The kind of bait employed depends upon the description of birds you desire to catch. Fieldfares feed upon hips, haws, the fruit of the white thorn and the wild rose, various kinds of worms, snails, and insects. They are fond of blackbeetles, cockroaches, &c., which being caught in the house may be used to bait the trap, after being scalded to death in boiling water. Thrushes, redwings, and blackbirds, are also attracted by the same bait. Starlings relish the same bait, but exhibit also a strong liking for eggs, cherries, and various kinds of grain. Larks are attracted by the seed grasses and by small insects. The down-fall is an excellent method of capturing birds required for the cage, as it does them no injury. It may moreover be used at any time of the year, though with less effect than in winter as regards the number caught. But any one knowing the harbour of a thrush or blackbird which has been heard to give forth superior notes, may be sure of securing it with the aid of the down-fall and the exercise of a little patience. In some parts of France a curious mode is practised of taking birds; a frame is constructed of the stripped branches of the slender straight-growing poplar, in the centre of which a seat is placed for the bird-catcher to sit upon. The frame so constructed is afterwards covered with boughs and evergreen shrubs among which are openings for the entrance of the birds, and also for the hands of the bird-catcher to come out, who is seated within. When the birds alight on or about the sides of the holes, the bird-catcher nimbly seizes them by the hand or by means of a small flap trap which he thrusts out at one of the holes, and upon which the birds alight.



Woodcocks, partridges, and other land birds are said to be easily caught by what is called *low-belling*. In this method a strong light is employed and two persons carry nets, one on either side of him who bears the light. The light-bearer carries a large bell, which he rings incessantly and with a regular jingle. The birds after a while become so alarmed by the combined effects of the light and the bell, that while some fly against the nets, others fall upon their backs on the ground and will not move, and so are captured. Larks may be taken in the day time by means of a net, which should not exceed twelve yards in length nor three and a half in width, and which is to be held by two persons. Larks, however, seldom lie so close as partridges, and in order to prevent them from rising too soon, the following

stratagem is adopted:—one of the sportsmen carries in his hand a live or stuffed hawk fixed to the end of a long stick, which as he runs with the net towards the larks he holds up in the air before him as high as he can; at the sight of this the larks are so terrified that they dare not move for fear of attracting the notice of their supposed enemy, and then there is little or no difficulty in throwing the net over and securing them. In addition to these there is a *bird-trap cage* used in gardens, orchards, &c., for catching young sparrows. It is a wicker utensil with a funnel, through which the bird, having descended in quest of the bait placed within, cannot ascend, and is thus caught.



For catching birds by means of bird-lime, the following is the most successful method:—Take a large branch or bough of a tree, and after having trimmed it of all the leaves and superfluous shoots, cover it all over with bird-lime, taking great care to lay it on properly, for if it be too thick the birds will see it and will not settle on the bough, and if it be too thin it will not hold them when they do. When the bough is well limed it must be fixed on a low dead hedge near a rickyard, hemp or flax field, or in some other place which is a favourite resort for small birds, and the sportsman, having concealed himself as near to the bough as he can, must imitate with his mouth or with a bird-call the notes which birds make when they attack or call one another; but if he should not be expert at this, there is another mode of attraction, called a *stale*. A hawk of any species or a bat make very good stales, but an owl makes the best of any, for this bird never shows himself at daylight without being followed by all the small birds that see it; so that if an owl be fastened in some conspicuous place at a short distance from the limed bough, the birds will collect around it in great numbers, and will be sure sooner or later to settle on the bough and be taken. When one bird is thus enticed and stuck fast, it must not be disengaged, but suffered to remain and attract others by its fluttering, so that many may be taken at once. If a live owl is not to be obtained a stuffed one will do nearly as well. Sometimes the representation of an owl carved in wood is used, and being painted in the natural colours of the bird, is found to succeed very well.—See MOLE-TRAP, RABBIT-SNARE, &c.

BIRD-LIME.—Put half a pint of linseed oil into an old pot or pipkin, and in which it will not be more than one-third full, put it on a slow fire, stir it occasionally until it thickens as much as required, which will be known by cooling the stick in water and testing it with the fingers. It is best made rather hard; then pour it into cold water. It can be brought back to the consistence required by the admixture of a little Archangel tar.

BIRD-STUFFING AND PRESERVING.—See TAXIDERMY.

BIRD-TAMING.—See AVIARY, BLACKBIRD, BULLFINCH, CANARY, &c.

BIRDS, DIETETIC PROPERTIES OF.—Those which serve as food may be divided into such as are domesticated, as the common fowl, turkey, duck, and goose; wild birds, usually termed game, as the pheasant, partridge, grouse, and woodcock, and some other wild birds that are not considered as game, such as the lark, pigeon, &c. The fattening and flavour of birds is very much influenced by the nature of their food. Those which feed upon grains and vegetables, as the common fowl, turkey, and pheasant, are the most delicate and have the whitest flesh. Those which live partly on animal and partly on vegetable food, as ducks and geese, are brown-fleshed and higher flavoured; and those which, being aquatic, live wholly on fish, have a taste savouring of the creatures they feed upon. Different parts of the same bird differ very much in flavour and tenderness, chiefly depending upon the amount of exercise which the surrounding muscles have undergone; thus it will be found that in *birds that walk* the wing is tender and the leg tough; while in *birds that fly*, these indications are diametrically opposite. The breast is generally considered the most tender part of the bird, but in the snipe and the woodcock the leg is preferred. The flesh of birds, particularly poultry, is extremely nutritious and easy of digestion.

BIRDS, DISEASES OF CAGE.—See AVIARY.

BIRDS' EGGS FOR CABINETS.—In selecting eggs for a cabinet, always choose those that are newly laid; make a medium sized hole at the sharp end with a pointed instrument; and make another hole at the blunt end with a needle or pin. If the yolk will not come out freely, run a pin or thin wire into the egg, and stir the yolk well about; this done, get a cupful of water, and immerse the pointed end of the egg in it, apply your mouth to the blunt end, and suck up some of the water into the shell; then stop the two holes with the finger and thumb, shake the water thoroughly within, and after this blow it out. The water will clear the egg of any remains of yolk, or of white, which may stay in after blowing. If this process performed once does not suffice, repeat it a second or third time. An egg, immediately after it is produced is very clear and fine; but by lying in the nest, and coming in contact with the feet of the bird, it soon assumes a dirty appearance. To remedy this, wash it well in soap and water, and apply a nail brush to remove the dirt. Nothing now remains but to prevent the thin white membrane which is still inside the shell from corrupting it; for this purpose fill a wineglass with the corrosive sublimate in alcohol, then immerse the sharp end of the egg shell in it, keeping your finger and thumb as you hold it, just clear of the solution; apply your mouth to the hole at the blunt end, and suck up some of the solution into the

shell; no fear need be entertained of drawing the solution into the mouth, for as soon as it rises in the shell, the cold will strike the finger and thumb, and it is then time to cease sucking; shake the solution in the shell thoroughly and then blow it back into the glass. The shell will now be beyond the reach of corruption, and will for ever retain its pristine whiteness. If it is desired to impart to the egg an extremely brilliant appearance, give it a coat of mastic varnish, put on very sparingly with a camel-hair pencil; green or blue eggs must be brushed with gum arabic.

BIRDS, SINGING,—include the nightingale, canary, thrush, linnet, lark, throstle, starling, bullfinch, goldfinch, &c. The first sound they produce is called a *chirp*, which is a single sound repeated at short intervals; the next sound is the *call*, which is a repetition of one and the same note; and the third sound is termed *recording*, which a young bird continues to do for ten or eleven months, till he is able to execute every part of his song.

BIRTH, REGISTRATION OF.—A registrar of births, deaths, and marriages is required to inform himself of every birth within his district, and to register the same as soon after the event as conveniently may be. Within forty-two days after birth, the father or mother, or in case of their illness or absence, the occupier of a house in which a child shall have been born, is bound to give information of the particulars thereof to the registrar upon request, and upon refusal is liable to indictment. They may exercise their discretion as to volunteering the information where it has not been required by the registrar; but every registrar who refuses or omits to register a birth of which he has had notice is liable to a penalty of £50. After forty-two days and within six months of a birth, if any person present, or the father or guardian make a solemn declaration of the particulars of such birth, the registrar, in the presence of the superintendent registrar, may register it and receive, over and above the usual fee, the respective fees of 2s. 6d. and 5s. Any person procuring the registration of a birth after forty-two days, and within six months without the presence of the registrar and superintendent registrar, is liable to a penalty of £50. If six months have elapsed since the birth, the child cannot be registered. The particulars required to be furnished to the registrar are the day and the month of the birth; the name (if any) of the child; the sex; the name and surname of the father; the name and maiden surname of the mother; the rank or profession of the father; to which the informant must sign his or her name, description, and place of abode in the register. There is no fee charged for registration.

BIRTHDAY CEREMONIES.—In England the anniversary of a person's birthday is usually observed as a sort of festival. On these occasions dinners or evening parties are given, with the accompaniments of dancing, singing, &c. The person whose birthday it is becomes the hero or heroine of the day; the guests immediately upon their arrival wish him or her "many happy returns of the day," the health of the person is also proposed by one of the company, and received as the toast of the evening. It is customary on these occasions to present some token to the person whose birthday it is, as a mark of friendship on the part of the donor, and in commemoration of the event.

BISCUIT CAKE.—Mix one pound of flour, five eggs well beaten and strained, eight ounces of sugar, a little rose or orange-flower water. Boil the whole thoroughly together, and bake for one hour.

☞ Flour, 1lb; eggs, 5; sugar, ½lb; rose or orange-flower water, few drops.

BISCUIT CRUST.—Put half a pound of flour on the paste-board, add to it the yolks of two eggs, and thoroughly mix until the egg is lost sight of: then add a dessert-spoonful of fine sifted sugar, and two ounces of butter, work these well in, and mix a little water or milk sufficient to make a stiff paste. Beat and roll it out until quite smooth, and work it into the thickness of a quarter of an inch, then cover your fruit with it.

☞ Flour, ½lb.; eggs, 2 yolks; sugar, 1 dessertspoonful; butter, 2ozs.; water or milk, sufficient.

BISCUIT CUSTARD.—Break two dozen macaroons into small pieces, and the same number of small ratafia biscuits, pour over them a hot custard, and stir well until the whole is thoroughly mixed; turn it into a trifle dish, and pour over it the whites of two eggs well whisked for an hour with red currant jelly; grate nutmeg over the top, and serve.

☞ Macaroons, 24; ratafia biscuits, 24; custard, sufficient; eggs, 2 whites, with red currant jelly.

BISCUIT DEVILLED.—Dip a captain's biscuit into boiling water, butter it well, spread over it ready-made mustard, cayenne pepper, a good deal of black pepper and salt; put it into the oven, or on the gridiron, and let it bake or grill till brown. This is considered as a relish with wine.

BISCUIT DROPS.—Beat up the whites of six eggs and the yolks of ten with a spoonful of rose-water, to which add ten ounces of pounded sugar. Beat the whole well up, and add one ounce of bruised carraway seeds, and six ounces of flour. Drop them on wafer paper, and bake in a moderate oven.

☞ Eggs 6 whites, 10 yolks; rose-water, 1 teaspoonful; sugar, 10ozs.; carraway seeds, 1oz.; flour, 6ozs.

BISCUIT ICE CREAM.—Break six eggs into a stewpan, and beat them with a wooden spoon; add a pint of cream, the peel of one lemon, two gills of syrup, and a little spice; boil it till it begins to thicken, stirring constantly; crumble some Naples and ratafia biscuits into it, and pass the whole through a sieve; turn into a mould, and place in ice.

☞ Eggs, 6; cream, 1 pint; lemon, 1 peel; syrup, 2 gills; spice, to taste; Naples and ratafia biscuits, sufficient.

BISCUIT PUDDING.—Pour a pint of boiling milk over three Naples biscuits grated; cover it close, and when cold add the yolks of four eggs, the whites of two, a wineglassful of brandy, a dessertspoonful of flour, nutmeg, and sugar to taste. Boil it in a basin for an hour.

☞ Milk, 1 pint; Naples biscuits, 3; eggs, 4 yolks, 2 whites; brandy, 1 wineglassful; flour, 1 dessertspoonful; nutmeg and sugar, to taste.

BISCUITS A LA FRANCAISE.—Beat up the yolks of eight eggs in two pounds of sugar for half an hour; whip the whites separately, and when they are well frothed, mix them with the yolks and sugar, and stir in one pound of flour lightly, and by degrees; have ready some tin or paper moulds, buttered within; put in the biscuit paste, filling the moulds but little more than half; throw some powdered sugar over them, and bake them in an oven for half an hour; when of a light brown colour and half cold take them out of the moulds.

☞ Eggs, 8; sugar, 2lbs.; flour, 1lb.

BISCUITS, TO PRESERVE.—For ordinary use biscuits will keep best in tin canisters. But if required to be kept for a long time, such as during a sea voyage, no other art is necessary to preserve them sweet and good than packing them up in casks well caulked and carefully lined with tin, so as to exclude the air. The biscuits should lie as closely as possible together; and when it is necessary to open the cask, it must be closed again with all speed, and as securely as it was before. Biscuits may also be preserved from the weevil and other injurious insects by being kept in a bag which has been previously soaked in nitre and dried.

BISCUITS TO USE WITH LIQUEURS. Put a pound and a quarter of sugar into a pan, with the peel of a lemon grated fine, a spoonful of orange-flower water, and the yolks of five eggs; beat them together till thoroughly incorporated; then stir in a pound and a quarter of flour, and beat the whole together; next whip the whites of the eggs till they rise in froth, and mix them with the sugar and the flour: have ready some white paper made into the form of little trenches, each about the depth and length of a finger; put two spoonfuls of Naples biscuit into each trench, powder them with sugar, and place them in a moderate oven; when done of a good colour, take them out of the papers, and put them upon a sieve in a dry place, till there is occasion to use them. These biscuits are excellent when dipped in liqueurs.

☞ Sugar, 1¼lb.; lemon peel, 1; orange-flower water, 1 teaspoonful; eggs, 5; flour, 1¼lb.; Naples biscuit, sufficient.

BISCUITS, VARIOUS.—1. HARD BISCUITS: warm two ounces of butter in as much skim milk as will convert a pound of flour into a very stiff paste. Beat it with a rolling-pin and work it very smooth. Roll it out thin and cut it into round biscuits. Prick them full of holes with a fork, and bake them for about six minutes. 2. PLAIN AND CRISP BISCUITS: mix a pound of flour, the yolk of an egg, and some milk, into a very stiff paste. Beat it well and knead it quite smooth; roll the paste very thin, and cut it into biscuits. Bake them in a slow oven till quite dry and crisp. 3. SWEET BISCUITS: beat eight eggs into a froth; add a pound of powdered sugar, and the peel of one lemon grated fine; whisk the whole well together till it becomes light, then add to it a pound of flour, and a teaspoonful of rose-water. Divide into biscuits, sugar them over, and bake them in papers or tins. 4. BRIGHTON BISCUITS: mix together, two pounds of flour, three drachms of carbonate of ammonia in fine powder, four ounces of powdered sugar, one ounce of arrowroot, four ounces of butter, and one egg; incorporate the whole well together with new milk into a stiff paste; then beat it with a rolling-pin for half an hour, roll out thin and divide into biscuits, bake in a quick oven for fifteen minutes. — See also ALMOND, APRICOT, CHOCOLATE, FILBERT BISCUITS, &c.

☞ No. 1. Butter, 2ozs.; milk, sufficient; flour, 1lb. No. 2. Flour, 1lb.; egg, 1 yolk; milk, sufficient. No. 3. Eggs, 8; sugar, 1lb.; lemon peel, 1; flour, 1lb.; rose-water, 1 teaspoonful. No. 4. Flour, 2lbs.; carbonate of ammonia, 3 drachms; sugar 4ozs.; arrowroot, 1oz.; butter, 4ozs.; egg, 1.

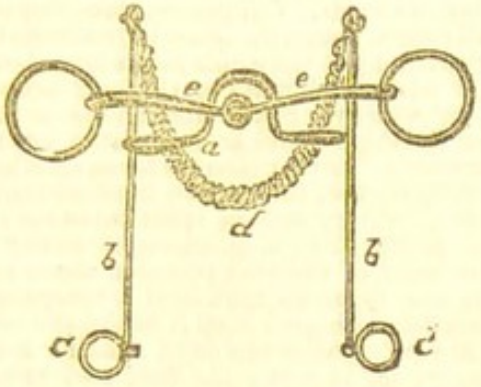
BISHOP.—A beverage compounded as follows: roast four good sized bitter oranges till they are of a pale brown colour; lay them in a tureen, and put over them half a pound of powdered loaf sugar, and three glasses of claret; place the cover on the tureen, and let it stand till the next day. When required for use, put the tureen into a pan of boiling water, press the oranges with a spoon, and run the juice through a sieve; then boil the remainder of a bottle of claret, taking care that it does not burn, add this to the strained juice, and serve it warm in glasses.

☞ Oranges, bitter, 4; sugar, ½lb.; claret, 1 bottle.

BISMUTH, MEDICAL USES OF.—Bismuth taken into the stomach in the state of a metal produces no effect upon the human system. It is therefore generally employed in the form of subnitrate. This is a white powder, sometimes in lumps resembling chalk, inodorous, and tasteless. It is insoluble in water, and but slightly soluble in the juices of the stomach, a circumstance which accounts for its limited sphere of action; hence its employment is almost entirely confined to affections of the stomach itself. In large doses it is poisonous, and produces vomiting, faintings, and even death. Its external application, as a cosmetic, in the well known form of pearl white, is not free from danger, and when applied for a lengthened period, to the face, causes nervous twitches, and finally induces paralysis. Subnitrate of bismuth is considered a tonic, and in nervous pains and cramps of the stomach it is decidedly antispasmodic. Bismuth being insoluble in water can never be administered in that vehicle, but may be given in extract of hops, in jelly, honey, or simply placed upon the tongue, and so swallowed.

BISTRE.—A brown colour which is used in water colours. It is prepared from soot, that of beech being preferred. It is not used in oil-painting, but has the same effect in water colours as brown pink has in oil.

BIT FOR HORSES.—The compound bit is composed of five principal pieces, viz.: *a*, the mouth-piece; *b b*, the branches; *c c*, the rings; *d*, the curb; *e e*, the cross-bar. A



compound bit, however, is not always requisite, many ponies and horses being ridden with a simple snaffle, which should be in the corners of the horse's mouth without pressing against it. The curb bit powerfully controls the horse, but with the snaffle he can take a natural position and act with more freedom. The snaffle is preferable for common use in every way; but if the rider cannot control his horse, he must resort to the curb bit, which should be knotted underneath the snaffle. Care should be taken that the bit does not press unnecessarily hard upon the horse's mouth, nor that it is so sharp as to wound it. It may be necessary to have a sharp bit for the headstrong and obstinate beast; yet, if it is severely and unjustifiably called into exercise, the animal will in all probability plunge and rear, and endanger both himself and his rider. The torments which the trappings of the mouth often inflict upon a docile and willing horse are useless and cruel, and instead of any benefit being derived from such a mode of treatment, it only serves to render the mouth hard, thereby destroying all the pleasure of riding, as well as causing the horse to become fretful and vicious.

BITES, strictly speaking, mean only such injuries as are inflicted by the teeth and jaws of animals, and merely imply another variety of punctured wound; but punctures with the fangs of reptiles are denominated bites also.

BITES OF ANIMALS generally result from the teeth of dogs and cats; and, as long as these proceed from a hurt the consequence of a sudden anger in the animal, need provoke no alarm, and the treatment is simple and easy. But when an animal has been excited into passion and kept in a state of irritation for some time, a poison is engendered and mixed with the saliva, that imparts to a wound then inflicted much inflammation, and sometimes considerable danger; especially so if the constitution of the person bitten, at the time should chance to be in a diseased or unhealthy state. In general, however, the bite is harmless enough; but as all such accidents produce a most depressing effect on the mind, and the terror excited by a harmless bite, in some instances, gives rise to the most exaggerated fear, it is always more satisfactory to adopt the same precautions as would have been demanded had the animal been really dangerous.

Treatment.—In cases of trifling abrasion from the teeth of dogs or cats, where it is the return snap for an accidental stamp or kick at the animal, and where there can be no reasonable doubt of the health of the animal, all that is really necessary either for precaution or cure, is to wash the part with warm water, apply the nitrate of silver, or lunar caustic, and tie on a hot bran poultice. Where the case is more serious, and the animal has been enraged, tie a garter or piece of tape directly round the limb, above the puncture or wound and between it and the heart, so as to avoid as far as possible all absorption into the system; the part is then to be washed quickly with a sponge and warm water, changing both water and sponge: if cupping glasses are at hand apply one directly over the bites, allow it to remain three or four minutes; remove it and wash away carefully the blood that may have exuded, or whatever moisture may have been forced to the surface, and apply the glass again, and if necessary a third time. When the cupping apparatus cannot be had, take a wineglass, put a few drops of spirits of wine, spirits of camphor, tincture of myrrh, Friar's Balsam, or sulphuric ether, or brandy if it is pure; light it with a match, and before the flame has burnt out apply it to the part. If the air has been well exhausted the flesh will rise in the glass, and a few drops of blood exude from the orifices. While these measures are being adopted — and they should not occupy more than ten or fifteen minutes—some lunar caustic may have been sent for, which is to be held between a piece of folded rag by one end, while the other dipped in water is rubbed freely over the part, and worked into the punctures; a hot bran or linseed meal poultice is then laid on the cauterised surface, the patient's mind tranquilised, and the limb and body kept in perfect rest. If a glass cannot be made to adhere by the use of the spirits named above, or by exhausting the air by the flame of a taper, let the caustic be applied at once, and the poultice continued till the eschar or blackened cuticle dies and is thrown off. If the wound heals slowly, with an irritable appearance, and small pustules form round it, apply the caustic again, give an occasional aperient of equal parts of blue and colocynth pill, and take as a corrective, in doses of half a tumblerful, four times a day, a decoction of dulcamara, or sarsaparilla. Two ounces of the former, cut small, and boiled from three pints of water to two, and one ounce of the latter, prepared in the same way.

BITES OR STINGS OF REPTILES.—Of these the rattlesnake, the cobra di capello, the whipcord snake, and the viper of our own country are the most dangerous;

and though the potency of the venom ejected from each varies according to the species, it exerts the same characteristic chain of symptoms only more or less intense, the difference being merely in degree and time, as the *virus* of one is more subtle and deadly than that of another. In all cases the infliction of the wound is followed by instant and acute pain; discoloration and swelling of the part, sickness, fainting, pain in the back, difficulty of breathing, spasms, extreme drowsiness, coma and death—in the worst cases—within two hours. Hitherto no antidote has been discovered to this quick killing venom, and all that medical aid can do to avert a fatal termination, lies in the speed with which it employs precautionary measures. These consist in, 1st, preventing absorption of the virus into the blood; 2d, in removing as much of the poison as possible from the wound; and 3d, by counteracting with antispasmodics and stimulants, the symptoms that supervene.

The treatment is the same from whatever variety of reptile the injury has been received, only modified according to the amount of danger to be apprehended. It is necessary to state, in order to overcome the natural repugnance of most persons to suck a venomed wound, that the most deadly animal poison is perfectly innocuous unless brought in contact with a cracked or abraded surface, and that it might be dissolved and drunk with impunity, if in its passage to the stomach there were no decayed teeth or excoriation on the lips or gullet. Directly after receiving the injury a string or ribbon must be tied tightly round the limb, above the wound, the part washed well and quickly with warm water, at the same time forcing out with the fingers any blood or exudation that may appear; if proper cupping glasses are not ready, instantly apply the lips and suck the wound with a steady exhaustion, spitting out and washing the mouth before again repeating the process, which should be continued for quite ten minutes. When the cupping glasses are used, the mode advised in the beginning of this article is to be adopted. The punctures are then to be treated with lunar caustic as already described, and a hot poultice applied. The fainting, difficulty of breathing, and symptoms of collapse that supervene, are to be met by doses of ether, brandy, and ammonia, or valerian, lavender and musk, repeated every ten or fifteen minutes, alternated every half hour, for four times, with thirty drops of Fowler's solution of arsenic, taken in a tablespoonful of water. Electricity should be applied to the spine, or, if not at hand, substitute friction with mustard along the spinal column. For the drowsiness and coma, the patient must be kept constantly walking, and cold water occasionally dashed in the face. Should much constitutional disturbance manifest itself subsequently; the system is to be strengthened and the morbid action corrected by a course of sarsaparilla—compound decoction—alternated with five drops of Fowler's solution of arsenic every six hours, or a compound Plummer's pill twice a day; at the same time a liberal diet, and such wines and tonics as the case may demand.

BITTERS.—The following recipes will all be found excellent:—1. Take two ounces of juniper-berries, one ounce and a half of gentian-root, a quarter of an ounce of coriander seeds, a quarter of an ounce of orange-peel, a quarter of an ounce of calamus aromaticus, a drachm of snake-root, and half a drachm of cardamom seeds. Cut the gentian-root into small pieces, pound the other ingredients in a mortar, and put the whole into a large bottle or jar with five bottles of the best brandy, gin, or whisky. Shake the bottle a little when the ingredients are first put in, but not afterwards. Let it macerate for twelve days, carefully corked, then strain it off, and bottle for use. Sherry may be substituted for spirits. 2. Put into a quartern of sherry an ounce each of the best pounded aloes, rhubarb, and liquorice root, and a teaspoonful of powdered ginger; keep it in the sun or by the fire for eight or ten days, shaking it frequently; let it settle for four and twenty hours, and strain it through flannel previously to using it. 3. Bruise an ounce of gentian-root and two drachms of cardamom seeds together: add an ounce of lemon-peel and three drachms of orange-peel. Pour on the ingredients a pint and a half of boiling water, let it stand for an hour closely covered; then pour off the liquor, and bottle for use.

BITTERS, USES AND PROPERTIES OF.—Bitters act beneficially upon the system by imparting a *tone* to the stomach, and bracing the organs of digestion to a sufficient degree to enable them to take food with greater avidity. It must be borne in mind, however, that an habitual indulgence in bitters as provocatives of the appetite is a bad one, and often results in serious consequences. Bitters therefore should only be taken medicinally, and with care, for although they are in themselves wholesome, when a judicious use is made of them, they frequently produce fever in delicate constitutions, and check the insensible perspiration which is necessary to health. Bitters should be taken in the morning about half an hour before breakfast, and the dose should not exceed a wineglassful.

BLACKBERRIES, PROPERTIES AND USES OF.—This is the most common of our native berries, and is found in almost every hedge. It has cooling and astringent properties, and is thus serviceable as a domestic remedy for various inflammatory complaints. The juice, mixed with raisin wine before it is fermented, will impart the colour and much of the flavour of claret. This fruit is only occasionally used for puddings, tarts, &c., and is then usually mixed with mulberries or other fruit.

BLACKBERRY, CULTURE OF. — This well-known plant is to be met with in the hedges and on the commons in all parts of England. It is extremely prolific and will grow on the most barren soil. It flowers in the months of July and August, and the fruit is ripe in September or October according to the fineness of the season. Hitherto this fruit has been little cultivated, except by way of experi-

ment, and in these cases it has been clearly shown, that with ordinary care and attention, it would be greatly improved both in appearance and flavour, and ultimately become as agreeable to the eye and to the palate as other more favoured fruits now are.

BLACKBERRY JAM.—Put blackberries that are not quite ripe into a jar, and cover it up closely. Set the jar in a kettle or deep stew-pan of water over the fire, and when it has simmered for five or six hours, force the juice through a sieve. To every pint of juice add two pounds of powdered loaf sugar, boiling and scumming it in the customary manner. Put into jars and tie down with bladder. This jam is sometimes used medicinally as a remedy for the stone, gravel, and dropsy, also for sore throats. The proper quantity to take for this purpose is a teaspoonful every night, and repeated in the morning if necessary.

BLACKBERRY JELLY.—Put the fruit into an earthen pan, squeeze it well with a new wooden spoon; add to it sugar half the weight of the juice, and let it infuse for an hour, then pour on a little water. Turn it into a jelly-bag nearly new; mix some melted isinglass with the juice, the proportion of the isinglass being one ounce to four pounds of fruit; put by in jars for use.

BLACKBERRY WINE.—Gather the fruit when ripe, on a dry day. Put it into an uncovered vessel, having a tap fitted near the bottom; pour in boiling water just enough to cover the fruit. Bruise the fruit thoroughly, and then let it stand covered till the pulp rises to the top and forms a crust, which it will do in three or four days. Then draw off the fluid into another vessel, and to every gallon add one pound of sugar; mix well and turn it into a cask to work for a week or ten days, keeping the cask well filled in the meantime, especially at the commencement. When the working ceases bung the wine down, and bottle in six or nine months. This wine with the addition of a little port wine, in the proportion of about a gill to every bottle, will be greatly improved, and if kept for four or five years, it will drink very much like genuine port.

BLACKBIRD.—This bird is one of the most docile of all the thrush birds. The male is black all over the body; the female blackish brown, tinged on the breast with rust-colour, and on the belly with gray. In confinement it is advisable to put the blackbird in a large cage. In choosing a blackbird from a bird-fancier, it is always advisable to deal with a person of known honesty, as it is very common to palm off birds of inferior song, and of a sickly habit, for superior songsters. This precaution applies with equal force to all dealings in connection with cage birds. Its food chiefly consists of the ordinary bird-paste, but it will also eat bread and meat. It is somewhat tender and delicate, but if treated with care and attention will live in confinement from ten to fifteen years. The blackbird pairs early in the year, so that the young birds may often be found in the nest as early as the end of March. The nest is built in some thick bush, generally near to the ground. The female lays twice or thrice a year five or six eggs, of a grayish green colour, covered with light brown and liver-coloured spots and stripes. The young males are always rather darker than the females, and can by this means be distinguished from them even in the nest. They may be taken as soon as the tail feathers show themselves, and reared on bread and milk. By this mode of treatment they become sooner accustomed to the food of the aviary. The song of the male blackbird is melodious, and consists of deep sonorous passages, like those of the nightingale, though intermixed with others which are rather harsh. It will sing throughout the year, except in the moulting season, and may be taught to whistle several airs without confounding them together.

BLACK-CAP PUDDING.—Make a thin light batter, and just before it is poured into the cloth stir to it half a pound of currants, well cleaned and dried; these will sink to the lower part of the pudding and blacken the surface. Boil it the usual time, and dish it with the dark side uppermost; send it to table with a sweet sauce.

BLACK COCK.—In the shooting of this bird the sport is pursued much after the same manner as the red grouse. The black cock is generally considered to seek his habitation among woody tracts; he is an uncertain bird, sometimes approaching very near to the sportsman, and at others altogether as shy. When black grouse become wild, which they do in October and Novem-

ber, they may be followed a whole day without yielding one successful shot. The best way then is, in order to bag a few, if you know of any birch woods where they frequent, to get a small pony accustomed to the gun. If on the ground, they will allow you to get within shot, and one or two may thus be secured. No dog is required. Early in the morning, just at daybreak, they may be seen sitting on the tops of the birch trees, feeding on the catkins, and they will then

allow a horse rider to approach within a few yards of them. The shooting of black cock *in England* is limited by Act of Parliament from the 1st of September to the 1st of December.

BLACK COCK, TO DRESS.—These birds require to hang for some days before they are dressed, otherwise they are comparatively flavourless. Pick and draw them with exceeding care, as the skin is easily broken, truss them, and lay them at a moderate distance from a clear brisk fire; baste them plentifully and constantly with butter, and serve them on a thick toast which has been laid under them in the dripping-pan for the last ten minutes of their roasting. From three quarters of an hour to an hour is sufficient time to dress them in. Serve with brown gravy and bread sauce.

BLACK CURRANT, CULTURE OF.—This distinct species of currant is a native of most parts of Northern Europe, and is found growing wild in woods, wet hedges, and other moist situations; it is chiefly *propagated by cuttings*, placed in a moist soil and shady situations, such as are afforded by borders of north exposure. The fruit bears chiefly on the shoots of the preceding year, and also from snags and spurs. The bushes require a *regulating pruning* twice a year. In summer, when any bushes are crowded with cross and water shoots of the same year, shading the fruit from the sun and preventing the access of air, thin the heart of the plant and other tufted parts moderately, pinching off or cutting out close what spray is removed; but do not touch the summer shoots in general. Winter pruning may be proceeded with any time from November until the end of February, or until the buds are so swelled that further delay would endanger their being rubbed off in the operation. Cut out the cross shoots and water shoots of the preceding summer, and the superfluous ones on the crowded branches. Prune long ramblers and low stragglers to some well placed lateral or eye. Of last year's shoots retain a sufficiency of the best well placed laterals and terminals, in vacant parts, to form successional bearers. Retain generally a leading shoot at the end of a principal branch; of the supply reserved for new bearers, a small number will probably require shortening. leave these from 8 to 12 inches in length, Between the bearing branches keep a regulated distance of at least six inches at the extremities, which will render them fertile bearers of good fruit. The ripening fruit comes in for partial gathering in June, advances to maturity in July, and continues in perfection till the end of August. Or if the bushes in a full exposure are timely defended from the birds and shaded from the sun with garden nets, or protected with nets when they grow against north walls, the fruit may be continued good till September or October.

BLACK CURRANT JAM.—Put the fruit in a preserving pan and place it over the fire, bruise and mash it well, and add an equal weight of pounded loaf sugar, stir the whole frequently; when it boils, skim and boil it again for ten minutes.

BLACK CURRANT JELLY.—Put eight pounds of fruit into a preserving pan with one pint of water; bruise the currants, and when nearly boiling press them through a hair sieve, then strain the juice through a piece of muslin, and to each pint allow one pound of loaf sugar; break it small, and with the juice put it into a preserving pan; stir it till it boils, let it boil for three minutes, skim it, and when cool put by in pots.

BLACK CURRANT LOZENGES.—Put six quarts of clean picked black currants into a preserving pan, and bruise them with the hand as long as the heat will admit; squeeze them through a sieve, and to every pint of juice add four ounces of brown sugar; boil and stir it for three-quarters of an hour, and then pour it thinly over saucers or small plates, and dry it for three successive days before the fire; cut it into small dice or lozenges, and lay them upon white paper in a box.

BLACK CURRANT PIE.—Put a paste round a dish, fill it with fruit and good moist sugar, add a little water and cover it with paste. In order to prevent the juice from boiling over, a teacup should be placed in the centre of the dish bottom upwards.

BLACK CURRANT PRESERVE.—To every pound of fruit allow half a pint of red currant juice and a pound and a half of powdered loaf sugar. Put them into a preserving pan; stir frequently until it boils; carefully remove the fruit from the sides of the pan, and take off the scum as it rises; let it boil for 10 or 15 minutes.

BLACK CURRANT PUDDING.—Make a paste; lay into a basin a well-floured cloth which has been dipped into hot water, wrung dry, and shaken out; roll the paste thin, press it evenly into the basin upon the cloth; put in the fruit, and cover with paste. Then gather up the ends of the cloth, tie it firmly to the pudding, and put it into plenty of fast boiling water. When it is done, take it out by twisting a strong fork into a corner of the cloth, turn it gently into the dish in which it is to be served, and cut immediately a small round or square from the top, or the pudding will become heavy.

BLACK CURRANT WATER ICE.—Put a dessertspoonful of black currant jelly into a basin, add the juice of two lemons, a gill of syrup, and half a pint of water; strain it and freeze it rich.

BLACK CURRANT WINE.—Take four gallons of fine ripe currants and put them into a large earthen jar with a cover to it. Boil two gallons and a half of water with six pounds of loaf sugar; carefully remove the scum as it rises from the liquid upon the currants in a boiling state, and let it stand for forty-eight hours. Next, strain the whole through a flannel bag into another vessel, return it thence into the jar, let it stand a fortnight to settle, and then bottle off.

☞ Currants, 4 or 5 gallons; water, 2½ gallons; sugar, 6lbs.

BLACK CURRANTS, PROPERTIES AND USES OF.—This fruit has a peculiar flavour which is disliked by some, and therefore it is seldom introduced to the dessert. It is, however, extensively employed in the form of jelly, jam, and preserve, in puddings and

tarts, and the juice fermented yields an excellent wine. The berries have a slightly laxative and diuretic tendency, and the recent juice possesses this latter quality in no ordinary degree. The leaves are extremely fragrant, and have been recommended for their medicinal qualities. Gathered when the flowers are beginning to open and carefully dried, the infusion either alone or with equal parts of black tea, furnishes a pleasant and effectual diuretic. This infusion has the taste and flavour of a mixture of black and green tea. The jelly and jam are convenient vehicles for administering powders and pills, and are also excellent remedies for coughs, hoarseness, &c.

BLACK DRAUGHT.—The common aperient medicine known under this name is made as follows:—

Senna leaves	6 drachms.
Bruised ginger . . .	½ drachm.
Liquorice root sliced .	4 drachms.

Put into half a pint of water; keep this standing by the side of the fire for three hours, then strain, and after allowing it to grow cool, add,

Sal volatile	1½ drachms.
Tincture of senna . . .	½ ounce.
Tincture of cardamoms .	½ ounce.

Cork close in a bottle and put by in a cool place. *Dose*, a wineglassful for an adult; two tablespoonfuls for young persons above fifteen. It is not a suitable medicine for children.

BLACK DYE.—The basis of all black dyes is iron precipitated by some astringent mordant, particularly by those which contain tannin; such as oak, bark, sumach, catechu, galls, &c. The iron is usually in the state of a sulphate, commonly known by the name of copperas, vitriol, or green vitriol. The iron and astringent mordants have so close a chemical affinity for each other, that the colour produced by their mutual action is not destroyed or injured by the contact of air or light. Logwood is usually employed as an auxiliary, because it communicates lustre and adds considerably to the fulness of the black. To *dye wool*, boil the goods for two hours in a decoction of nut-galls, and afterwards keep them for two hours more in a bath composed of logwood and sulphate of iron, kept during the whole time at a scalding heat, but not boiling. During the operation they must be frequently exposed to the air. The common proportions are, 5 parts of galls, 5 of sulphate of iron, and 30 of logwood, for every 100 of cloth. *Silk* is dyed in the same manner as wool, except that as it imbibes a large quantity of tannin, the quantity of galls must be increased to twice as much, and the silk must remain longer in the solution.

BLACK EYE.—A black eye is nothing more than a contusion. Leeches, beneficial in other parts, here only add to the mischief; the best remedies are lotions that absorb the effused blood, such as weak solutions of hartshorn and water, or lotions of sal ammoniac and spirits of camphor. The succulent root called Solomon's Seal, if applied within an hour of the accident, will not only remove all pain and stiffness, but cause complete absorption of the effused blood. It should be scraped like horse-radish, damped with vinegar and applied in quantity to the eye, and kept in close contact for a few hours; but as this is not always to be procured, the following remedy can always be obtained wherever there is a chemist's shop:—First soften the cuticle with warm water, then wet a piece of folded lint in the *pure* extract of lead, and tie it over the eye, re-wetting the pledget every ten minutes, or when it becomes dry. In a couple of hours the discolouration and swelling will have entirely disappeared. When the discolouration remains, after the swelling has been reduced, the appearance of the eye may be improved by spreading over the discoloured parts a little white wax, and dusting thereon very lightly some violet powder, either coloured or otherwise, according to the complexion.

BLACKING BALLS.—Mix one pound of ivory-black, one pound of lamp-black, a quarter of a pound of gum arabic dissolved in water, six ounces of brown sugar, half an ounce of melted glue, and a quart of water; make into balls. This mixture may be either used for boots and shoes, or for restoring the black leathern seats and backs of chairs, &c.

BLACKING FOR HARNESS. — Melt two ounces of mutton-suet with six ounces of beeswax, add six ounces of sugar-candy, two ounces of soft soap dissolved in water, and one ounce of indigo, finely powdered; when melted and well mixed, add a gill of turpentine; lay it on the harness with a sponge, and polish off with a brush.

BLACKING, LIQUID.—Ivory black, four ounces; molasses, three ounces—mix them well together, and then add two tablespoonfuls of milk and two of strong vinegar, mixing well, and put to this one ounce of oil of vitriol.

BLACKING, PASTE.—Half a pound of ivory black, half a pound of treacle, half an ounce of powdered alum, one drachm of turpentine, one ounce of sulphuric acid, and two ounces of raw linseed oil. Mix the ivory black and treacle first together until thoroughly incorporated, then add the rest of the ingredients. It may be cut into square cakes, and should be enveloped in bladder.

BLACK LEAD.—A carburet of iron, consisting of ninety-two parts of iron and eight of charcoal. It is used for polishing grates, stoves, &c., and should be employed in the following manner:—Put some of the black lead into a small pan or saucer and add a little water or small beer, but not sufficient to make it very wet, a portion of this should then be applied to a part of the stove by means of a little round brush; before this gets quite dry a polishing-brush should be used briskly until the surface shines; proceed in the same manner with each remaining part of the stove, till the whole is finished. Sometimes a little gin or egg is mixed with the black lead instead of beer, for the purpose of producing a greater degree of brightness.

BLACK PUDDING.—Cut some onions small, and boil them with a little water and some hog's lard; when well done and there remains nothing but fat, take the flare, cut it

into dice, and put into a stew-pan, with the onions, some pig's blood, and a quart of cream; season with salt and spices; mix all well together, and then fill the pieces of gut, which should have been previously cleansed and cut according to the desired length of the puddings; take care that they are not too full, lest they burst in boiling; tie the ends of each pudding, put them in boiling water, and boil them for a quarter of an hour; then prick them with a pin, and if neither the blood nor the fat come out, they are sufficiently done; let them cool, and broil on a gridiron just before serving.

BLACK PUDDING, IRISH. — Blanch and pound to a paste a quarter of a pound of sweet almonds with a wineglassful of rose-water; grate half a pound of the crumb of bread; mince one pound of fresh suet, add half a pound of clean currants, a teaspoonful of pounded cinnamon, nutmeg, and cloves, a pint of cream, the yolks of four eggs well beaten, the whites of two, a glass of brandy, and a quarter of an ounce of candied lemon peel. Mix all the ingredients thoroughly together; sweeten with pounded loaf sugar and boil it in a cloth. When cold, cut it into thick slices; heat it in a Dutch oven or broil it on a gridiron, and serve.

☞ Almonds, ½lb.; rose-water, 1 wineglassful; bread crumb, ½lb.; suet, 1lb.; currants, ½lb.; cinnamon, nutmeg, and cloves, 1 teaspoonful (mixed); cream, 1 pint; eggs, 4 yolks, 2 whites; brandy, 1 wineglassful; lemon-peel, ½oz.; sugar, to taste.

BLACK PUDDING, SCOTCH. — Salt hog's blood when drawn; strain it; mix with it a little sweet milk or stock; stir into it shred suet and dried oatmeal, with plenty of pepper, salt, and chopped onions, till pretty thick; fill the skins and fasten them at the ends. Boil the puddings for an hour, pricking them as they swell with a needle, to let out the air. Then broil on the gridiron and serve hot.

BLACK REVIVER.—Take bruised galls, one pound; logwood, two pounds; green vitriol, half a pound; water, five quarts; boil for two hours and strain. This is used to restore the colour of *black cloth*. It should be applied lightly and evenly over the surface with a piece of sponge, and the clothes should then be hung out in the air to dry. The following is an excellent *black silk* reviver. Boil logwood in water for half an hour, then simmer the silk in it for half an hour, take it out and put into the dye a little blue vitriol or green copperas; cool it, and simmer the silk for half an hour. Or, boil a handful of fig-leaves in two quarts of water until it be reduced to one pint; squeeze the leaves, and bottle the liquor for use. In cases where the silk has not faded to any considerable extent, cold tea will answer every purpose.

BLADDER.—This well known substance is a species of animal cuticle, and is prepared by cutting off the fat and loose membranes attached to it, and by washing it first in a weak solution of chloride of lime, and afterwards in clean water. This material possesses the property of being perfectly dry and air tight; and is consequently used for a number of domestic purposes, such as covering preserves, pickles, potted meats, &c., which would be destroyed by the action of the air and the contact of damp. Bladders in the shape of a belt round the waist, or in a globular form under each arm, are sometimes used as aids for swimming. But, as they are apt to collapse from being punctured, or on receiving any other external injury, they cannot be relied upon with much security.

BLANCHING, IN COOKERY.—An operation performed by putting meat, tongues, palates, &c., into cold water, when the article is gradually brought to boil, taken out and plunged into cold water, where it is left until quite cold. Blanching is intended to impart whiteness, plumpness, and softness. The operation, while rendering the meat whiter and more sightly, at the same time lessens its nutritive qualities, by abstracting a portion of the soluble saline matter which it contains, and thus deprives it of one of the principal features which distinguish fresh meat from salted meat.

BLANCHING, IN HORTICULTURE.—An operation performed by earthing the stems of plants, by tying up their leaves, or by covering them from the light. *Blanching by earthing* is performed on the celery, cardoon, asparagus, &c. In the case of annuals, the earth is generally drawn up so as to press on the leaves of the plant as it advances in growth; in the case of perennials, a covering of loose earth is generally placed over them before the growing season, through which the stalks shoot up and are blanched. *Blanching, by tying the leaves together*, is sometimes performed on lettuce, cabbage, endive, &c. The plant being nearly in its most leafy state, the head or fasciculus of the leaves is gathered together and tied up with bast ribbons. By this operation two effects are produced; the inner leaves as they grow being excluded from the light, are blanched, and being compressed in proportion to the growth, which takes place after tying up the head, the fasciculus becomes both tender and solid. *Blanching, by overlaying*, is merely the laying down of tiles, slates, pieces of board, &c., on endive and other salading, when nearly full grown; and of which, being thus excluded from the sun, the future growth is colourless. *Blanching, by covering*, is applied to sea kali, rhubarb, asparagus, &c., and consists in placing over each plant a pot which excludes the light, and thereby prevents the formation of the green colour. This pot is represented in the accompanying engraving; it consists of two parts—the body *a*, and the top *b*, which latter is necessary, as it can be taken off to examine the state of the crop, and also to gather it without having to remove the whole of the material. They are of various sizes, from 10 to 14 inches in diameter, and from 12 to 20 inches high.

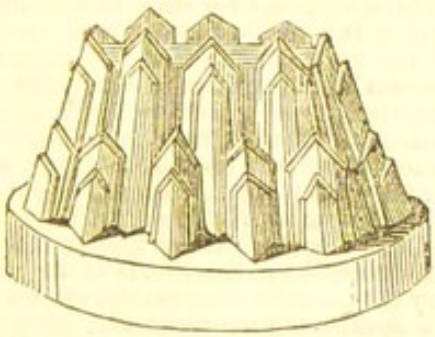
BLANC-MANGE A LA FRANCAISE.—Blanch one pound of sweet and a score of bitter almonds, drain them on a sieve, and afterwards dry them by rubbing them in a napkin; pound them in a mortar, moistening them from time to time with half a teaspoonful of water, to prevent their oiling. When they are pounded as fine as possible take them out of the mortar, and put them into a pan, then with a silver spoon beat up the almonds gradually with a half pint of filtered water; after this spread a napkin over an oval dish, and put the almonds upon it, then gather up the corners of the napkin and wring it very tight, to press out all the milk from the almonds; put into this milk twelve ounces of crystallized sugar, broken into small pieces. When the sugar is dissolved pass the whole through a napkin, and add to it one ounce of clarified isinglass, made rather warm; when the whole is well incorporated pour into the mould, which should be previously iced. The blanc-mange will be ready to serve in two hours.

☞ Almonds sweet, 1lb.; almonds bitter, 20; water, ½ pint; sugar, ¾lb.; isinglass, 1oz.

BLANC-MANGE, AMERICAN.—Mix half a pint of cold water with two ounces of arrowroot, let it settle for a quarter of an hour, pour off the water, and add a tablespoonful of laurel water, and two ounces of sugar; sweeten a quart of new milk, boil it with a stick of cinnamon, and half the peel of a lemon; pick out the cinnamon and lemon, and pour the boiling milk upon the arrowroot, stirring all the time; put it into a mould, and turn it out the following day.

☞ Water, ½ pint; arrowroot, 2ozs.; laurel water, 1 tablespoonful; sugar, 2ozs.; milk, 1 quart; cinnamon, 1 stick; lemon peel, ½ of one.

BLANC-MANGE, COMMON.—Infuse for an hour in a pint and a half of new milk the thin rind of a small lemon, and four or five bitter almonds blanched and bruised; then add three ounces of sugar, and an ounce and a half of isinglass, boil them gently over a clear fire, stirring until the isinglass is dissolved; take off the scum, stir in half a pint or rather more of rich cream, and strain the blanc-mange into a bowl; then



move it gently with a spoon until nearly cold, to prevent the cream from settling on the surface. Mix with it by degrees a wineglassful of brandy, and turn into moulds.

☞ Milk, 1½ pint; lemon rind, 1; almonds bitter, 4 or 5; sugar, 3ozs.; isinglass, 1½oz.; cream, ½ pint; brandy, 1 wineglassful.

BLANC-MANGE, DUTCH.—Put an ounce of isinglass into half a pint of boiling water, and boil it till dissolved, with the peel of a small lemon. Beat up the yolks of three eggs in half a pint of sherry, and when thoroughly mixed, put it to the isinglass with three ounces of sugar. Mix the whole well together, and boil it for a few minutes; then strain it through a hair sieve, stir till nearly cold, and turn it into shapes.

☞ Isinglass, 1 oz.; water, ½ pint; lemon peel, 1; eggs, 3 yolks; sherry, ½ pint; sugar 3 ozs.

BLANC-MANGE EGGS.—Make a small hole at the end of four or five large eggs, and let all the egg out carefully; wash and drain the shells, and fill them with blanc-mange; place them in a deep dish filled with rice to keep them steady, and when quite cold gently break and peel off the shell. Cut the peel of a lemon into fine shreds, lay them in a glass dish, and put in the eggs.

BLANC-MANGE, HOT.—Put into a saucepan a pound of sweet and a dozen bitter almonds, blanched and pounded. In another saucepan boil, with some sugar, a quart of new milk; pour this by degrees, boiling, on the almonds, and pass the whole through a very fine sieve, pressing the almonds at the same time. A quarter of an hour before serving, put this mixture on the fire, and keep stirring it until it adheres to the spoon.

☞ Almonds sweet, 1lb.; almonds bitter, 12; milk sweetened, 1 quart.

BLANC-MANGE FRITTERS.—Put into a stew-pan half a pound of ground rice, four eggs, a quart of milk, and a quarter of a pound of sugar; let it boil three hours, stirring frequently; when it has become thick take it off and add to it half a lemon-peel grated and a saltspoonful of salt. Mix the whole well together and spread it upon a floured dish; dredge some flour over it, and when cold divide the mass into bits, and fry in boiling lard until of a good brown colour; put sugar over them, and serve hot.

☞ Ground rice, ½lb.; eggs, 4; milk, 1 quart; sugar, ¼lb.; lemon-peel, half of one; salt, 1 saltspoonful; flour, sugar, and lard, sufficient.

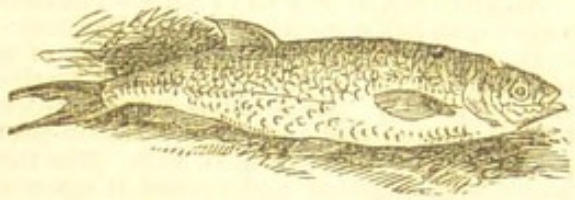
BLANKETS.—To be durable blankets must have a certain weight, a closeness of fabric, and sufficient quantity of wool in them. It is necessary, therefore, in choosing blankets, to look not merely at the rich appearance of the pile, but also the weight and texture. If not in constant use they are liable to be moth-eaten. To prevent this they should be folded and laid under feather beds that are in use, and occasionally taken out in the air and shaken. When soiled they should be washed, not scoured, and well dried before they are laid by. Blankets well chosen in the first instance and kept with ordinary care afterwards, will last a lifetime.

BLAZE.—See FLAME.

BLEACHING.—The best method of bleaching or restoring whiteness to discoloured *linen* is to let it lie on the grass, day and night, so long as is necessary, exposed to the dews and winds. There may occur cases, however, when this will be difficult to

accomplish, and where a quicker process may be desirable. In these cases the linen must first be steeped for twelve hours in a ley, formed of one pound of soda to a gallon of boiling soft water; it must then be boiled for half an hour in the same liquid. A mixture must then be made of chloride of lime with eight times its quantity of water, which must be well shaken in a stone jar for three days, then allowed to settle; and being drawn off clear, the linen must be steeped in it for thirty-six hours, and then washed out in the ordinary manner. To expedite the *whitening of linen in ordinary cases*, a little of the same solution of chloride of lime may be put into the water in which the clothes are steeped; but in the employment of this powerful agent great caution must be exercised, otherwise the linen will be injured. *Silk* is bleached by boiling it in white soap and water, after which it is subjected to repeated rinsings in pure water. *Gloves, stockings, straw bonnets*, &c., are submitted to the action of sulphuric acid, or to the fumes of sulphur, and sometimes by oxalic acid or chloride of lime. *Printed books, engravings*, &c., may be whitened by first subjecting them to the action of weak chloride of lime water.

BLEAK.—A fish of the carp genus; abundant in most of our rivers, particularly in the Thames and the Lea. Its length is about five or six inches; slender in shape, colour bright silvery, with the back olive green. Its tail is forked, and, from its continual motion, it has been called the river swallow.



Angling for bleak is practised both by float-fishing and whipping. In *float-fishing* the tackle should be very fine. The baits, gentles, blood-worms, caddis flies, paste, &c., should be sunk about mid-water, in general casts. In warm weather they take higher, and in cold weather lower than this. Occasionally throw in some ground bait to draw them together, such as chewed bread, dried crumbs, &c., followed by a handful of gravel or sand. *Whipping for bleak* is excellent practice for a young angler. Use a very fine hair line with a black gnat at the end, or otherwise mount one with a very minute ginger-palmer as a stretcher, and two droppers, one of which should be a black gnat, the other a blue. The common house-fly also forms an excellent bait. Bleak is not valued highly as a table fish, and is chiefly taken for the sake of its beautiful silvery scales, which are extensively used in the manufacture of artificial pearl.

BLEEDING AT THE NOSE is the most common and most harmless of all discharges of blood from the body; and in childhood and youth is as often the consequence of sudden heat, exercise, or the merest accident, as it is a natural means to cure a plethoric state of the arterial vessels of the head. It is only when excessive, and it continues for any length of time, that it requires to be checked. As no part of the body is so prone to bleed from the slightest accident as the nose, and as the discharge in hot weather and in full-bodied persons is often abundant and troublesome, the face, nose, and forehead should be freely sponged with cold water; and if the bleeding is obstinate, a wet towel must be laid suddenly over the shoulders, or on the spine, between the neck and shoulders. Sometimes the mere dropping a cold key down the back will produce an immediate suppression of the discharge; all these remedies act by the contracting power of cold, constringing the relaxed vessels. In cases where these means fail, and the patient has been laid on his back without effect, it may become necessary in severe cases and in young persons to extract a few ounces of blood from the arm, or plug the nostril, and so apply pressure immediately to the part affected. For this purpose tie a piece of strong thread round a small compress of lint, and having moistened it well with the extract of lead insert it by the handle of a pen up the nostril from which the blood is exuding. When the cavity is sufficiently distended the patient is to grasp the nose firmly between his thumb and finger, and thus establish for some time a steady pressure on the mouth of the bleeding vessel. After a sufficient time the compress is to be pulled down by means of the string that has been left to hang down. Sometimes this hæmorrhage from the nose is the result of a suddenly checked discharge: in such cases the bleeding is symptomatic, and is on no account to be immediately appeased, or, unless productive of much prostration, to be hastily stopped.

BLEEDING FROM THE STOMACH may proceed, and very often does, from blows, falls, severe pressure, or accidents, though it not unfrequently arises in persons of relaxed and delicate fibre, as a self-created disease. Blood may be effused from the vessels on the surface of the internal coat of the stomach, and remain there for some time before ejected by vomiting; or it may be discharged almost directly after its effusion.

The symptoms that usually characterize the presence of blood in the stomach, are a dry skin, fever, restlessness, and headache; at first a full quick pulse, soon becoming small and wiry, tickling in the throat, and uneasiness at the pit of the stomach, cold extremities, loss of sleep and appetite, nausea, and after a time vomiting, when the amount thrown up is sometimes excessive, and would appear almost beyond the retaining capacity of the organ from which it has been ejected. When the stomach has been relieved the patient feels easier, though the dry skin, furred tongue, thirst and other febrile symptoms continue till, after a remission of a few hours, or sometimes days, the vomiting returns, and a certain portion of blood, of perhaps different colours, with the contents of the stomach, is again ejected. Vomiting of blood is a very dangerous disease, especially in thin, emaciated, and diseased subjects, the patient sinking from exhaustion under the repetition and magni-

tude of the attack. *Treatment.*—If the patient is not advanced in years and the system not prostrated, six or eight ounces of blood may be taken from the arm, the utmost repose and silence enjoined, and the patient placed in a recumbent posture; bottles of hot water placed to the thighs and feet, and a mustard poultice, made of equal parts of flour and mustard, and spread on flannel, is to be applied hot to the region of the stomach.

Having adopted these applications, one of the following pills may be taken every two hours:—

1. Sugar of lead . . . . 12 grains.
   Rhubarb, powdered . 6 grains.
   Opium, powdered . . 2 grains.
   Quinine . . . . . 3 grains.
   Crumbs of bread . . 10 grains.

Mix well and add extract of hyoscyamus enough to make into a mass, which divide into twelve pills. These pills should be followed by frequent draughts of buttermilk or vinegar and water, so as to prevent the lead being decomposed by the acids in the stomach.

2. Mint water . . . . . 6 ounces.
   Hydrocyanic acid (schiel) 1 drachm—Mix.

One tablespoonful to be taken every hour. This mixture may be taken in conjunction with the pills, though more efficaciously employed on alternate days.

3. Infusion of roses . . 12 ounces.
   Elixir of vitriol . . 1 drachm.
   Syrup . . . . . half an ounce—Mix.

Two tablespoonfuls to be taken every three hours, sucked through a quill.

4. Tincture of muriate of iron 2 drachms.
   Infusion of quassia . . . 8 ounces, or half a pint—mix.

One tablespoonful to be taken every hour, sucked through a quill.

5. Powdered alum . . . . 1 drachm.
   Peppermint water . . . 1 pint.

Dissolve, and add compound tincture of catechu, 3 drachms—mix. One tablespoonful to be taken every hour.

Beside these means, lemonade may be drunk freely; lime juice taken in frequent doses of a tablespoonful, either alone, with ice, or mixed in water. Or effervescing draughts may be administered every hour, allowing the effervescence to take place in the stomach.

The diet must be light and of a farinaceous nature, and every precaution is to be adopted to keep the system as low and in as anti-inflammatory a state as possible.

BLIGHT.—A term in common use for supposed atmospherical injuries received by plants. Before effects were traced to their causes with the same care that they are at present, the sudden discolouration of the leaves of plants, their death, or their being covered with minute insects or small excrescences, was called by the general name of blight; and this blight was attributed to some mysterious influence in the air, to the east wind, or to thunder, because these states of the atmosphere commonly accompanied the phenomena alluded to. It is now found that what is called blight is in some cases the effect of insects, to the progress of which the dry state of the atmosphere produced by east wind is peculiarly favourable, while in other cases it is caused by parasitical fungi. The sudden death of plants and also the withering and drying up of part of their leaves and branches, to which appearance the term blight should perhaps be restricted, are produced by the transpiration of water from the leaves taking place with greater rapidity than it can be supplied by the absorption of the roots. In very hot weather, branches of fruit-trees, trained against walls, are sometimes withered up in a few minutes from this cause. What is called the blight on fruit trees is commonly nothing more than the injuries done to the leaves and buds by the caterpillars of certain moths.—See MILDEW, RUST, SMUT, &c.

BLIND—ASYLUMS AND CHARITIES FOR THE.—1. *Hetherington's Charity.* Established for the purpose of paying annuities of £10 to blind persons. The leading qualifications are—birth and residence in England, to the exclusion of Wales and Berwick-upon-Tweed; age, 61 years and upwards; residence, three years in the present abode; and total blindness during that period; income, if any, under £20 per annum. Those who have ever begged, received alms, or are deemed objects of parish relief, day-labourers of every denomination, soldiers and sailors, servants and journeymen in any handicrafts, or persons living by turning a mangle, are excluded from the benefit of this charity, which is intended "for those who have been respectably brought up, and who need some addition to what they have, to make life more comfortable under the misfortune of blindness." Forms of application may be obtained by personal request, or that of a friend (not by post), at the counting-house of Christ's Hospital, London. Clerk, George Trollope, Esq.

2. *The Blind Man's Friend.* Endowed by Mr. Charles Day, of the well-known firm of Day & Martin, who left £100,000 for the benefit of distressed blind persons, of whom 270 are at present receiving pensions from £12 to £20 a year each. The election of pensioners rests exclusively with the three trustees, who meet quarterly to consider petitions, and select the most deserving objects. Applicants must be wholly blind, and residents in England, Wales, or Scotland; the petition must state in full the particular details of the case—name, residence, age, employment, amount of income, length of blindness, &c.; and be signed by the clergyman and churchwarden of the parish, as certifying their general belief in the representations made; also by at least two housekeepers to whom the petitioner is personally known. Trustees, William Underwood, William Croft, and William Simpson, Esqrs. Clerk and Treasurer, John Simpson, Esq. Office, 29, Savile Row, London.

3. *Painters' Charity*; consisting of pensions of £10, distributed by the Painters' Company. The number of pensioners is 173, whose ages vary from 61 to 100 years. Blank forms of petition are issued from the office between the hours of 11 and 3, from the 25th

of October until the 30th of November. Office, Painter's Hall, Queenhithe London.

4. *Came's Charity*, arises from a fund invested with the Cordwainers' Company, for granting pensions to blind men of 46 years of age, and to blind women of 40 years of age. Applications to be made by petition, before the 10th of November. Office, Cordwainers' Hall, 43, Cannon Street West, London.

5. *School for the Indigent Blind*, which, in addition to imparting a moral and religious education to the indigent blind, also instructs them in a trade by which they may be able to provide, either wholly or in part, for their future subsistence. The benefits are extended to both sexes, who, when admitted, are clothed, boarded, lodged, and instructed. All applicants under 10 or above 25 years of age, or who have a greater degree of sight than will enable to distinguish light from darkness, cannot be placed on the list of candidates. Persons desirous of admission may obtain printed papers of questions and engagements at the school, to which answers in writing will be required, attested in the manner therein specified. Office, at the School, St. George's Fields, London. In addition to these charities there is also a Society for Visiting the Blind, Office, 27, Red Lion Square, London; and the London Society for Teaching the Blind to Read, Office, 1, Avenue Road, London.

BLINDNESS.—See EYE, DISEASES OF

BLINDNESS IN HORSES.—The dilation or contraction of the pupil of the eye of the horse furnishes a useful method of ascertaining the existence of blindness in one eye or both. Thus, the pupil is oblong, and variable in size; it differs with the intensity or degree of light that falls upon the eye. In a dark stable the pupil is expanded, to admit a greater proportion of the light that falls upon the cornea; but when the horse is brought towards the door of the stable and more light is thrown upon the eye, the pupil contracts, in order to keep out that extra quantity which would be painful to the animal, and injurious to vision. When opposed directly to the sun the aperture will almost close. In cases of suspected blindness, therefore, let the size of both pupils be carefully noticed before the horse is removed from the stable, and as he is led to the door, observe whether both the pupils contract, and equally so, with the increase of light. If the horse should be first seen in the open air, let it be observed whether the pupils are of exactly the same size; then let the hand be placed over each eye alternately, and held there for a little while, and let it be observed whether the pupil dilates with the obstruction of light, and equally in each eye. According as these indications are absent or present, so is the vision perfect or imperfect. Blindness in both eyes will usually be betrayed by a horse moving his ears in a constant and rapid motion, directing them in quick succession to every quarter. He will likewise hang back in his halter in a peculiar way, and will lift his feet high, as if he were stepping over some obstacle, when there is actually nothing to obstruct his passage, and there will also be an evident uncertainty in the putting down of his feet.

BLIND MAN'S BUFF.—A lively game, very well known, and adapted as a healthy in-door sport for children of both sexes. One of the company is blindfolded; and must then endeavour to catch another of the company, who is then to be blindfolded; and so on in turn. The blindfolded person is usually led to the centre of the room, and some one addressing him, while the rest of the company stand round him, asks—

"How many horses has your father got?"

He answers, "Three!"

"What colour are they?"

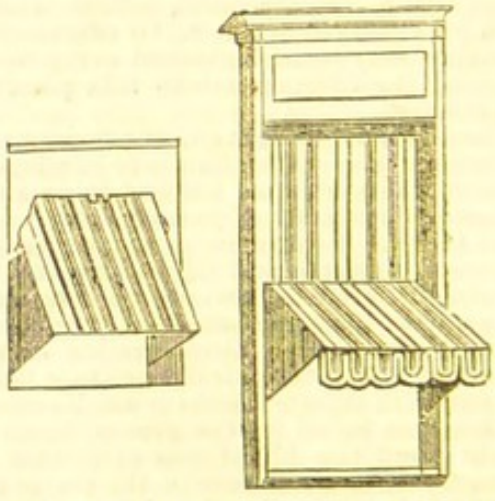
He replies, "Black, white, and gray!"

"Then turn round three times, and catch whom you may."

The fun then begins, and everybody must look out for himself. When any one is caught, all the company keep immediate silence, and the blindfolded person is to call out the name of his prisoner. If he makes a mistake the prisoner must be liberated, and the sport recommenced. In playing this game there should be no unpleasant tricks practised on the blind man, and everybody should share the risk of being caught. It should be observed that this game is best played in a large room, where there is but little furniture and no ornaments or other fragile articles.

BLINDS, FOR WINDOWS. — The blinds generally used for the inside of windows are the Venetian and Holland, both of which are well known. Outside blinds are very useful, and have a picturesque appearance. They have not only the effect of shading the curtains, carpets, and other furniture in a room from the direct rays of the sun, and so preserving their colours; but, by reflecting back the sun's rays they keep the rooms cooler during summer, and also darker, which last circumstance lessens the inducement for flies and other winged insects to intrude themselves. The latest improved blinds of this description are known as the bonnet blinds: *Fig.* 1, represents them as

Fig. 2. *Fig.* 1.



adapted for sitting-rooms; *Fig.* 2, the manner in which they are made for bedchambers. They are usually made of striped cloth, fixed to an iron framing at the bottom; and are

made to rise, by cords and pulleys, into a case of wood at the top of the window, which is generally made ornamental.

BLISTER.—The term blister is applied to any substance that has the power to raise the outer skin into bladders or pustules. There are several varieties of blisters—animal, vegetable, and mineral, the principal being the cantharides or Spanish fly, mustard, euphorbium, mezereon, savine, antimony, silver, vinegar, potassa, and ammonia.

Blistering and counter irritation is a mode of treatment by which it is sought to cure one disease by establishing another of the same type, but less severe than the first; bearing this in mind, the general utility of all external stimulants, especially those of blisters, will be better understood and more fully appreciated.

Blisters are used in medicine as a means of depletion, either to carry off from the body a certain amount of blood in the form of serum, and thus act as a local bleeding, or in addition to this effect, to cause, by the inflammation they produce on the surface, a larger amount of blood to circulate through the adjacent cuticle, and thus relieve some deeper organ or part from the excess of blood that disease causes to be attracted to it. With this view only, and when no depletion is required, medical men are in the habit of using a milder form of blistering than that effected by raising the epidermis in bladders, and to this they give the name of rubifacients, or, in simple English, substances that "make red."

From the benefit they afford, the ease of application, and the safety of their employment, blisters have become of universal use, and may be considered as an established domestic remedy. Yet there are certain points in connection with them that require explaining, both for protection and guidance. When the blister has sufficiently risen, remove the plaster, and nipping the blister where it bags most, gently press out the water, taking great care not to break the skin as it collapses; immediately place over the whole a warm bread poultice, the bread confined within a fold of muslin, and allow it to remain for one or two hours; then carefully remove the poultice, and sprinkle the blistered part with a thick layer of violet powder, cover this with a piece of linen, and by a bandage or handkerchief keep the whole in its place: every four hours add more violet powder, especially over the moist part, taking care not to remove the cake or crust that forms till the cuticle is sufficiently healed to permit of its being taken away, when the place is to be lightly dusted with the powder from time to time, to avoid cracking the new cuticle. It is seldom if ever necessary to interpose gauze or tissue paper between the blister and the skin, and, except in very rare and singular cases, should never be done, nor is there any time that can be fixed as the duration a blister should remain on; this must depend on the rising, which will take from eight to sixteen hours to effect; though in infancy and childhood, from the extreme delicacy of the cuticle, the time required is infinitely shorter. But this is a point that every nurse provides for by frequent inspection. When a blister is not at hand steep a pewter plate or piece of flat metal in boiling water, and place it at once on the skin, pressing it down for a moment, and then allowing it to rise, and as it cools remove it; or in cases of still greater emergency, a blister may be obtained by wetting a part of the cuticle and rubbing on it for a few minutes, lunar caustic; or cut a circular hole out of a piece of adhesive plaster, which having adhered to the skin, tie some lint to the end of a stick, dip the padded end in nitric acid or aquafortis, and brush lightly and rapidly the skin exposed within the hole in the plaster, when a vesicle will be immediately produced. In this country it is seldom that any blister is used but that of cantharides or Spanish flies, except, in extreme cases, that of mustard, as given above. The blister plaster as sold in the shops is a species of tough ointment, and is made of wax, suet, rosin, and lard, all melted over a slow fire, and while cooling the powdered flies stirred in, till the whole, when cold, becomes a smooth, firm, and tenacious mass. The mode of making a blister is to cut out a shape from a piece of adhesive plaster, either round, oval, oblong, or according to the part on which it has to be applied, and taking a piece of the blister plaster, and softening in the fingers with the right thumb wetted in water, extend it over the shape, leaving a margin of half an inch all round; the plaster is to be spread about the thickness of a shilling, and all over of an equal smoothness. This is then to be warmed for a moment before the fire, and applied evenly over the part, the edges of the plaster being nicked, where necessary, to make it lie flat. For the ears the shape of the blister resembles the figure 6, the O part coming under the lobe of the ear, and the tail sweeping behind it; each ear, however, requires a different position of the figure, that of the left needing the 6 as it naturally stands, the right must have it reversed, as thus, 9.

BLISTERED FEET.—The best remedy for this is to rub the feet, when going to bed, with spirits mixed with tallow, dropped from a lighted candle into the palm of the hand.

BLOATERS—are herrings cured in a peculiar manner, as at Yarmouth, where they are first salted, and then smoked with wood smoke, and are known as "Yarmouth Bloaters."—See HERRING.

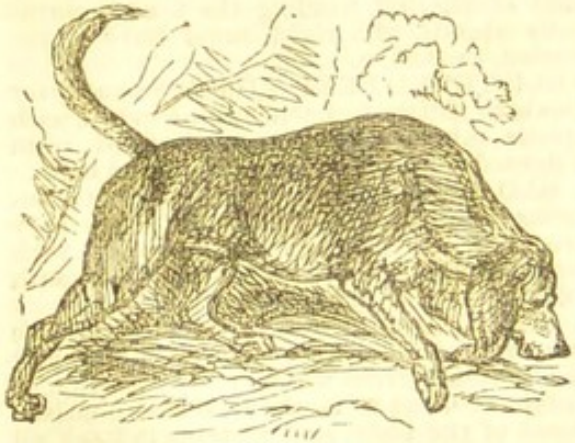
BLOOD is not only a vital fluid, the source of animal heat and moisture, and the fountain from which every secretion is eliminated, but it is the food and nourishment of the body, and contains in itself all the elements from which the bones, muscles, and every organ of the frame are constructed. The temperature of the blood differs in different animals; in man it is ninety-eight degrees, lowest in fishes, and highest in birds. When drawn from the body and collected in a basin, it directly separates into two parts—the clot or coagulum, which being the heaviest falls to the bottom; and the serum, or whey, a thin straw-coloured fluid,

in which the crassamentum or clot floats. Blood consists of water, albumen, fibrine, hydrochlorate of potass and soda, lactate of soda, carbonate and phosphate of soda, colouring matter and peroxide of iron.

Two kinds of blood, alike in their main characters but very different in their properties, circulate at the same time in the body, these are called the *arterial* and the *venous*, the one a bright scarlet, the other a dark purple. *Arterial* blood, or that contained in arteries or pulsating tubes, is specifically lighter than venous blood, of a bright scarlet colour, and of a higher temperature. It comes directly from the left side of the heart and the lungs, where having received fresh oxygen from the air and obtained its heightened colour, it is diffused to the remotest part of the body. *Venous blood*, or the blood of veins, is heavier than arterial blood, thicker, less warm and of a dark purple colour. As arterial blood is loaded with the elements of reproduction, so venous blood is charged with all the waste of the body, the worn down particles and general refuse of the system, which is brought back from the points where the arteries terminate, to the *right* side of the heart, from whence it is sent to the lungs to be purified and converted again into arterial blood. The amount of blood circulating in an adult's body, is estimated at from twenty-eight to thirty pints or pounds of this quantity; three-fourths are supposed to circulate in the veins, and one-fourth in the arteries.

BLOOD, DETERMINATION OF, TO THE HEAD.—See CONGESTION.

BLOODHOUND.—This dog is not unlike the deer hound, but is taller and better formed. It has large and deep ears, the forehead broad, and the muzzle narrow. The expression of the face is mild and pleasing when not excited, but when following his prey his ferocity becomes truly alarming. The bloodhound is trained to



hunt the human being instead of the quadruped. If once put on the track of a supposed robber or murderer he would unerringly follow him to his retreat at the distance of many miles. Such a breed was necessary when neither private individuals nor the government had other means to detect offenders. Now, however, when readier means of detecting culprits exist, this dangerous breed of hounds has fallen into disuse. It, nevertheless, at the present day, is often bred by the rangers in large forests or parks to track the deer-stealer, but oftener to find the wounded deer.

BLOOD LETTING OR BLEEDING.—The operation by which blood is taken from the system, for the prevention and cure of disease, for the purpose of reducing dislocations and rupture, and also for promoting the absorption of medicine more easily into the system. Blood letting is either general or local; general, when abstracted in sufficient quantity to lessen the entire mass of the circulating fluid; local, when performed over or near the disease, for the purpose of diminishing blood in a part.

GENERAL BLOOD LETTING is either performed by opening a vein with a lancet, or by opening the temporal artery or one of its branches.

LOCAL BLOOD LETTING is effected by cutting the part with a scarificator, an instrument armed with from 9 to 18 lancets, and applying the cupping glasses over them; by the application of leeches; or by dividing the most distended vessels with a lancet or bistoury.

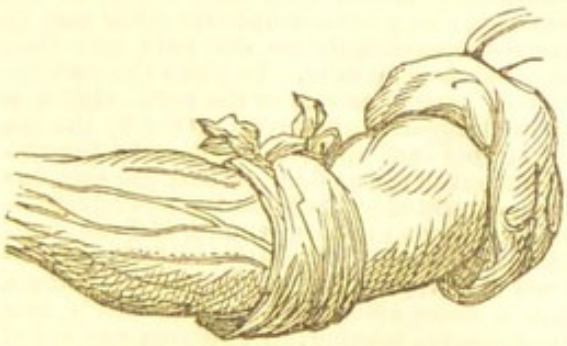
In blood letting from a vein, in whatever part the operation is performed, if the vein is in the foot, ancle, back of the hand, or arm, it is first necessary to tie a string or fillet above the part to be operated upon, and between it and the heart. By this means the return of blood to that organ is arrested at the fillet, and all the veins below it gradually become distended, and rising up show themselves beneath the cuticle; or in fat patients, where the cellular tissue is too thick to allow the veins to appear through the skin, they can be felt beneath by the fingers, like round cords. In every part of the body up to the neck, the bandage is placed *above* where the puncture is to be made; but in the head and neck the compression must be *below* the intended opening. Where the vein is small that has been opened, and the blood consequently flows in a weak and imperfect stream; before opening another, the hand should be placed in a basin of hot water, and the whole arm up to the bandage fomented by wrapping it in flannel dipped in the water; by this means the vein is not only expanded, but the blood from the collateral vessels forced with momentum into the larger tube, and a full and steady stream may in this manner be often obtained. The water is then to be removed, and a staff or the handle of a broom placed in the patient's hand; not only as a support to the arm, but in order to propel the blood steadily through the fingers, by the muscular exertion of grasping it. The proper requisites for bleeding are a clean, sharp lancet, two pledgets or small folds of linen, the smallest about an inch square, and four or six times doubled, the next about twice the dimensions of the first, a fillet, or strip of broad tape, a yard and a half long, a basin to receive the blood, and when the patient is sitting to be bled, a pole or staff for the hand.

General bleeding is ordinarily performed

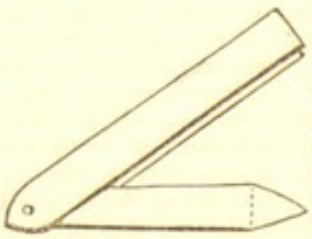
in the arm; it is immaterial in which arm the bleeding is effected, only that it is necessary to accustom both hands to perform the operation; for, if the patient is bled in the left arm, the lancet must be held in the *left* hand, or else the operator is certain to receive the first leap of the blood over his face and person.

Running along each arm from the wrist till lost in the muscles above the elbow, are two well-defined veins, one on the inner, the other on the outer side of the limb. While proceeding up the arm, equidistant between both is a third, called the median. Just before reaching the bend of the arm the centre vein divides into two short branches, diverging obliquely, the outer branch to unite with the external or basilic vein, and the inner in like manner joining the internal or cephalic vein; it is either in one or the other of these two short veins that the operation of bleeding is almost always performed. The outer or median basilic on the thumb side of the arm is the vein generally selected by the surgeon for bleeding, as being larger than the other, and yielding a fuller supply, but it has the danger of lying directly over the brachial artery; and should it be punctured by an inexperienced operator, would lead to an aneurism, and the serious operation of tying the main artery. The other vein, therefore, the one crossing obliquely inwards, the median cephalic, is the best and safest vessel in every respect for the non-medical practitioner to open for the purpose of bleeding. The operator must bear in mind that it is necessary before tying up the arm, to place his finger on the vein he purposes opening, and if he feels any pulsation beneath it, on no account to bleed in that vein, but select one more removed from arterial branches.

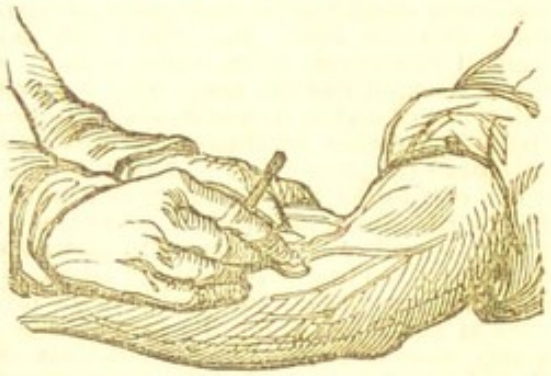
Having selected the vein to be opened, in which the operator will be guided by the size and distinctness of the vessel, first grasping the arm tightly for a few seconds with both hands above the elbow, and allowing the checked blood to distend the veins, when he will be able to decide upon the best one for his purpose, he will then pass the fillet or bandage two or three times round the arm above the elbow, and tie it in a bow beneath the limb; taking care not to make the pressure too tight, as in that case the arterial circulation will be checked and the blood after the first leap will cease to flow; the compression must only be sufficient to



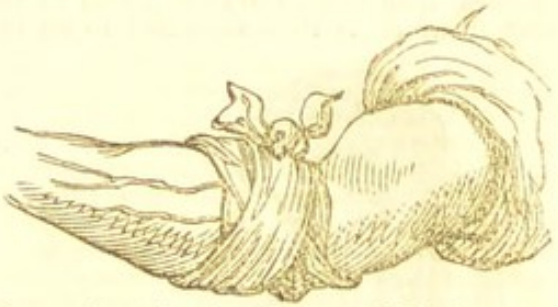
impede the superficial circulation. The lancet is then to be opened at a right angle with the handle, and the blade grasped firmly between the thumb and finger of the right hand, allowing little more than the mere shoulders of the instrument to project. Standing in front of the patient the operator next extends the arm, and letting the elbow rest in his hand, places his thumb over the vein he purposes opening, to keep it steady, then holding the lancet like a pen, with a gentle but steady pressure he should insert the point of the instrument obliquely into the top of the vein in the direction of its course, till having penetrated as far as the



shoulders of the lancet, or where the point merges in the sides—as indicated by the dotted line in the annexed engraving—it is to be brought out by cutting upwards, so that the wound in the vein and cuticle shall be of the same size; the operator then lays down his lancet, and taking up the basin, and litting his thumb from off the vein, allows the blood to flow till he has obtained the quantity desired. It is always necessary to keep



the arm in the same position in which the opening was made, or the skin may get over the orifice and abruptly stop the bleeding. When a sufficient amount has been withdrawn the thumb is again to be placed on



the vein, the bandage untied, the arm washed, and taking up the smallest pledget with the right hand, press with it the divided cuticle together, and closing the orifice the pledget should be placed on the opening, and then the larger one upon that, using the thumb of the left hand, while the palm and fingers support the elbow, to keep them in their position; the centre of the bandage is then to be placed on the compresses or pledgets, and each end passed obliquely round the arm like the figure 8,

tying the two ends over the compress in a small bow, and the arm kept in an unbent and as a quiet a position as possible for 20 or 30 hours.

BLOTCHES.—Blotches or pimples on the face and neck, are, when not the result of a scrofulous state of the system, the consequence of some functional derangement of the liver or stomach; and any external application that would suddenly drive them from the skin, might be attended with troublesome consequences; therefore care must be observed in the employment of lotions. The cause must be in the first instance discovered, and if found to proceed from the *liver*, three grains of blue bill are to be taken twice a day, for three or four days, followed every second morning by a tablespoonful of Epsom salts dissolved in half a pint of water. If from the *stomach*, a powder of fifteen grains of carbonate of soda, with five grains of rhubarb and two of ginger, is to be taken in a wineglassful of water twice a day, and a compound colocynth pill every second morning. If the blotches have been of long standing these means must be persisted in for some time, and the patient should take the decoction of sarsaparilla, or a mixture made by boiling equal quantities of dulcamara and dandelion in four pints of water till reduced to three, and when cold, take a small tumblerful three times a day. At the same time, the face may be washed with elder flower water, in which a small quantity of corrosive sublimate has been dissolved, in the proportion of two grains to a pint; or a lotion may be made of a pint of rose water and one drachm of extract of lead; in both cases the face is to be washed or well wetted two or three times a day. It is sometimes necessary to substitute an infusion of penny-royal for the sarsaparilla, in which case the compound assafœtida pill should be taken instead of the colocynth and salts; and in obstinate cases exercise and sea-bathing must be resorted to as an adjunct to the treatment.

BLOW PIPE.—An instrument by means of which the flame of a candle or lamp is directed upon any substance placed to receive it, which is thus subjected to an in-

tense heat. The blow pipe is to the artist and experimentalist, what the wind furnace is to the artisan; but it is proportionately more powerful, convenient, and economical. Beginners are usually unable to maintain a continuous stream of air from the jet, which is, however, very simple to accomplish. The operation depends upon a little artifice in blowing through the pipe, in order to produce a continued stream of air for many minutes, if necessary, without ceasing. This is done by applying the tongue to the roof of the mouth, so as to interrupt the communication between the mouth and the passage of the nostrils; by which means the operator is at liberty to breathe through the nostrils, at the same time that by the muscles of the lips he forces a continual stream of air from the anterior part of the mouth through the blow-pipe. When the mouth begins to be empty, it is replenished by the lungs in an instant, while the tongue is withdrawn from the roof of the mouth and replaced again in the same manner as in pronouncing the monosyllable *tut;* in this way the stream may be continued for a long time without any fatigue, if the flame be not urged too impetuously.

BLOWS.—The consequences to be apprehended from blows, depend upon the force with which they are given, and the nature of the part injured. Blows are more serious when inflicted on the head and over joints, than over well covered parts, and, like bruises, when the force has been considerable, are immediately followed by the rupture of several small vessels and the effusion of blood, with swelling and discoloration. When the blow is received on a thinly covered part, such as the shin or elbow, the consequences are generally severe, and the parts above the bone frequently slough. There are three objects to be observed in the treatment of blows and all varieties of contusion: to subdue the inflammation that follows the injury; to promote absorption of the effused blood; and restore the tone or strength of the injured part. For the first of these it is customary to apply leeches immediately around the seat of pain, and when by their bleeding the inflammatory state has been subdued, to employ cold lotions of sugar of lead or zinc, to disperse the swelling; but the best application that can be used to effect this purpose, after the use of leeches, is the following:—Sal ammoniac, ½ an ounce; camphor water, 1 pint; vinegar, 4 ounces—powder; and dissolve the ammoniac in the camphor water, and add the vinegar; lastly, mix; and keep rags constantly wetted with this lotion to the swelling; or a little sulphuric ether may be poured occasionally on the part and then allowed to evaporate. To effect the restoration of tone or power to the part, friction is to be frequently employed, either by the use of simple lard and the hand, or by the employment of opodeldoc. When the skin has been lacerated by the blow, the wound is to be treated like an incised wound, and the edges closed with adhesive plaster. But all these objects can be obtained in a much shorter time, and a more efficacious, and infinitely less troublesome manner, by applying extract of lead a few times freely to the part in the same way as a lotion. When the skin is

broken, the only precaution necessary is to lay the abraded part as smooth as possible; should there be any bleeding this will check it; it will subdue the inflammation, dispel the swelling, and, while preventing the chance of sloughing, restore vigour to the part injured.

BLUE-BELL.—The common name given to a bulbous-rooted plant of the hyacinth kind, frequently met with in woods and other places. Its bulb is globular, white, and coated; its leaves linear, channelled, shining, and drooping in their upper half; they are blue, pendulous, nearly an inch long, and scented.

BLUE DYE.—There are several methods for dyeing cotton, linen, silk, and wool of a blue colour, among which are the following:—1. Give the goods a mordant of alum, then rinse them well, and boil them in a bath of logwood, to which a small quantity of blue vitriol has been added. 2. Boil the goods for a short time in a bath of logwood, then add to the liquor tartar and verdigris, in the proportion of one ounce each to every pound of logwood employed. 3. Bilberries, elder-berries, mulberries, and several other blue vegetable substances, may be used to dye blue as above, instead of logwood.

BLUEING.—One of the operations of the laundry, which consists in colouring the last rinsing water very slightly with blue, so that the otherwise yellow colour of the linen is got rid of. Care should be taken to avoid using so much as to make the shade too deep, since a decided blue is just as objectionable as a decided yellow. The blue is tied in a small flannel bag, which is dipped in the water and squeezed, so as at once to stain the liquor as it comes out, and also to graduate its shade with greater delicacy.

BLUE PILL.—One of the most useful, safe, and convenient preparations of mercury. Its use for general purposes has almost superseded calomel, and has this great advantage over all other forms of mercury, that it may be taken with comparative impunity, and employed by the non-professional person with almost absolute safety; an overdose having only the effect of a purgative, passing out of the system by the excessive action it superinduces.

Blue pill exerts three distinct actions on the system, according to the dose and manner in which it is given—as an alterative, an aperient, and a sialagogue (or medicine that acts on the salivary glands, and excites an increased flow of saliva). As *an alterative*, it may either be given alone, in doses of three grain pills twice a day; in conjunction with quinine, sarsaparilla, or a tonic mixture; or it may be taken in combination with powdered rhubarb and colombo; in which case it is customary to make them into powders, as in the following prescription for an alterative medicine:

Blue pill	2 scruples.
Powdered rhubarb . .	1 drachm.
Powdered colombo . .	1 drachm.
Powdered ginger . .	1 scruple.

Rub the blue pill with the rhubarb till incorporated, then add the colombo, mix that well with the other, and lastly put in the ginger; when the whole has been made into a well-mixed powder, divide into twelve papers, taking one in a little jelly or honey, or any conserve, two, or if necessary, three times a day.

As an aperient.—The blue pill is to be taken in doses of from six to twelve grains, either as a bolus or divided into two pills. But where a more general action is required, it is best to combine the blue pill with another form of aperient, such for instance as the compound colocynth pill or extract, with either of which it may be judiciously combined in the proportions of equal parts, or one of blue pill and two of colocynth; as in the following very excellent and useful combinations.

Aperient pill, No. 1:

Compound colocynth pill	2 scruples.
Blue pill	1 scruple.

Mix, and divide into twelve pills; one to be taken three times a day, or two at bed time and one in the morning, when the effect is required quickly, and repeated as occasion demands.

Aperient pill, No. 2:

Compound extract of colocynth Blue pill	} of each. } ½ drachm.

Mix and divide into twelve pills; to be taken as the above.

Aperient pill, No. 3:

Assafœtida pill . . Blue pill . . . . Extract of henbane	} of each one scruple.

Mix, and divide into twelve pills, two to be taken three times a day.

When blue pill is taken alone as an aperient it should never be used at bed time for that purpose, as it will then act on the skin, and materially mitigate its aperient powers.

As a sialagogue.—When employed to act on the salivary glands, to produce a more perfect digestion by yielding a larger solvent for the food and increasing the powers of the gastric juice, it is necessary that the mercury should be kept in the body, so as to enable it to affect the organs that secrete the saliva; it therefore becomes necessary to destroy its aperient and alterative action, and retain it in the system sufficiently long to react on these particular organs or glands. To effect this object the blue pill must be combined with some astringent, such as kino or catechu, so as to prevent its passage out of the body. For this purpose the following combination will be found calculated to meet the requirements necessary:

Blue pill	2 scruples.
Powdered kino . .	1 scruple.

Make a mass, and divide into twelve pills; one to be taken every four hours, till the mouth becomes tender, or the extra flow of saliva shows that the effect wished for has been obtained, when a black draught or two or three compound colocynth pills will be sufficient to carry off the salivating effects of the medicine. A second dose of aperient

medicine may be taken if required; but as a general rule the black draught, or two pills and a draught will suffice for all necessary purposes.

The dose of blue pill as an alterative is from one to three grains, two or three time a day. As an aperient, from five to twelve grains, repeated if necessary; and as a sialagogue from three to five grains in combination with kino or catechu, every four hours.

BLUE STONE—Is used in a solution of from four to fifteen grains to an ounce of water, and applied to foul and indolent ulcers, by means of a wetted rag; it is also rubbed in substance, on fungous growths, warts, &c., to destroy them. *Caution.*—It is a poison.

BLUNDERS. — See PRONUNCIATION, SPEAKING, WRITING, &c.

BLUSHING.—This unpleasant indication of nervousness, trepidation, and other mental emotions, is caused by the sudden disturbance of the blood-vessels, which under these circumstances eject the blood with unusual velocity and in undue quantities towards the surface; and thereby heighten the natural hue of the skin. Blushing, especially in the male sex, is generally regarded as a betrayal of weakness of character and a want of moral courage, and seldom fails to inspire derision and contempt. To remedy this painful demonstration, persons who are subject to it should mingle with society and accustom themselves to speak before company. Previously to entering or leaving a room where many persons are assembled they should determine within their own minds how they shall act, so as not to be flurried or taken off their guard by the unusual attraction which their entrance or exit may occasion. In short, on every occasion when they begin to feel timid, they should whisper courage to themselves, and endeavour to overcome the painful weakness by an effort of the will.

BOARDING HOUSE — A species of hotel, where persons may lodge, and have all, or a portion of their meals, at a fixed rate. Each person is provided with a bedroom, and has the privilege of using a sitting-room which is common to all. The meals are partaken of at one table at certain hours, which have been fixed with a view to the convenience of the boarders generally. Persons are not compelled to remain a specified time, or to give an equivalent warning as in lodgings, but may remain as short or long a term as they please, and pay accordingly. Boarding houses are excellent establishments for those who have otherwise no "home" and few acquaintances, as the advantages of society are offered in every respect the same as though it were a private family, and a person has all his wants provided for, without any trouble to himself, at a reasonable rate. Many travellers, and other persons who are in the habit of moving from place to place, prefer boarding houses to hotels, because they are not expected as a matter of course to drink or pay for wine, spirits, and beer, and also because the terms are much more reasonable. The charges at boarding houses vary according to locality, style, &c., but a person may be domiciled at a very comfortable establishment, at the rate of two guineas per week, including every item of expense.

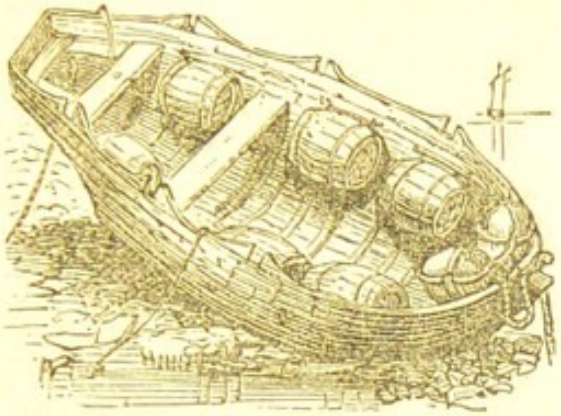
BOARDING SCHOOLS are establishments where young ladies and young gentlemen are taught, housed, and fed, at a certain rate per annum. The terms range from £20 a year upwards; and extras are usually charged for, such as washing, books, music, pew-rent, &c. In most schools each pupil is expected to be furnished with a silver fork and spoon, towels, and other requisites for the toilet. Payments are made quarterly, and it is usual to give a quarter's notice before removing a pupil from a school. Holidays are given twice a year, at Midsummer and Christmas, generally of a month or six weeks' duration, and these intervals are charged for just as though the pupils were actually at school. At some establishments arrangements may be made for keeping a pupil at school during the holidays on payment of a stipulated weekly rate. Before a parent sends his child to a boarding-school he should ascertain by references and otherwise, whether the conductor of the establishment is a properly qualified person; whether he or she exercises the required amount of moral influence over the pupils; whether the treatment is humane, without being unreasonably severe on the one hand, or lax on the other; also as to the quality and quantity of food, the opportunity for exercise, the practice of cleanliness, &c.—See EDUCATION.

BOARDS, TO REMOVE STAINS FROM.—To take out *grease spots:* dissolve some fuller's earth in a little hot water, to the consistency of thick paste, and let it get quite cold. Cover the grease spots with it thickly; and after it has remained all night, or for several hours, until thoroughly dry, scour it off with cold water. Should the grease not disappear with the first application, the operation must be repeated two or three times, or as often as may be necessary for its removal. *To take ink out:* apply strong muriatic acid, or spirits of salts, to the stains with a piece of cloth; afterwards, well wash the parts with water.

BOARDS, TO SCOUR. — Mix lime, one part; sand, three parts; soft soap, two parts. Lay a little on the boards with a scrubbing brush, and rub thoroughly. Be careful to clean straight up and down—not crossing from board to board; then dry with clean cloths, rubbing hard up and down the same way. Floors should not often be wetted, but very thoroughly when done; and once a week they may be dry-rubbed with hot sand and a heavy brush—the right way of the boards.

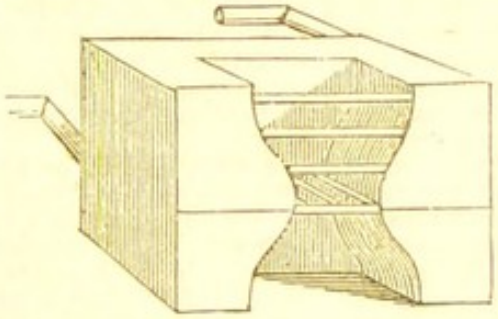
BOAT.—A term used in a general sense to denote any small ship or vessel, whether open or decked, and which may be propelled by oars, sails, or by steam; they are consequently of very different forms and constructions, according to the specific purposes they are intended to serve. One of the most important of this class of vessels is the Life Boat, for the purpose of preserving the lives of persons shipwrecked, or otherwise

left to the mercy of the waves. Several kinds of life-boats have been constructed from time to time, each possessing peculiar features and distinct advantages. On the score of simplicity of construction and of efficiency, the form of life-boat deserving of the highest recommendation, is that shown in the engraving, which consists



merely of the ordinary ship's boat with empty casks fixed in it, by which it is rendered buoyant and incapable of sinking, even when filled with water.

BOILER.—A receptacle for hot water, usually forming a part of the kitchen range. It is supplied with water by an oval aperture at the top, which is closed by a heavy piece of cast iron, fitting it exactly, and having a projection on the other side that runs into a groove. This groove is always full of water from the condensed steam, and the water prevents any steam escaping from the boiler, for before any can come out it must make its way through the water in the groove, and also be strong enough to lift up the cover, which therefore acts as a safety valve. To prevent the trouble of supplying the boiler every day with water by hand, some of them are made self-filling, and are supplied from a small cistern in the kitchen

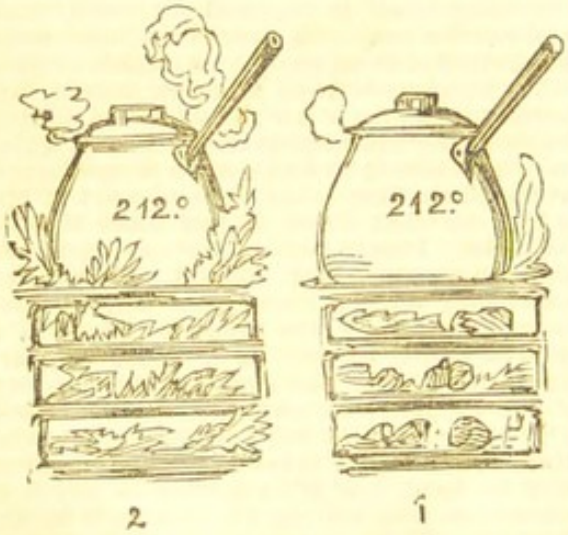


with a ball-tap. Boilers are apt to get out of repair from constant use; they are also liable to crack when suffered to remain empty for any lengthened period. It frequently happens also, that in the course of time a stony deposition is formed in boilers, somewhat similar to the fur of a common tea-kettle, and this incrustation, when it arrives at a considerable thickness, impedes the boiling of the water by its being a bad conductor of heat. When this happens, the top of the boiler must be taken off and the hard incrustation cut out with a chisel. If suffered to remain, not only would the water boil slowly, but the boiler, by getting red-hot, would soon be burned out. The best way is, every three or six months to clean off the incrustation by scraping, while it is thin enough to scale off.

Independent of their domestic uses, boilers may be made to assist horticultural operations. A boiler, similar to that in the engraving, may be connected with the ordinary kitchen range, and fitted with a flow-pipe and a return pipe, both communicating with a greenhouse, conservatory, or ash-pit. It must, however, be carefully borne in mind, that no part of the flow pipe should dip to a lower level than that of the point from whence it started; nor the return pipe dip deeper than the part where it enters the boiler. An air tap, about the size of an ordinary quill, should be fixed in the flow pipe at its highest point for the escape of air, which, if allowed to exist in the pipes, would completely arrest the circulation of the water; such a contrivance as this will in no way interfere with domestic arrangements, as a stopcock can be placed on both the flow and return pipes, rather close to the boiler within, or close to the wall without, as may be most convenient.

BOILING.—This most simple of culinary processes is not often properly performed, from the mere want of attention to the commonest rules. The following are the principal directions to be followed:—Let the saucepan be as nearly as possible the size to hold the joint or piece of meat that is to be boiled, so that no unnecessary quantity of water may be required to cover the meat, and yet that every part of the meat may be covered by water. Should any part be left uncovered, it will be hard and discoloured, and injure the quality of the whole. When the meat itself is required for solid food, and not for soups, its nutritious juices must be prevented from escaping as much as possible, which is done by plunging it into fast boiling water for a few minutes, and adding immediately afterwards as much cold water as will reduce it to a moderate temperature, at the same time taking away a part of the water, so that there is not more than is required. Previously to being placed in the saucepan, meat should be washed extremely clean; sometimes milk is put in the water, or the meat wrapped in a floured cloth, to give it a white appearance, but these devices are unnecessary if due diligence be exercised by the cook. The water must be kept gradually but continually boiling, if it boils too fast the meat will be hard, and if in boiling slowly it is allowed to stop boiling, the meat will be underdone. When the water is beginning to boil a scum will invariably arise, which must be narrowly watched for and removed the moment it appears. After the first scumming, put in a little cold water, which will throw up the rest of the scum. The oftener it is scummed, and the clearer the top of the water is kept, the cleaner and better flavoured the meat will be, but if this be neglected, the scum will boil down and impregnate the meat, thereby deteriorating both its colour and quality. Do not allow

the meat to remain in the water after it is done, as it will become soddened and tasteless; dish it up immediately. The *proportion of water* is a quart for every pound of meat, that is to say supposing the meat should be fresh. The *time required* depends upon the size of the joint; the general rule is to allow twenty minutes for every pound of meat; but salt meat requires longer, and so does a particularly thick joint, such as a leg of pork or of lamb, which will require about twenty minutes in the whole above this allowance. The weather also influences the length of time for boiling, meat requiring comparatively less time in summer than in winter. In *boiling vegetables* they should be washed previously, and have all the old, coarse, and dead leaves carefully picked off and thrown away. An hour before they are cooked they should be put into a pan of clean water with a little salt in it; this will free the vegetables from both insects and dirt. But before putting the vegetables into the saucepan, this salt water must be drained off, or the boiling will be too long kept back, and they will be deprived of their fresh green colour. Remember, also, to boil vegetables in plenty of water; let the water boil fast when they are put in; and let it continue to boil fast till they begin to sink and are quite tender, which are the signs of their being done. To assist in preserving their greenness, throw one or two tablespoonfuls of salt into the saucepan with them. Do not let them be overdone, or their colour will be spoiled. When done, strain them carefully; do not let them remain in the water a minute after they are off the fire, or they will lose their colour and flavour. For the boiling of vegetables al-



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ways use soft water; hard water spoils their colour and interferes with their taste; but if none but hard water can be obtained, throw in a little soda, or a teaspoonful of salt of wormwood. With the exception of carrots and parsnips, which may be boiled with salt beef or pork, vegetables should never be dressed with the meat. In the process of boiling, due regard should be had to the *economy of fuel*, which is often wasted for the want of the commonest knowledge in this branch of cookery. If, for instance, a vessel containing water be placed over a steady fire, as seen in *fig.* 1, the water will grow continually hotter till it reaches the limit of boiling, after which the regular accessions of heat are wholly spent in converting it into steam; the water remains at the same degree of temperature, however fiercely it boils. The explanation of this is, that the heat of boiling water *never rises above* 212 *degrees;* when, therefore, a fierce fire and an equally fierce ebullition, are kept up, as shown in *fig.* 2, the heat above 212 degrees, —as fast as it is evolved, is carried away by the volumes of steam that rise from the surface of the water; consequently, the heat kept up beyond a certain point is a waste of fuel.

In making soup, gravy, or savoury jelly of any kind, the principal object is to abstract from the meat used for the preparation all the nutriment and savour which it can be made to yield; this is effected by putting it into cold water and heating it very slowly indeed, and then keeping it for a specified time at the point of boiling, or letting it simmer in the gentlest manner.

As meat cannot be cooked in water without a certain portion of its nutrient matter being extracted, the water in which meat has been boiled should never be thrown away; as, with the addition of vegetables, it may be made use of for making soups and stews, and thus effect a considerable saving in large families.

BOILS are hard swellings of an inflammatory character, extremely sensitive and painful. They are the result of some gastric or other functional disturbance of the digestive organs, and must always be looked upon as symptoms of an internal derangement, most frequently situated in the stomach. Boils are most prevalent in youth —in persons of a plethoric or full habit of body, and in those of a scrofulous disposition. During unhealthy seasons, and in persons of weak or relaxed fibre, boils are sometimes attended with fever and considerable constitutional disturbance; but, as a general rule, they are purely local annoyances, causing more pain and inconvenience than alarm or danger.

Treatment.—The swelling should be poulticed frequently, either with hot bread or linseed meal; but, as the suppuration is very tedious, the poulticing is to be continued till the skin becomes thin and yields to pressure, when the top of the boil is to be laid freely open with a lancet, the blood and exudation carefully pressed out, and the poulticing resumed, not only till the pus becomes healthy—that is, thick and yellow —but till the core is removed, when the abscess is to be washed with a weak solution of caustic or sulphate of zinc, or if nothing else is at hand, a little rum or brandy and water, strong enough to stimulate the healing process by a little smarting. At the same time that the poulticing is commenced, the following mixture must be taken in doses of *two tablespoonfuls* three times a day, and one of the alterative pills night and morning:—

Raspings of quassia one scruple.
Boiling water . . . half a pint.
Infuse till cold, strain and add—liquor of potass, 3 drachms—mix.

Alterative pills.—Take of
Compound rhubarb pill
Blue pill . . . . .
Extract of hyoscyamus
} of each one scruple.

Mix, and divide into twelve pills.

Or one of the following powders may be taken in a cupful of water three times a day, instead of the mixture; or, as a change, substitute for it—

Carbonate of soda . . 6 drachms.
Powdered colombo . 1 scruple.
Powdered ginger . . ½ drachm.

Mix, and divide into twelve powders.

A change of food and a full and liberal diet is also necessary; at the same time quick and active exercise must be adopted, and, where practicable, sea bathing and the use of the flesh-brush added to the other means employed.

BONA FIDE *(Latin)*.—With good faith; without fraud or deception. In law, an act done *bonâ fide*, is one done with good faith, without fraud, knowledge, or notice of any deceit or impropriety, and in contradistinction to an act done colourably, deceitfully, with bad faith, fraudulently, with knowledge of previous facts rendering the act to be set up invalid.

BONBONS.—Have some little tin moulds—oil them neatly; take a quantity of brown sugar syrup, in the state called a blow, which may be known by dipping the skimmer into it and blowing through the holes, when parts of light may be seen; add a few drops of lemon essence. If the bonbons are prepared white, when the sugar is cooled a little, stir it round the pan till it grains and shines on the surface, then pour it in a funnel; fill the little moulds; when they are hard and cold, take them out and put them in papers. If they are to be coloured, the colouring should be added while hot.

BONE, CULINARY USES OF.—The bones of good meat form most excellent materials for making soups and gravies. The best mode of extracting the nutritious parts from bone, is as follows:—Crush the bones small, and boil them for fifteen minutes in water; when cold, skim off all the fat from the liquor. Then grind the bones and boil them in eight or ten times their weight of water (of which that already used must form a part), until half of it is wasted, when a very nutritious jelly will be obtained. Iron vessels should alone be used in this process, as the jelly and soup act upon copper and brass. The bones of fresh meat are most productive; those of boiled meat rank next; whilst those of roasted meat scarcely afford any jelly.

BONE MANURE. — Bones ground to powder are extensively used in stimulating the first efforts of vegetable life, being placed in the ground immediately before, or along with, the seed. In a crushed state they are employed in the formation of vine borders, as they are slow in decomposing, and, in their decay afford food to the plants long after all other manures applied at the same time have become exhausted. Bone-dust, in combination with sulphuric acid, has of late years been greatly recommended, and in this state it has been found to have greater effect in raising crops on strong land than bone-dust alone. The manner of preparing the sulphurated bones, is to mix a given quantity of sulphuric acid with twice its bulk of water, and to place twice the weight of bone-dust as of the acid, in a tub or trough, and pour over the bones the prepared liquid, gradually and at short intervals; the bones will become entirely dissolved and form a mass with the acid and water. One hundredweight of bones with fifty-six pounds of sulphuric acid, will be sufficient bone manure for an acre of strong garden ground, previously manured with stable-dung; for bone should always be regarded as an auxiliary, and not as a general manure. Bones are often broken down by fermentation with sifted coal-ashes, and even with pure sand, and their value considerably increased, probably on account of their being disintegrated to the smallest possible degree, and thereby mixing more readily with the soil. The following will be found the best method of fermenting bone-dust:—Mix four cartloads of bones with as many of sand, or mould, or sawdust, in a flat-topped heap. The bones should be thoroughly drenched with water, and the other materials moistened. In a few days such a heat will be generated in the heap as to render it unbearable to the hand. As the wet side of the heap will not be heated so much, it should be covered with sand; a large heap makes better manure than a small one; and so do unboiled bones and fresh ones, than boiled and stale ones. The heap should be turned over at the end of a fortnight, and at the expiration of a month the bones will be dissolved. The great difficulty has hitherto been in making the fertilizing properties of bones easily and cheaply available. A discovery, however, has recently been made by which bones may be converted into manure on the most economical principles. It has been ascertained that if bones are suffered to mingle with the ordinary stable refuse for a few months, they will during that time become converted into a perfectly pulpy state, and in a fit condition to dress the soil without any other preparation; it should therefore be a rule with all persons engaged in agricultural pursuits, to have all the bones from the kitchen thrown upon the manure-heap day by day; the refuse of the stable accumulating simultaneously with the bones, and the whole thus forming an excellent manure. Bone manure is not beneficial on wet retentive soils, as continued moisture prevents decomposition; but in every description of dry soil it never fails to succeed.

BONES OF THE HUMAN BODY.—The structure of the bones consists of a fine gauze-like membrane, called cellular tissue, into the cells or meshes of which the bony particles are deposited; the bone taking its shape according to the duty it has to perform. All bones are hollow, and consist of two plates, the centre being filled up with a

kind of honeycomb arrangement, the cells of which are filled with a fine oil, to give them lightness, and avoid the danger of fracture, which, if solid, would occur on the slightest accident. Bones are divided into the round and flat; the round bones, such as those of the leg and arm, are long cylindrical hollow tubes, filled with an opaque semifluid oil called the marrow, which, while adding to the nutrition, imparts strength and lightness to the bone. The flat bones, such as the breast and blade bone, consist of two plates with a cancellated intermediate structure, and form cages or receptacles for the vital organs of the body, as the bones of the skull for the protection of the brain; the ribs and breast bone for the lungs and heart; and the hip bones and sacrum for the bladder, uterus, and large intestines. On the other hand, the long or round bones answer the purpose of levers, and are moved by the power of the muscles inserted into, or taking their origin from them.

The skeleton of the human body consists of 246 bones, divided into two equal sets, with the exception of the spinal column, which is composed of 26 separate bones, one piled on the other like the course of stones on a pillar.

Bones in their first formation are little more than gristle, and can be bent and twisted without fear of fracture; but as the embryo increases, bony particles are gradually deposited till the bone acquires sufficient hardness for the duty it has to perform. In youth, and up to the period when development ceases, the cartilaginous and earthy particles are in nearly equal proportions; but as life advances, the bony elements predominate, and the bones, as in old people, become more brittle, and more easily broken.

BONNET.—This article of female attire is one of the most important, for, according as it offends against, or conforms with, certain principles of taste, so it is rendered what is called "becoming" or "unbecoming," and materially influences, not only the appearance of the face of the wearer, but the whole person. The following are the general principles which should guide females in their choice of bonnets:—When the face is round, it should come so far forward as to cover part of the cheeks; and should the lower part of the face be broad, this defect may be entirely concealed by bringing the corner of the bonnet in a sloping direction towards the point of the chin. When, on the contrary, the face is thin, the bonnet should be so worn as to display as much of the cheeks as possible. Generally speaking, the bonnet, in order to adapt itself to the contour of the face, should be worn slightly off the head, because, when the oval of the face and the oval of the bonnet occupy the same lines of sight, the result is an inartistic formality. But when the two ovals intersect each other, an harmonious combination of lines is produced. Tall females should be careful not to increase their height by the adoption of elevated trimmings; while ladies of low stature may, on the contrary, take advantage of such accessaries.

The following principles with regard to the *colour of the bonnet contrasting with the complexion*, should also be borne in mind:—Pink, yellow, or violet bonnets are unfavourable to fair complexions, because the shades they reflect are of a sickly and greenish cast. On the other hand, blue and green are favourable to fair complexions, on account of the lively and roseate tinge they impart. Again, black bonnets are becoming to fair persons but not to dark, whereas white bonnets are more fitting for brunettes than for blondes.

A bonnet and its trimmings will *last much longer* if dusted immediately after a walk, and then placed in a bonnet-box; for this purpose there is nothing better than a handful of large feathers of fowls tied together. *Straw bonnets* may be greatly improved in appearance by washing them with soap and water, applied with a sponge or flannel; after washing, rinse them well in cold water, and dry them quickly in the air; when dry, beat the white of an egg well and wash the bonnet with it. The wire should be removed previous to the operation, and fastened on afterwards. *Old straw bonnets* may be easily reduced into bonnets or hats for children. The back parts should be cut out, and the better parts worked up into a smaller size. *Chip and straw bonnets* may be dyed black by boiling them three or four hours in a strong decoction of logwood, adding a little green copperas; the bonnets may be allowed to remain in the dye all night, and dried the day following in the open air. The inside and outside should afterwards be well rubbed with a sponge moistened with sweet oil; and, finally, the bonnet should be blocked to the shape required.

The *making of bonnets* may be achieved by any person possessing taste and intelligence after a few instructions, thereby effecting a great saving in expenditure. The materials may be easily procured, and the fashion decided on by the aid of the styles exhibited in the West End shops, and also by consulting the book of fashions.

BOOKCASE.—In order to ensure convenience, cleanliness, and order, every house should be provided with a suitable receptacle for books. On the score of economy, also, this provision is to be recommended; for books that are left carelessly lying about, are apt to meet with rough usage from servants or children, and otherwise liable to a variety of accidents, which carefully placing them away prevents. The most economical bookcases are simple shelves, filling up a side of a room or a recess in it. When they are detached pieces of furniture and large, they are usually made with the lower part deeper, for folios and other large books, and this part may be shut up with close doors, one part containing drawers for prints or portfolios, or shelves for folio books. The projection of this lower part serves as a shelf

to rest books upon. The upper part is usually fitted up with shelves, to contain books of the quarto, octavo, and smaller sizes. In the country, bookcases may do very well without glazed doors, or with doors having wirework only to secure the books; but in the large cities of England, close doors are indispensable to preserve the books from smoke and dust, which prove extremely destructive to them in the course of a few years.

BOOK-CLUBS are associations formed for the purpose of affording extensive reading at a moderate cost. The method adopted is, for a number of persons jointly to subscribe a certain sum annually or otherwise, for the purpose of creating a common fund for the purchase of books. Each person has the privilege of proposing such works from time to time as he is desirous of having in the collection, and the books so procured, are bespoke by the readers, and passed from hand to hand according to priority of claim; by this means each member is enabled to become a sharer in a number of books for the same sum that, under other circumstances, it would have cost him to secure one.

BOOK-KEEPING is the art of recording in a regular, concise, and systematic manner the transactions of merchants, traders, and other persons engaged n pursuits connected with money. There are two modes of keeping books of account; the one by what is termed *Single* and the other by *Double Entry*. The system of Single Entry is chiefly confined to the business of retail dealers; when transactions being limited to the detail of sales and purchases, for cash or credit, a single entry of the account in the ledger is sufficient for the purposes of a record. This, however, is but an imperfect and unsatisfactory mode of book-keeping; and, therefore, in the case of wholesale and mercantile business recourse is had to the system of double entry. By this system each account is entered twice; first on the Dr. or Cr. side of one account, and afterwards on the contrary side of some other account. It has the advantage of keeping the merchant informed, not only of the goods sold, but of what remains on hand, without the trouble and inconvenience of frequently "taking stock;" and it also supplies a check by which errors may be detected, which, by the system of single entry, would probably escape notice.

In the form of book-keeping by *single entry* three books only are necessary — a Cash Book, Day Book, and Ledger. In the *Cash Book* all monies received and paid away should be entered. When money is paid into a bank it is entered on the Cr. side, "Union Bank, as per receipt;" and when money is drawn out the entry is on the Dr. side, "Union Bank, as per order." When goods are purchased for cash, the money being paid away, the entry is on the Cr. side, "By goods, per Day Book." The cash should be balanced every month as soon after the last day of the month as possible. The following example is a record of the cash transactions for a month, in the form that they should be entered.

(1.) Dr. Cash. CASH BOOK. Cash. Cr.

1858.			£	s.	d.				£	s.	d.
Apr. 1	To Stock for Capital in Trade	1	1000	0	0	1858. Apr. 1	By Union Bank, per receipt	1	950	0	0
7	Union Bank, per order	1	85	0	0	4	Warehouse Furniture	1	30	0	0
11	Do. do.	1	60	0	0	7	Gas Fittings	1	12	6	10
13	Do. do.	1	15	0	0	10	Waters & Co., Liverpool	1	109	17	4
"	James Mason, in full	3	74	4	4	12	Jobson & Co., Manchester	2	25	15	0
15	Union Bank, per order	1	135	0	0	13	Thos. Forbes, Leeds	1	37	7	0
16	Jasper Saunders	3	18	16	10	14	Edward Stuart, Norwich	2	13	12	6
17	R. Young, in part	2	5	0	0	17	Union Bank, per receipt	1	70	0	0
19	Robert Preston, in part	3	3	6	8	19	John Thompson, Hull	2	151	13	8
"	John Bell, in full	3	14	3	7	20	Union Bank, per receipt	1	25	0	0
20	Henry White, in part	2	4	0	0	21	Brown & Co., Paisley	2	79	16	0
22	Union Bank, per order	1	45	0	0	30	Goods per Day Book	D	57	0	0
24	James Hope, in full	3	3	3	0	"	Private acc., personal exp.	11	7	8	11
26	Union Bank, per order	1	35	0	0	"	Goods, Changes, petty cash		6	18	7
30	Samuel Wright, in full	4	4	4	0						
"	Goods, Cash, Sales, this month		88	7	6		Balance to next month		1576 13	15 10	10 1
			1590	5	11				1590	5	11

The *Day Book* contains a record of the transactions of each day in the order in which they take place. The party concerned in the transaction, or customer, is named in full, with the term Dr. or Cr. annexed, according to the circumstances of the case; Dr. when you sell goods *to* him, and Cr. when you buy or receive goods *from* him, thus:—

DAY BOOK.

(Fol. 1.)

		£	s.	d.
	London, April 13, 1858.			
	Cr.			
	Harvey & Co., Thames St.			
1	By 5 hhds. Sugar, 44s. 4d.	11	1	8
	2 chests Black Tea, 160lbs. 2s. 6d. . .	20	0	0
	1 cask Muscatel Raisins, 120lbs. 4d. .	2	0	0
	1 cask Valencia do. 180lbs. 3d. . . .	2	5	0
		35	6	8
	14.			
	Dr.			
	Jas. Robinson, Queen St.			
1	To 8⅓ yds. Welsh Flannel, 3s. 2d. . . .	1	6	11
	12 yds. Cambric, 4s.	2	8	0
	15 ,, Muslin, 3s.	2	5	0
		5	19	11
	15.			
C	Cash. Cr.			
	By 50 yds. Poplin, 2s. 9d.	6	17	6
	60 ,, Black Satin, 3s. 2d.	9	10	0
	30 yds. Brussels Lace, 15s. . . .	22	10	0
	25 yds. French Cambric, 14s. 6d. . .	18	2	6
		57	0	0
	Private Account. Dr.			
4	To 2⅔ yds. Cloth, Blue, 16s. 6d.	1	19	2
	3½ yds. super., 8s. 6d.	1	9	9
	15 ,, Cotton, No. 1, 1s. 4d.	1	0	0
	3½ yds. Black Silk, No. 1, 3s. 4d. . .	0	11	8
		5	0	7

In addition to the foregoing specimens of daily entries, the following instructions will serve as a general guidance for the keeping of a Day Book. The date of each entry must be inserted in the margin, the names and addresses of customers written in full. When goods are received or purchased on credit enter under the term of Cr., and distinguish it with the word *By*. When goods are sold on credit add Dr. to the person's name and residence, and commence the entry with the word *To*. When abatement for short measure and discount are allowed by you, enter the person *Dr.*, and when similar allowances are made to you, enter the person *Cr.*

The *Ledger* is a book into which every transaction is entered from all other books, with certain references, indicating the sources from which the items are derived. In this book each customer's name has a certain space allotted to it, in which the goods sold appear on the Dr. side, and the cash and other considerations received, on the Cr. side, thus:—

LEDGER.

(4.) Dr. John Rose

1858.		Fo.	£	s.	d.
Jan. 25.	To Goods .	5	10	8	0
Feb. 8.	,, ,,	9	23	1	0
,, 24.	,, ,,	12	13	12	0
Mar. 12.	,, ,,	17	20	9	5
			67	10	5
Apr. 1.	To Balance.		34	1	4

Cr. Walton St.

1858.		Fo.	£	s.	d.
Jan. 29.	By Cash .	1	4	4	0
Feb. 24.	,, ,,	1	27	11	0
,, 31.	,, Discount	12	1	14	1
	,, Balance.		34	1	4
			67	10	5

The principal books used for *double entry* are the Day Book, Cash Book, Journal, and Ledger. The *Day Book* ought to contain the main transactions that occur in the several stages of business. All entries in this book should be fully intelligible, as it contains the major part of the materials from which other books are formed. The *Cash Book* contains a record of every transaction that takes place in which cash bears a part; the

entries are made roughly and at the time that they actually transpire in the same manner as other transactions are entered in the Day Book. The *Journal* is a book in which the scattered items of the Day Book and Cash Book are fairly entered and methodically arranged. The *Ledger* is the final depository into which the entries from the Journal are again transferred under their several heads. In double entry, however, it must be remembered that each item is entered *twice*, to facilitate which, general accounts are treated in precisely the same manner as personal accounts are treated in the single entry ledger. Thus accounts are opened with *Cash*, *Goods*, *Bills Receivable*, *Bills Payable*, *Interest*, *Commission*, *Profit and Loss*, *Trade Expenses*, *&c.*, just as though they were John Rose, Jasper Saunders, or Robert Preston; every item received or disbursed on their behalf being duly debited and credited to their account.

In order to simplify the apparent difficulties of this system, and to show its working from first to last, the following are presumed extracts, in connexion with one particular set of transactions, traced through the various stages they are supposed to run.

DAY BOOK.

April 2, 1858.

Fo.
Jour.
Bought by William Richards, Boro',
330 yds. Merino, 2s. 1d. . . £34 7 6

2.

Fo.
Jour.
Bought by Robert Green, Bute St.,
147 yds. Velvet, 11s. . . . £80 17 0

2.

Fo.
Jour.
Bought by Samuel Paine, Walworth,
72½ yds. Damask, 3s. 8d. . . £13 5 10

It will be seen that the above are three separate entries of distinct transactions which took place upon the same day. The next example shows how they are introduced into the Journal, where they are entered under the collective heads of Sundries. *Sundries* standing for the names of the parties generally, which in this part of the process it is unnecessary to repeat. The words "To Goods" expresses that Goods having parted with property amounting to a certain total, to the three persons named, or Sundries, it must be credited to that amount, as follows:—

JOURNAL.

April 2, 1858.

Sundries to Goods.

Fo.		
D. B.		
William Richards .	£34 7 6	
Fo.		
D. B.		
Robert Green . .	80 17 0	
Fo.		
D. B.		
Samuel Paine .	13 5 10	
		£128 10 4

The final record of these transactions, is then transferred to the Ledger, where "Goods" is credited, agreeably with the entry in the Journal, to the amount of £128 10s. 4d.; whilst, on the other side, William Richards, Robert Green, and Samuel Paine, are severally charged with the items entered in their names. The result is that the same amount will stand on the Debit side as on the Credit side; the only difference being, that in the one case it appears under a collective head, and in the other it is distributed into three; thus:—

LEDGER.

(fol. 50.)

1858. Goods. Cr.

	£	s.	d.
April 2. By Sundries . . .	128	10	4

(fol. 375.)

Dr. William Richards.

1858.	£	s.	d.
April 2. To Goods . . .	34	7	6

(fol. 202.)

Dr. Robert Green.

1858.	£	s.	d.
April 2. To Goods . . .	80	17	0

(fol. 486.)

Dr. Samuel Paine.

1858.	£	s.	d.
April 2. To Goods . . .	13	5	10

Thus far, the *sale of the goods*. For the *payment*, it will only be necessary to take one of the above examples, namely, that of Robert Green.

It is surmised, that when the goods, which have been here traced through their several entries, are paid for, the settlement of the account will not be confined to cash only, but will include other considerations, such as Bills, Allowances, Discount or Interest, and odd pence. For each of these items, there is an account, which must be *debited* with the respective sums, which they have received from, or allowed to, Robert Green. The first record of this transaction is made in the Cash Book, as follows:—

CASH BOOK.

Fo. Jour. June 1, 1858.

Sundries to Robert Green.

	£	s.	d.
Cash	20	5	0
Bills receivable	55	10	0
Goods (allowance for damages) .	4	11	0
Interest on £20 5s. 2½ per cent. . . .	0	10	2
Profit and Loss (odd pence) .	0	0	10
	80	17	0

This entry will appear precisely the same in the Journal, and therefore needs not be repeated here; but may be at once traced to the Ledger. In the Ledger, accordingly, Robert Green is credited with the total amount of £80 17s., by sundries; *sundries* representing, as before, the various items which do not in this particular entry require to be specified. The account of Robert Green, therefore, will now be the same both on the Debit and Credit side, and may be

accordingly *ruled off*. That done, the general accounts to which the items in the settlement of Robert Green's account appertain, must be severally *debited* in the amounts with which they are chargeable. The result of these entries of the payment of the goods will be similar to that recording their purchase; that is to say, the same total will appear on the debit and on the credit side of the ledger, thus:—

LEDGER.

(fol. 202.)

Robert Green.

1858.	Cr.	£	s.	d.
June 1.	By Sundries . . .	80	17	0

(fol. 8.)

1858.	Dr. Cash.	£	s.	d.
June 1.	To Robert Green . .	20	5	0

(fol. 46.)

1858.	Dr. Bills Receivable.	£	s.	d.
June 1.	To Robert Green . .	55	10	0

(fol. 22.)

1858.	Dr. Goods.	£	s.	d.
June 1.	To Robert Green . .	4	11	0

(fol. 70.)

1858.	Dr. Interest.	£	s.	d.
June 1.	To Robert Green . .	0	10	2

(fol. 101.)

1858.	Dr. Profit and Loss.	£	s.	d.
June 1.	To Robert Green .	0	0	10

By the foregoing examples, therefore, it will be perceived, that everything received, as well as everything parted with, is entered twice, and unless these entries agree with each other, the two sides of the ledger, when finally added up, will not balance; and whether the discrepancy be a deficiency or an excess, there is positive proof of an error existing somewhere.

Amongst merchants and traders, it is usual to have a periodical adjustment of the account books; and before taking a general balance, it is necessary to prove the posting of the ledger, by making out a trial-balance. This is done by adding all the Dr. sides into one sum, and all the Cr. sides into another; these sums will be equal when the ledger has been correctly posted, but if any difference exists, there is certainly an error somewhere that requires investigation. If, however, any sum has been entered to a different account than the one to which it belongs, but on the same side, the two sums will still agree; and the only method to detect an error of this kind, is to have the journal and ledger compared by two persons, the one reading off the journal, and the other turning up the accounts in the ledger, and marking them, when correct, as he proceeds. When a journal entry is either wholly omitted, or twice entered in the ledger, the summing up of the Dr. and Cr. sides of the ledger will not detect the error; but if the cash received, cash paid, bills receivable, bills payable, and day-book entries, are added together, the sum will always agree with that side of the ledger which is correct, and lead to the detection of the error. Double entry would appear, at first sight, to be involved in inextricable confusion, but it is not so in reality, all transactions being governed by the following simple rule:—Anything *received*, the *receiver*, or the account on which anything is *received*, is Dr. Anything *delivered*, the *deliverer*, or the account on which anything is *delivered*, is Cr.

In journalizing the subsidiary books, and in posting the ledger, errors frequently occur; such as debiting or crediting one person or account instead of another; entering the sum too large or too small; omitting entries altogether; posting them twice, &c. Where errors of this kind are discovered they must be immediately corrected. And this must not be done by any erasure or interlineation, but by an entry explanatory of the mistake in the Day Book. This entry is then to be journalized like a regular transaction and posted into the Ledger: for instance, in the Ledger, John Rose is on the 8th of February debited to bills payable, but on the 31st of March it is discovered that this entry should have been posted to Henry Smart's account; Henry Smart is therefore debited to John Rose in the Day Book, and the mistake is thereby explained. If any account has been overposted, it must either be debited or credited for the excess; and if it has been underposted, a new entry must be made upon the same side for the deficiency. When an entry has been entirely omitted, it must be made whenever it is discovered, mentioning *when* omitted; and when an entry has been posted twice, it may be corrected by entering the amount on the other side, noting the fact of its being twice posted.

The most dangerous of all errors are those which may be made in the original entries, and they should therefore be strictly guarded against. The balancing of books should not be delayed beyond a certain time, as too wide an interval renders the correction of any error a work of greater difficulty. It may also happen in the case where an account has been underpaid a year or two previously that the person has subsequently died, failed, retired from business, or have otherwise become inaccessible from any accidental circumstance that is likely to occur with the lapse of time. In these instances a positive loss is sustained which might otherwise have been avoided.

In addition to the books already enumerated, other subsidiary books are generally used. The *Petty Cash Book* has a record of the various charges incurred in trade, which are too trifling to be entered separately in the cash-book; such, for instance, as postage stamps, string, bill stamps, carriage of goods, &c.; this book is balanced once a month, and the total amount of expenditure transferred to the cash-book, under the head of petty cash. *Bills Receivable.*—When a bill is received, it should be immediately entered under this head, and duly numbered; and when a bill is accepted or paid away, it should be entered as *Bills Payable*; for each of these a separate book should be kept, and the bills entered in the form following:—

BILLS RECEIVABLE.

Fo.	No.	When received.	On whose account.	Drawn by	Upon whom.	Payable to	Place.	Date.	Time.	Payable at.	When due.	Amount. £ s. d.	When and how disposed of.	Fo.
42	176	Jan. 1.	R. Sale.	Self.	R. Sale.	Order.	Leeds.	Jan. 1.	3 Mos.	Glyn's.	Apr. 4.	54 10 2		
43	77	Jan. 2.	J. Wood.	Self.	J. Wood.	,,	Preston.	Dec. 20.	2 Mos.	Barnett's.	Feb. 23.	91 8 6		

BILLS PAYABLE.

Fo.	No.	When accepted.	On whose account.	Payable to whom.	Place.	Date.	Time.	Due.	Payable at.	Advised	Amount. £ s. d.	To whom paid, and when.	Fo.
30	219	Nov. 20.	Jackson & Co.	Order.	London.	Nov. 18.	2 Mos.	Jan.	21, 1859.	Hoare's.	25 0 0		

Books: *Huntington's Art of Book-keeping; Tate's Commercial Book-keeping; Kelly's Elements; Foster's Book-keeping Elucidated; Jones's Book-keeping Exemplified; Barnes's Guide to Book-keeping; Tayler's Hints on Book-keeping; Tuck's Manual of Book-keeping; Morrison's Mercantile Book-keeping; Mair's Book-keeping Methodized; Hutton's Practical Book-keeping.* Also various systems by the following: *Booth, Lambert Brewer, McDougal, Dell, Matheson.*

BOOK-STAND. A useful article of furniture, tending to prevent the injuries which books are liable to receive if laid loose on tables. They may be made in a great variety of forms and sizes, according to the particular views and wants of individuals. The most convenient form for professional men, authors, and others having occasion to consult a number of works at the same time, is that shown in the engraving. The

books are placed upon a low conical wheel, and kept open by little brass fasteners, as in music stands; and as this wheel may be turned round upon its stand with the least touch, it is easy to refer to the several books without lifting them from their places.

BOOKS, CHOICE OF. — See ANGLING, ARITHMETIC, ASTRONOMY, BIOGRAPHY, BOTANY, CHEMISTRY, COMPOSITION, COOKERY, DOMESTIC ECONOMY, FARMING, GARDENING, GEOGRAPHY, GRAMMAR, HERALDRY, HISTORY, NATURAL HISTORY, NOVELS, ROMANCES, TALES, &c.; also ARCHITECT, ARTIST, ATTORNEY, &c.

BOOKS, PRESERVATION OF.—Books require a certain degree of warmth and ventilation to preserve both their bindings and their leaves. They should also be removed from their shelves from time to time and dusted, the shelves themselves undergoing a thorough cleaning at the same time. Books are liable to be destroyed by worms and insects, especially in the leaves nearest the cover. Where this danger is apprehended the books, the covers, and the shelves on which they stand should (if necessary) be dusted with a mixture of powdered alum and white pepper; and in addition to this precaution, in the months of March, July, and September, the books should be rubbed with a piece of woollen cloth steeped in a solution of powdered alum, and dried. But all these remedies

would be uncalled for, if a portion of alum and vitriol were mixed with the paste used in the binding. This would act as a certain preventative, as all insects have an aversion to mineral salts.

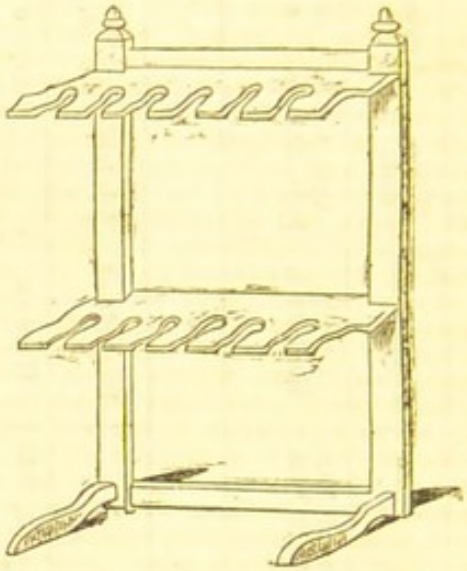
BOOKS, TO REMOVE STAINS FROM.—When the paper is disfigured with *stains of iron* it may be perfectly restored by applying a solution of sulphate of potash, and afterwards one of oxalic acid. The sulphurate extracts from the iron part of its oxygen, and renders it soluble in the diluted acids. The most simple, but at the same time very effectual method of erasing *spots of grease*, wax, oil, or any other fat substance, is by washing the part with ether, and placing it between white blotting-paper; then with a hot iron press above the parts stained, and the defect will be speedily removed. In many cases where other stains are not bad, rectified spirits of wine will be found to answer the purpose. To remove *spots of ink* and even *writing*, spirits of salts, diluted in five or six times the quantity of water, may be applied with success upon the part, and after a minute or two, washing it off with clear water.

BOOMERANG.—This instrument is a curved piece of wood, flat on one side, and slightly rounded on the other; and if skilfully thrown it may be made to go in almost any direction the thrower pleases. It should be held horizontally in throwing it, and cast by bringing the arm backwards, when, after making a variety of curves, the instrument will come back again to the person who sent it. This missile was used by the Australian Aborigines, with which they were very dexterous in hitting birds. The principle of the boomerang has also been attempted to be applied to the propulsion of ships.

BOOT-HOOKS—are instruments intended to be inserted into the loops fastened to each side of Wellington boots, when they are being pulled on. These supply a hold or purchase which cannot be obtained with the hands only, and accordingly increase the power of force applied.

BOOT-JACK.—A well-known contrivance for assisting in removing boots from the feet. Ordinarily they consist of a narrow strip of wood with a space hollowed out at the extremity of the shape of a heel, and having a small block of wood fastened underneath to elevate it a sufficient distance from the ground. These conveniences are also made to open and close with little brass hinges to render them portable and more convenient for being packed in portmanteaus, travelling bags, &c. The best description of boot-jack of all, however, is one which admits of the whole foot being inserted, and is further supplied with an upright rest upon which to place the hands, so that the boot may be withdrawn with the greatest ease, and without a strain upon any particular part of the boot. Where a boot-jack is not at hand, a person should remove his boots by gently easing the heel and the toe alternately. It is always better, however, to use a boot-jack, as kicking boots off injures them.

BOOT-STAND. — This article of bedchamber or dressing-room furniture is very handy, and tends to preserve the orderly



appearance of the room. It is also better for the boots and shoes, which, instead of being allowed to lie about in the dust, are preserved with their original polish, and always in a fit state to put on. Some persons have as many pairs of boots as the stand will accommodate, and wear them on consecutive days of the week as they follow in order; the first pair on Monday, the second on Tuesday, and so on.

BOOT-TOPS, TO CLEAN.—Mix half a pint of boiled milk with a quarter of an ounce of vitriol, and a quarter of an ounce of spirits of salts; shake these well together; then add a quarter of an ounce of red lavender, and apply the liquid with a sponge.

BOOT-TREE. — A mechanical arrangement of several sections of wood, so that they resemble, in the whole, the counterpart of the human leg and foot. These, when inserted into boots, assist in cleaning them; they are also excellently adapted for keeping boots in shape when not in use; and by thus preparing them for the wearer, yield an amount of comfort and ease unattainable without them.

BOOTS. — In choosing these articles of attire, care should be taken that they are strongly made, and of good materials. Low-priced boots are invariably the dearest, as they are constantly needing repair, and wear out in an incredibly short space of time, beyond all mending. The best plan is to employ some respectable bootmaker regularly, who will take care for his own sake, as well as yours, to supply you with a good and well-fitting article. Under these circumstances, it is usual to have a *last* or model of the feet; and the boots always being made

by this, a perfect fit is invariably ensured. Boots should neither be too loose nor too tight; in the one case, they chafe the skin, and produce blisters, and in the other, they cause corns, bunions, and other painful disorders of the feet, by violently pressing upon the surface and impeding the circulation. The soles of boots should not be too thick, because they interfere with the natural bend of the foot, and prevent the muscles of the leg from exercising the amount of action necessary for its perfect development. Neither should the soles be so thin as to expose the feet to the influence of cold and damp; a medium thickness of sole is the best, and will be found the most comfortable wear, even in summer. The heels of boots should not be of an inordinate height, as by that means the foot is unnaturally forced into the fore part of the boot; so that it is impossible to walk any distance without experiencing the greatest pain. The toes of boots should not be too narrow, as the toes of the feet are driven one upon another; and in addition to corns and bunions being induced, that part of the foot becomes permanently deformed, and partially disabled. Boots may be *preserved much longer than they ordinarily are* by a little care and attention. In the first place, they should not be worn immediately after they are made, but left to be seasoned for one, two, or three months. A person should be provided with two or more pairs, putting those by to-day that were worn yesterday, and thus relieving, as it were, the constant stress upon them: by this means, they will also preserve their shape better. When boots are damp, they should be taken off as soon as possible, and placed with the soles towards the fire, at a moderate distance from it. The *creaking* of boots may be remedied by soaking the soles for a few minutes in cold water. The upper leathers of boots are apt to crack, especially at the bend of the foot, the best preventitive for this is to lubricate the leather well with melted mutton fat, suffering it to soak in undisturbed for a week or ten days; the greatest objection to this is, that it prevents the leather from yielding a polish, and it therefore remains a matter of taste with the wearer which alternative he chooses to adopt. When boots are tight, they may be eased by being placed before the fire just previously to putting on; and when they are loose, a little wool or wadding should be put in at the toe part.

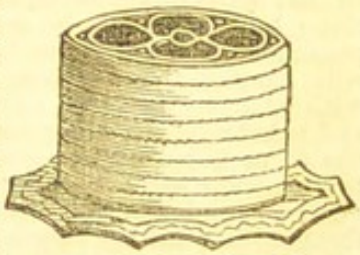
BOOTS, TO CLEAN.—In performing this, the first thing is to scrape off the dirt; this should never be done with a knife, but with a piece of wood fashioned into a similar shape; the remainder of the dirt should then be brushed off as well between the upper leather and the sole, as from every other part. A very little blacking should then be put on, just sufficient to moisten the leather without wetting it; while this is yet damp, the shining brush should be applied briskly and lightly, until a brilliant polish is produced. In order to do this effectively, a portion only of the boot should be done at one time; proceeding in the same manner with the remaining part, until the whole is done.

Patent Leather Boots, when very dirty, should be carefully wiped at the edges of the soles, and also the upper leathers, with a damp cloth, finishing with a dry one: a few drops of sweet oil should then be rubbed over the surface with a piece of soft linen, or an old silk pockethandkerchief.—See SHOES.

BOOTS, TO MAKE WATERPROOF.—Boots that have undergone the process of waterproofing, are useful for occasional shooting and fishing, or for extraordinary inclement weather; but for common wear they are unwholesome, on account of confining the insensible perspiration. Various preparations have been made to brush over leather and render it waterproof; these are generally composed of mixtures of oil, turpentine, rosin, and wax. The following is an excellent recipe:—Melt in an earthen vessel, over a slow fire, half a pint of linseed oil, one ounce of beeswax, one ounce of oil of turpentine, and half an ounce of rosin. If new boots are saturated with this composition, they will be impervious to the wet, and likewise soft and pliable. To obviate the objection urged against the waterproof mixture, cork soles may be worn, which will be found to absorb the moisture without impeding the perspiration.—See CLOGS, GOLOSHES, &c.

BORAX.—Commercial borax is obtained either by purifying native borate of soda, or by saturating pure boracic acid with the alkali. It is extensively employed as a flux for metals, for soldering; and in medicine. Internally it is diuretic, sedative, and refrigerant, in doses of from 15 to 40 grains; externally, as a gargle for sore throat, and in powder, as a detergent in aphthæ, and ulcerations of the mouth. Dissolved in rose-water, it is used as a cosmetic; mixed with eight times its weight of lard, it forms a useful ointment for piles and sore nipples.

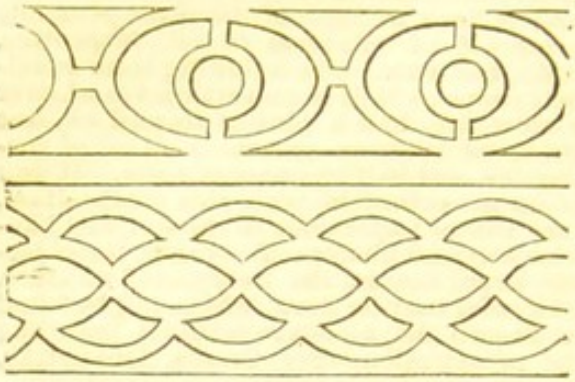
BORDEAUX CAKE. — Roll paste to rather less than a quarter of an inch thick, and cut it into six or seven portions of equal size; lay these on lightly floured or buttered tins, and bake them in a slow oven until they are firm and crisp, and equally coloured of a pale brown. When they are cold, spread upon each a different kind of choice preserve, and pile the whole evenly into the form of an entire cake. The top may be iced, and decorated according to fancy.



BORDEAUX WINE, IMITATION.—Mix a quart of fine Devonshire cider and an equal quantity of port together; shake them well, and put the mixed liquor into bottles, cork them securely and lay them on their sides; in a month it will drink as a very close imitation of Bordeaux wine.

BORDERS FOR GARDENS. — These adjuncts, which are both useful and ornamental, may be either natural or artificial. When flowers are used for this purpose, they should be of the simplest kind, so as to set off to greater advantage the richer bloom

of the other portions of the bed. Among the most suitable border-flowers may be mentioned the daisy, London pride, primrose, violet, gentian, periwinkle, and thrift. The well-known evergreen plant, the box, is more generally employed than any other for borders; it is easily kept in order with occasional clipping, and always looks neat. Stone, slate, or tile borders, are also extensively used, and if designed with taste, are to be preferred to any other bordering, in cases where the possessor of a garden has but little time to bestow upon it. The accompanying engravings represent two de-



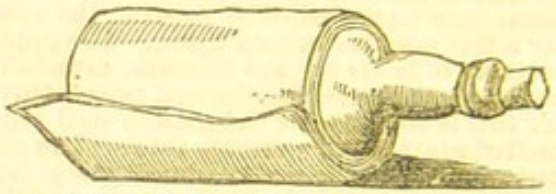
signs for borders, either of which is calculated to produce a chaste and picturesque effect.

BOTANICAL SPECIMENS, TO PRESERVE. — The plants intended to be preserved should be gathered when the weather is dry, and after placing the extremities in water, suffer them to remain in a cool place till the following day. When about to be submitted to the process of drying, place each plant between several sheets of blotting paper, and iron it with a large smooth heater till all the moisture is dissipated. Colours may thus be fixed, which otherwise become pale and blanched. Some plants require a more moderate heat than others, so that some nicety is required in the operation; but if the iron be not too hot, and is passed rapidly over the blotting paper, it will answer the purpose sufficiently well with plants of almost every variety of hue and substance. In compound flowers, where the form is solid and resisting, as the centaurea, some little art is required in cutting away the under part, so that the profile and forms of the flowers may be the more clearly exhibited; to accomplish this successfully, the flowers and fructification should be fixed upon the paper with gum, previous to ironing, by which means they become nearly incorporated with the surface. While this process is going on, blotting paper should be laid under every part except the blossoms, in order to prevent the white paper from being stained.

BOTANY. — A science including everything relating to the vegetable kingdom, whether in a living or in a fossil state. It embraces a consideration of the external forms of plants; of their anatomical structure, however minute; of the functions which they perform; of their arrangement and classification; of their distribution over the globe at the present and at former epochs, and of the uses to which they are subservient. It examines the plant in its earliest state of development, when it appears as a simple cell, and follows it through all its stages of progress until it attains maturity. It takes a comprehensive view of all the parts which cover the earth, from the minutest lichen or moss, only visible by the aid of the microscope, to the most gigantic productions of the tropics. And it marks the relations which subsist between all members of the vegetable world, and traces the mode in which the most despised weeds contribute to the growth of the denizens of the forest. Books: *Lindley's Introduction; Ralph's Elements; Drummond's First Steps; Francis's Grammar; Paxton's Dictionary; Balfour's Manual; Graham's Outlines; Henslow's Principles; Henfrey's Rudiments; Guinness's Views; Fennell's Drawing Room; Archer's Economic Popular; Steel's Botany of the British Isles; Smith's English Botany; Mrs. Loudon's Botany for Ladies; Graham's Botany for Schools; Willshire's Botany for Medical Students; Smith's Systematic and Structural Botany; Encyclopædia Britannica*—article, *Botany*.

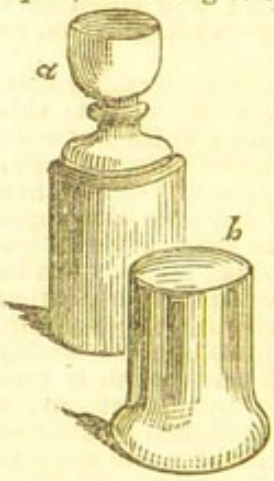
BOTTLE CEMENT.—Melt half a pound of black rosin, half a pound of coarse red sealing-wax, and a quarter of an ounce of beeswax, in a pipkin; when it froths up, before all is melted, stir it with a tallow candle, which will settle the froth and prevent the composition from boiling over. When required for use, dip the head of the corked bottle into the hot mixture.

BOTTLE FOR THE FEET.—In many cases where it is desirable to keep the feet warm, it cannot be better performed than through the medium of bottles filled with hot water; for this purpose common stone



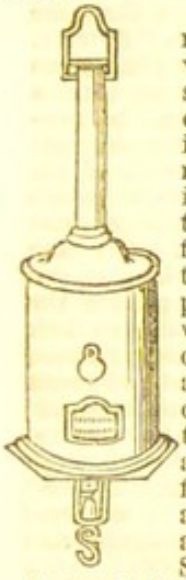
bottles will do; and when used, they should be wrapped round with three or four rolls of flannel.

BOTTLE FOR TRAVELLERS.—A contrivance made to hold a gill or more of liquid, according to the size, and which may be securely and commodiously carried in the coat pocket. *Fig. a* represents the bottle with the glass in it, which is constructed to be put in and taken out as an ordinary stopper. The whole is fixed in an outer case of leather, which protects it from being broken; and when not in use is covered by the upper part of the case, *fig. b*, which keeps the glass in its place, and renders the whole secure and compact. Although this little



contrivance is especially adapted for travellers, it will, as a matter of course, always be found handy on emergencies when refreshment is needed and cannot be procured elsewhere.

BOTTLE-HOLDER. — A new invention, chiefly designed to prevent soiling the hands or heating the wine; at the same time it forms an elegant ornament to the table, is suitable for any black bottle, and may be applied without any trouble; the case in which the bottle stands may be made of wicker work, or any other material, according to fancy; the handle of metal, glass, or leather.



BOTTLE-JACK. — A culinary instrument almost invariably used where small sized joints are cooked. It consists of a spring enclosed in a brass cylinder, and requires winding up every time it is used. The joint is fastened to a hook suspended from the cylinder containing the spring, and is usually placed within a tin screen, which assists in the process of roasting. When bottle-jacks are not in use they should be carefully placed away, so that they may not be thrown down and injured. It will also be found advantageous to apply a little oil to them occasionally to keep them in order.—See MEAT SCREEN.

BOTTLES, CHOICE AND CARE OF.—When it is intended to keep liquors for any length of time, the bottles in which they are put should be selected with care. They should be of good manufacture and of equal diameter throughout, or they will be liable to break in the binn when piled very high. Just previously to being used they should be examined in the open air, the person examining them facing the strongest light, and applying his eye closely to the mouth of the bottle, at the same time turning it slowly round, by which means it will be readily ascertained whether there is any crack or other flaw in the bottle, and also whether it is clean or not. Bottles are best when quite new, but if thoroughly cleaned will answer the purpose sufficiently well.

BOTTLES, TO WASH AND CLEAN.—Bottles should be washed immediately they are emptied, and drained with their necks downwards. If they should have contracted a musty smell, they may be fumigated by a lighted brimstone match put under—first washing them; after which they should be washed again; for this purpose a piece of charcoal left in a bottle for a little time is an excellent remedy. Lead shot is commonly used for cleaning bottles, but when this is done, great care should be observed that none of the shot are left in the bottles, as one or two grains of shot, when dissolved by the wine, are sufficient to communicate to it a poisonous quality and to be productive of fatal results. Small round pebbles of the size of shot answer the purpose much better; but the best method of all, is to put in fine coal, either with hot or cold water, and shaking it according to the substance that fouls the bottle.

BOTTLING CIDER. — This should be performed in the month of April, as the liquor is then in its highest state of perfection. Fill the bottles, and let them remain uncorked until the following morning; then cork very tightly, secure with small string or wire, and cover the top of the cork with melted rosin or wax.

BOTTLING FRUITS.—Burn a match in the bottle, to exhaust all the air, then place in the fruit to be preserved, quite dry, and without a blemish; sprinkle sugar between each layer, put in the bung and tie the bladder over; set by the bottles, bung downwards, in a large stewpan of cold water, with hay laid between, to prevent breaking. When the skin is just cracking take them out.

BOTTLING MALT LIQUORS.—Before proceeding to bottle ale or porter, it is necessary to ascertain whether the liquor is in a proper state for that purpose; if it is but slightly saccharine, and has but little briskness, it is in a fit state for bottling; but if, on drawing out the vent peg, it spirts up with force, it is a sign that the liquor is still too active to be bottled with safety. Should the beer appear a little too brisk and frothy while bottling, the bottles may be left open for a few hours, and filled up as the froth works out, but they should be filled only to within an inch of the cork. It must be observed, that if the corks are driven in while the liquor is working much, there is always a danger of the bottles bursting. Great care should be taken to bottle at the proper time. When a cask of beer is to be bottled, the bung may be loosened, and the beer left exposed to the air for a few hours to flatten it, to prevent the bottles bursting. The *corks* used should be of the best quality; previously to inserting them they should be soaked in a little beer; and when the bottles are corked they should be laid on their sides; that the beer, by swelling the corks, may make them quite tight. The binns should be constantly inspected, to ascertain the state of the liquor, and as soon as the bursting of one bottle is discovered, the remainder should all be set upright to prevent further loss. If the beer is a little too flat when bottled, or if it is wanted to *be up*, as it is termed, very soon, a lump of sugar may be put into each bottle, or four or five raisins, or a teaspoonful of rice; these, by giving rise to a new fermentation, will make the beer quite brisk. The warmer the weather, or the warmer the place where the bottles lie, the sooner will fermentation begin, and the beer be ripe and fit for use. Strong ales may be kept in bottles of glass, without the risk of forcing out the cork or bursting the

glass, but weak ales undergo a much more violent and unmanageable fermentation than strong ales; hence table-beer in warm weather may burst the bottles, while strong ale will not be affected. In some kinds of beer, where there is much fixed air generated, stone bottles, such as those used for ginger beer, will be best, and the corks of these require to be fastened down with string or wire. Great care should be taken that the bottles are perfectly clean; and one great advantage of glass is, that its transparency enables this to be seen. When a small cask of ale or beer of any kind is half consumed, it is a good practice to bottle the remainder, which otherwise would get too flat; but in this case attention must be paid to the time when it is required to be fit to drink. The rule for ascertaining whether beer is *up*, is when, on holding up the bottle to the light, you perceive a rising above the beer.

BOTTLING WINE.—The first thing to be attended to is the choice of good corks; they should be perfectly new, well cut, and flexible; any having black spots in them should be rejected. When the wine runs clear, place a shallow tub under the tap of the cask, and take care that there are two or three small holes near the bung or in it, to allow the air an ingress, to supply the place of the wine withdrawn. All being ready, hold the bottle under the tap in a leaning position. Fill the bottle to within two inches of the top of the neck, so that when the cork comes in, there may remain three-quarters of an inch of space between the wine and the lower end of the cork. The corks should be dipped, not soaked, in wine, and should enter with difficulty; they are driven in with a wooden mallet. If the cork is to be waxed, it must be cut off to less than a quarter of an inch. Champagne bottles must have their corks driven about half way, and fixed down by a wire, this makes them easy to draw. While a cask of wine is bottling off, it is impossible to exclude the admission of air to the surface of the liquor, except some particular method is employed, and if the operation lasts some time, the wine is almost certain to be injured; the best prevention for this, is a bottle of fine olive oil, which being poured into the cask and floating on the surface of the wine, totally excludes the air, and prevents acidity or mouldiness for a whole year. When the crust, or precipitation of wine in bottles, is deposited in excess, and is about to be removed, the wine should be decanted into fresh bottles, or the deposit may mix with and injure the wine. Wine to be fit for bottling, must not only be separated from the gross lees, and have attained perfect clearness by fining, but it must also remain a certain time in the cask, to ripen; for this, no precise rule can be laid down. Generally speaking, however, wine should not be bottled until it has lost its sharpness, and is no longer liable to fermentation. When wine is bottled too soon it often ferments and remains always sharp; the best time to perform this operation is in the month of March or October, especially if the weather be fine and clear.

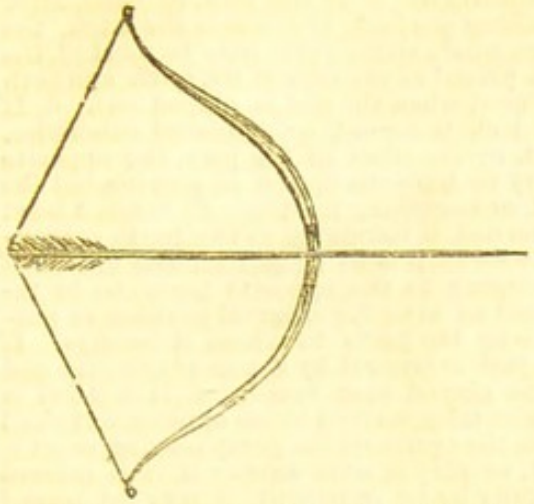
BOUILLON.—A kind of French soup or stew, prepared as follows:—An earthen pot, made to hold from one to seven pounds of meat, is provided. A sufficient quantity of lean meat, usually part of the leg or shoulder, is put into this vessel, which is then filled up with cold water, the proportion being five pints of water to a pound and a half of meat. The pot is then placed on the hearth close to the wood fire, and generally on the hot ashes. When it begins to simmer, the scum which is thrown up is carefully removed from time to time, three quarters of an hour being allowed for this process. A carrot, half a parsnip, a turnip, an onion, a little celery, and any other vegetables in season are then added, together with salt, pepper, and spice. After these additions the pot remains covered at the fire, and is kept there simmering for six hours more, hot water being from time to time supplied in the place of that which has evaporated.

BOUQUET.—A French word which has become English by adoption, and the same as our nosegay, or collection of cut flowers. In the arrangement of a bouquet a judicious exercise of taste is desirable, so that a pleasing and effective whole shall be produced. It is necessary, for instance, that there should not be too many flowers of one kind or of the same colour, but varied as much as possible, and so arranged that they blend and harmonize well with each other. It is usual to place the largest and most beautiful flowers in the centre, the remainder ranging around, according to their attractiveness, the outer edge being formed of the simplest flowers, or merely of green foliage. For particular occasions bouquets are further ornamented with fancy papers, having an aperture in the centre, through which to insert the stems. There are also bouquet holders of gold, silver, or pearl, real or imitative, furnished with a chain and ring, which admits of the bouquet being attached and suspended from the wrist, or any part of the dress. Bouquets are usually taken by ladies to balls, assemblies, theatres, &c.; and on such occasions a gentleman may show his refinement and taste by providing the lady whom he may be about to escort with a bouquet.

BOUQUET DE LA REINE.—A highly fragrant and much esteemed perfume for the handkerchief, &c., compounded as follows:—Oils of bergamot and lavender, of each 30 drops; neroli, 15 drops; oils of verbena and cloves, of each, 5 drops; essence of musk, ambergris, and jasmine, of each, half a drachm; rectified spirit of wine, 2 ounces; mix.

BOW, IN ARCHERY.—It is not easy to construct a serviceable bow; and the best plan is to buy one at a respectable archery warehouse; but if you are determined to make one for yourself, select two pieces of yew tree, laburnum, or thorn, of the length you require. Let one piece, that for the inside, be about half the length of the outside piece; lay them together, and bind them firmly round with cord; place in the centre a piece of cloth or velvet for the hand. Do not weaken the bow by tapering

off the ends too finely. For the bow-string hempen cord is the best, its thick-



ness depending upon the strength of the bow. The strength of the bow is calculated upon the principle, that its spring (the power whereby it regains its natural position) is always proportioned to the extent of its flexion. This is in general cases a fair experiment. The same result may be arrived at by the following method :—The bow being strung, place it horizontally on a ledge, hook a scale on the string, and the weight sufficient to bear it down till it is the length of an arrow from the bow is equivalent to the resisting force. See ARCHERY.

BOW, IN ETIQUETTE.—A mode by which well-bred persons in England recognise and salute each other. A bow ought to be made by bending the upper part of the body and the head forward in a gentle curve; the action should be neither too laboured nor too curt, but the body should be inclined forward, and suffered to regain its erect position with an elastic sort of motion. The occasions upon which this gesture of respect is to be performed are innumerable, such as on entering or leaving a room, meeting with or addressing a lady, appealing to a public assembly, taking wine at dinner, tacitly admitting an error, or permitting an adverse opinion to override your own, acknowledging a compliment, signifying attention when individually addressed, bidding adieu to persons when the acquaintance is slight, &c. On the other hand it must not be repeated too frequently so that it becomes a mark of servility and excessive obsequiousness. In this, as in many other instances involving particular points of etiquette, a person's own good sense and correct taste must step in and define the line, within which it would be rudeness to fall short, and beyond which it is absurdity to overstep.

BOWEL COMPLAINTS are in all cases symptoms of the effect of other causes, and never occur spontaneously, but are the result of indigestive food or excessive acidity of the stomach, the presence of a large quantity of bile in the small intestines, acrid and misacting medicines, wet feet or exposure to cold; the result of disease in the mucous or muscular coats of the bowels, exposure to miasmata or infectious air, and the inhalation of noxious gases.

1. *Bowel Complaint, attended with Sickness and Vomiting.*

The vomiting should be first allayed by small effervescing draughts or wineglasses of soda-water, with a teaspoonful of brandy, given every half hour, and a blister the size of a crown piece laid on the pit of the stomach: while for the relief of the bowels the following mixture is to be given in doses of two tablespoonfuls every hour till the relaxation is checked.

Prepared chalk . . .	1 ounce.
Aromatic powder . .	2 drachms.
Sugar	1 drachm.
Peppermint water . .	8 ounces.

Mix well in a mortar, and add

Tincture of kino . . .	2 drachms.

When the bowel complaint is attended with pain or griping in the stomach, 1 drachm of the TINCTURE OF ASSAFŒTIDA, and 40 drops of LAUDANUM are to be further added to the mixture, which is still to be taken in the same quantity, and, if necessary, repeated as frequently.

2. *Bowel Complaint, the result of Improper or Undigested Food.*

Prepared chalk . . .	1 ounce.
Carbonate of magnesia	2 drachms.
Carbonate of soda . .	1 drachm.
Carbonate of ammonia	2 scruples.
Camphor water . . .	8 ounces.

Mix well in a mortar, and add

Tincture of kino . . .	2 drachms.

Mix and take two tablespoonfuls directly, and one every hour afterwards.

3. *Bowel Complaint, from Exposure to Cold or Wet.*

Infusion of red roses .	8 ounces.
Epsom salts	½ ounce.

Dissolve, and add

Diluted sulphuric acid	30 drops.

Mix, and take two tablespoonfuls every three hours, and one of the following pills every four hours. Should the skin be dry and hot, give 10 grains of Dover's powder, at bedtime, in a little gruel.

Compound rhubarb pill,
Extract of henbane,

of each one scruple. Mix, and divide into eight pills.

4. *Bowel Complaint, attended with Cramps and Spasms.*

Apply hot mustard poultices, made with equal parts of mustard and flour, over the the bowels, and to the inside of each thigh, and give the following mixture and pills every hour till relief is afforded.

Prepared chalk . . .	1 ounce.
Aromatic powder . .	2 drachms.
Carbonate of ammonia	1 drachm.
Mint water	8 ounces.

Mix well, and add

Tincture of kino . . .	3 drachms.
Sulphuric ether . . .	1 drachm.

Mix; two tablespoonfuls with one pill every hour.

Camphor	6 grains.
Powdered opium . . .	4 grains.
Calomel	9 grains.

Extract of hemlock, enough to make into a mass, which is to be divided into six pills.

5. *For the Bowel Complaints of Young Children* the most efficacious and convenient remedy is the tincture of kino, given in doses of 20 to 60 drops, in a little sugar and water, and repeated every hour or two till the relaxation is stopped. When the bowels are disordered from teething, it is best to give an alternative powder every four hours, for two or three times, such as the following for an infant of nine months, increasing the strength according to the age.

Grey powder	6 grains.
Rhubarb	2 grains.
Scammony	9 grains.

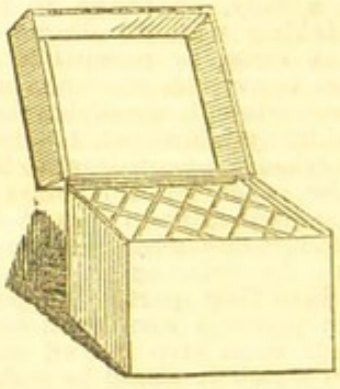
Mix well, and divide into three powders.

When the relaxation has been stopped, it is always advisable to take an aperient pill, in a day or two after, to restore the bowels to a healthy condition. In many simple cases of bowel complaint, a dose of castor oil is the only remedy required, and where resulting from improper food, by its aperient action it both removes the cause and the effect with it. The bowel complaint, or diarrhœa, that occurs as a critical symptom in fever, is on no account to be hastily or injudiciously checked; but when calling for treatment, the mixture No. 4 is the most advisable one to employ for that purpose.

BOWLS.—This game is of great antiquity, and has existed in a variety of forms. That which has ultimately become the proper English game of bowling, is performed with balls of fine hard wood on a smooth shaven lawn, called a bowling green. There are two parties, and each individual possesses a bowl. One of each party bowls alternately. The object is to deliver the ball from the hand along the surface of the green, and in such a manner, as to place it close by an appointed mark. The party which first gains the specified number of points, by being nearest the goal, is victor. The goal, or object played to, is a small ball called the *Jack*. It is not fixed upon any particular spot; but is bowled by one of the party to a certain distance. A knowledge of the value of forces, which can be gained only by experience, is necessary in bowling; but a not less important art is the knowledge of giving a bias to the bowl. The following are the rules of this game, as laid down by the Roxburgh Club, and such as essentially govern the game generally:—

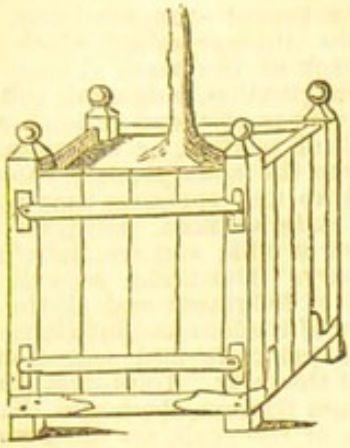
1. The game to consist of nine points, unless otherwise agreed; and the throwing of the jack and playing first, to be decided by lot. 2. If the jack is thrown into the ditch upon any occasion after the first throw, the opposite party have the privilege of throwing it anew, and not afterwards moved, if three clear feet of the ditch in front of the players. 3. All players, when throwing their ball, to have one foot on the aftermost white ball marked on the cloth; the position of the cloth not to be changed during an end; and if by accident removed from its situation, to be placed as near as possible to the same spot; and a bowl touching a jack at any time during its course on the green is what is called a "toucher," and counts the same as any other bowl, though in the ditch. 5. If the jack, or bowl, after touching the jack, is run into the ditch, the place where either rests may be marked, the jack placed at the edge of the ditch, and both replaced when the end is played out. 6. If the jack is *burned*, or displaced otherwise, that, by the effect of the play, the opposite party to have the option of playing out the end, or beginning it anew. 7. When a bowl is burned, if belonging to the party responsible for it, it is to be put off the green: if belonging to the opposite party, to be replaced as near its original position as possible by the party to whom it belongs. If the jack is burned by a non-player, the end to be played over again. 8. If a bowl is accidentally marred by an opponent, it shall be in the option of the party playing to let it rest, or play it over again; if it is marred wilfully by an opponent, it may be placed anywhere, at the pleasure of the player. If a bowl is marred in either case by the player's party, the opponents to have the same privilege. 9. If a bowl (without touching the jack) rebounds from the ditch, it shall be put off the green; and if it has disturbed either jack or bowls, they shall be replaced as near as possible by the opponent's party. 10. After an end is played, neither jack nor bowls to be touched until the game is counted and all parties satisfied. No measuring till the end is played. 11. No player to change his bowl during the game; the party doing so loses the game.

BOX FOR CLOTHES.—Although, generally speaking, boxes are not the most suitable receptacles for clothes, still there are occasions when they must of necessity be used; as, for instance, when travelling, or making a long sea voyage. When so needed, boxes should be chosen capable of adapting themselves to the clothes which are to be packed in them; being of a convenient length,



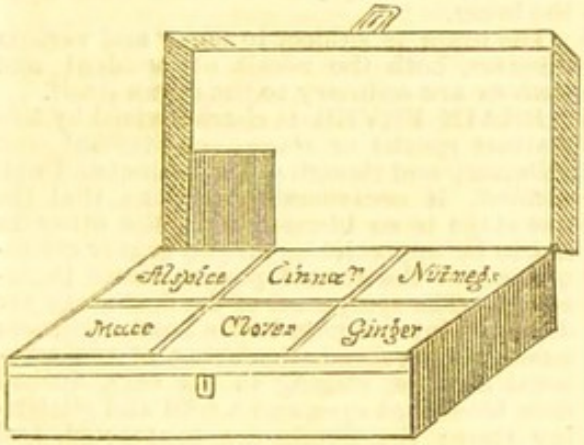
depth, &c., and having partitions where the separation of certain articles is desired. For female attire, the box seen in the engraving, is especially well adapted. It has a frame with a narrow girth crossed within, and resting on a projection some inches below the top of the box. This admits of frills, laces, caps, and other light articles being fixed on the upper side.

BOX FOR PLANTS.—A substitute for a large pot, of a cubical figure, and generally formed of wood; though, in some cases, the frame is formed of cast iron, and the sides of slate cut to fit, and moveable at pleasure The construction of these boxes consists of



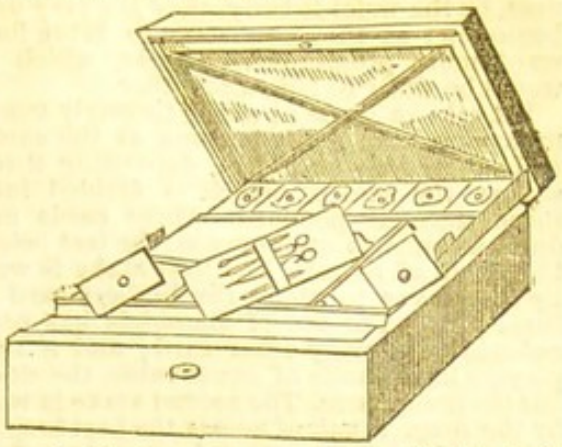
two of the sides being fixed, and the other two moveable, but kept in their places by a couple of iron bars with hinges, which are fastened on one side, and on the other are hooks to catch in. By using these boxes, the state of the roots may be readily examined, the old earth taken out, and fresh put in at pleasure; another material advantage is, that plants may be shifted, by sliding them from one box to another, without disturbing the roots.

BOX FOR SPICES.—In culinary operations, it is essential that all the apparatus, even of the most trifling kind, should be orderly arranged, and ready at hand. With this view, a box for the several kinds of



spices is indispensable, so that any, or all of them, may be ready for use immediately they are wanted. These boxes are of various constructions; but that shown in the illustration is the best, as it not only prevents the aroma of the spices from escaping, but by having each compartment clearly designated, prevents the possibility of one spice being taken in mistake for another.

BOX FOR THE WORK-TABLE.—This convenient and elegant receptacle is almost indispensable for females who are much employed in needlework; as it contains, in a compact form, all the implements and materials called into requisition; and possesses the double advantage of costing but little, and of being portable. The moveable



tray holds the scissors, knife, stiletto, bodkin, &c.; the part beneath is capable of containing the more bulky materials generally used and the part immediately beneath the lid is adapted to retain any article that is required to be kept with great care.

BOXING.—The art of self-defence, which, so long as it is kept within its legitimate limits, without being degraded into a brutal pastime, may be advantageously acquired by every man, in order that, as occasion requires, he may be able to protect himself against aggression and insult. Books: *Pierce Egan's Boxiana; Owen Swift's Handbook to Boxing.*

BOX TREE.—An evergreen bush or small tree, found all over Europe, as well as upon the chalk-hills of England. The wood of this tree is very valuable; it is of a yellowish colour, close-grained, very hard, and heavy; it cuts better than any other wood, is susceptible of a very fine polish, and is very durable. Box trees may be raised from seed, which should be sown soon after it is ripe, in a shady border of light loam or sand, but they are generally propagated by cuttings planted in autumn, and kept moist until they have taken root. The *box plant* is best known for its use in gardens as edgings to borders; the kind so employed is a dwarf variety. Dwarf box is increased by parting the roots or slips. The best time for transplanting this shrub is October, though it may be removed almost at any time, except summer, if it be taken up with a good ball of earth.

BRACES.—A portion of male attire, worn for the purpose of connecting the trousers with the other portions of apparel; some objections have been urged against them, one being, that owing to the strain they necessarily occasion on the shoulders, they are injurious, and interfere with the due development of the chest; if, however, they are chosen of supple and elastic materials, and not fastened too tightly, no ill consequences need be apprehended from their use.

BRACELET.—An ornament worn by females upon the wrist, fashioned from a variety of materials, and of numerous designs. Care should be taken that these ornaments do not fit so tightly as to impede the circulation of the blood or irritate the skin. In a picturesque point of view, brace-

lets tend to set off a white and well rounded arm, but where there is a tendency to redness, or the wrist is bony, they are very unbecoming; as they only serve to bring forward more prominently defects, which it would be wiser to hide altogether.

BRAG.—A game at cards, formerly much in fashion. As many persons as the cards will supply may play, each depositing three stakes, the sum of which is divided into three unequal portions. Three cards are dealt at once to each person, the last being turned up all round. The first stake is won by the player to whom the highest card is turned up. The ace of diamonds has precedence over every other card; and if two players have hands of equal value, the elder has the precedence. The second stake is won by the *Brag*. A pair of aces is the best brag, a pair of kings the next, and so on in order. The knave of clubs and the nine of diamonds combined with any pair, make what is termed a *pair royal*, which has preference over everything, except a *natural pair royal*, formed of any of these similar cards. A natural pair, however, does not supersede an artificial pair made by these favourite cards. Sequences and flushes count after these pairs. The sport of the game arises at this point. Any player who *brags* that he holds a better hand than his neighbour, may stake upon it according to his desire of confidence; and the player who brags longest and ventures most, sweeps the stake, although, perhaps in truth, his hand is inferior in value. Either party, however, may, if he pleases, demand to see the hand of the other, and then the strongest hand wins. The third stake is won by the eldest player whose cards amount nearest to thirty-one.

BRAIN.—The brain is a large flat sheet of considerable dimensions, expanding from the spinal marrow like an open umbrella from the stem that supports it; and con-

sists of two distinct substances; the under surface soft, white, and tenacious, like a cake of marrow, and the upper surface more firm than the other, and of an ashy grey colour. This sheet of brain is rolled up so as to confine it in the smallest compatible space, having at the same time regard to the rise and fall of its substance, in time with the swell and exhaustion of the lungs, and when so confined to protect it as far as possible against ordinary dangers.

The brain is divided into two perfect halves, called hemispheres, right and left; while each hemisphere, in turn, is further divided into three distinct parts or lobes. There are also five small cavities made between the convolutions, called ventricles. Besides the division into hemispheres and lobes, the brain is further subdivided into the brain proper—the cerebrum, and the little brain—the cerebellum, which is situated at the back of the head. The first is the seat of imagination, judgment, and thought, and the source of those actions which are the result of volition, or dependence on the will; from the latter proceed those animal propensities and appetites that are, in the natural state of man, irrespective of the judgment or will; and are, therefore, called involuntary. The brain, as well as being the seat of judgment and all the reflective functions of wisdom and intelligence, is also the vital principle and source of all the nerves of the body. To protect this delicate organ from friction, the bones that contain it, inside of the skull, are lined with a thick fibrous membrane, that covers all the asperities of the bones as with a pad; and between this and the exterior surface of the brain, has been expanded a very fine, thin, serous texture, like the glazy pellicle on the inside of an egg shell, the purpose of which is to secrete a fluid that shall lubricate the surface of the membrane above, and allow the brain to glide about its box with smoothness and facility. At the same time, dipping into all the convolutions, and following the brain in all its folds and doublings, is a third delicate membrane, a perfect network of arteries, veins, and lymphatics, all woven together by the most gossamer tissue, and the duty of which is to carry nourishment, or blood, to every part of the substance of the brain.

The brain is subject to many and various diseases, both the result of accident and such as are ordinary to the organ itself.

BRAIN FEVER is characterized by two distinct epochs or stages—excitement and collapse; and though often distinct and well defined, it occasionally happens that the one stage is so blended with the other as not to be appreciable, till the graver consequences of the second period evince themselves. The symptoms of the first stage are deep and intense pain in the head, tightness across the forehead, throbbing of the temporal arteries, ringing in the ears, flushed face, bloodshot eyes, and a wild and glistening stare; the pupils are contracted, and particularly sensible of light, while the ears are impatient and irritable to the sense of noise: violent delirium, want of sleep, convulsive paroxysms, attended with a hot dry skin, hard quick pulse, a white coated tongue, great thirst, nausea and vomiting, and a confined state of the bowels. Sometimes the delirium is the first symptom shown, or the disease may progress to a culminating point in a more insidious manner, often commencing with an apparent attack of biliary vomiting. This formidable disease usually proves fatal in a few days, sometimes in twelve hours.

The mode of treatment resolves itself into

blood-letting, purgatives, and cold applications to the head. In bleeding, respect must be had to the *effect* produced, and not to the *quantity* abstracted, that is, till the pulse is affected, or fainting takes place; for this purpose, the patient should be bled *standing*, and from a *large* orifice, in a full stream. About half an hour after the bleeding, and when the patient has rallied from the fainting, cupping is to be employed behind the ears, or the nape of the neck, while half-a-dozen leeches are applied to each temple. At the same time, bladders of ice are to be applied to the shaved head, occasionally varied by rubbing ether over the scalp briskly, and allowing it to evaporate. As constipation is a marked feature of brain fever, powerful purgatives must be employed from the first indication of the disease; for this purpose, one of the following powders should be given every three hours, and *three* tablespoonfuls of the accompanying mixture every *four* hours.

Powders.—Calomel . . . 30 grains.
Jalap . . . . . 2 drachms.
Ipecacuanha . . . . 6 grains.
Mix and divide into six powders.

Mixture. — Infusion of senna . . . . . 7 ounces.
Epsom salts . . . . 2 ounces.
Syrup of buckthorn . 1 ounce.
Sal volatile . . . 1 drachm.
Mix.

If this does not keep up a frequent and vigorous action on the bowels; in addition, put two drops of croton oil on the tongue, or wipe the wet cork or stopper of the bottle on the patient's lips.

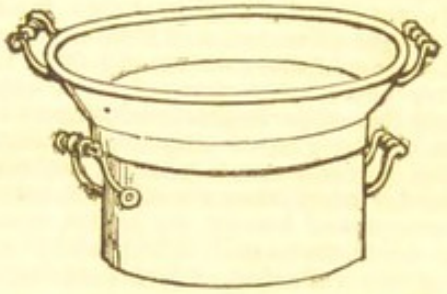
After twelve hours, and between that and two days, the *second stage*, or series of symptoms sets in, the headache and wild delirium cease, and is succeeded by a low indistinct muttering and a state of stupor, from which it is finally impossible to rouse the patient. Hearing and vision become imperfect and difficult, with squinting, double vision, and distended and immovable pupil: the spasms have given place to twitching of the muscles, and starting of the tendons; the limbs are cold and powerless, or palsied, the countenance ghastly; a cold sweat breaks out over the body, and the patient dies in a state of profound coma.

The treatment in this second and fatal stage, is necessarily one more of regimen than medicine. If the pulse is hard, a blister may be put on the head; but the great art lies in the judicious application of stimulants, such as ether, ammonia, valerian, beef-tea, wine, and opiates.

The following mixture combines most of these agents, and may be employed to promote reaction, accompanied with thickened beef-tea, and bottles of hot water to the feet.

Carbonate of ammonia . ½ drachm.
Powered opium. . . . 3 grains.
Ipecacuanha . . . . 3 grains.
Mix in a mortar, and add
Camphor water. . . . 5½ ounces.
Compound tincture of cinnamon . . . . ½ ounce.
Sulphuric ether . . . 1 drachm.
Mix. A tablespoonful every two hours.

BRAISING.—An operation in cookery, of French invention, and esteemed by epicures as the most perfect method of dressing meats. It is eminently suited to white meats, lean venison, turkey, and domestic fowls. Braising is a comparatively easy process, and the same rules apply either to meat or poultry. Clean, season, and stuff, or lard, where necessary, the article to be dressed. Line the bottom of a stewpan (just large enough to hold the meat) with slices of good bacon, of fat beef, sliced onion, carrot, and turnip. Strew in a few chopped herbs, with salt, mace, black and Jamaica peppercorns, a few bay leaves, and a clove of garlic; observing to vary and suit the seasonings to the nature of the preparation. Lay the meat or poultry on this compound, and cover it with a layer of the same ingredients. Over this, place a round of buttered paper, wrap a cloth about the lid of the stewpan, and press it closely down, setting a weight over it, to keep it so, and to prevent the escape of the savoury steam, which the meat or poultry ought to imbibe till completely saturated. Set the stewpan over the embers of a wood fire, mixed with the hot ashes; place embers above it, and let it stew gently for two hours and-a-half. When done, take it up, and keep it very hot; strain and reduce the gravy by quick boiling, until it is thick enough to glaze with; brush the meat or poultry over with a portion of it, put the remainder into the dish, and send it directly to table. *Braising Pans* are of



various forms, but the one illustrated is generally considered the most suitable; the stewpan of modern form, however, or any other vessel that admits of the embers being placed upon the lid, will answer the purpose nearly as well.

BRAN.—The husks or shells of wheat which remain when separated from the flour in the mill. It contains a portion of the farinaceous matter, and has a laxative quality; for this reason, bread partially made with it is sometimes recommended to be eaten instead of white wheaten bread. It is also useful as a domestic remedy for several minor complaints; a decoction of it, sweetened with sugar, is taken for coughs, hoarseness, &c. A handful mixed with a pail of warm water forms an excellent emollient foot-bath; and as a poultice, it is efficacious for sores and wounds. It is of wheat bran that starch is principally made. Dyers reckon bran among the non-colouring drugs, and use it for making, what is termed, the "sour waters" with which their several

dyes are prepared. It is also used by calico printers to remove the colouring matter from those parts of their goods which are not mordanted. Bran is employed as a cooling laxative for horses, in the form of a mash, and as a vehicle for occasional changes of food used medicinally. It is given before and after medicine, and forms the main agent in the stable for aiding purgatives in their action.

BRAN YEAST.—Boil one pint of bran and a small handful of good hops, in two quarts of water, for ten minutes; strain it through a sieve, and when lukewarm, add three or four tablespoonfuls of beer yeast, and two of treacle; put it into a jug; cover it, and place it before the fire to ferment.

BRANDY.—The spirituous liquor produced by the distillation of wine only, and not from any other fermented body. But brandy consists not merely of the spirit drawn from wine, it contains also some water, and is flavoured by the essential oil of the grape, which has been dissolved by the alcohol produced during fermentation. The average proportion of alcohol in brandy varies from 48 to 54 per cent. When pure, it is perfectly colourless, and only acquires a pale brown or yellow tint from the cask. When brandy is first imported, it is generally 1 or 2 over proof, but its strength decreases with age; and by the time that it is usually taken from the bond-store for sale, it is seldom stronger than 3 or 4 under proof. The very finest brandies average from 5 to 10 under proof, and never exceed 2 under proof; they then contain more than half their weight of water, and from their boiling point being higher, they come over to this country more fully charged with essential oil, and the other volatile and fragrant principles of the grape; thus possessing, in a greater degree, that peculiar aroma and flavour for which they are so much esteemed. The compound known as *British brandy*, is made chiefly from malt spirit, with the addition of mineral acids, and various flavouring ingredients.

BRANDY, ADULTERATION OF.—Brandy undergoes adulteration, both abroad and at home. The common practice in France is to add spirit of wine and colouring, to raise the strength of the liquor before exporting it. This is technically called *making up* for the London market. It is done to any extent desired by the English purchaser, and the quantity and prices of the substances so added, are regularly set forth in the invoice. When the purchaser is not well acquainted with the trade, and desires a strong spirit at a low rate, the common practice is to sell him brandy so mixed as genuine. The usual strength at which brandy is sold in England, is about 11 or 12 under proof; when weaker than 17 under proof, it becomes seizable by the excise. The strength at which it is sold and "permitted" in the wholesale trade, is generally 10 under proof, to which it is reduced by adding water; and it is never less than 12 under proof, unless a different strength has been agreed on at the time of sale. French brandy, in addition to the adulterations already noticed, is also disguised by burnt sugar, cayenne pepper, grains of paradise, horse-radish, acetic acid, almond cake, and other flavouring and acrid substances. In the majority of cases of adulteration, the palate will be the readiest detector, but the fraud may be discovered more definitively by gently evaporating a little of the suspected liquor in a spoon or glass capsule, when the acrid matter, colouring, and sugar, will be left behind, and may be readily distinguished by their flavour, sweetness, and glutinosity. A little perfectly pure brandy, evaporated in a similar manner,—on a watch-glass for instance,—merely leaves an extremely slight discoloration on the surface. In the trade, the addition of water to spirit is technically called "*reducing*," whilst absolute adulteration is known under the questionable name of "*improving*." The only method to obtain perfectly pure brandy, is either to take it direct from the bond-store, without allowing it to enter a private cellar, even for an hour, or to buy it of some known respectable dealer, at a price that offers no inducement to dishonesty.

BRANDY CREAM.—Boil two dozen blanched sweet almonds, with four pounded bitter almonds, in a quarter of a pint of milk; when cold add to it the yolks of five eggs, which have been beaten well in cream; sweeten, and put to it a gill of brandy. After it is thoroughly mixed, pour to it a quart of thin cream; set it over the fire to simmer, but not to boil. Stir till it thickens, then pour into cups or glasses, and when cold it will be ready. A ratafia drop may be added to each cup; if intended to keep, the cream must be previously scalded.

☞ Almonds, sweet, 24; bitter, 4; milk, ½ pint; eggs, 5 yolks; brandy, 1 gill; cream, 1 quart; sugar, to taste.

BRANDY PUDDING.—Line a mould with raisins, stoned, then with slices of French roll, next to which, place ratafias or macaroons, then another layer of raisins, followed by the roll and the biscuits, and so on alternately till the mould is full, adding at intervals, and by degrees, a gill of brandy. Beat four eggs, add a pint of milk, sweetened, half a nutmeg, and the peel of half a lemon finely grated. Let the liquid sink into the solid part; then flour a cloth, tie it tightly over, and boil for one hour, turn into a dish and serve with sweet sauce.

☞ French roll, ratifias, and raisins, sufficient; brandy, 1 gill; eggs, 4; milk, 1 pint; nutmeg, ½ of 1; lemon peel, ½ of 1.

BRANDY, USES AND PROPERTIES OF.—There is no spirit that exercises so beneficial an effect on the system when taken in moderation, as brandy, for in many cases it is not merely a stimulant, but has powerful medicinal properties. In cases of suspended animation, such as from partial drowning, or intense cold, hanging, &c., brandy is the surest restorative that can be applied. It is also of the greatest benefit when the frame has become exhausted by any extraordinary demand that has been made upon it. In many inward complaints, such as spasms, colic, and diarrhœa, it almost always affords effectual relief. In all cases, however,

where brandy is administered medicinally, care should be taken that the quantity is not excessive; and to guard against this, it will be found safest to give a tablespoonful of brandy mixed with a wineglassful of hot water, from time to time, according to the urgency of the case. Weak brandy and water, cold, is the best beverage that can be taken by dyspeptic and bilious persons with their meals, the proportion being a tablespoonful of brandy in half a pint of water. Brandy, however, when taken in excess, is capable of injuring the system in the same degree as in moderation it produces benefit. Under these circumstances it heats the blood, preys upon the liver, and impedes the functions of the digestive organs; in fact the best rule to observe in regard to brandy is, to drink it as little as possible habitually, when in health, so that it may be able to operate with due effect when there is occasion to have recourse to it.

BRASS.—This useful alloy of copper and zinc is now generally manufactured by plunging the *copper*, in slips, into the zinc, melted in the usual manner. The former metal rapidly combines with the fluid mass, and the addition is continued until an alloy is formed, somewhat difficult of fusion, when the remainder of the copper is at once added. The brass thus formed is broken into pieces and remelted under charcoal, and a proper addition of either zinc or copper made, to bring it up to the colour and quality desired.

BRASS WORK, TO CLEAN.—Rub it over slightly with a piece of flannel dipped in sweet oil; next, rub it hard with another piece, dipped in finely powdered rottenstone; then clean it with a soft linen cloth, and polish off with wash-leather.

BRAWN.—Having cleaned a large pig's head thoroughly, and rubbed it with salt, boil it until the bones can be removed with ease; season with salt and pepper, and lay the meat in a mould whilst it is hot; press this down with a board and heavy weight, and let it remain in a cool place for six hours; then boil for about an hour, covering the mould with the liquor in which the head was first boiled; press again after this boiling. The flavour is very much improved by adding in layers, when the mould is filled, some salted and boiled tongue, in thin slices.

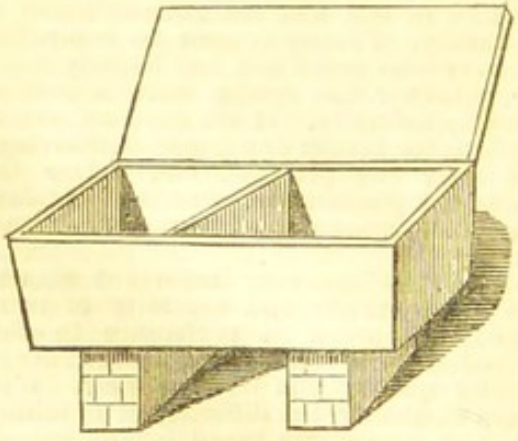
BRAWN, MOCK.—Boil a pair of calves' feet very tender; take off the meat, and have ready the belly piece of pork, salted with common salt and saltpetre for a week. Boil this almost enough; take out all the bones, and roll the feet and pork together; then bind the roll very tight with a strong cloth and coarse tape. Boil it till tender, then hang it up in the cloth till cold.

BREACH OF TRUST.—A trustee, banker, merchant, broker, attorney, agent or person under power of attorney, fraudulently disposing of property, or a director or manager of a public company, fraudulently appropriating property, or keeping fraudulent accounts, or wilfully destroying books, papers, or writings of the company of which he is a member, or being concerned in making any false entry, or any material omission in any book of account or other document, or publishing any fraudulent statement, or any person knowingly receiving property fraudulently disposed of, if found guilty, is liable to the punishment of being kept in penal servitude for the term of three years, or imprisonment for not more than two years, with or without hard labour, or by fine; and any person being the bailee of any property, fraudulently converting the same to his own use, although he should not break bulk or otherwise determine the bailment, is guilty of larceny.

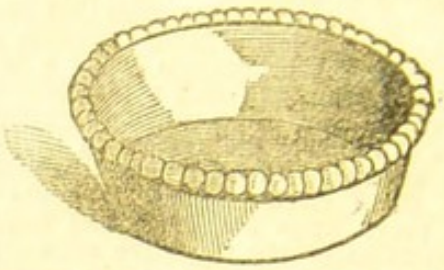
BREACH OF PROMISE OF MARRIAGE.—A contract to marry, like all other agreements, must have mutuality for its basis; therefore an action for the breach of it may be maintained as well by a man against a woman as the contrary. The promise need not be in writing, nor is it necessary to prove an express promise in so many words. The contract may be evidenced by the unequivocal conduct of the parties, and by a general yet definite understanding, between them, their friends and relations, that a marriage is to take place. And although the precise time is not agreed upon, the law will presume that the parties promised to intermarry in a reasonable or convenient, time upon request. But unless the defendant incapacitates himself by marrying another person, a request must be proved. The pre-engagement of the defendant to another person forms no defence to this action, as he cannot thus avail himself of his own wrong; nor is the promise of a man to marry within a reasonable time void, although he was married at the time of making such promise, because his wife might have died within a reasonable time. If a man knowingly promises to marry a woman of immodest character, he is bound to do so; but if he after promise discovers the true nature of the woman's character, he is justified in breaking that promise. A promise of marriage is not binding if it be obtained, or if the continuation of the engagement be procured, by means of a fraudulent and false representation to the defendant, or wilful concealment from him of the plaintiff's former situation in life, and the circumstances of her family. Parties cannot be compelled to marry who could not live happily together, whether the reason were a mental or bodily infirmity. It is a good answer to an action for breach of promise of marriage, that after the promise, and before the breach, the plaintiff absolved the defendant from his promise, and the performance thereof.

BREAD.—Two very important reasons urge the propriety and necessity of using home-baked bread in preference to that purchased of the baker; these reasons are its superior quality and its cheapness. With regard to quality, the difficulty of obtaining pure and wholesome bread is well known, and it is equally notorious that the deleterious compounds often vended under the name of bread, seriously impair the diges-

tive organs, and prejudice the health generally. With regard to cheapness, the fact has been ascertained that, in making the bread at home, there is a saving of one-third of the cost of baker's bread. It is therefore apparent that on the score of both economy and health, it is of the utmost consequence, especially in large families, that home-made bread should be used. Many novices in bread-making imagine that it is a difficult art to attain, whereas, it is both simple and easy; the success of the process depending upon certain principles, which may be readily understood, and are as follows:—The requisite quantity of flour is made into a paste or *dough* with water, and this dough, previously to baking, is submitted for some time to the action of a moderate heat; a state of fermentation then ensues, in which process a large quantity of carbonic acid gas is diffused amongst the mass, which is prevented from escaping by the solidity of the dough, which in consequence becomes puffed up and spongy, and ultimately covered with a light porous paste; to assist and expedite this operation, yeast is introduced. In bread-making a great deal depends on the chief ingredients used; the *flour* should be especially selected with the greatest care; it should neither be too new nor too old, and should be ground about six weeks before it is required. The most advantageous method is to preserve the grain itself, and to have portions of it ground from time to time, as needed. For this purpose a person should provide himself with a handmill, the cost of one in which 20lbs. of flour may be ground in forty or fifty minutes, would be about £4 10s.; this outlay would be soon covered by the saving effected, to say nothing of the promotion of health, by avoiding the too common adulterations which flour undergoes. *Yeast* is an important auxiliary, demanding the greatest attention, for unless it be good and in a fitting state to produce ready and proper fermentation, the best flour will fail to yield wholesome or even eatable bread. A knowledge of the due proportion is also indispensable; too much impairs the flavour of the bread and diminishes its nutrient qualities, while too little fails to render it light



and, as a consequence, digestible. The only *implements* of any consequence required for bread-making, are a kneading-trough, when a large quantity is to be made; this is an oblong wooden box, with a lid to it, as seen in the accompanying engraving. When, however, a small quantity only is required, a large earthenware pan, glazed on the inside, will answer the purpose; this has also the recommendation of



being less liable to absorb the moisture which afterwards becomes sour, and is more easily kept clean and dry than anything else. The pan, however, should be of a sufficient size and depth to contain the quantity of flour required for the bread, without being much more than half filled, as there should be space enough to knead the dough freely, without danger of throwing the flour over the edges, and also to allow for its rising. The other implements required are, a hair sieve for straining yeast occasionally, and one or two strong spoons.

Supposing a person never yet to have attempted to make bread, wishing to do it well, and having no one to furnish the necessary instructions, such person may succeed perfectly by strictly attending to the directions hereafter given. It must be premised, however, that as a small baking is easier to manage than a large one, and the expense attendant on failure necessarily much less, the receipt is given for a limited quantity by way of trial. Put half a gallon of flour into the pan; then with a large metal or wooden spoon hollow out the middle, without entirely cleaning away the flour from the bottom of the pan; then take either a large tablespoonful of brewers' yeast, which has been rendered solid by mixing it with plenty of cold water and letting it afterwards stand to settle for a day and night, or nearly an ounce of fresh German yeast; put it into a large basin, and proceed to mix it, so that it shall be as smooth as cream, with three quarters of a pint of just warm milk and water, or water only. In order to prevent lumps forming, the liquid must be poured in by spoonfuls just at the beginning, stirring and working it round well, to mix it perfectly with the yeast, before the remainder is added. Pour the yeast into the hole made in the middle of the flour, and stir into it as much of that which lies round it as will make a thick batter; this must also be free from lumps; strew plenty of flour on the top, throw a thick clean cloth over it, and set it where the air is warm, taking care not to place it too near a large fire, and at the same time raising it from the floor, so that it may be protected from constant draughts of air, which would otherwise pass over it. Look at it from time to time after it has been laid for nearly an hour, and when it is perceived

that the yeast has risen and broken through the flour, and that bubbles appear, it is then ready to be converted into dough—this is technically called the *sponge*; place the pan on a strong chair or table of convenient height, and pour into it half a pint of warm milk or water; stir into it as much flour as you can with a spoon. Next throw plenty of the remaining flour on the top of the leaven, and begin with the knuckles of both hands to *knead* it well. This process is best performed by a strong steady movement, rather than a quick irregular action. In the meantime keep throwing up the flour which lies under and round the dough, on to the top of it, that it may not stick to the fingers. When the flour is nearly all kneaded in, begin to draw the edges of the dough towards the middle, in order to mix the whole thoroughly, and continue to knead it in every part, spreading it out and then turning it constantly from the side of the pan to the middle, and pressing the knuckles of your closed hands well into and over it. When the whole of the flour is worked in, and the outside of the dough is quite free from it, as well as from all lumps or crumbs, and does not stick to the hands when touched, it will be sufficiently prepared, and may be again covered with the cloth, and left to rise a second time. In three quarters of an hour, look at it; and should it have swollen very much, and begun to crack, it will be in a fit state to bake. Turn it then on to a paste-board, and with a large sharp knife, divide it into two, shape it into loaves, and despatch it to the oven. If it is to be baked on a flat tin, or on the oven floor, dust a little flour on the board, and make the loaves up lightly into the form of dumplings. Give them a good shape by working them round quickly between the hands, without lifting them from the board, pressing them slightly as you do so; then take a knife in the right hand, and turning each loaf quickly with the left, just draw the edge of it round the middle of the dough, but do not cut deeply into it. Make also one or two slight incisions across the tops of the loaves, as they will rise more easily when this is done. To prevent the bread sticking to the pans, and being turned out with difficulty after it is baked, they should be rubbed with butter. When the loaves are drawn from the oven, they should be turned upside down or on their sides, or they will become wet and blistered from the confined steam; they should thus remain until they are perfectly cold.

For baking on a large scale, the following is one of the most approved receipts:—Put a bushel of flour into a kneading trough. Mix a pint of yeast thoroughly, with as much milk-warm water; make a deep hole in the middle of the flour, and pour the yeast and water into it; then take a spoon and work it round the edges of this body of moisture, so as to bring into it by degrees, flour enough to make a thin batter, which must be well stirred for a minute or two. Throw a handful of flour over the surface of this batter, and cover the whole with a cloth thickly folded to keep it warm. Set it by the fire, regulating the distance by the state of the weather, and the season of the year. When the batter has risen enough to make cracks in the flour, form the whole mass into dough, thus:—Begin by strewing six ounces of salt over the heap; and then beginning round the hole containing the batter, work the flour into the batter, pouring in milk-warm water or milk, as it is wanted. When the whole mass is moistened, knead it well. Mould the loaves; let them rise for twenty minutes, and put them into an oven which has been previously heated. The length of time required for baking will be proportioned to the size of the loaves. The baking in an ordinary oven, will require about an hour for a four pound loaf, fifty minutes for a three pound loaf, and so on in proportion.

The following *general rules in connexion with bread-making*, will be found worthy of attention:—1. Bread is better baked without tins, which impart to the crusts an unnatural degree of hardness. 2. The temperature of the water or milk, must be regulated by the season; in summer, it should be milk-warm; in autumn and winter, a few degrees warmer; and in frosty weather, as hot as the hand can bear it; but never scalding, or the whole will be spoiled. 3. Soft water only should be used for bread-making, filtered rain water being the best of all. 4. When there is reason to suspect, either from the appearance or smell of the flour, that it is not good, and there is still a necessity for using it, let it be baked for an hour in a very slack oven; and add to it, when making into dough, ten grains of carbonate of ammonia, carefully powdered, for every pound of flour. 5. Bread should be put into the oven as soon as the loaves are formed, and when in, the oven door should be fastened up closely, and only opened when absolutely necessary. 6. When bread is home-baked, the time when it will be ready for baking should be correctly calculated, so that the oven may be made fit to receive it at the exact moment. Should it have to be carried to a baker's, a thick cloth folded three or four times, should be thrown over it before it is sent, and removed only when it reaches its destination. 7. Bread made entirely with milk, becomes dry much sooner than that which is moistened with a portion of water. If the flour and yeast are good, water alone, will yield the most wholesome and nutritious bread. 8. The making of the dough should be completed in one operation; for if abandoned when half made, and allowed to become cold before it is finished, it is certain to be spoiled. 9. Yeast that is sour, or that has been frozen, or scalded by having over-hot liquor poured to it, will fail to produce light bread. 10. To ascertain whether dough be light enough to bake, let the knuckles be pressed hard upon it; and if the impression disappears in a short time, it is ready for the oven. 11. Rather a quick oven is required to bake bread properly. Occasionally, it will be light and well-flavoured when slowly baked, but seldom of a good colour. The heat should be so regulated, that it may penetrate the dough thoroughly before the outside becomes hard.

12. If bread is withdrawn from the oven before it is sufficiently baked, it should be returned immediately; for if suffered to become cold, the application of heat will have no effect upon it. 13. When the dough has been kneaded into too thin a consistence, so that it spreads about, instead of remaining in shape, when moulded into loaves, it should be put into rather a slow oven, otherwise the outside will speedily harden and lock up the moisture. 14. In warm weather, the fermentation of the sponge and dough must be watched with critical precision. If either be left in a state of active fermentation for so short a period above the proper time, as even half an hour, there is a risk of sourness, and the mass will sink and become heavy. In any weather, the quality of the bread will be prejudiced by over-working. 15. As the heat of the oven is greatest at the further end, and at the sides, the largest loaves should be placed there, and the smaller ones in the centre, and near the mouth of the oven. 16. When bread is sufficiently baked, the surface will be uniformly browned, everywhere firm to the touch, the bottom crust being especially hard. To test whether bread is done which has been cut, press down the crumb lightly in the centre with the thumb; when it is elastic and rises again to its place, it is a proof that it is perfectly done; but if the indentation remain, it is not done. Books: *Acton's Bread-Book; Wedlake's How to make Bread at Home; Accum's Treatise on Bread-making; Cobbett's Cottage Economy.*

BREAD, ADULTERATION OF.—Bread is systematically adulterated with various deleterious ingredients, the chief of which are alum, chalk, bones, potato-pulp, and salt.

Alum increases the whiteness and firmness of the bread made from inferior flour, and thereby causes it to resemble bread made from the very best flour, The qualities which alum imparts to a loaf are very unimportant, having reference merely to the appearance, "lightness," neatness of shape, &c. The chemical action of alum on moistened flour is analogous to tanning, and destroys in a considerable degree its nutritiveness. It converts the gluten of the flour into a kind of tough, tenacious "wash leather," which is difficult of digestion. This gives the dough a tenacity and firmness, enabling it to retain the thousand of little air bubbles given off by the yeast, which constitutes the "lightness" or spongy porous character of the bread. Hence, flour that will not "rise" may be made to do so by means of alum. Another object in the use of alum is, that it preserves the upright form of the loaves, and prevents them from adhering firmly together, thereby enabling the baker to separate them more readily on their removal from the oven. An unalumed loaf is, with a little practice, distinguishable from an alumed one by its appearance alone. It is not so bulky nor so symmetrical in its shape; its sides are roughened and torn in being separated from the batch. Unalumed bread "bites short;" alumed bread "bites tough;" and the rough sour taste of alum is slightly perceptible in it. The most marked contrast, however, is apparent in "crumbling," when a day or two old; unalumed bread crumbles with the greatest facility by rubbing it between the hands, whereas, alumed bread, however old, "crumbles" with difficulty. In the same way, alum renders the new loaf less liable to crumble when cut.

Chalk, Whiting, Plaster of Paris, &c., are often mixed in small quantities with the flour, for the purpose of improving the colour of the bread, and increasing its yield — the increased yield simply signifying *more water*. These ingredients may be readily detected by pouring on the bread oil of vitriol diluted in six or seven times its weight of water; if effervescence ensue, it is proof that there is adulteration. Bread made with flour containing more than four per cent. of chalk, &c., is spotted here and there with white marks, which are accumulations of carbonate of lime. *Bones*, burned to whiteness, and ground to an impalpable powder, are chiefly used to adulterate *thirds* flour, which, being of a somewhat gritty nature, will disguise the grittiness which it is almost impossible to deprive bones of, be they ever so laboriously ground. To detect this fraud, mix spirit of salt with five or six times its weight of water, and if effervescence ensue adulteration exists. Further, if the liquid be thrown on a filter of paper, the portion which runs through the paper will let fall a white heavy deposit, when pearlash is added. The mixture of *potato* with flour, although not positively unwholesome, nevertheless serves to deteriorate the amount of nourishment which bread made from pure wheaten flour affords, and consequently a fraud is committed. This adulteration may be readily detected by the microscope. The cells which contain the starch corpuscles are in the potato very large; in the raw potato these are adherent to each other, and form a reticulated structure, in the meshes of which the well defined starch granules are clearly seen; in the boiled potato, however, the cells separate readily from each other, each forming a distinct body, and the starch corpuscles are much less distinct, and much altered in form. The following test places the matter beyond all doubt. Put about 100 grains of the suspected bread into a glass, and pour upon them, first one fluid ounce of distilled water, and then one fluid ounce of diluted solution of iodine. If the bread contains any fecula the liquor will assume a crimson tinge, which will increase according to the quantity of potato starch present. When pure wheaten bread is submitted to the same treatment, at first no colouring is produced, but about a quarter of an hour after the addition of the water of iodine, streaks of a purple or violet colour begin to appear from upwards downwards, and in the course of half an hour the liquor acquires a light blue tinge, the intensity of which is seen gradually augmenting. *Salt*, when added in a large quantity to the dough, imparts to it the property of absorbing, concealing and retaining a much larger quantity of water than it otherwise would. Bread made from such dough, will, on leaving the oven, come out much heavier than it ought, and the addi-

tional weight will be simply water. Fortunately, the taste of such bread is sufficient index of its bad quality; it is rough in its grain, and has this remarkable property, that two adhering loaves will generally separate unevenly, one taking from the other more than its share.

Adulteration of bread is also practised by *mixing the meal of inferior grain with the wheaten flour*. The presence of *barley* may be discovered by the aid of the microscope. If it be present in large quantities, however, it can be ascertained by treating a portion of the suspected bread for some time with boiling water, when, if the adulterant be barley flour, an insoluble starch remains. When the flour of *maize* or *rice* is mixed in any considerable proportion with wheaten flour, the bread is harsh and dry; if *Indian corn* is used to any extent, it communicates a distinct yellow tinge, and feels coarse; it has, moreover, a peculiar sweet flavour.

A fraud of a kindred character with adulteration is frequently practised, especially by low-priced bakers, in giving *short weight*, and although the mockery of weighing the bread on delivery may be gone through, a previous tampering with the weights and scale will leave a deficiency of weight. Housekeepers therefore, should provide themselves with weights and scales, so as to check any such attempts at dishonesty. It ought also to be known that *new bread weighs more than stale*, the latter losing a portion of its water by evaporation. This circumstance is well understood by bakers, with whom it is a common practice to throw empty sacks over the loaves, as soon as they are taken out of the oven, to prevent the escape of water. It has been ascertained by direct test that the average excess of weight of new bread over stale is half an ounce in every two-pound loaf. Supposing, therefore, that a family consume thirty two-pound loaves weekly, the aggregate loss will be exactly a pound of bread. In an article of such extensive consumption as bread it is of the utmost consequence to obtain a supply as pure as possible, as the repeated introduction into the stomach of the deleterious compounds enumerated is calculated to produce ill-health, and to prevent recovery where it already exists. Persons, therefore, should deal with a respectable tradesman, rather than purchase their bread of those who systematically undersell their competitors. See FLOUR.

BREAD, BARLEY.—Mix one bushel of wheat flour with three quarters of a bushel of barley meal. Make this into dough, with salt, yeast, and warm water, and bake for two hours. As barley meal does not ferment readily with yeast, it is always best to set the sponge with wheat flour altogether, adding the barley meal when the dough is about to be made.

BREAD, BRAN.—To four pounds of best household flour put two tablespoonfuls of small beer yeast, and half a pint of warm water; let it stand two hours in a warm place. Add half a pound of bran and a teaspoonful of salt; make the dough with skim milk or warm water; cover it up, and let it stand for an hour. Put the loaves into warm dishes, and let them stand twenty minutes before they go into the oven.

BREAD, BROWN.—This may be made from pure wheaten flour ground coarsely, or from a mixture of wheat, barley, and rye-flour, in the proportion of two pounds of good wheaten flour to one of each of the other. Oatmeal may be substituted for the barley flour, or added to the barley and rye in the proportion of one third. When making brown bread use a larger quantity of yeast and less water, and knead for an hour.

BREAD CAKE. — Separate from the dough, when making common white bread, as much as is sufficient for a quartern loaf. Knead well into it two ounces of Lisbon sugar, two of butter, and half a pound of currants. Warm the butter in a teacupful of good milk. When thoroughly kneaded, make into the form of a cake, and bake in a tin.

☞ Dough, 1 quartern; Lisbon sugar, 2 ozs.; butter, 2 ozs.; currants, ½lb.

BREAD CHEESE-CAKES. — Slice a penny white loaf as thin as possible; pour over it a pint of boiling cream, and let it stand for two hours. Beat up eight eggs, half a pound of butter, and a grated nutmeg. Put in half a pound of currants, and a tablespoonful of brandy. Bake in patti-pans.

☞ Bread, 1 penny loaf; cream, 1 pint; eggs, 8; butter, ½lb.; nutmeg, 1; currants, ½lb.; brandy, 1 tablespoonful.

BREAD CHIPS, TO SERVE AS BISCUITS.—Cut thin shavings of bread from a stale loaf, spread them on a dish, or lay them singly on the tin tray of an American oven, and dry them very gradually until they are perfectly crisp; then bring them to a pale straw colour; withdraw from the fire, and, as soon as they are cold, pile them on a napkin, and serve them without delay. They require an extremely gentle oven to bake them properly.

BREAD CRUMBS, FOR CUTLETS.—Cut off the crumb of a stale loaf, break it with the hands, put it into a clean cloth, and rub it in order to crush it; sift it through a fine cullender, and add to it salt and pepper, and parsley finely chopped. Melt a piece of butter, and dip the cutlets into it; put them into the bread crumbs and turn them about till they are well covered; sprinkle them with salt and pepper, and then broil or fry them.

BREAD CRUMBS, FOR FISH.—Cut thick slices from the middle of a loaf of light stale bread, pare the crust entirely from them, and dry them gradually in a cool oven until they are quite crisp through; let them become cold, then roll or beat them into fine crumbs, and keep them in a dry place for use. To strew over hams or cheeks of bacon, the bread should be left all night in the oven; which should be sufficiently heated to brown, as well as to harden it. It may be sifted through a dredging box over to the hams after it has been reduced almost to powder.

BREAD CRUSTS, TO SERVE WITH CHEESE.—Tear the crumb of a new loaf into rough pieces with a couple of forks, lay them on a tin, and place them in an oven for ten minutes.

BREAD, ECONOMICAL.—Clean, sound, whole wheat, which, with all its bran and all its flour, is to be crushed or ground to a desirable fineness, with no screening of any kind. The meal or flour is then to be mingled in the proportion of half a pint of water, or so saturated with carbonic acid gas, to a pound of flour or meal. When the gas-water and meal are thoroughly commingled, the dough is to be placed in the oven. The loaves ought to be so arranged as to become crusted all over. The temperature of the oven should be regulated by a thermometer, and the stay of the bread in the oven up to the period of its delivery, must also be exactly regulated. The bread thus made, by commingling flour with water saturated with carbonic acid gas, in the proportion mentioned, is light and exceedingly palatable. If preferred, the bread can be seasoned with salt, or flavoured with sugar. Only the coarse flake bran is to be removed from the flour; of this take 5lbs., and boil it in rather more than 4 gallons of water, so that when perfectly smooth you may have 3¾ gallons of clear bran water; with this knead 56lbs. of flour, adding salt and yeast in the same way and proportions as for other bread. When ready to bake divide it into loaves, and bake them 2½ hours. Flour will imbibe three quarts more of bran water than of plain, so that it does not produce a more nutritious food, but makes an increase of one-fifth of the usual quantity of bread. The same quantity of flour which, kneaded with water, will produce 69lbs. 8oz. with bran water, produces 83lbs. 8oz.—a gain of 14lbs. When ten days old, if put into the oven for twenty minutes, this bread will appear quite new again.

BREAD FRIED, FOR GARNISHING.—Cut the crumb off from stale bread into slices the thickness of the blade of a knife, stamp them into any form, heat a little olive oil in a stewpan, and put in the sippets; fry them, some white and some brown. When crisp, drain and dry them, and put them by, separately in paper cases, according to form and colour. When they are wanted, pierce the end of an egg, let a little of the white out, and beat it with the blade of a knife; mix with a little flour; heat the dish slightly; dip one side of the sippet into the beaten paste, and stick it on the dish; in this manner continue until the garnishing is finished.

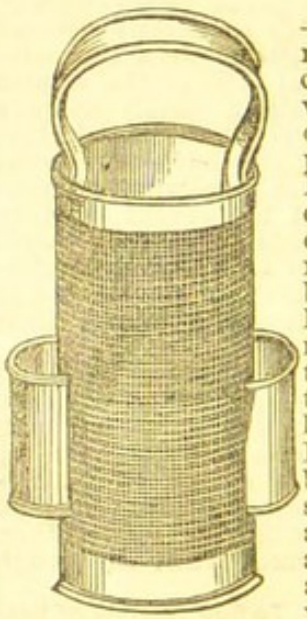
BREAD FRITTERS. — Strew half a pound of currants on a dish, and dredge them well with flour; grate some bread into a pan until a pint of crumbs is produced; pour over them a pint of boiling milk, in which two ounces of butter have been stirred; cover the pan, and let it stand for an hour. Then beat the mixture thoroughly, and add half a nutmeg grated, a quarter of a pound of white powdered sugar, and a wineglassful of brandy. Beat six eggs till very light, and stir them by degrees into the mixture. Lastly add the currants, a few at the time, and mix the whole thoroughly. It should be brought to the consistence of a thin batter, and if it turns out too thin, add a little flour. Have ready over the fire a heated frying-pan with boiling lard. Put in the batter in large spoonfuls, and fry the fritters to a light brown. Drain them on a perforated skimmer, or an inverted sieve, placed in a deep pan, and send them to table hot. Serve with wine and powdered sugar.

☞ Currants, ½lb.; bread crumbs, 1 pint; milk, 1 pint; butter, 2 ozs.; nutmeg, ½ of 1; sugar, ¼lb.; brandy, 1 wineglassful; eggs, 6.

BREAD, FANCY. — See BREAKFAST-CAKES, CRUMPETS, MUFFINS, ROLLS, RUSKS, SALLY-LUNNS, &c.

BREAD, FRENCH.—To four pounds of the finest flour put a quart of lukewarm milk, a little salt, a quarter of a pound of melted butter, and half a pint of yeast; whisk the fluids together, and add three beaten eggs; mix the flour with this, handling it as little as possible; let the dough rise, and mould the bread into rolls, cakes, &c. Bake on tins in a quick oven.

BREAD, FRENCH BEAN.—The seed of the white French-bean, or haricot, boiled quite tender, and rubbed through a sieve and mixed with two-thirds of their weight of flour or meal, will make bread which in flavour and appearance can scarcely be distinguished from geniune wheaten bread. After the beans have been prepared as directed, the pulp from them should be thoroughly incorporated with the flour or meal, and the bread finished in the usual way. Although this bread may be freely eaten by persons in robust health, it is not calculated for those whose digestion is delicate.



BREAD-GRATER.—A culinary implement used for producing bread crumbs when they are required for the various purposes of cooking. It is used upon precisely the same principle as the nutmeg grater, the bread being rubbed briskly upon the perforated surface, and the crumbs falling through into the hollow cylinder beneath. By the use of the bread grater the desired end may be attained more readily and perfectly, and any unnecessary waste of bread is entirely avoided.

BREAD, INDIAN WHEAT. — Upon seven pounds of Indian-meal pour four quarts of boiling water, stirring it all the time; let it remain till lukewarm, then mix it with fourteen pounds of fine wheaten

flour, to which a quarter of a pound of salt has been already added; make a depression in the surface of the mixture, and pour into it two pints of yeast, which must be thickened to the consistence of batter with some of the flour; let it stand all night, when the whole should be well kneaded and allowed to remain for three hours. It may then be divided into loaves, which, in this instance, are better baked in tins, letting the dough remain in them for half an hour previously to placing them in the oven.

BREAD JELLY. — Cut the crumb of a penny roll into thin slices, and toast them equally of a pale brown; boil them gently in a quart of water till a jelly is produced, which may be known by putting a little in a spoon to cool; strain it upon a piece of lemon peel, and sweeten to taste; a little wine may be added. This is a light and pleasant repast for invalids.

BREAD, LAWS RELATING TO.— Under the assize acts, bakers are restricted to bake only three kinds of bread,—viz., wheaten, standard wheaten, and household; the first being made of the finest flour, the second, of the whole flour mixed, and the third, of the coarser flour. The loaves are divided into peck, half-peck, eight pounds eleven ounces, and the quartern, four pounds five and a half ounces, avoirdupois. Now, however, it is enacted, that within the City of London, and in those places where the assize is not set, it shall be lawful for the bakers to make and sell bread made of wheat, barley, rye, oats, buck-wheat, Indian corn, peas, beans, rice, or potatoes, or any of them, along with common salt, pure water, eggs, milk, barm, leaven, potato, or other yeast, and mixed in such proportions only as they shall think fit. It is also enacted, by the same statutes, that bakers in London, and in all places within ten miles from the Royal Exchange, where an assize is not set, may make and sell bread of such weight and size as they think fit. *But* it is at the same time enacted, that such bread shall always be sold by avoirdupois weight, of sixteen ounces to the pound; and in no other manner, under a penalty, for every offence, of not more than forty shillings. French or fancy bread, or rolls, may, however, be sold, without previously weighing the same. Bakers or sellers of bread, are bound to have fixed in some conspicuous part of their shop, a beam and scales, with proper weights, for weighing bread; and a person purchasing bread, may require it to be weighed in his presence. Bakers and others sending out bread in carts, are to supply them with beams, scales, &c., and to weigh the bread, if required, under a penalty of not more than £5. Bakers, either journeymen or masters, using alum or any other unwholesome ingredients, and convicted on their own confession, or on the oath of one or more witnesses, to forfeit not exceeding £20, and not less than £5; if beyond the environs of London, and not exceeding £10, nor less than £5, if within London or its environs. The adulteration of meal or flour is punishable by a like penalty. Loaves made of any other grain than wheat without the City and its liberties, or beyond ten miles of the Royal Exchange, to be marked with a large Roman M. Any ingredient or mixture found within the house, mill, stall, shop, &c., of any miller, mealman, or baker, which after due examination shall be adjudged to have been placed there for the purpose of adulteration, shall be forfeited; and the person within whose premises it is found punished, if within the City of London and its environs, by a penalty not exceeding £10, nor less than 40s., for the first offence; £5 for the second offence; and £10 for every subsequent offence. And if without London and its environs, the party in whose house or premises ingredients for adulteration shall be found, shall forfeit for every such offence not less than £5, and not more than £20.

Notwithstanding these enactments, it is notorious that the adulteration of bread is almost universally practised. Dr. Hassall mentions the fact of twenty-four samples being purchased from different bakers in the metropolis, the *whole of which were adulterated with alum;* and Mr. Normandy declares it to be his belief, that *no bread exists in London free from admixture with mashed potatoes.*

BREAD, POTATO.—Boil the quantity of potatoes required in their skins, When done, peel them, and bruise them with a rolling pin, to the consistence of a paste. To this, add as much flour as there is potato-pulp, and some yeast. Knead them well, putting as much water as may be necessary. When properly kneaded, form them into loaves, and place them in the oven, taking care that it be not quite so hot as for ordinary baking, or the bread will become hard on the outside before the inside is properly baked. The door of the oven should not be closed so soon as is usually done. This bread must be allowed a longer time to bake than any other.

BREAD PUDDING. — Cut some light white bread into thin slices. Put into a pudding shape a layer of any sort of preserve, then a slice of bread, and repeat until the mould is almost full. Pour over all a pint of warm milk, in which four beaten eggs have been mixed; cover the mould with a piece of linen; place it in a saucepan with a little boiling water; let it boil for twenty minutes, and serve with pudding sauce.

BREAD PUDDING, FOR INFANTS. — Grate some stale bread into a teacup, pour boiling milk over it; and when cold, mix with the yolk of an egg. Boil it in a cup for a quarter of an hour.

BREAD PUDDING, PLAIN. — Grate white bread; pour boiling milk over it, and cover close. When soaked for an hour or two beat it fine, and mix with it two or three eggs well beaten. Put it into a basin that will just hold it; tie a floured cloth over it, and place it in boiling water. Serve with melted butter poured over. It may be eaten either with salt or sugar.

BREAD, RICE. — Simmer slowly over a gentle fire a pound of rice in three quarts of water, till the rice has become perfectly soft, and the water is either evaporated or imbibed by the rice; let it become cool, but not cold, and mix it thoroughly with four

pounds of flour; add to it a little salt and four tablespoonfuls of yeast; knead it thoroughly, and let it rise before the fire; make it up into loaves with a little of the flour, which, for that purpose, must be preserved from the four pounds. Bake it for rather a long interval.

BREAD, RYE.—Mix rye with wheat flour, in the proportions of one-third of the former to two-thirds of the latter, and proceed as in other bread. This bread is very firm, solid, and nutritious, and retains its firmness for a long time.

BREAD, SAGO.—Boil two pounds of sago in three pints of water until it is reduced to a quart, then mix with it a pint of yeast, and pour the mixture into twenty-eight pounds of flour. Make into bread in the usual way.

BREAD SAUCE.—Pour half a pint of boiling milk over a breakfast cupful of stale bread crumbs in a jug; cover this, and in twenty minutes at soonest, beat it up in a small saucepan, adding butter and salt, cayenne and mace to taste. Add as much boiling cream or milk as will thin it; boil up and serve. Sometimes an onion is added, but, as its taste should be scarcely perceptible, it must be boiled in four or five waters previously to being employed.

BREAD SOUP.—Boil some pieces of bread crust in a quart of water, with a small piece of butter. Beat it with a spoon, and keep it boiling till the bread and water are well mixed; season with salt.

BREAD, TO FRESHEN.—Stale bread may be brought to almost the same state as when newly baked, by putting it into a cool oven for nearly an hour.

BREAD, TO KEEP.—When bread is perfectly cold it should be laid into a large covered earthen pan; this should be kept free from crumbs, frequently scalded, and then wiped dry for use. Loaves which have been cut should have a smaller pan appropriated to them, and this also should have the loose crumbs wiped from it daily. The bread pans, instead of standing on the floor, should be placed upon a proper stand or frame made for the purpose, by means of two flat wedges of wood, so as to allow a current of air to pass under them.

BREAD, UNFERMENTED.—Mix four pounds of flour, half an ounce (avoirdupois) muriatic acid, half an ounce (avoirdupois) carbonate of soda, and a quart of water; first mix the soda and flour well together by rubbing them in a pan, then pour the acid into the water, and incorporate well by stirring. Mix altogether to the required consistence, and bake in a hot oven immediately. This bread keeps longer than bread made with yeast, and is far more sweet and, generally speaking, more digestible.

BREAD, USES AND PROPERTIES OF.—Bread differs widely from the flour of which it is composed, owing to the chemical changes that take place during the process of baking, for although raw flour contains starch, gluten, and saccharine matter, none of these substances can be found in their true character in baked bread. A chemical combination has therefore taken place, by which a new compound has been formed, and which is fitter for digestion than either of these proximate principles separately. Bread may be made of the flour of different grains; but in this country the bread chiefly used consists of three different sorts, the *white*, the *wheaten*, and the *household*. Fine white bread is made of wheat flour only; wheaten bread of flour mixed with the finer bran; and household bread of the whole substance of the grain, including the coarser bran. Wheat flour, on account of the gluten that it contains, admits more readily than any other of being converted into light spongy bread. Hence wheaten bread is most generally acceptable, because the more porous bread is, the more easily is it digested. The reason of this is, that the bread, which by its lightness, has the largest volume, presents the greatest surface to the digestive juices, and is more easily absorbed. It is, however, insisted upon by medical authorities, that bread for ordinary consumption should not be made of too fine a flour, for the gluten of bread is apt to oppress the stomach in the process of digestion, so that the coarser particles of flour are required for the purpose of acting mechanically upon the coats of the stomach, and to keep up a degree of wholesome irritation to assist its functions. The result of investigation and of various tests, tends to prove that persons who are in robust health, who take much exercise, or who eat bread in small quantities only, and mixed with other food, may freely partake of the finest wheaten bread without suffering any ill effects. But that persons in a delicate state of health, especially dyspeptic patients, others whose employment is chiefly sedentary, and others, again, who consume large quantities of bread, would do well to eat brown bread, in which a portion of bran is introduced, wholly, alternately, or occasionally, as may be deemed requisite. Bread should always be thoroughly baked, and should never be eaten until it has stood at least twenty-four hours after being taken out of the oven. Newly baked bread contains an excess of mucilage in consequence of not having parted with its moisture, hence it invariably disagrees with the stomach, and frequently produces indigestion, biliousness, diarrhœa, dyspepsia, and similar ailments.

Bread has been called the "staff of life," because it is the only food that could alone support life for any length of time; and because we ordinarily eat more of bread than of any other kind of food, and always with an undiminished appetite and relish. In every stage and condition of life it is acceptable, and it may be allowed with advantage to the aged and the weak, because it sufficiently supports the system without stimulating or relaxing it. It is not necessary to eat bread with every kind of diet, but a certain proportion should form an addition to every meal with those whose digestion is at all weak. With articles of food that contain much nourishment in small bulk, it is useful to give the stomach the proper degree of expansion. When added to animal food, bread has also the advantage of pre-

venting the loathing attending a too copious use of animal food, and also of counteracting its strong tendency to putrefaction. Under certain conditions, however, bread becomes prejudicial; if eaten too freely, or to serve as a meal, it produces viscidity, obstructs the intestines, and lays the foundation of habitual constipation; it is also injurious to young infants, and occasions disorder, griping, and flatulence. If circumstances render it necessary that bread must be given to infants, it should, at all events, be slowly toasted, or rebaked as hard as a biscuit or rusk throughout, and then well soaked. Bread in addition to being eaten in its original state, is also used for a variety of culinary purposes. It is likewise employed as a domestic remedy, in the form of an outward application.

BREAD AND BUTTER PUDDING.—Thickly butter a dish, and line it with small slices of the crumb of a loaf, cut thin; spread over them some well washed and picked currants, then a layer of thin slices of bread and butter, and so on alternately, till the dish be almost full; then pour in a quart of milk, mixed with four beaten eggs, a saltspoonful of salt, half a grated nutmeg, and sugar to taste. Bake it for three quarters of an hour.

☞ Milk, 1 quart; eggs, 4; salt, 1 salt spoonful; nutmeg, ½ of 1; sugar, to taste; bread and butter, and currants, sufficient.

BREAD AND MILK. — Cut slices of fine stale bread into small pieces, and pour boiling water over them; cover close, and let it stand for ten minutes, after which pour over good new milk in an equal quantity, and flavour with sugar or salt.

BREAD AND RICE PUDDING.—Boil a quarter of a pound of rice in milk till it is quite soft, put it into a basin, and let it stand till next day. Soak some sliced bread in cold milk, drain the milk off, mash the bread fine, and mix it with rice, beat up two eggs with it, add a little salt, and boil it for an hour.

BREAD AND SUET DUMPLINGS.—Mix altogether half a pound of grated bread, half a pound of suet chopped small, the juice and grated rind of a lemon, quarter of a pound of moist sugar, and two eggs; make this into five dumplings; boil them in cloths for half an hour, and serve with sweet sauce.

☞ Bread, ½lb.; suet, ½lb.; lemon, 1; sugar, ¼lb.; eggs, 2.

BREAKFAST. — This being the meal which is to support the body during the most active part of the day, great care should be taken to have it served with undeviating regularity. When the breakfast is served punctually and satisfactorily, it gives an impetus and a cheerfulness to the whole proceedings of the day; but a late breakfast frequently disarranges a whole chain of events. Indeed, such is the sensibility of the stomach, when recruited by a good night's rest, that, of all alteration in diet, it will be most disappointed at any change of this meal—either of the time of serving it, or of the quantity or quality composing it—so much so that the functions of a delicate stomach will be under such circumstances frequently deranged throughout the whole day after.

Breakfast is to the strong and healthy a most enjoyable meal, and it may always be considered as one of the best signs of health when a person can eat and digest a good breakfast, especially after exercise. The circumstance that the strong and healthy can enjoy with impunity a good breakfast has given an erroneous idea as to the advisability of invalids making it a hearty meal, and still worse, of prefacing it by exercise. With very many, perhaps the majority of people in this country, especially in towns, the interval between rising and breakfast is not one of great vigour; the powers both of body and mind are undoubtedly recruited if there has been due rest; but they are not in full action, and if too long an interval be permitted to elapse before food is taken, they become exhausted, and still more so if physical exertion is had recourse to. With persons of a weak constitution exhaustion of any kind before breakfast, such as walking, gardening, bathing, or even cold sponging, is almost sure to prove injurious. For, in these cases, exertion instead of improving digestion, weakens it. The erroneous opinion so generally formed on this point arises no doubt from the fact that exercise and exertion before breakfast induce an appetite; this may very possibly be the case, but at the same time it should be borne in mind that *digestion* is also required, in order that food may perform its proper office; and if one exists without the other, the effect is rather injurious than otherwise. The explanation is, that the nervous power which should have aided the process of digestion has been used up, and a full breakfast taxes the already overwrought nervous energy beyond the powers of endurance.

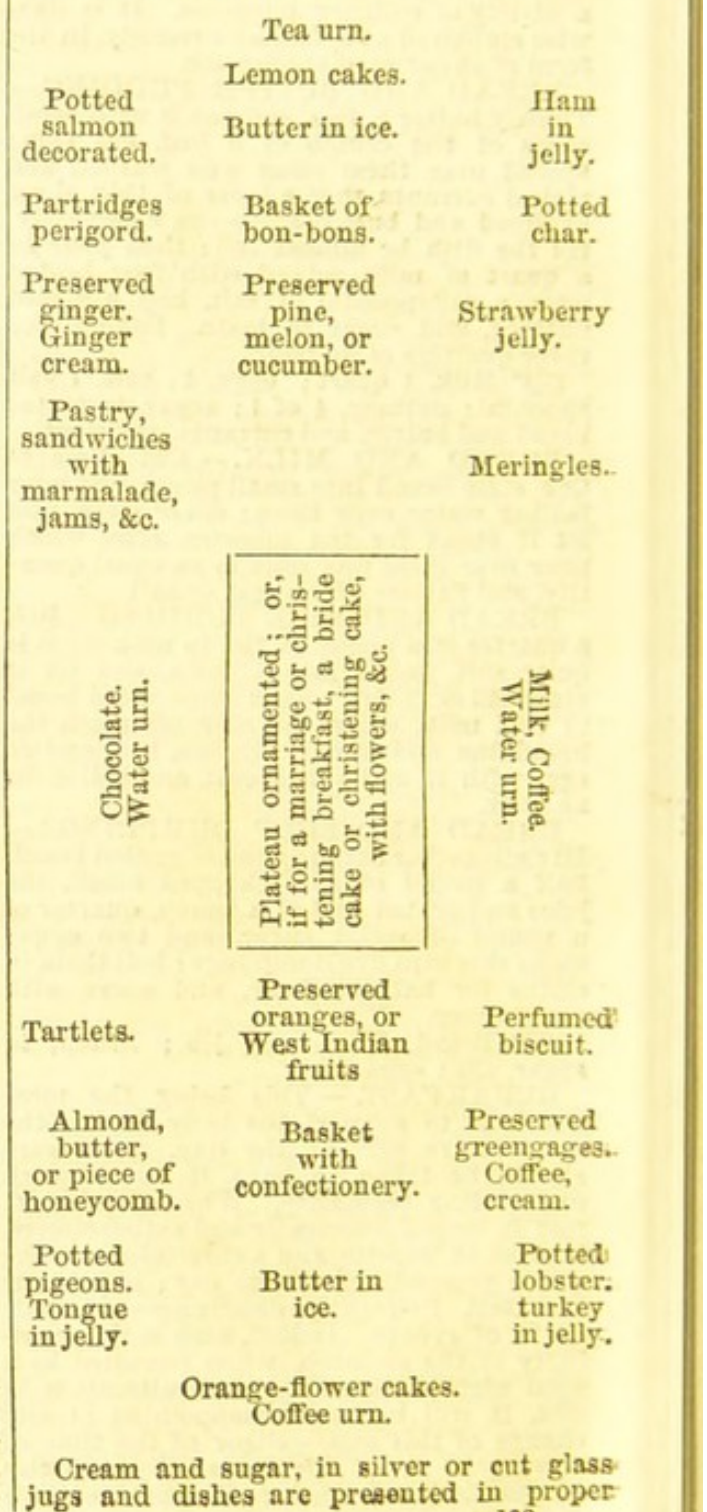
The time at which breakfast should be taken must depend upon a variety of circumstances. Generally speaking, about an hour after rising will be found the most appropriate. By that time the powers of the system have fully recovered from the inactivity of sleep, and the functions of the stomach and other organs have then come into full play. If abstinence is prolonged beyond this interval, the physical and mental energies, unsupported by the supply of food which indirectly gives them birth, gradually lessen, and incipient exhaustion ensues. The fluids of the stomach and smaller tissues begin to act upon the coats of those viscera instead of on the food, and an unpleasant feeling of hunger, or a loss of appetite comes on as a natural consequence. The exceptions to this general rule are, that many persons, even those who are not in the habit of taking supper, from a weakened condition of the system, experience an uneasy sensation of languor, accompanied by a feeling of debility and depression, which unfit them for the slightest exertion until they have taken food. On the other hand, many persons retire to rest at a late hour, immediately after eating a hearty supper, and rise at a disproportionately

early hour, so that the food has not had time to digest properly; and in such cases the breakfast hour may be delayed beyond the usual interval, so that the food of the previous night may have the opportunity of passing from the stomach before a fresh supply is introduced.

When breakfast cannot be taken within a reasonable period after rising, a biscuit or crust of bread may be eaten in the interim. A raw egg or two sucked from the shell, or broken into a cup of tea and drunk, will be found most valuable for this purpose.

The quantity and quality of food to be taken at breakfast, must depend on the constitution, habits, and pursuits of the person. Individuals exposed to cold moisture, the morning dews, or unwholesome air, should fortify their stomachs with a good and substantial breakfast. When the dinner hour is late, the morning meal for a person in health should be sufficiently solid to prevent the necessity of having recourse to a hearty luncheon. Tea and coffee are now the morning *beverages* generally used by all classes in this country; and the choice of these must depend on the experience of each individual, as to which agrees with him best. Coffee is preferred by many; but although very grateful to the palate, it is apt to prove heating. For the delicate, the bilious, and the young, it should not be taken strong, and should be well softened down with milk and sweetened with sugar. Tea is considered as extremely grateful and refreshing, but in many cases it acts injuriously upon the nerves. In making this beverage, it is best to use good black tea, and to drink it of a moderate and reasonable strength. Green tea should, by all means, be avoided. Chocolate is occasionally taken with breakfast, but owing to its oily constituents, it is apt to disagree with all but the strongest stomachs. Cocoa is sometimes recommended as an occasional drink, and when made from the nibs, may prove beneficial. Persons affected with indigestion, and those with weak stomachs, are frequently troubled with heartburn, and other uneasy sensations, every time they take much warm fluid; in such cases it is advisable to drink a cup of weak tea on rising in the morning, and only a small cup of tea with breakfast, in order to avoid mixing much liquid with solid food—a combination that rarely agrees well with the enfeebled or delicate stomach. The *solid food* for breakfast should be easy of digestion and nutritious; and sufficient to afford the gentle stimulation which the system requires. Females, children, and persons leading a sedentary life, should confine themselves to a sufficient quantity of good bread and butter; to which an egg, or a small rasher of mild bacon, may be advantageously added. Persons engaged in active occupations, may venture somewhat further, and add a little ham or cold meat. When an undue time will elapse before the luncheon or dinner, and particularly during the colder season of the year, the broiled leg of a fowl, an underdone mutton chop, or a little tender rump-steak, will be found by the persons last referred to, very acceptable. But excess must be particularly avoided; a rule easily violated at the breakfast table. In all cases, and especially when a weakened condition of the digestive powers exists, new bread, hot rolls, butter in excess, and the fat of meat are to be avoided.

BREAKFASTS FOR CHRISTENINGS, WEDDINGS, &c.—The arrangement of these breakfasts depends greatly upon the season of the year; ornamentation with natural flowers being the chief means employed for decorative purposes. It is usual to have everything cold except the tea and coffee, and the following plan of the disposition of the breakfast table may always be carried out with effect:—



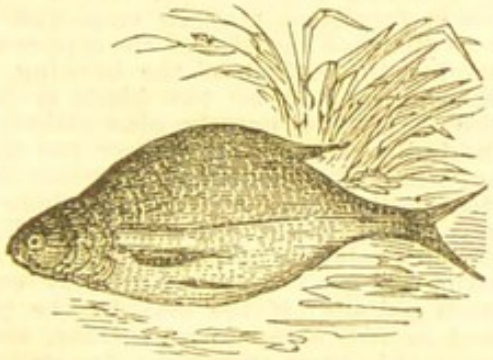
Cream and sugar, in silver or cut glass jugs and dishes are presented in proper

places. Game and lobster salads may make part of the dishes, and venison is an appropriate luxury. Ice-pails may, in hot weather, be placed on the table. Plovers' eggs, hot, in a napkin, or cold, laid in moss, are tasty. At such entertainments, the lighter dessert wines are used, and also liqueurs. Toast, rolls, muffins, eggs, may find a place on the side table. Fruit may form a part of the repast, according to the season.

Breakfasts are supplied by pastrycooks at so much per head, according to the style in which they are to be served; the charge usually ranging from 4s. to 10s. Under such arrangement the contractor provides every article that is to be used, as well as what is to be consumed. Attendants are also sent, who prepare the table, wait on the guests, and ultimately clear the things away. Breakfasts thus supplied are the most satisfactory. The repast is better "got up" than it generally is, when private resources are only available. The person who gives the breakfast is spared all trouble and anxiety, the guests are much better pleased, and the expense is very little more than the home-prepared festival.

BREAKFAST ROLLS.—To two pounds of flour put a teaspoonful of salt, a quarter of a pint of fresh yeast, and as much water as will make a batter. Stir this well till it is smooth, and let it stand covered before the fire to rise for two hours. Add as much more flour to it, which you should have rubbed down with the butter you mean to put to the rolls. Work the dough very smooth, divide it, and mould it into rolls; bake them in tins.

BREAM.—Called by naturalists *Cyprinus Brama*, is a deep but narrow or thin fish, and is of two kinds, the silver bream and the golden or carp bream, of which the latter is the more prized for culinary purposes, and also grows to a larger size, sometimes attaining the weight of seven or eight pounds; it is



a broad, hog-backed fish, with a forked tail, a small dorsal fin, which is compensated for by the largeness of the anal one, and by the more than usual size of the forked fin between the dorsal and the tail. It has a small head and mouth, and a prominent eye; the haunts of the bream are ponds and deep sluggish parts of rivers, with marly or clayey bottoms, except in March and April, and again in June, just after spawning; when they are found in the gentle streams, with a sandy or gravelly bottom. Bream spawn about the end of May, at which time they leave their usual haunts in the deepest parts of a river or pond, and seek those spots which are fullest of weeds, on which they deposit their spawn. Old Izaak Walton tells us that the male fish is provided with two milts, and the female with two large bags of spawn. The rivers of this country most prolific in bream, are the Ouse, in Bedfordshire and Huntingdonshire, the Oundle, in the latter county, the Cam, in Cambridgeshire, the Yare, in Norfolk, and the Wey, in Surrey; whilst in some parts of the Lea and the Thames, very fine specimens of this fish will be found.

The best *time* for fishing for bream, is in the months of July and August; although, if the weather continue warm and genial, good sport may be obtained in September, and even in October. The *rod* should be light and pliable, about 12 feet in length; the butt and next joint made of cane, bamboo, or deal; the third joint of lance wood or hickory; and the top joint of lance wood, green heart, or spliced cane. The *reel* may be either of brass or wood; the *running line* should be fine, and either plaited or twisted. The former is more suitable, if to be used with a brass reel, and the latter for the wooden one; the *bottom line* or *tackle* should be of fine round gut, from 3 to 6 feet long; the *hook*, number 6 or 7; and the *float*, a turkey or swan quill, or cork, according to the stream in which it is intended to be used. As bream are fond of resorting to the deepest parts of ponds, or to the deepest holes in rivers, where the water is sometimes 20 or 30 feet deep, a *sliding float* should be added to the stock of knick-knacks which go to make up the full complement of any angler's stores; the use of this float is, that if a *fixed float* were used, and if it were fixed at the proper depth, the line would be too long for casting in, and the fish when hooked could not be brought to the surface for netting or landing, in consequence of the float not being able to pass through the rings of the rod; the line, say 20 or 30 feet below the float, would be unmanageable by a 12-foot rod, even if the angler were on a high bank; the *sliding float* should be made of cork, with rings just large enough for the running line to pass freely through, fixed at the *top* as well as to the *bottom*, and in a direct line with each other, to keep the float stationary at the proper depth, or rather to make the float keep the bait in its proper position; the line must be stopped from passing through the rings of the float by taking a loop therein, through which may be placed a piece of string or line large enough to do this, but small enough readily to pass through the rings of the rod; when in the water, the buoyancy of the float will keep it on the surface, and the line will pass through the rings until checked by the piece of inserted string or line. Of course the position of this must be changed according to the depth of the water to be fished in. The *leger line* is also used for bream fishing. The best *baits* for bream are lob, dew, red, and marsh worms, gentles, wasp grubs, and paste, but they may be taken with wheat-pith, greaves, grasshoppers caddis, and sal-

mon roe. The *ground bait* for bream should be selected according to the *bait* intended to be used; either worms, chopped into pieces about an inch long, carrion gentles, wasp grubs, boiled barley or malt, either whole or coarsely ground, and grains; and should be cast into the place intended to be fished 20 or 24 hours before commencing. The bream is a very shy fish, and requires that the angler should practise great caution if he would succeed in taking him. Books: *Blaine, Daniel, Walton (Ephemeras' Edition) Bailey's Instructor.*

BREATH, IMPURE.—There is nothing more annoying to a person of refined feeling, or disagreeable to all who approach him, than to be afflicted with an impure breath; and as the causes are so limited from which it proceeds, and the mode of treatment so simple and attainable by all, it becomes a great social dereliction in any one so afflicted not to immediately avail himself of a remedy. Impure breath can only proceed from three causes, an unhealthy state of the stomach, unclean or decayed teeth, and salivation. For the latter condition there is no remedy till the course of medicine that has produced it has been withdrawn. When depending upon an impure state of the stomach, the best remedy is wormwood or camomile tea, taken in cupfuls, three times a day, with half a teaspoonful of carbonate of soda in each dose, with an aloetic or colocynth pill, twice a week. By this means, persisted in for a short time, the worst case of fetid breath may be conquered, when dependent on a depraved state of the digestive organs. For impure breath, the consequence of the state of the mouth and teeth, the only cure is cleanliness, and where it is inconvenient or impossible to stop the decayed teeth, and the patient is disinclined to have any stumps or shells of teeth removed, the mouth may always be kept clean and perfectly inoffensive by the daily use of the tooth-brush and the following powder.

Powdered cuttlefish .	2 drachms.
Powdered myrrh . .	½ a drachm.
Carbonate of soda . .	1 drachm.
Charcoal powder . .	1 ounce.

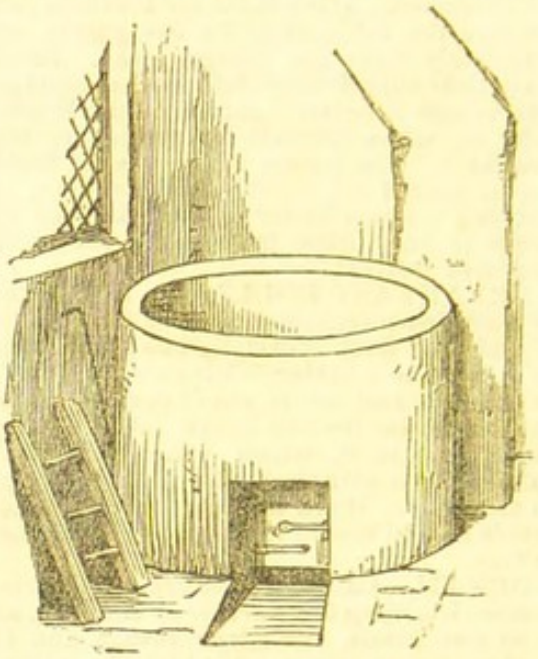
This powder should be used freely, and allowed to remain some minutes in the mouth and over the teeth before being washed away.

To effect the same object, but in habitual and long standing cases, the teeth may be cleaned with warm water in which a small quantity of the chloride of lime has been dissolved, in the proportion of half a spoonful to a pint of water. By a simple adherence to one or more of these plans this most unpleasant annoyance can always be mastered, and its repetition prevented.

BREWING.—The process of brewing ought to form a part of the domestic economy of every family, for similar reasons as those that apply to home made bread, namely, that the article thus produced may be obtained much purer and for a far less cost than when purchased from the brewer or the publican. Brewing is not a difficult art, a great deal depends upon proper management and strict attention to certain definite rules; and whatever obstacles may present themselves at the outset will soon be overcome by practice and personal experience.

The process of brewing may be divided into three distinct heads—1. The utensils employed. 2. The ingredients used. 3. The various operations performed.

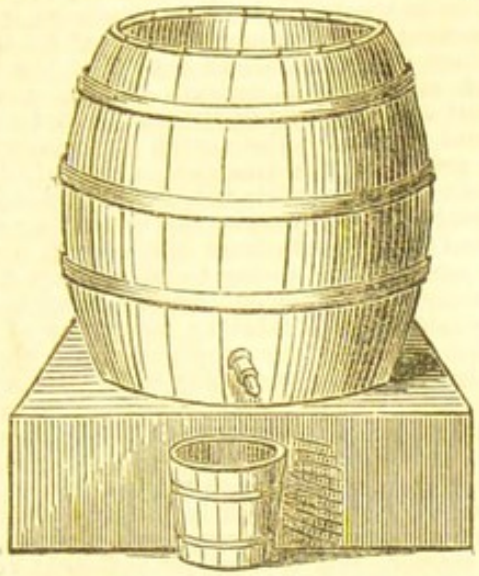
1. The Utensils. *The Copper* is used for heating the water; sometimes it is fixed for the purpose, if the brewing be on a tolerable scale; or in a portable one, if the brewing be limited; in short, the size of the copper must depend upon the extent of the establishment, and what is required; the copper in the engraving is a fixed one



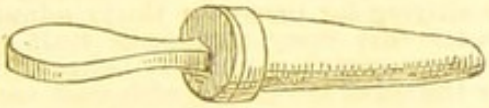
of the smallest size. But it is not absolutely necessary that a copper should be designed purposely for brewing; the ordinary washing copper with which every house is furnished may be employed. If this be the case the size of the copper will determine the extent of the brewing. If it be required to brew two kinds of beer at the same time, namely, nine gallons of ale, and nine gallons of table beer, the capacity of the copper should not be less than thirteen gallons. If one kind of beer be only required, then, for each nine gallons the copper should contain, if the whole quantity of grist be mashed only once, thirteen gallons; if the mashing be performed in two separate operations, seven gallons; if in three operations, five gallons. It is not economical to exceed these capacities, at least, not to extend them to fifteen, nine, or seven gallons. To save time and labour it is desirable that the copper be placed, if it can be conveniently done, at such a height as will allow the water to run from it into the mash tub, by means of a wooden spout or gutter. Much trouble, besides waste, will also be avoided if the copper be furnished with a metal tap; but, instead of having it soldered in, it is better when consisting simply of a pipe of sheet copper, coming out level with the bottom, and projecting beyond the brickwork in

which the copper is fixed. Into this tube the tap may be easily secured, as is done by fixing it in a cask, and again removed as occasion may require. The tap should be of a size sufficient to prevent its being choked by the hops in drawing off the malt wort.

The Mash Tub is the vessel which is to hold all the ground malt or grist,



and water enough to make the infusion of sweet wort for ale. It is generally made of wooden staves, fixed by hoops of iron or wood; two-thirds of any broad bottomed cask or barrel will do for this purpose. All that is essentially necessary is to have the vessel capacious enough to hold the malt and water to be infused, with a contrivance at the bottom to let off the infusion or sweet wort into another vessel. For this purpose some have a metal tap fixed near the bottom, but in cheaper ap-



paratus a spigot and faucet is found sufficient for those who cannot afford the other. This is merely driven tight into the hole in the lower part of the tub, and the peg takes out. The objection to this contrivance, however, is that it is apt to swell by the hot liquid, and in attempting to draw off the wort, the apparatus may be forcibly pulled out altogether. The size of the mash tub must be adapted to the mode of brewing to be pursued. A smaller or larger mash tub will be required for the same quantity of liquor, according to the number of mashes it is to undergo. But in any case it should be large enough to hold the whole of the wort of which the ale is made, and all the malt, and there should be likewise room enough left to mash in; for this purpose the liquor should not reach above five to six inches from the edge of the mash tub.

The Under-back is a shallow tub placed below the mashing tun, for the wort to run off into when drawn from the grains. Its size is proportioned to that of the mashing tun. It is best to be large enough to hold all the wort of one mashing, that the wort may not be cooled by being transferred into other vessels previous to boiling. This tub should have its capacity divided into gallons, that the quantity of wort from each mash contained in it may at once be known by mere inspection.

The Cooler is a flat tub used for the purpose of cooling the wort before it is fermented; common washing tubs will answer this purpose tolerably well. For each nine gallons of liquor to be brewed let these tubs contain in the whole fourteen gallons, which may be divided in the following manner, and from these sizes a calculation for any greater scale may be readily made; the larger tub, in each case, being intended to serve in the three-fold capacity of *receiver*, *cooler*, and *gyle-tun*. For a brewing of eighteen gallons, one sixteen gallon and one twelve gallon tub are required. For twenty-seven gallons one tub of eighteen gallons, and two tubs of twelve gallons, are necessary. To brew a barrel, the larger tub should have a capacity equal to thirty gallons, while each of the other two should be able to hold thirteen gallons.

The Thermometer is found of great service to the brewer, and should always be employed where accuracy is required. By it the proper heat of the mash is regulated, and of the worts when drawn from the mash tun. It indicates when the worts in the coolers are of the proper temperature to begin the fermentation, and it marks the progress of this process by the increase or diminution of heat. For this purpose a common thermometer with a metal scale, enclosed in a tin case, will do.

2. THE INGREDIENTS USED.—These consist of malt, hops, water, and yeast. *The Malt* is chosen according to the intended character of the brewing; pale, amber, high-dried, or any mixture of them, as the occasion may require. The amber-coloured is best adapted for general brewing, but pale malt is preferable for brewing in a small way; either may be procured of any respectable maltster. Malt varies much in *quality;* when good its grains are large, full of flour and plump; they break easily between the teeth, and if drawn across a board leave a chalky trace. The shell or husk also should be thin and brittle. When the malt is purchased, inquiry should be made, whether it is old or new. If the malt be new, it should be left exposed to the open air one or two days after grinding, before it is used. If it be old, it will be better to have it ground on one day and brewed the next without allowing it to stand after it is broken. It should be bruised moderately small, so that every grain be crushed: but if ground very fine, it will clog the mash and impede the draining of the wort. The *quantity* of malt used in domestic brewing may be regulated as follows:—If the beer be not intended for keeping, one bushel of malt will make twelve gallons of common or table ale. Or from one bushel of malt may be brewed twenty-four gallons of table beer, without any table ale or nine gallons of ale, and six of table

beer, or six of ale and twelve of table beer, or any other proportions, bearing in mind that the *common* ale and table beer are here considered as two of table beer, being equal to one of ale. This is the smallest quantity of malt that should be employed for brewing twelve gallons of good table or common ale. It must be understood, that the malt be measured before it is ground, because a bushel of malt by measure produces, when coarsely ground, one bushel and a quarter of grist, and when finely ground, the increase of bulk is still more considerable; hence, if the malt be purchased in a ground state, this allowance must be made accordingly. *Hops*, like malt, vary much in quality; the best are of a bright colour between yellow and green, of a pungent fragrant smell, and when rubbed between the hands, of a glutinous character; if any brownness of colour appears on them, it is a sign that their qualities have partially perished. They should be chosen free from leaves, stems, &c., and be kept in a dry place closely packed, or they will become damp and mildewed. Hops do not keep perfectly good for more than a year, and therefore it is best to procure them of the present year's growth. The *quantity* of hops used may be regulated according to the palate. One pound of hops to a bushel of malt produces a pleasant bitter, and is considered a good proportion, but less may be used if the draught is quick. The *water* best adapted for brewing is variously estimated, some giving the preference to soft water, and others to hard. But it may be considered that any kind of good drinkable fresh water will do for brewing, provided it be free from impregnations derived from stagnant pools or ponds containing decayed animal and vegetable substances. In all cases it is advisable that the water should be allowed a sufficient time to settle before it is used. *The yeast* must be sweet and good, for upon that circumstance proper fermentation mainly depends. The best yeast is that which is collected at the top, and which has become a dense tough froth, formed when the fermentation has been a good deal advanced. What has fallen to the bottom, or the ground yeast, is not so powerful. Though yeast can be kept, yet new yeast is more active than old. Yeast is also liable to become putrid by keeping, and the smallest quantity of this, or the least tendency to it, will inoculate a whole tun. The *quantity* of yeast that should be used cannot be the same exactly for all cases, for it must depend partly on the quality of the beer, and upon the season: in most cases a larger quantity of yeast will have the same effect as a higher degree of heat in exciting the fermentation, and a smaller quantity will be equivalent to a lower temperature; but, in general, a gallon for four barrels may be stated as the usual proportion when the wort is from 60 to 70 degrees; if the heat be greater a smaller quantity will be sufficient.

3. *The operations* in the process of brewing are, mashing, boiling, cooling, fermentation, and cleansing. *Mashing* is extracting from the ground malt, by the addition of hot water, the infusion or wort. During the process of mashing, a peculiar principle contained in the malt, called by chemists *diastase*, reacts upon the starch with which it is associated, and converts it first into a kind of gum, and ultimately into a species of grape sugar. The more perfectly this is effected, the richer will be the resulting wort in sugar or "*saccharine*," and the stronger and more alcoholic the beer produced by its fermentation. Mashing is effected by three distinct processes. The action of the first mash is merely to extract the sugar contained ready formed in the malt; that of the second to convert the starch into sugar by the action of the diastase; and that of the third to fully complete the last-named object, as well as to carry away the remaining portion of extract left from the second mash. The quantity of water to be employed for obtaining the different mashes must be determined by the relative capacities of the mash tub and the copper; care should be always taken to employ so much for the first mash as will keep a sufficient quantity in the copper to prevent its being injured by the fire. When you commence the process of mashing, fix the mash tub in a convenient situation, and in a slightly slanting position, so that it may readily receive the water from the copper, and also allow sufficient room for the person who is to stir the mash. Then having adapted to the orifice of the spigot or tap that projects within the tub, a wicker strainer covered with a case of close canvas, to prevent the grains and fine flour from passing through, pour in the mash tub ten gallons of boiling water, for every five pecks of malt to be employed. When the water has cooled down to 160 degrees in summer, or 170 in winter, let one person gradually pour the malt into the tub, while another stirs and mixes it with the water. Then thoroughly agitate the whole mixture, and keep stirring for twenty or thirty minutes, in order that every particle of malt may become completely saturated. After which cover the mash tub closely with malt sacks, cloths, or whatever else is handy, to keep in the steam.

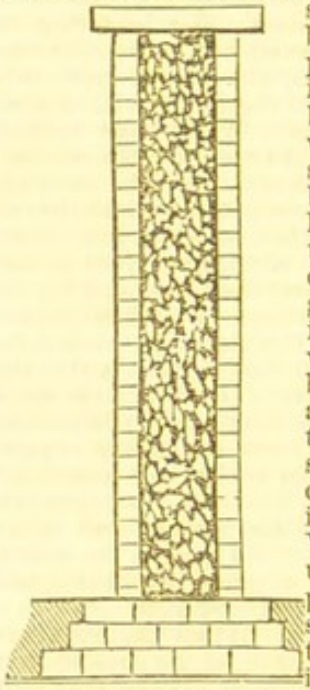
When the mash has stood for at least one hour and a half in winter, and one hour in summer, draw off a few quarts of wort into the under-back, and return it into the mash tub, that it may run off clear; when it runs clear, draw off the whole as quickly as possible. During the time the first mash is standing on the malt, refill your copper with water, and bring it to the heat of 190 degrees for the second mash; and when the first mash has run off, lade as much water on the malt as will make it of the same consistence as the first mash. If the brewing be intended only for nine gallons of beer per bushel of malt, five and a half gallons of water is the proportion required for the second mash. Let the water be poured on the malt by one person, while another plies the "oar" for at least half an hour. If it be intended to brew only one kind of liquor, the second wort may run into the same receiver containing the first wort. The second mash must stand for an hour and a half, and then be drawn off as

quickly as possible. The third mash should be made by adding the remaining portion of the water heated to 200 degrees, this should be well stirred and stand for an hour. Although three separate operations of mashing are here stated, if time or convenience does not admit of this proceeding, the grist may be mashed in two operations only, with the whole allowance of water to be employed; in that case a quantity of water will be seen lying on the top of the malt, the mash being too thin, and a portion of the extractive matter remains in the grain which is mashed out by the second mash. But it is always preferable to make three mashes. When you have mashed a third time you may proceed with the process of *boiling*. Empty your copper of water, and, if it will hold the whole of the wort, fill it with the first and second worts together with the hops, and likewise your third wort, as soon as it has run off; if the copper be not large enough to boil at once, mix your worts together, and boil them twice; taking care to add the hops of the first boiling to the second. Boil the mixture till the liquor *breaks*, or becomes clouded with large fleecy flakes. This will take place probably when the wort has been boiled about one hour. The breaking or curdling is best observed by taking a basinful of the wort out of the copper and suffering it to cool, when the flakes will be seen distinctly in the wort. Whilst the boiling is going on, arrange the tubs for the cooling process, by raising them from the floor on to a support, to allow a free circulation of air beneath them; then place a hair sieve over it, supported by a frame of four pieces of wood joined ladder-wise, and resting on the edge of the tub, strain the boiled liquor through the sieve. Put the hops back into the copper, and boil them again with the second and third wort. *Cooling* is the next process, the object of which is to reduce the temperature of the liquor as quickly as possible, in order to avoid acidity or "souring." When the boiling is finished, the mash tub must be cleared of the grains, and after rinsing it with water, fill it with the boiled wort, and put it in a place where it is not exposed to a current of cold air, to serve as a gyle tun for the wort. When the contents of the several tubs have so far cooled, that the average temperature of the different quantities united will be from 62 to 65 degrees, the process of *fermentation* then takes place; pour the whole into the gyle tun, add the yeast, and, having covered up the vessel, let it stand in a moderately warm place The method of mixing yeast with the wort is as follows: take one pound of good yeast, and about two quarts of wort, stir them well together, and place them near the fire for a few minutes till the mixture begins to ferment; then pour the whole into the gyle tun, and agitate the contents briskly with the oar; then cover up the vessel. After fermenting twenty-four hours, take a handful of flour, and the same quantity of salt, place them before the fire to get warm, and sprinkle them over the contents of the gyle tun; then give the whole a good stirring. If the fermentation proceed too rapidly, and there appear danger of the whole contents of the vessel overflowing, the yeast may be beat down with a stick, and the tub uncovered: a door or window may also be opened in the place where the tub stands to admit a cool draught of air, for retarding the fermenting process. If the fermentation is languid and feeble, one or two large stone bottles, filled with hot water, closely corked, may be let down into the tub, to increase slightly the temperature of the liquor. The commencement of the fermentation is indicated by a line of small bubbles forming round the sides of the vessel, and in a short time extending over the whole surface. A crusty head soon forms, and then a thick rocky one, followed by a light frothy head. At length the head assumes a yeasty appearance, the colour becomes yellowish-brown, and a vinous odour is developed. As soon as this last head begins to fall, the liquor should be skimmed continually every two or three hours until no more yeast is formed. It may be regarded as a rule that the lower the temperature is, and the slower, more regular, and less interrupted the process of fermentation, the better will be the quality of the brewing, and the less liable to be changed by age. *Cleansing* consists in running the beer from the gyle tun into casks or other vessels, set sloping, so that the yeast, as it forms, may work off the one side of the top, and fall into a vessel placed below to receive it. The process of *cleansing* is generally commenced as soon as the saccharine in the fermenting wort falls to about ten pounds per barrel, a degree of attenuation which it usually reaches in about forty-eight hours. When *barreling* the beer, draw off the fermented liquor from the thick sediment in the fermenting vessel into clean casks, previously rinsed with boiling water; and when the casks have been filled, strike a few strokes with a mallet on the hoops, in consequence of which the air-bubbles become displaced, the liquor subsides a little and leaves more to be added. A slow fermentation will still go on in the beer, and an additional quantity of yeast become disengaged, and overflow the barrels, which should be placed with the bung-holes inclined a little on one side. The same liquor which overflows from the cask—being saved by means of vessels placed underneath—may be used for filling up the barrels. In four or five days the beer will have purged itself from the yeast; let it stand a few days more till the vinous fermentation is completed, which is easily perceived by the yeast at the bung-hole turning brown and becoming full of holes, the casks may then be bunged up. The casks should be occasionally examined, especially in warm weather. If a hissing noise is audible at the bung-hole, the spile may be left in loosely till the liquor has become quiet; but it is better to check the fermentation, which may be done by repeatedly wetting the cask with cold water all over with a mop. The beer being well prepared and completely worked off, it will then be proper to remove it to the place where it is to remain for use. As soon as it is placed in the cellar—where it should be

kept as far as possible from a current of air—the bung must be drawn, and the casks filled up quite full with fine beer, skimming off the head from time to time that will arise in consequence of its being rolled over. After being attended to in this manner for two or three days, the casks should be bunged tight, and a hole bored with a gimlet near the bung for the vent peg, which should be left rather slack for a day or two. In three weeks or a month the beer will become fine, and may then be tapped. The following important items in the process of brewing cannot be too strongly insisted upon:—The proper heats of the water in the different mashings; the length of time the water should stand on the mash; the time that the wort should actually boil; the necessity of getting the wort cool as soon as possible; the proper heat for mixing together the wort and the yeast, and the subsequent attention thereto; but above all the constant care to fill up the barrels repeatedly.

In addition to the foregoing special directions for the process of brewing, the following *hints and cautions* will be found worthy of attention. The *best time* for brewing is cool weather; March and October being expressly suited for brewing in a small way. If for want of room you are obliged to brew during warm weather, let the quantity be not greater than is requisite for immediate use; for most liquors, brewed during hot weather, seldom keep long. *Cleanliness* cannot be too particularly observed, especially in the summer season: every particle of matter left in the utensils, after being used, creates a foulness not easily afterwards got rid of, and inevitably imparts a bad taste for a length of time to subsequent brewings. Some days previous to the operation of brewing being commenced, all the casks and tubs should be filled with water, to render them tight. By neglecting this precaution, many disagreeable consequences may follow by unexpected leakage, particularly if the utensils are not well-seasoned vessels that are constantly kept in use. Immediately after the brewing utensils are made use of, they should be carefully and thoroughly washed out, and rinsed with cold water, and this operation must be renewed from time to time, if they are not soon again to be made use of. During the summer months a few lumps of unslacked lime should occasionally be thrown into each, and, with such lime liquor, the vessels should be well scoured. The copper likewise requires attention; it should never be used without being scoured, and in doing this the bottom, and all round the tap, should be specially examined, to see that no coat of verdigris adheres. *Preparations* should be made for brewing on the day before the actual process commences; the materials should be laid ready at hand, the utensils arranged in proper order, the copper filled, and the coals provided for the fire. Purchase malt in or before the month of May, to avoid the summer-made malts. Malt is also cheaper at that period than at any other. Purchase hops in October or November; if in a good ripening season, and they are in fine condition, lay in your stock. Seasons differ greatly. Easterly winds are bad for brewing, and worts exposed to them rarely escape injury. The sweet wort particularly will often contract an acidity not to be eradicated; therefore always shut out easterly winds, whenever it is possible. The mash-tub, underback, &c., ought to be painted when new and dry; first, by priming, which should be followed by three coats of paint, each successive coat increasing in substance; thus forming an unyielding mass. Wood so guarded will never shrink. Avoid all drugs of every kind; the true flavour of beer is derived from malt and hops alone; and the introduction of other ingredients, independently of the injury they occasion, is utterly useless and opposed to common sense. Books: — *Accum's Art of Brewing; Every Man his own Brewer; Levesque's Art of Brewing; Black's Practical Treatise; Roberts' Domestic Brewer.* See ALE, BEER, BOTTLING, CLARIFICATION, FINING, RACKING, &c.

BRICK AND CONCRETE WALL.—This method of construction is often adopted to economize bricks, and is as follows:—The sides are carried up brick on bed, and, to produce the thickness intended, the space between is filled up with rough gravel, stone chips, broken brickbats, or any dry hard material. As the building proceeds, thin hot lime grouting is poured into the heart of the wall till all the spaces between the packing are completely filled; this adheres to the side brickwork and cements it together in one solid mass. Where walls are put up to suit temporary purposes, this plan should not be adopted, as it is almost impossible to separate the bricks from each other after the concrete has become fully set. By this plan it will readily be seen that a great saving of bricks is effected; for example, a 14-inch wall, built solid, requires 3620 bricks per rod, whereas by this plan 1210 bricks are sufficient, being the number required to build two 4-inch walls only. If to this is added the expense of the concrete, the brick and concrete wall will even then be found much the cheapest and most durable.



BRICKS are the materials most generally employed for the walls of private dwellings in this country, and when they are well made and properly burnt, no substance is superior in durability. But as modern bricks are often so carelessly made that they crumble to pieces in a very short time, much judgment is required in their selection

and purchase, and the best method is, to visit several brickfields before deciding. Bricks will last for a long time without requiring any attention beyond an occasional scraping of the surface and the filling up the vacancies left by the wasted mortar, known as pointing.

BRIDE.—See WEDDING CEREMONY.

BRIDE CAKE.—Take four pounds of flour well dried, four pounds of fresh butter, two pounds of loaf sugar, a quarter of an ounce of mace, and the same of nutmeg. To every pound of flour put eight eggs and four pounds of currants, which have been well washed and picked, and dried before the fire until they have become plump. Blanch a pound of sweet almonds, and cut them lengthwise, very thin; a pound of candied citron, the same of candied orange, and the same of candied lemon-peel, together with half a pint of brandy. First work the butter to a fine cream with your hand, then stir in the sugar for a quarter of an hour, beat the whites of the eggs to a strong froth, and mix them with the sugar and butter; beat the yolks of the eggs for half an hour, and mix them well with the rest; then by degrees put in the flour, mace, and nutmeg, and continue beating the whole till the oven is ready, put in the brandy, currants, and almonds lightly; tie three sheets of paper round the bottom of the hoop, to secure the mixture, and rub it well with butter, put in the cake, and lay the sweetmeats in three layers, with some cake between each layer; as soon as it rises and colours, cover it with paper before the oven is closed up, and bake it for three hours. It may be iced or not, as desired.

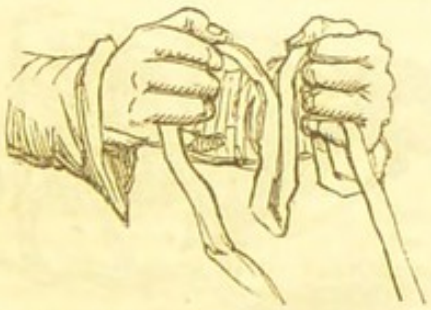
☞ Flour, 4lbs.; butter, 4lbs.; sugar, 2lbs.; mace, ¼oz.; nutmeg, ¼oz.; eggs, 32; currants, 16lbs.; almonds, 1lb.; candied citron, 1lb.; candied lemon-peel, 1lb.; candied orange-peel, 1lb.; brandy, ½ pint.

BRIDEGROOM.—See WEDDING CEREMONY.

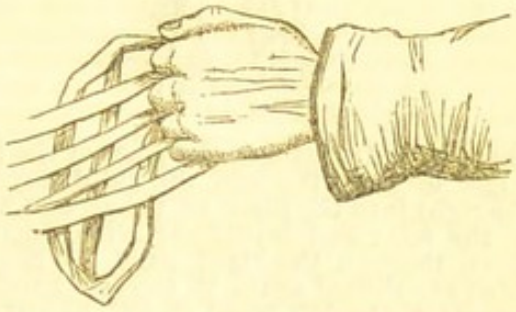
BRIDEGROOMSMAN.—See WEDDING CEREMONY.

BRIDESMAID.—See WEDDING CEREMONY.

BRIDLE.—This contrivance for directing, encouraging, and restraining the horse when mounted, consists of the bit, headstall, and reins. The management of the latter forms an important feature in horsemanship, and varies according to the style of riding, the

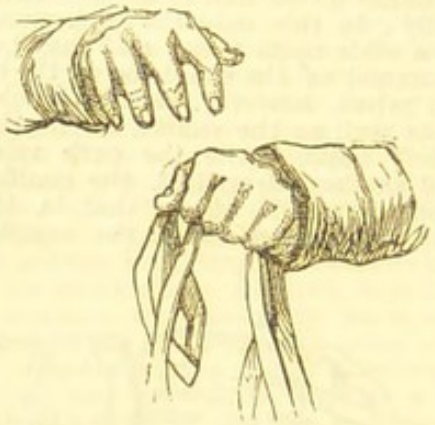


design of the rider, and the propensities of horses. In holding the snaffle reins separately, one rein passes into each hand, between the third and fourth fingers, and out of it over the forefinger, where it is held down by the thumb. When afterwards further advanced the reins are held in the left hand—as at first taken up—the left rein passing under the little finger, and the right under the third finger, both lying smooth through the hand, the superfluous rein hanging over the first joint of the forefinger, and the thumb being placed upon it. Riders should not throw their right shoulders back, as they are apt to do, when they first take the reins in one hand. The right arm should hang by the side, with the hand in a line with the thigh, or, if holding the whip, it may be kept a little lower than the left, in order not to obstruct the operation of the bridle. Generally speaking, it is better to ride with the snaffle alone, and to use the curb occasionally; in this case the curb reins may have a slide upon them, and may hang on the pommel of the saddle or on the horse's neck; when, however, the rider holds the curb as well as the snaffle, having both in the left hand, while the curb reins are placed as above described, the snaffle reins are placed within them, that is, the left snaffle rein enters under the second, and

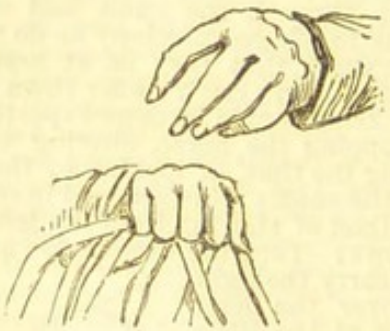


the right under the first finger and both pass up through the hand, and out of it over the forefinger, precisely as do the curb reins, except that they lie at first above, then within, and lastly under them. Shifting the reins should be done expertly, without stopping the horse, altering the pace, breaking the time, or looking to the hands. When the snaffle reins are held in one hand, the method of shifting from the left hand is as follows:—Turn the thumbs towards each other; carry the right hand over the left; in place of the little finger of the left hand, put the forefinger of the right hand downwards between the reins; lay the reins smoothly down through the right hand, and place the thumb upon the left rein, between the first and second joint of the forefinger. To shift them again into

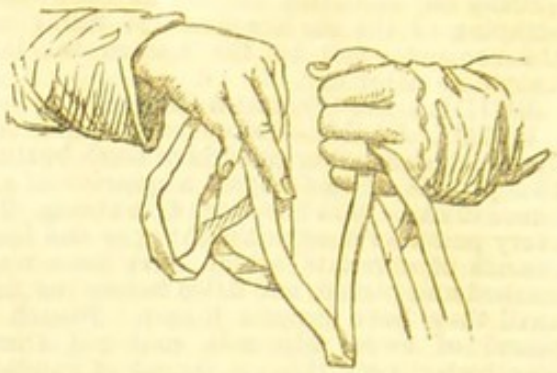
the left hand, it is only necessary to carry the left hand over the right; to put the little finger of the left hand downwards, between the right and left reins; to pass them gently upwards through the hand, and to let the ends hang over the forefinger as at first. When both curb and snaffle reins are held in the usual method, they should be shifted to the right hand, in a similar manner, by turning the thumbs towards each other; carrying the right hand over the left; putting the forefinger of the right hand into the place of the little finger of the left; the second



finger of the right into the place of the third finger of the left; and the third finger of the right into the place of the second finger of the left; and laying the reins smoothly down through the right hand. When the reins are shifted again to the left hand, the fingers of the left hand should be put into

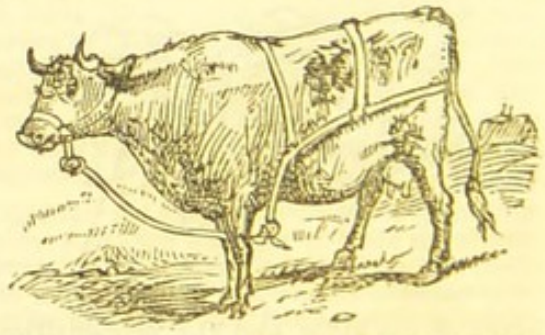


the places they were previously taken from, the reins being turned smoothly upwards through the hand and over the forefinger. Separating the reins is sometimes necessary. When a horse refuses obedience to one hand, two may be used. It is seldom, however, necessary to take more than one rein in the right hand, and this the right rein of the snaffle only; for this purpose the rider turns the back of his right hand upwards; puts the first three fingers over the snaffle rein; receives it between his little and third fingers, and lets the superfluous end hang over the forefinger, with the thumb upwards, as he does the bridle hand. *Adjusting the*



reins is shortening or lengthening them, wholly or partially, as occasion may require. To *adjust the whole*, take the superfluous reins that hang over the forefinger of the left hand, into the right, so that with that hand the horse may be supported, and every step he takes, felt. Then open the fingers of the left hand, so as to slip it up and down the reins smoothly and freely, and thereby adjust them at pleasure. *To shorten the curb rein, and lengthen the snaffle*, take into the right hand the centre of the curb rein that hangs over the forefinger, slip the whole of the reins too long, pass the left hand down them, and feel with the fingers whether both the curb reins are of equal length, before grasping with the left hand, or quitting with the right. *The shortening of the snaffle, and lengthening of the curb*, is similarly effected, by taking into the right hand the centre of the snaffle that hangs over the forefinger, and proceeding in the same way. *When any single rein requires shortening*, apply the right hand to that part which hangs over the forefinger, and draw it tighter. When the reins are separate, or occupy both hands, and want adjusting, the hands must be brought together to assist each other; remembering that the inner hand, or that which supports the attitude the horse works in, is not to depart from its position, so as to occasion any disorder, but that the outer hand is to be brought to the inner, for the purpose of adjusting them.—See BIT, CURB, REINS, SNAFFLE, &c.

BRIDLE, FOR OXEN.—When oxen are turned into pastures, it is generally necessary



to place some gear on them to prevent them from cropping the trees, and to preclude the possibility of their tossing when viciously inclined. For this purpose, the contrivance

known as the Normandy breechin, is best adapted, its application being shown in the accompanying engraving.

BRILL.—A fish somewhat like the sole, but broader, and intermediate between that and the turbot. It is a fine fish, not greatly inferior to the latter, though much cheaper.

BRILL, BOILED.—An hour before it is dressed, soak it in water with some salt in it. Score the skin across the thickest part of the back, to prevent it breaking on the breast, which will happen if this precaution be not observed, by the swelling of the fish. Put into a fish-kettle of cold water a large handful of salt, lay the fish on a drainer in it. When on the point of boiling, skim it, and afterwards set the kettle on the side of the fire to boil as gently as possible for from ten to twelve minutes. This allowance of time is for a fish weighing from five to six pounds. Have a fish-napkin properly arranged on a fish-drainer, and carefully dish the fish.

BRILL, FRIED.—Cut off the fins close to the sides, scrape off the slime, and dry the fish well; then egg them over, dip them in bread crumbs, and fry to a pale brown in plenty of dripping or lard. Garnish with fried parsley, serve up with melted butter or soy, ketchup or anchovy sauce.

BRILL, FRIED IN BUTTER.—Cut the fish from off the bones, in cutlets of about three inches or more; remove the skin from the dark side, but let the pale side remain. Dip each cutlet into butter, and fry in plenty of dripping. Garnish with fried parsley, and serve up with anchovy and melted butter.

BRIMSTONE.—See SULPHUR.

BRIOCHIC CAKES.—Make a paste with half a pound of flour and a little hot water, mixed with a spoonful of yeast; wrap up this paste in a cloth, and put it in a warm place for twenty minutes in summer, and for an hour in winter; then put a pound of flour on the board; mix the paste that you have prepared with it, together with three quarters of a pound of butter, five eggs, a little water, and a few grains of salt. Knead altogether three times; then wrap it up warmly, and let it remain for nine or ten hours. Cut the paste into pieces of the size desired, and mould them as you please; egg them over and bake them:—small one for half an hour, medium size for an hour, and large one for an hour and a half.

☞ *Paste:* flour, ½lb.; hot water, sufficient; yeast, 1 tablespoonful. *Add:* flour, 1lb.; butter, ¾lb.; eggs, 5; water, sufficient; salt, a few grains.

BRITANNIA METAL.—An alloy composed of block tin, antimony, copper, and brass. It takes a high polish, does not readily tarnish; and when kept perfectly bright, nearly approaches the lustre of silver. It is not acted upon by acids, and may be safely used in the preparation or the partaking of food. A number of domestic utensils are made from this metal, and their cost being very moderate, they are brought within the reach of nearly all persons.

BRITANNIA METAL, TO CLEAN.—For this purpose a paste may be used, composed as follows:— Sift rotten-stone through a muslin or hair sieve: mix with it as much soft soap as will bring it to the stiffness of putty: to about half a pound of this, add two ounces of oil of turpentine. It may be made up into balls, or put in gallipots; it will soon become hard, and will keep any length of time. When the metal is to be cleaned, rub it first with a piece of flannel moistened with sweet oil; then apply a little of the paste with the finger, till the polish is produced; then wash the article with soap and hot water, and when dry, rub with soft wash-leather, and a little fine whiting.

BRITISH MUSEUM.—This national collection is situated in Great Russell Street, Bloomsbury Square, London. The public are admitted free on Mondays, Wednesdays, and Fridays, between 10 and 4, from the 7th of September to the 1st of January; between 10 and 5, from the 7th of January to the 1st of May; and between 10 and 6, from the 7th of May to the 1st of September; and daily during the weeks of Easter, Whitsuntide, and Christmas; also on Saturdays, in the summer months, after 12 o'clock. It is closed from the 1st to the 7th of January, the 1st to the 7th of May, and the 1st to the 7th of September, inclusive, on Ash Wednesday, Good Friday, and Christmas Day, and also on any special fast or thanksgiving day, ordered by authority.

The various objects of interest collected together, are classified somewhat as follows:—The Egyptian Antiquities are in two rooms—one on the ground floor called "The Egyptian Saloon," the other upstairs called "The Egyptian Room." *The Egyptian Saloon* consists of the heavier objects, such as Sarcophagi, Columns, Statues, Tablets of the Dead, Sepulchral Urns, &c., and comprises about 6000 objects. *The Egyptian Room* contains 102 glass cases of small statues, various articles of ancient domestic use, weapons, amulets, &c. *The Nineveh Marbles* are placed in a cellar under the building, and form a collection of early and interesting specimens, brought from the country whose name they bear. *The Etruscan Room* contains a collection of vases discovered in Italy. The collection is arranged chronologically, and according to the localities in which the several antiquities were found. *The Elgin Marbles*, so called from the Earl of Elgin, who brought them over to England in 1801. They consist of relics of Grecian architecture, and are considered as the most perfect specimens of ancient art. *The Phigalian Marbles, Egini Marbles, Lycian Marbles, and Boudron Marbles*, are various collections separated under their distinctive heads, and are all, more or less, interesting. *The Townley Collection* consists of marbles belonging to all periods, except the most ancient. *The Bronze Room* contains a number of cases of specimens of Greek and Roman art; comprising bronze utensils and personal ornaments, metal mirrors, lamps, incense vessels, candelabra, &c. *The Modern Marbles* chiefly represent the most celebrated Englishmen, from Shakspeare downwards. *The Medal Room* contains Greek, Roman, Saxon, and other coins, geographically and chrono-

logically arranged; those of each country being kept separate. The library of printed books consists of 500,000 volumes, comprising upwards of 700,000 works, taking each separate pamphlet as a separate work. *The Manuscripts* are divided under several heads, and the rarest of these, entitled select, can only be seen and examined in the presence of an attendant. *Print Room—Drawings, &c.* A small, but interesting and valuable collection of some of the most celebrated artists of ancient and modern times. *Mineralogy and Geology* arranged in the north gallery, with running titles supplied on the outside of the glasses, and labels within them. *Zoology*, comprising an extensive and interesting collection, especially of birds of almost every known species.

It is obvious from the numerous and varied points of interest which the British Museum presents, that it is impossible to view the whole collection at one visit; and it will, therefore, be found less fatiguing and more satisfactory, for the visitor to confine himself to certain departments on his first visit, and inspect the remainder on the same principle at subsequent intervals.

BROCCOLI, CULTURE OF.—This species of cabbage, of which there are many varieties, is propagated by seed. As all the kinds are not generally at command, the following times and varieties are specified as being those employed in general practice, and by which a supply always abundant is accomplished. A first sowing may be made under a frame at the close of January, and a second at the end of February, or early in March, on an eastern wall border, of the purple, cape, and other cauliflower varieties, for production at the close of summer and during autumn; the seedlings from these sowings are respectively fit for pricking out, if that practice be followed, in March and early in April, and for final planting at the close of the latter month and May. In April another crop of the same varieties may be sown for pricking out in May, and planting in June, to produce at the close of autumn and in early winter. During the month of May a fourth and larger crop than any of the preceding, of the early purple and white varieties, to be pricked out in June and planted in July; and finally, the last open ground crop may be sown in June, to be pricked out in the succeeding month and planted in August and September; the plants will follow from the others in succession throughout winter and spring. By these repetitions an almost continued supply is afforded. Each variety should be sown separately, and the sowing performed thinly; the beds not more than three or four feet wide, for the convenience of weeding. The seed must not be covered more than half an inch, and the beds must be netted over, to keep away the birds, which, especially, in showery weather, are very destructive. The fitness of the plants for pricking out is indicated by their having five or six leaves, rather more than an inch in breadth; they are set four or five inches apart each way, and water given every night until they have taken root. They must have four or five weeks' growth before they are again moved; or not before they have leaves nearly three inches in breadth. When planted out they must be set on an average two feet asunder each way; in summer a little wider, in winter rather closer. Water to be given at the time of planting, and occasionally afterwards until they are established; during the droughts of summer it may be given plentifully with the greatest advantage. They must be hoed between frequently, and the mould drawn up about their stems.

To force forward the winter-standing varieties, they should be taken up in November, and after the outer leaves are trimmed off, laid on their sides in a sloping position in a bank or terrace of light earth, space sufficient being left between every two plants that their heads do not come in contact. To continue the supply uninterruptedly, even in midwinter, the best practice is that when the crop sown about the third week in May has been planted out, the weaker plants which remain should be left eight or ten days to acquire strength, and then planted in pots filled with very rich compost, to be shaded and watered until struck. These are to be plunged in the ground at similar distances as the main crops, and about three inches below the surface, so as to form a cup for retaining water round each; these cups are filled up by the necessary earthings, which must be pressed firmly down to prevent the wind loosening them. *To preserve the winter-standing crops* from destruction by the severe weather, they should be taken up early in November, injuring the roots as little as possible, and laid in a sloping direction in the soil with their heads to the north. Or a small trench should be made in the first week in September, at the north end of each row, in which the adjoining plant is laid so low that the centre of its stems at the top is put level with the surface of the ground, the root being scarcely disturbed; it should then be immediately watered, and the roots covered with more mould. Thus every plant in succession is treated. Before the arrival of snow, a small hillock must be raised round each plant, to support its leaves and prevent their being broken. *For the production of seed* such plants of each variety must be selected, in March or April, as most perfectly agree with their peculiar characteristics, and are not particularly forward in advancing seed. As the branches spread, four or six stakes should be placed at equal distances round each plant, and hooped with string, to support them and prevent their breaking. When the pods begin to form water should be given repeatedly, and occasionally some thrown over the whole plant, which tends to prevent mildew. Before the pods begin to change colour, those from the extremity of every shoot must be taken away, as they yield seed which produce plants very apt to run to seed without heading, and by an early removal others are benefited. The branches ought to be gathered as soon as the pods upon them ripen. Varieties must never be planted near each other, or they will be

reciprocally contaminated. The seed ripens in August or September, and it is recommended to preserve it in the pod until wanted; although the general practice is to beat it out and store it as soon as it is perfectly dry.

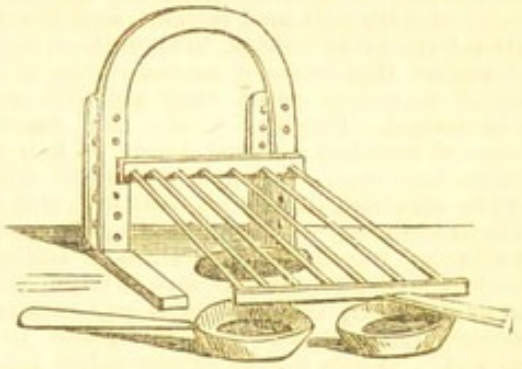
BROCCOLI, PICKLED. — Take firm, well-coloured vegetables, before they are quite ripe, and cut away the bark of the stems and all the green leaves. Scald them for four minutes in a pan of boiling brine, and then drain and dry them thoroughly. When dry pull them into properly sized branches, trim the stalks smoothly, and pack them up in jars: pour over them cold, vinegar in which black and Jamaica pepper, ginger, cloves, and a little cayenne, have been previously boiled.

BROCCOLI, PROPERTIES OF.—This esculent when boiled and eaten with a moderate quantity of pepper, is very wholesome, nutritious, and exceedingly easy of digestion; it furnishes a good assimilating dish along with solid animal food, and acts an auxiliary part in the dietary arrangement.

BROCCOLI, TO DRESS. — Choose those that are close, compact, and of a good colour. Strip off the outside leaves and trim away the tops of the inner leaves, cut off the stalk at the bottom, and pare away the outer, husky skin from it and the branches. Having washed them, lay them head downwards in a pan of cold water and salt, which will bring out all insects, and boil them open on a drainer, in plenty of water, with a little salt. Skim the water well: from ten to fifteen minutes will boil them. When the stalks are nearly tender they are ready. Melted butter is either served with the broccoli, or separately in a butter boat.

BROGUES, CORRECTION OF.—An *Irishman*, wishing to throw off the brogue of his mother country, should avoid hurling his words out with a superfluous amount of breath. It is not *broadher* and *widher* that he should say, but the *d*, and every other consonant, should be neatly delivered by the tongue, with as little noise, clattering, or breathing as possible. Next, let him drop the roughness or rolling of the *r* in all places but the beginning of syllables; he must not say *stor-rum* and *for-rum*, but suffer the word to be heard in one syllable. He should exercise himself until he can convert *plaze* into *please*, *plinty* into *plenty*, *bacon* into *beacon*, and so on. He should modulate his sentences so as to avoid directing his accent all in one manner—from the acute to the grave. Keeping his ear open for good examples, and exercising himself frequently upon them, he may become master of a greatly improved utterance. A *Scotchman* is betrayed into a contrary fault to that which the Irishman commits, and is continually drawling his tones from the grave to the acute. The smooth guttural *r* is as little heard in Scotland as in Ireland, the trilled *r* taking its place. The substitution of the former for the latter must be a matter of practice. The peculiar sound of the *u*, as spoken in the north, must be compared with the several sounds of the letter, as they are heard in the south; and the long quality which a Scotchman is apt to give to the vowels that ought to be essentially short, must be clipped. In fact, aural observation and lingual exercise are the only sure means to the end.

BROILING.—This culinary process is to small joints of meat what roasting is to large joints. *The apparatus required in broiling* is very simple, and consists only of a gridiron to be placed over the fire; or one with channelled bars leading to a trough beneath, placed before the fire. An improved broiling apparatus has lately been introduced, which consists of the ordinary form of gridiron, supported by two uprights and united by an arch; and the lower part being bent to a right angle, it stands loose by its weight alone, at the proper place, and may be removed when broiling is not required. The best method for using this apparatus is the following:—Instead of keeping the gridiron horizontal, which occasions much of the fat to fall upon the iron, it should be kept slanting, as in the engraving, by which the



fat runs down the bars into ladles placed to receive it. This apparatus is to be recommended for the cleanliness, facility and expedition with which the process can be performed. In broiling, generally, particular regard must be paid to the cleanliness of the utensil; it must be kept quite clean between the bars and bright on the top; before it is used the bars should be rubbed with fresh suet. It should then be heated for a few minutes, and when warm rubbed with a piece of brown paper; this will prevent the meat from sticking to the bars, or from being marked by them. Broiling requires a brisk, clear fire, the surface being modified by the sprinkling of salt. The ordinary gridiron should be placed sloping over the fire, that the fat may run off to the back of the grate, instead of falling on the live coals and smoking the meat; if this precaution should not prevent its making an occasional blaze, lift the gridiron quickly beyond the reach of the smoke, and hold it away until the fire is clear again. Turn the meat quickly and frequently while it is broiling, in order to preserve the juices; for this purpose a pair of tongs should be used instead of a fork, which allows the juice to escape. If, however, tongs are not used, the fork should be stuck into the outer skin or fat of the cutlet, chop, or steak, and not into the lean, as by that means a portion of the gravy will be wasted. Broiled meat should be rather underdone than otherwise, and it should be removed from the fire on the instant that it is

deemed to be sufficiently cooked. Hot dishes should be ready to place it on, and it should be sent to table immediately. Observe never to baste anything on the gridiron, because that may be the means of burning it and occasioning the fire to smoke; and also, if any butter or sauce be added after it is dished up, do not press the spoon or knife on the meat, as the crispness will be removed and the juices will render the viand leathery and unpalatable. Cutlets from the centre of the leg of mutton or from the neck are preferred to chops, for broiling where any delay is likely to take place between the interval of the meat being cooked and eaten, as the fat of chops, etc., becoming chilled or soddened by standing, it not only loses its pleasantness of flavour, but has its digestibility impaired. Cutlets or meats of any other form when egged and crumbed for broiling, should afterwards be dipped into clarified butter, or sprinkled with it plentifully, as the egg-yolk and bread will otherwise form too dry a crust upon it. Broiled meats are sometimes seasoned with salt and pepper, and brushed with a little oil or butter, to keep them moist, but unless this be done, no seasoning of salt should be given until they are just ready to be dished. Broiling is the best possible mode of cooking several kinds of fish and preserving their flavour, amongst which may be specified mackerel, whiting, and salmon in cutlets; when fish is thus dressed, it should be wrapped in a thickly buttered sheet of writing paper before it is placed on the gridiron, by this means it will retain its flavour better, and be less liable to be smoked. When a fowl or any other bird is cut asunder before it is broiled, the inner part should be first laid to the fire.

Although broiling possesses the advantage of expeditious cooking, it is not to be recommended on the score of economy, as a great proportion of the nutritious juices is discharged in the process, beyond the means of recovery. On dietary principles, however, broiling is a superior mode of dressing food. If the portion of meat is not too thick, and its fibre be cut across, the heat quickly penetrates and loosens the texture, while from the suddenness of the operation, the juices are prevented from being carried off, and it is thus rendered peculiarly tender and palatable. For invalids especially, broiling is deemed as the best mode of cooking meat, where it is given to restore strength, whilst as a matter of taste, it is often best suited and most acceptable to the fickle appetite of the sick person.

BROKER.—A sworn broker is a person licensed to act as the agent of parties in the sale or purchase of goods, stocks, shares, or funds, and in the negotiation of the receipt or payment of money beyond seas. He is paid for his services by a commission or percentage upon the amount or value of the business he is engaged to transact. He need not have the possession of the goods for the transfer of which he bargains, and he may not buy or sell upon his own account. He delivers to the buyer and seller respectively bought and sold notes, which contain the whole of the contract, and are sufficient to bind the parties. A material variation between the bought and sold notes is fatal to the contract. In the City of London a person must obtain a license from the Corporation to act as a broker, for which he pays £2 a year, and acting without such license renders him liable to a penalty of £500.

A Shipbroker is employed to procure goods on freight or a charter for ships outward bound, to enter and clear vessels at the Custom House, to collect the freight on goods, and generally to take an active part in all business between merchants and ship-owners. *An Insurance broker* is an agent for effecting with the underwriters at Lloyd's an insurance of a ship or cargo. It is his duty to inform the underwriter of all the circumstances in his knowledge relating to the insurance, and, on the part of his principal to take care that the contract is properly executed. Unlike other brokers, an insurance broker, though he has given up the name of his principal, continues personally liable to the underwriters for the amount of the the premium, but he is not liable to make good to the owner of the ship or merchandise, who must look to the underwriters in the event of loss. *Exchange or bill brokers* negotiate the purchase and sale of bills of exchange drawn upon foreign countries; from their knowledge of the rate of exchange they fix the average rate of exchange in these securities, by which merchants consider themselves bound. The title of bill broker is also given to another class of persons, whose business it is to employ the spare money of bankers and capitalists, in discounting bills of exchange having some time to run before they become due. *Stock-brokers* are employed to transact business in the funds for stockholders, and conclude contracts or bargains in government or other stock. They are paid by a brokerage or commission, which they are entitled to deduct from the produce of the sale; generally an eighth (2s. 6d.) per cent. It is usual to apply the name of broker to a person who buys and sells second-hand furniture, although such an occupation does not bear any analogy to brokerage as here described. These persons do, indeed, sometimes superadd to their business the appraising of goods, and the sale of them by public auction, under warrants of distress for rent, for the performance of which functions they must provide themselves with an excise license, and they come under the regulations of an act of parliament. The business of a pawnbroker is altogether different from that of the commercial brokers here described. See DISTRESS FOR RENT, PAWNBROKER, STOCK-JOBBING, &c.

BROMPTON STOCKS.—These beautiful flowers are biennials, and their seed should be sown early in May, in a border of light sandy soil, with an eastern exposure, and never in front of a hothouse or south wall, as they cannot bear too much heat. The seeds should be sown very thinly in narrow drills, made about six inches apart. As soon as the plants begin to grow and have expanded their second pair of leaves, they

should be watered every evening with a watering pot having a very fine rose. When the plants are about three inches high, they should be thinned out, so as to be at least six inches apart, and the plants removed should be carefully replanted in another bed. In about a month's time they should be thinned again, and the alternate rows taken up, so as to leave the remaining plants about a foot apart every way; the plants removed being taken up with balls of earth, and carefully transplanted, watered, and shaded, till they have re-established themselves. Great care is necessary in transplanting, as the stocks have long tap-roots, with very few fibrils attached. When the plants are wanted to be very fine, they may be protected during winter by hoops and mats, or hand-glasses; but in general, this is not thought necessary. In March or April, a compost should be formed of sandy loam, or sand enriched with the remains of an old hot-bed, or vegetable mould formed of decayed leaves; and pits about two feet deep and two feet in diameter, dug in flower borders and filled with it, into which the stocks should be transplanted, with balls of earth attached, as large as can be taken up. They should be carefully shaded and watered till they have taken root; and afterwards they should be watered every night till they come into flower.

BRONCHITIS is now much milder in its attacks, and seldomer met with than formerly, though it still remains a disease of both severity and danger. *Acute bronchitis* is characterised by general fever, heat of the skin, difficulty of breathing, with hurried and sometimes laborious respiration; a peculiar sense of fulness and roughness of the windpipe, followed by hoarseness, oppression, or pain over the region of the heart, accompanied by a short dry cough. After from six to twelve hours, a secretion of mucus takes place in the trachea and bronchial tubes, producing a wheezing, rattling noise as the patient respires; and in consequence of the blood not being freely exposed to oxygen in its passage through the lungs, the lips and cheeks assume an ashy or dusky hue. The pulse at the first is quick and hard, but after a time, becomes full and what is called, soft; but so compressible, that a little extra pressure of the finger will apparently extinguish it. There is at the same time great prostration of strength, considerable anxiety and alarm, with pain in the head, giddiness, and when the symptoms are severe, even delirium.

Bronchitis arises in general from exposure to cold and humid atmosphere; taking cold after violent exertion, or from any of the ordinary causes of cold or sore throat. The hoarseness and dry full sense, experienced in the nose and windpipe, is often felt extending far down the chest, attended with considerable sneezing; and the efforts of a dry, hard cough, causing pain both in the chest and shoulders.

Chronic bronchitis, when arising as a primary disease, presents some or all of the previous symptoms; but in a considerably modified form, the fulness in the windpipe, oppressed and laborious breathing, hoarseness and cough, are, however, the most general symptoms of chronic bronchitis; the expectoration, though after a time becoming more free, is far from being copious, and consists of discoloured mucus; sometimes of a purulent appearance, at others stained with blood, or streaked with a brick-coloured fibrinous matter. The symptoms are generally exaggerated towards night, when they are attended with increased fever and night sweats.

Treatment of acute bronchitis.—In full bodied constitutions, if the disease be taken in its first stage, bleeding to the extent of eight or ten ounces may be very safely and beneficially employed; but as the debility that attends bronchitis is both great and sudden, unless adopted in the *earliest* stage, the practice would be highly culpable, as all the physical stamina is required to throw off the collected mucous from the bronchial passages so bleeding, unless employed early, can never properly be practised. When necessary, an emetic must be immediately given, consisting of antimonial and ipecacuanha wines, of each half an ounce, or the following powder:—ipecacuanha 15 grains, tartar emetic 1 grain, mix; to be dissolved in a little warm water and drunk directly, following it up by frequent draughts of warm water. If the first emetic does not operate freely, repeat the same dose within the hour, assisting the action, if necessary, by tickling the throat with a feather. As soon as the vomiting has subsided, apply a blister 3 inches wide by 6 inches long, down the centre of the chest, and give a tablespoonful of the mixture below every two hours. Take of—

Distilled water	6 ounces.
Tartar emetic	6 grains.
Powdered nitre	1 scruple.

Dissolve, and add tincture of colombo, 2 drachms—mix. At the same time, between the doses, let the patient inhale the steam of hot vinegar and water, and wear a veil over the face, so as always to breathe through a medium. When the blister has risen and the plaster has been removed, apply a hot bread poultice, which repeat every hour, for two or three times; and finally, dress with violet powder.

When the expectoration changes its character and becomes thick, greenish and ropy, it will be necessary to give stimulating expectorants, to facilitate the discharge; for that purpose, the annexed mixture, in doses of a tablespoonful every three or four hours is to be employed. *Expectorant mixture.*

Gum ammoniacum . . .	2 drachms.
Carbonate of ammonia .	1 drachm.

Rub into a powder, then add a teaspoonful of water; triturate till the whole is rubbed into a smooth, creamy paste, when add, by degrees, six ounces of water.

Syrup of squills	1 ounce.
Tincture of tolu	2 drachms.
Spirits of sweet nitre . .	2 drachms.
Paregoric	½ an ounce.

Should there be much restlessness or want of sleep, 30 drops of laudanum may be taken at bed time in a little gruel, or added to

dose of the expectorant mixture. Or when the mixture is not necessary, from 10 to 15 grains of "Dover's powder," according to the age and strength of the patient, should be taken an hour before bed time. It is also necessary to take an occasional aperient, which should consist of two assafœtida pills at night, and a black draught the following morning; or five grains of blue pill, and a dose of Epsom salts, three hours afterwards. The patient should be kept as much as possible in one temperature during the attack; and all lengthened conversation and fatigue strictly avoided. The diet should be light, low, and farinaceous, and consist of eggs, milk, custards, and sago, and tapioca puddings; and only when the expectorant or stimulating stage has been reached, should the drink be anything stronger than gruel. But when the expectorants are indicated, it becomes necessary to give wine, or other stimulants, and support the patient's strength by a more generous diet.

Treatment of chronic bronchitis.—Where the symptoms are severe, the treatment may begin by placing a blister on the throat, and giving the expectorant mixture already prescribed. But in ordinary cases, it will be sufficient to place a large hot bran poultice on the throat and chest, renewing it every three or four hours; and twice a day rubbing the chest and throat with the following embrocation:

Dissolve, by heat, two drachms of camphor in two ounces of olive oil, and add spirits of sal volatile half an ounce, and at the same time give the expectorant mixture in tablespoonful doses every two hours.

Where there is much loss of rest, and much anxiety, the annexed mixture is to be substituted for the expectorant, and taken in doses of two tablespoonfuls every four hours.

Dovers powder	1 drachm.
Carbonate of ammonia . .	2 scruples.
Camphor water.	8 ounces.
Sulphuric ether	1 drachm.

At the same time, the steam of hot vinegar and water is to be inhaled, and the patient's strength supported by a proper and efficient dietary; with all the precautions advised in acute, observed in the management of chronic bronchitis.

BRONZE.—A metallic alloy composed principally of tin and copper, remarkable for the exactness of the impressions which it takes by moulding, as well as its durability. On a small scale, this alloy is prepared in crucibles, but for statues and larger works, on reverbatory hearths. The fusion of the mixed metals is conducted as rapidly as possible under pounded charcoal, and the melted mass is frequently stirred together, to produce a perfect mixture before casting.

BRONZE ARTICLES, TO CLEAN.—This should be done by merely dusting with a feather brush, or with a soft cloth, as washing will take off the bronzing.

BRONZING PLASTER FIGURES.—With a solution in water of palm-oil soap, mix a solution of sulphate of iron and sulphate of copper; this furnishes a brownish green precipitate, the colour of which may be modified at pleasure by the addition of a greater or less quantity of one or the other of these salts. The precipitate, after being washed and dried, is re-dissolved in a mixture of good varnish of linseed oil, and wax; and with this solution the figures (having been previously heated) are coated; on becoming dry they will be found to be perfectly bronzed.

BRONZE, TO REMOVE STAINS FROM.—Make the article very hot by dipping it in boiling water, then rub it with a piece of flannel moistened with suds made from yellow soap: rub clean with soft linen cloths. If the article to be cleaned be a tea urn or other similar vessel, it should be filled with boiling water before the outside is touched.

BROOCH.—An article of female ornament, usually placed in front of the dress. As these ornaments are very conspicuous, they should always be of the best materials, and of chaste workmanship; but when they are necessarily of inferior value, they should be of small size and of neat pattern.

BROOMS.—Articles in daily use in connection with domestic economy, made of various materials and of a variety of forms, according to the uses to which they are applied—such as *carpet brooms*, made of a strong white grass, termed whisk; *chamber brooms*, made of long hogs' bristles; *hand-brooms*, *banister brooms*, *&c.*; *feather brooms*, for dusting pictures, mirrors, and delicate articles; and *hearth brooms* for sweeping up the cinders of the grate; there is a description of this latter, made with the handle to shut up short, like a telescope, so that the brush part is entirely concealed when not in use; and the exterior being ornamented, it may take its place by the side of the fire in drawing-rooms or sitting-rooms without appearing unsightly. There are also brooms for offices, yards, and areas, of birch, some of which are made for this purpose in the form of chamber-brooms, of the inside of the canes called rattan, after the outside has been stripped off for the seats of chairs; these are extremely effective and durable, as well as cheap.

BROTH.—A decoction usually obtained from animal substances, and peculiarly adapted as a food for sick persons. When properly made, with a requisite proportion of the various ingredients, and without fat, it is a nutritious article of diet, and may supply the place of both meat and drink; but when taken to any extent, bread should be eaten with it, otherwise it is apt to disagree with the stomach. When broths are made for the sick, they should be varied in strength, according to the state of the patient. Light broths agree with weak stomachs; mutton is reckoned the best ingredient on these occasions; chicken next. In cases of diarrhœa, broth in excess is apt to increase the nausea, but it is at the same time extremely beneficial, if properly managed and administered; in such cases it is best made from veal or fowl, and thickened

with rice, which may be strained off, and it must be given in small quantities only at a time. Broth is best made by putting the article from which it is to be formed, into the quantity of cold water requisite, and keeping the whole at a heat somewhat short of boiling for many hours; it should then be allowed to cool, and the fat skimmed off. The following rules will also be found of essential service in making broth. 1. Procure wholesome meat, properly killed. 2. Earthen vessels are preferable to those of metal, as a less degree of heat keeps them boiling; and once heated, a few hot cinders will retain as gentle a degree of boiling as may be desired. 3. Use double the quantity of water to the weight of meat. 4. Add a sufficient quantity of common salt, to facilitate the separation of the blood and slime that coagulate under the form of scum. 5. In the early stage of the process sustain such a degree of heat as will throw off the whole scum. 6. Afterwards a lower, but an equable temperature, that the broth may simmer gently till the substances employed, whether nutritive, colouring, or flavouring, are perfectly combined with the water, according to the several degrees of solubility.

BROTHS, VARIOUS.—See BARLEY, BEEF, CALF'S FEET, CHICKEN, MUTTON, VEAL, &c.

BROWN DYE, *for Cotton.*—First imbue the material with brown oxyde of iron, by soaking it in iron liquor; then dye it by boiling for two hours in a bath of quercitron bark. This will give a drab, olive, or yellow, according to the quercitron used, then by mixing a little sumach with the bark and boiling again, any shade of brown may be obtained. *For Silk.*—Fill a copper or saucepan with soft water; when it gently boils, put in a quarter of a pound of chipped fustic, two ounces of madder, one ounce of sumach, and half an ounce of cane wood; if not required to be so red, the cane wood may be omitted. These should boil for two hours, that the ingredients may be thoroughly incorporated. The copper must then be cooled down by pouring in cold water, the goods may then be put in, and simmered gently for half an hour or an hour; if this colour should require darkening or subduing, it may be done by taking out the goods and adding a small piece of green copperas. When of the colour desired, rinse in two or three waters and hang up to dry. *For Wool.*—Various substances are used for this branch of dyeing; walnut peels, or the green covering of the walnut when first separated, are white internally, but soon assume a brown, or even a black colour, on exposure to the air. They readily yield their colouring matter to water. They are usually kept in large casks covered with water for above a year before they are used. To dye wool brown with them, nothing more is necessary than to steep the cloth in a decoction of them till it has acquired the desired colour. The depth of the shade is proportioned to the strength of the decoction. If the cloth be first passed through a mordant of alum, the colour is brightened.

BROWN SAUCE.—Put into a saucepan two pounds of beef, the same quantity of veal, an old fowl, some onions and carrots, and throw over the whole a pint of water; place this on a strong fire until it begins to glaze, then put the vessel on a slower fire, and when the glaze begins to brown, put to it a little stock, adding to it some mushrooms, a bunch of parsley, a few cloves, and some bay leaves; skim it, add a little salt, and let it simmer for three hours; then strain the liquor off, and add to it a roux which has been made in a separate vessel; let it boil again for another hour; then skim off the fat, pass the liquor through a sieve, and it will be ready for use.

BROWN SOUP.—Stew four pounds of lean beef, stuck with cloves, in four quarts of water, a stick of cinnamon, and a blade of mace. When the goodness is boiled out of the beef, take it out, and put in two gills of red wine, a little salt, and an onion. After it has browned some time, add two tablespoonfuls of browned flour, and a glass of white wine. Let it simmer, and serve it up in a tureen with sippets of toasted bread.

☞ Beef, 4lbs.; water, 4 quarts; cinnamon, 1 stick; mace, 1 blade; cloves, sufficient; red wine, 2 gills; salt, a small quantity; onion, 1; flour (browned), two tablespoonfuls; white wine, 1 wine glassful.

BROWN SOUP, WITHOUT MEAT.—Put into a saucepan three quarts of water, with bread raspings sufficient to thicken it; two or three onions cut small, some whole pepper, and a little salt; cover it close, and let it boil for an hour and a half; strain it off through a sieve. Then cut up celery, endive, spinach, and sweet herbs, and fry them in butter until they are of a fine brown; when done, put them in soup; boil it till the vegetables and herbs are tender, and the soup of a proper thickness; serve with fried bread, either in a tureen or separately.

BROWNING FOR GRAVIES, SOUPS, &c.—To give a brown colour to soups and gravies, fry some onions with flour to a good brown colour, and add them to the soup; or toast a piece of bread as crisp and as brown as possible; or put in raspings, which may always be had from the baker's; or melt some lump sugar in an iron ladle or spoon until it becomes brown, pour it upon boiling water, and stir it; give it a boil and keep it for use in a bottle. The following is an approved receipt for soups and gravies generally:—To a gill of water add four ounces and a half of lump sugar, and half an ounce of fresh butter, put them into a small pot, set them over a gentle fire, and stir with a wooden spoon until a light brown is produced. Then add a pint of water, boil and skim it, and bottle off for use when cold. As much of this may be added to the soup or gravy as will give it the desired colour. To make a *clear browning for gravy or gravy soups*, put a knuckle of veal, two pounds of lean beef, and an equal quantity of lean gammon of bacon, all cut into slices, into a stewing pan, with a sufficient quantity of chopped carrots, turnips and celery, to two quarts of water; stew the meat till quite tender, but do not brown it. Thus prepared it will serve either

in soup, or brown, or white gravy; if for brown, add some of the above colouring, and boil for a few minutes.

BRUISES.—Bruises may proceed from many causes, be of many varieties, and occur in any part of the body. When severe, and happening over a joint, total rest of the limb must be enjoined, and the joint kept constantly soothed by fomenting it with a folded flannel, wrung out of a hot decoction of camomile flowers, and poppy heads, made strong. The same application may be applied to any other bruised part of the body, and where the pain is severe. When a swelling results from a bruise, not over a joint, wet a folded rag well with the extract of lead, and lay it over the part, repeating the process in a few minutes; with the third or fourth application the swelling will have disappeared. In the bruises and hurts received by children from falls, this will be found in all cases an invaluable remedy. When the skin has been broken by the bruise, and there is much discoloration and pain, apply the extract of lead, and over that, place a hot bran or camomile poultice, re-wetting the rag with the extract on every occasion of renewing the poultice.

BRUSHES are usually made of hog's bristles, of different degrees of coarseness and fineness, and of various lengths. The hair is doubled and fixed into holes by means of wire, which is concealed by a thin plate of wood that covers it. In ill-made brushes this covering is apt to come off and expose the wire, and when this fails the hair comes out. When this accident occurs the wood should be glued on again securely. In some brushes the hair is merely fixed into the holes by a kind of cement, and are accordingly worthless. The various brushes in common use may be enumerated as clothes brushes of various kinds, hat brushes, coarse and fine shoe brushes, nail brushes, tooth brushes, crumb brushes, bottle brushes, scrubbing brushes, blacklead brushes, and furniture brushes.

Clothes brushes are best when made of grass whisks, as they extract the dirt and dust more effectually than the ordinary clothes brush, and do not injure the nap. *Hat brushes* should be of soft material, and furnished with a velvet pad on the back, which binds the nap together, and gives it a fine gloss.

BRUSHES, TO CLEAN.—Put a dessert spoonful of pearlash into a pint of boiling water and shake the brush about in it until it be perfectly clean; then pour some clean hot water over it; shake, and dry before the fire.

BRUSH CASE.—A convenient adjunct to the dressing table, and a contrivance well adapted for travelling-bags, &c.; by this means the hair brushes are kept clean, and also prevented from soiling other articles that are in their proximity. These cases may be fitted with a lock and key.

BRUSSELS SPROUTS, CULTURE OF.—A winter vegetable growing two or three feet high, and along the stalk of which small green heads, like cabbages in miniature, sprout out, each growing from one to two inches in diameter, and the whole being ranged spirally along the stem. The plants are raised from seed, of which an ounce is sufficient for a seed bed four feet by ten feet. The seed is sown in spring under a frame, so as to bring the plants forward; they are then transplanted into an open border with a good aspect, and in this way they may be obtained from July to the May following. The plants need not be placed at more than eighteen inches each way, as the head does not spread wide, and the side leaves drop off. It is usual to cut them off about a fortnight before gathering from the stem. In spring, when the sprouts are disposed to run to flower, their growth may be checked by taking up the plants and laying them into the ground in any shaded spot. The seed is generally procured every second year from Brussels, as the plants are found to degenerate if grown two seasons from British seed.

BRUSSELS SPROUTS, TO DRESS.—Wash the plants perfectly clean; put them in boiling water, with a little salt, and then let them boil gently for half an hour; then strain them through a cullender. Set the cullender over the saucepan, and cover it over with a cloth; the steam will keep them hot, and they will drain perfectly dry.

BUBBLE AND SQUEAK.—Cut into pieces convenient for frying, cold roast or boiled beef; add pepper and salt, and fry them; when done lay them on a hot drainer, and while the meat is draining from the fat used in frying them, have in readiness a cabbage already boiled in two waters, chop it small and put it in the frying-pan with some butter, add a little pepper and keep stirring it, that all of it may be equally done. When taken from the fire, sprinkle a very little vinegar over the cabbage, just enough to give it a slight acid taste. Place the cabbage in the centre of the dish and arrange the slices of meat neatly around.

BUCKSKIN GLOVES, TO CLEAN.—Wash them in warm water and soap until the dirt is removed, then pull them out into their proper shape, or stretch them on wooden hands. Do not wring them, but place them one on the other and press the water out. Mix a little pipe-clay, or pipe-clay and yellow ochre (according to the colour required), with vinegar or beer. Rub this over the outside of the gloves, and let them dry gradually in the shade or by the fire, but at some distance from it. When about half dry, rub them well and stretch them on the hand or wooden mould; after they are rubbed and dried, brush them with a soft brush, to extract the dust. Finally, iron the gloves with a smoothing iron moderately heated, taking the precaution to place a piece of cloth or paper over them; when this process is completed they will look equal to new. Tanned gloves, commonly called Limerick, are genteel and economical in spring and autumn, as they do not soil so soon as white. The tan colour is made by infusing saffron in boiling water for about 12 hours, and rubbing the infusion over the

leather with a brush. The water should be soft, and never applied in any case at more than blood heat.

BUCKTHORN. — A hardy, indigenous, prickly shrub, common in hedge-rows; flowering in May, and ripening its fruit in September. It is propagated by seed, layers, and grafts. The juice of the unripe berries forms a deep green dye, if boiled with a little alum. A syrup made from its berries is sometimes used as a purgative, but it is apt to gripe, and need not be employed when there are so many better medicines of the same class.

BUDDING.—The operation of transferring the buds of one tree to the branches of another. Its use is the propagation of plants, which could not be affected at all, or much less conveniently, by the other modes of extension, such as striking by cuttings, grafting, &c. The process is also employed for multiplying a species or variety more expeditiously than by either of the other modes of propagation. The time of performing the operation is from July to September, and the mode is as follows:— The first thing to be done is, to select a young shoot of the current year, from which the bud is to be taken, and a stock of one or of several years' growth, into which the bud is to be inserted. The bud is cut out with a portion of the bark and the wood attached above and below the footstalk of a leaf, in the axil of which leaf the bud is situated. To do this a sharp penknife or budding knife is inserted in the shoot, about three-fourths of an inch below the bud, and passed up beneath the bud to about half an inch above it; the bud, with the bark and wood to which it is attached, is then held in the left hand, and with the knife in the right hand the thin film of wood is quickly picked out, leaving the bud attached — technically called the shield. A shield is then formed in the back of the stock, about a third of an inch in length; and a transverse cut is made within one-fourth of an inch of the upper part of the longitudinal slit. The bark is opened on both sides of the longitudinal slit by means of a thin flat piece of bone or ivory; or, in nursery practice, with the end of the handle of the knife, which is made thin on purpose. The bud is now inserted in its natural position, with the bud bearing upwards, and a portion of the upper part of the bark, to which the bud is attached, is cut across, so as to fit to the transverse cut which was formed in the stock. The bud is made fast in its situation by tying it with a strand or ribbon of bast matting; this being done in summer or autumn, the matting remains on for a month or six weeks, according to circumstances, till the back of the bud shows by its healthy appearance that a vital union has taken place. The matting may now be loosened, and in a week or two altogether removed. *Shieldbudding reversed* is performed by paring the transverse cut at the bottom of the perpenpicular slit intsead of at the top; and its most important use is to induce a state of productiveness in fruit trees; this mode is preferred by those who think that the sap rises in the bark equally with the wood — a principle which some are disposed to question. It is, however, generally admitted to be the best method for trees having gummy sap. *Niche budding* is when the wood is retained in the bud. In placing the bud on the stock, the principal thing to be attended to is, to bring the horizontal edges of the base of the niche in the stock, and those of the bud, which is to fit into it, into the most perfect contact possible; because the union is produced, not as in common summer budding, by the junction of the soft wood of the stock with the rudiment of the soft wood on the inside of the bark of the bud, but by the junction of soft wood with soft wood. This mode of budding will always succeed best when the niche in the stock is made where there is already a bud, making the horizontal cut through the base of the bud. *Annular or ring budding* is performed by joining the stock and scion together, as shown in the engraving, but in either case the top of the stock is not to be interfered with. This is a valuable mode of propagating trees or shrubs with hard wood and thick bark, or those which, like the walnut, have buds so large as to render it difficult to bud them in the common way. There are many other kinds of budding, but these are in the most general use.

It sometimes happens in the case of roses, that the bud will produce a shoot the same season in which it has been inserted, but it more frequently remains dormant till the following spring; at this period the stock should be cut three or four inches above the bud; and the shoot, as it grows, should be slightly tied to the portion of the stock left on above the bud, in order to prevent it being injured by high winds. The second year this portion of the stock may be cut off close to the bud. Buds may be in-

serted in stocks at a few inches from the ground, in which case the plants produced are called dwarfs; or in straight stems at four, five, or six feet from the ground, when the plants produced are called standards. The latter is the most common mode of budding roses and orange trees; but other shrubs and trees of rare or ornamental kinds are commonly budded within a foot or a few inches from the ground. Sometimes buds of several kinds are inserted in the same stock, and sometimes buds are inserted in branches in different parts of the tree, for the sake either of supplying vacant places in the branches, or of producing several kinds on the same tree. In all cases of budding, it is essential that the stock shall not be very different from the bud to be inserted in it. In some cases it is even necessary that the bud and the stock should be of the same species; while, on the other hand, it sometimes happens that a bud may be inserted successfully in any stock which is of the same natural order.

BUG.—The shape, colour, and offensive smell of this insect are but too well known. The female bug deposits her eggs in the beginning of summer, and being of a glutinous nature they readily adhere to anything which they touch. The places generally chosen to deposit the eggs in, are the crevices of bedsteads and other furniture, or the walls of a room. In about three weeks these eggs hatch, and the young bug comes forth, very closely resembling the parent insect, except in size, which it fully attains in about three months. There are various remedies devised for the extermination of this pest, but the most effectual *preventive* is cleanliness. In new houses, where the habits of the family are orderly, and a general attention is paid to cleanliness throughout, there will be little danger of bugs; but on removing to an old house which has had various occupants, these disgusting insects frequently make their appearance with the commencement of the warm weather, from having been permitted to get possession of the crevices of the wood work on the walls; and, if the rooms are papered, they often contrive to effect a lodgement between the edges of the paper and the plastering. In this case the best remedy is to have the paper torn off (first loosening it by washing it all over with a broom or brush dipped in water), and the walls purified by whitewashing or painting. If bugs are found in the crevices of the skirting board of an old house, their haunts should be well washed with a strong solution of corrosive sublimate in water, which, however, is exceedingly poisonous, and should only be intrusted into the hands of careful persons. An excellent precaution against bugs under any circumstances, is, to have all the bedsteads in the house taken down every spring, and after washing the joints with cold water and yellow soap, to have the whole of the bedstead completely coated with copal-varnish. In aggravated cases, where the whole room, walls, floor, and ceiling are infested, the only effectual remedy is fumigation; to effect this, remove every article from the room, after satisfying yourself that they are perfectly free from vermin, then close every opening, chink, and crevice in the room that is capable of admitting the air, this is done by pasting paper over them. Next cut up four ounces of brimstone into an iron pan, light some slips of linen dipped in the brimstone, and place them in the pan, leave the room without delay, closing the door and covering even the keyhole. In twenty-four hours no living creature will resist the fumes; sometimes, however, eggs remain, and a fresh fumigation may afterwards be required. For *occasional or local applications* to any part of the room or bedstead, the following receipts will be found efficacious:—1. Take two ounces of quicksilver and the whites of two eggs, or any larger or smaller quantity in the same ratio; beat the quicksilver and the whites together until they become a froth, then with a feather apply the compound thus formed to the various holes and crevices infested. 2. Spirits of wine, half a pint; spirits of turpentine, half a pint; crude sal ammoniac, half an ounce; corrosive sublimate, one ounce; camphor, one ounce. This mixture should be inserted into the joints of the bedstead, &c., with a syringe, and the surface washed with a sponge fastened to a stick; every part of the woodwork must be washed with it. Care should be taken that this mixture is *not applied by candlelight*, as the flame might cause the spirits of wine and turpentine to ignite and the most serious consequences to ensue. 3. Two ounces of red arsenic, a quarter of a pound of white soap, half an ounce of camphor dissolved in a teaspoonful of rectified spirits, made into a paste of the consistence of cream; insert this mixture in the openings and the joints of the bedstead. When it is intended simply *to expel bugs from the bed*, as for instance when persons are travelling and put into beds infested with bugs, a simple and efficacious plan is, to suspend a small bag of camphor to the bed, just in the centre, overhead. The sprinkling of a few drops of oil of lavender, or a more liberal sprinkling of lavender water, between the sheets and on the pillow, will also answer the desired end. In both of these cases the odour is more than the insects can endure, so that they are compelled to keep within their haunts.

BUILDING SOCIETIES are a species of joint stock company, the members of which subscribe periodically, and in proportion to the number of shares they hold, different sums into one common fund This fund becomes large enough to be advantageously employed by being let out at interest to such of the members as desire advances, and the interest, as soon as it is received, making fresh capital, is lent out again and again, so as to be continually reproductive. Large

sums may be raised in this manner; for, to take an example, if one thousand shares were subscribed for, at 10s. per month per share, the amount in one year would be £6000, which, month by month as received, might be advanced to any members who would wish to become borrowers. The payments of *borrowers* are so calculated as to enable them to repay, by equal monthly or less frequent instalments, within a specified period, the principal of the sum borrowed and whatever interest may be due upon it throughout the duration of the loan. The other members who have not borrowed, and who are generally called investors, receive at the end of a given number of years a large sum, which is equivalent to the amount of their subscriptions with compound interest accumulated upon them.

As regards the purchasing of house property, Building Societies must be deemed particularly beneficial. Under ordinary circumstances, a large portion of every man's income is usually absorbed by the payment of rent, especially among the poorer classes, who pay for their tenancy much more heavily than their richer neighbours, considering the relative value of the houses which they occupy. But by means of these societies persons who are not possessed of capital, and who merely receive their incomes periodically, may become possessors of a house; and this they are able to do only from the practical fact that the annual repayments required by a society upon a loan do not much exceed the rent of a house, which could be purchased with the sum borrowed; so that a man living ten or fourteen years in a house, instead of paying his rent to a landlord, and thus losing so much money for ever, pays it with a small addition to a building society for a limited number of years, and in consideration of his consent to this arrangement the society advances him at once the money requisite for the purchase of the property, which thus, in the stipulated time, when the loan has been repaid with interest, becomes entirely his own, the money advanced being in the meantime secured by a mortgage on the house. Building societies are generally founded with the same object in common, but carried out with various modifications. They are divided into two distinct classes, the one terminating, the other permanent. A *terminating* society is one which it is intended to close at the end of a certain period, when all the shares of the members have realized their full amount. In a *permanent* society, it is merely the membership of a shareholder that terminates at the end of a fixed number of years, when he receives the value of his shares, the society itself continuing for ever. The majority of the terminating societies announce at the time of their formation that their shares represent a fixed sum, usually £120, to be realized at the expiration of a given number of years, by which time it is expected the association will terminate with that result. The number of years is generally ten or fourteen, although some societies exist whose anticipated duration is eleven or thirteen years, and some in which the amount of the shares is £50 or £100. The subscriptions of the members are a few shillings per month per share, varying with the number of years calculated as the probable duration of the society but not allowed by the statute to exceed twenty shillings per share, and the investing or non-borrowers are promised the amount of their shares at its close. The subscriptions are received at monthly meetings, and with as little delay as practicable; the advances are lent to those members who wish to become borrowers, and to obtain a loan in the shape of a present advance on each share they hold or take up, in lieu of the amount which they would otherwise receive at the end. The sum advanced per share of course depends on the number of years that remain between the time of borrowing, and the date at which the society is expected to terminate. The theory upon which a terminating building society proceeds is as follows. Let the case be that of a fourteen years terminating society, formed on the basis of a five per cent. rate of interest, and consisting of shares of £120 each, on which every member pays 10s. at the beginning of each month during fourteen years. This sum is assumed, because such a monthly annuity would, at five per cent. rate of interest supposed, realized monthly, and continually invested and reinvested accumulate to £120 at the end of fourteen years; hence £120 is the amount that a non-borrowing member would be entitled to receive at the close of the society. On the other hand it is known that £60 cash, invested at five per cent. rate of compound monthly interest, will accumulate to £120 in nearly fourteen years. If then, a member should wish to discount one share, and take its present value at the beginning of the society, he would be entitled to receive £60, in consideration of his subsequent monthly payments of 10s., or £6 a year for fourteen years. Similarly, should he desire to borrow £300, or five times £60, he would have to make payments on five shares, amounting to £30 a year. As the society progresses in its existence, the number of remaining months over which a borrower's payments can extend, diminishes, so that the amount of advance per share which a member would be entitled to receive, if he wished to borrow at a later period of the society than the beginning, would depend upon the date of his first becoming a subscriber. If he had only just entered before receiving a loan, the amount of advance per share would merely be the discounted present value of his future payments, but if he had been a subscriber for some months previously, then, in addition to the allowance for his future subscriptions, he would also be entitled to a sum arising from his past payments.

Various objections are urged against terminating building societies, but the chief one is that the opportunity for investment soon ceases. At the beginning of the term a person might be willing to engage to pay £30 a year for fourteen years on a corresponding loan; but if only six years of the

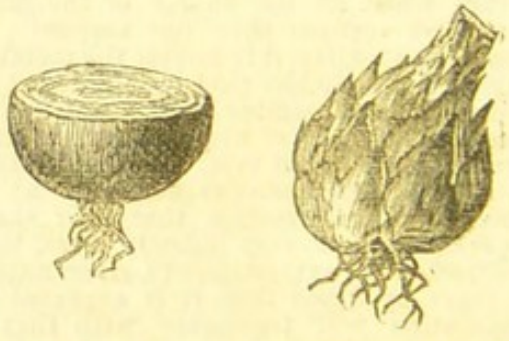
duration of the society were unexpired before he joined it, he might find £59 18s. a year highly inconvenient; and if only four years, £85 12s. 6d. a year, quite out of the question.

In a *permanent society* the investors pay a certain monthly subscription during a fixed number of years, calculated as sufficient for the realization of their shares, at the end of which time the amount due is paid to them and they retire from the association, so far as such shares are concerned. The investors represent the proprietors of the society. New members can enter at any time, and commence their subscriptions without paying up any arrears, or any increase on the original entrance fee, whereas, in terminating societies, the fee on entering is increased, without sufficient reason, year by year, until, from being originally only 2s. 6d,, it is in some cases raised to £6 per share. The duration of membership is counted from the month of a member's first entrance. This causes every month a fresh series of members to be added to the society, or new shares to be issued, so that, taking an example, if the term of membership were ten years, or one hundred and twenty months, and fifty new shares were taken up, on the average, every month, there would, at the end of the first ten years be six thousand shares subscribed; supposing always that if any were withdrawn, the average were yet kept up by an increase in the new comers. At the end of the first one hundred and twenty months, fifty would be paid out; but as new members would come in, the number of subscribers would be undiminished, and month by month afterwards, as successive periods of one hundred and twenty months were completed, old members would go out and new ones come in. In this society a member ceases to be an investor when he becomes a borrower, receiving whatever amount is due to him on his investing shares with interest up to the time of borrowing. The loan, secured by a mortgage on the property purchased, is for an optional fixed number of years, and is repaid with interest by a corresponding monthly subscription. As an example of the working of this society; suppose a member purchase a house for £300, which would return a *net rental* of £30 per annum, and he borrows that sum, for which his repayments during ten years, covering principal and interest, would amount at per annum (by monthly instalments of £3 11s. 3d.) to

	£42	15	0
Multiplied by ten years		10	
Making the total repayments . .	427	10	0
Deduct ten years' rent	300	0	0
Leaving the cost, as far as the Building Society is concerned	£127	10	0

For which sum the member has thus secured to his family a house free of rent for the remainder of its lease. The above example is for ten years; a person may, however, purchase a house for smaller annual payments, if he take the loan out for twelve or fourteen years. It will thus be seen that the purchase would cost the borrower only £12 15s. a year for a reasonable space. It cannot be disputed that to secure so important an advantage it is worth any reasonable effort, the sacrifice of some unimportant luxury, or the employment of a portion of a person's leisure hours in some profitable pursuit, would be certain to secure the desired end. And when that is accomplished, the temporary sacrifice is repaid a hundredfold by enabling a man to appropriate the whole of his income, without being interfered with by the serious deduction for rent, to more solid and lasting comfort for himself and his family. It should also be borne in mind that when an income is dependent solely upon a person's own exertions, its receipt is liable to be intercepted by sickness or other accident, nevertheless, the landlord expects his rent as regularly as usual, and, in default of payment sells off the home, and expels the tenant into the streets. But a man who has a house of his own still keeps a home over his head, and being able to accomplish that, is in a better position to struggle with adverse circumstances. In short, when the advantages held out by building societies are considered, and the comparatively easy means by which those advantages may be obtained, it becomes a matter of surprise that any person should be found so short-sighted as to literally waste a large portion of a moderate income. For instance the economy of being a house proprietor, is approximately like that of being the proprietor of one's furniture. On entering upon housekeeping, no prudent man, if he can possibly help it, thinks of hiring furniture, well knowing that the hire very soon amounts to the whole value; and yet how many thousands of persons there are in the metropolis only, who deem it an unwise piece of extravagance not to purchase their articles of household furniture, and yet are content to hire their houses, thereby commiting the anomaly of hiring houses or apartments to deposit their unhired furniture in.

BULBS are plants which belong to a particular division of vegetables having certain peculiarities requiring a particular mode of culture. They are, with scarcely a single exception, very ornamental, from the large size of their flowers in proportion to the entire plants, and from the brilliancy of their colours. Their principal peculiarity is, that they produce but a limited number of leaves every season; and hence, if these leaves are



cut off or injured, no new leaves are produced during the same season, In all other

herbaceous plants, when the leaves are destroyed fresh leaves are produced to a comparatively unlimited extent; and, if the season be long enough, the plant may produce a sufficiency of foliage in the current year to enable it to mature flowers in the next. But in bulbs the case is different —the leaves produced are very few, and if they are shortened before they are fully grown, or cut off before they begin to decay, the bulb is deprived of nourishment to such an extent, as either not to flower at all the following season, or to flower very weakly. Thus, the great art in the culture of bulbs, is to preserve all their leaves uninjured, to expose them fully to the sun and air, and by no means to cut them off till they have begun to decay at the extremities. By far the greater number of bulbs flower in spring, and produce their flower stems immediately after they begin to grow; shortly after they have flowered they cease growing, and remain dormant and without leaves during the remainder of the year. Hence, almost all bulbs require to be planted in autumn, and also, require a free, dry, and somewhat rich soil, into which their roots may penetrate easily, and procure nourishment without difficulty for their rapidly growing leaves. The bulb is in all cases strengthened by preventing the flowers from producing seeds; and in most cases it ought to be taken up as soon as the leaves are decayed, and preserved in dry sand or earth, and in some cases on shelves, or in papers in a dry room, till the planting season in autumn. Bulbs which are indigenous to Britain, such as those of the common wild hyacinth, and some of the narcissi, receive little injury from remaining in the ground all the year; but improved varieties of indigenous bulbs, and all bulbs from warm climates, such as those of the hyacinth, the ixias, &c., are greatly injured by the moisture of our summers, and when left in the ground, require the interposition of art to keep the soil moderately dry. From the circumstance of bulbs growing with great rapidity when in a state of vegetation, they require abundance of water, and this is the reason why the soil in which they are planted should always be deep, so as to retain the moisture. In one sense bulbs are more easy of culture than any other class of plants, because, the germ being previously formed, and the nourishment provided for in the body of the bulb, it is only necessary to supply heat and moisture to cause these to develope. Bulbs never last more than one year, a new one forming every season after the plant has done flowering, as the old bulb wastes away. Bulbs are generally propagated by a smaller species produced at the side of the old ones, which are called offsets, but they may be also propagated by seeds; the seeds should be sown in beds of light earth, where the plants may remain till they come into flower, which will generally be in from three to five years. The soil for almost all bulbs should be a free sandy loam, and the situation open and fully exposed to the sun.—See CROCUS, HYACINTH, NARCISSUS, TULIP, &c.

BULLFINCH.—When first taken, the bullfinch may be allowed to range the room

with other birds, except some particular reason exist why it should be kept in confinement. The shape and size of the cage are of little consequence, as the bullfinch is a quiet bird and thrives under all circumstances. It is, however, usual to put those which have been taught, into a handsome cage of brass wire, and in a room by themselves, as their artificial song might spoil that of other birds, if within hearing. *The food* for those that are allowed to run about, may consist of German paste, and a little rape seed by way of variety. Those which are kept in a cage, however, must have rape and hemp seed, with occasionally a little plain biscuit. Rape seed soaked in water, without any hemp seed, increases their longevity, as the latter is too heating and often ends in causing blindness or inducing decline. They occasionally require a little green food also, such as water-cress or lettuce. The bullfinch is an exceedingly affectionate bird; very averse, both when wild and confined, to being separated from his mate, and when with her, continually caressing and calling to her. They breed three or four times a year. The female lays from two to six eggs of a bluish white, with a circle of violet and brown spots at the large end. The young birds are hatched in a fortnight. If they are to be taught to whistle, they must be taken out of the nest when half fledged, kept very warm, and fed every two hours with rape seed soaked for several hours in cold water, afterwards scalded, strained, bruised, mixed with bread, and softened with milk, of this, two or three mouthfuls must be given at a time. The male bullfinch may be distinguished from the female by a slight red tinge upon the breast. They do not begin to whistle till they are able to feed themselves, but must nevertheless be whistled to immediately they are taken, as in this case the lesson is more deeply and readily impressed upon the memory. The bullfinch is one of the few birds that can be induced to learn a tune which may be reduced to the form of musical notation. A great number of them are brought from Germany, where they are instructed to the utmost degree of refinement. To accomplish this, however, the course of instruction must last at least nine months, for, if of less duration, they will either confuse their different airs, learn false notes, transpose passages, or, perhaps, altogether forget their lesson at the first moulting. Even when

they have been taught it is as well to keep them apart from other birds, for their aptness at learning renders them liable to catch up any novelty. It is also necessary to help them when they hesitate, and to repeat their song to them especially at moulting time, else there is danger of having an imperfect performer. They are generally capable of retaining in their memory three distinct tunes, and in these they are best instructed by means of a bird-organ or a flute. The utmost perfection, however, is attained by teaching them one air only, together with the usual short flourish or prelude. *Bullfinches* may be *tamed* by the following method:—A fresh caught bird is allowed to feed himself in his cage for one day. A band is then prepared, such as fowlers put round the wings of a decoy bird, with which, and a thread one foot in length, the bullfinch is so fastened that he can neither fall down nor beat himself to death. His food is then put into a little bag, to which is attached a small bell, and his drink poured into a vessel similarly furnished; at first when these are offered him, the chained bird will neither eat nor drink; it is then as well to leave the vessels with him for a day or two and allow him to help himself, yet approaching whenever he is seen to eat. On the third day he will readily take his food whenever offered, and the bell must be rung as long as he is eating; when he has finished he must be carried about on the hand; upon which, as he finds he cannot get loose, he will at last begin to eat quietly. On the third or fourth day he will probably of his own accord fly to the hand in which the seed bag is, he must then be liberated, and will be found to follow the hand however far it is withdrawn. Should he take the opportunity of flying away, he must again be bound and left without food for several hours. In this manner the bullfinch may be tamed in the course of a few days, and be taught to fly to the hand whenever he hears the bell. The *diseases* by which bullfinches are attacked, are costiveness, diarrhœa, epilepsy, and the moulting disease. On these occasions a change and regulation of food will generally work a cure.

BULLOCK'S HEART, TO DRESS.—Make a veal stuffing and introduce it into the upper part of the heart. Roast it until well done, and serve with currant jelly.

BULLOCK'S LIVER, FRIED, WITH POTATOES.—Stew two or three pounds of liver in one piece, in a small quantity of water for three hours, then take it out, and stew an equal quantity of potatoes, cabbage, carrots, and turnips, mixed, seasoning with pepper and salt. When nearly done, take them out of the liquor and divide them into pieces of the size of an egg. Then place them into a fryingpan, ready heated, with a little lard or dripping, with the liver cut into slices; fry the whole till sufficiently done. Then turn the contents of the frying pan on to a dish before the fire; put a little stock into the pan, thickened with flour, and when warmed up, pour it over the liver and vegetables, and serve.

BULLOCK'S LIVER AND RICE.—Soak three pounds of liver for half an hour in water, then boil it gently in three quarts of water, with one pound of rice, add two or three onions, a little parsley, four tablespoonfuls of vinegar, pepper and salt. At the time of adding the seasoning, cut the liver into slices; a rasher or two of bacon may also be introduced.

BUNIONS. These painful affections of the feet are generally situated on the great toe, and are the consequence of an inflammation of the bursæ of the joints, and are caused entirely by pressure, from the faulty make of the shoe.

Bunions, when first formed, are soft, and rise after the pressure of the finger; but this condition soon changes, if the exciting cause is continued, to a permanent thickening, and disfigurement of the part. The *treatment* of bunions must commence by removing the provoking cause, pressure; and where the inflammation extends to the skin, and the pain is acute, a few leeches should be applied, and the toe well fomented with a camomile poultice. When the inflammatory stage has been subdued, the bunion is to be rubbed with mercurial ointment and camphor, in the proportion of two drachms of the latter to one ounce of the former. For the long standing bunion, absorption should be attempted by occasionally rubbing the enlargement lightly with lunar caustic, the part having been previously softened by a hot fomentation. As soon as one cuticle has peeled off, apply the caustic again; and so on, repeating the application several times. From the first, the pressure must be taken completely off the part, by wearing a small adhesive plaster spread on the thickest buckskin, with a hole cut out large enough to admit the bunion to pass through.

BUNS.—Mix two pounds of flour with half a pound of sugar. Make a hole in the middle of the flour, and pour in two tablespoonfuls of yeast, and half a pint of warmed milk. Make a thin batter of the surrounding flour and the milk, and set the dish covered before the fire till the leaven begins to ferment. Put to the mass half a pound of melted butter, and milk enough to make a soft paste of all the flour. Cover this with a dust of flour, and let it rise once more for half an hour. Shape the dough into buns, and lay them apart on buttered tin plates in rows, to rise for half an hour. Then bake in a quick oven. See BATH BUN, SCOTCH BUN, &c.

☞ Flour, 2lbs.; sugar, ¼lb.; yeast, 2 tablespoonfuls; milk, ½ pint; butter, melted, ¼lb.; milk, sufficient.

BURGUNDY PITCH.—A resin obtained from the pine tribe, but the genuine article is seldom procurable; that sold for it being a preparation made from common resin. It is used for plasters which are slightly stimulant.

BURGUNDY WINE. See WINES.

BURIAL.—Unless the party deceased had been ill 12 hours before death, or been attended by a medical man, there must be an inquest before the funeral can take place. A dead body may not be removed until 48

hours after death, nor until the registrar of deaths for the district has had twenty-four hours notice of the death, and has received a certificate stating the cause of death and signed by the medical man who attended the deceased during the last illness; or in case no medical man attended, then some medical man called in after death.

Before the funeral, the undertaker must procure from the registrar of deaths a certificate that the death has been duly registered by him, and deliver the same to the minister, who shall be required to perform the religious service for the dead; and if there shall have been an inquest on the body, then the certificate of the coroner is sufficient. And in case a minister is requested to bury a dead body without such certificate, then he must give notice thereof to the registrar within seven days afterwards, under a penalty of £10.

An individual under whose roof a poor person dies, is bound to carry the body decently covered to the place of burial. The overseers of a parish are not bound to bury the body of a pauper lying in the parish, but not in a parochial house, although such pauper died in a hospital within the parish, and were a married woman, whose husband was settled in the parish and receiving relief there. But when a body lies in the house of a parish or union, the parish or union must provide for the interment. See DEATHS, REGISTRATION OF.

BURNET, CULTURE OF.—This is a hardy perennial plant, flowering from June till September, when the seed ripens. The leaves are pinnated, and form a tuft next to the root; but alternate on the stem. The stalks rise to fifteen inches in height. The flowers are small, and of a pale red colour, having a number of threads in the middle. The plant may be raised from seed; of which half an ounce will suffice for a bed 3 feet by 4 feet. It may either be sown in spring or early in autumn. It may also be propagated by parting the roots early in spring. When the plants are of 2 or 3 inches in growth, transplant into rows, at 6 inches apart, plant from plant. Cut down all flower-stalks not intended for seed.

BURNET, USES AND PROPERTIES OF.—The leaves of the burnet are employed in flavouring soups, sauces, &c.; they are also mixed in salads, and form a favourite herb for cool tankards. When used in moderation, burnet agrees with most ages and constitutions; but if taken to excess it becomes difficult of digestion, and induces constipation.

BURNING GLASS.—A name given to a glass or mirror so formed as to collect the sun's rays which fall on it into a point or small surface, and thereby produce an intense heat, and set fire to combustible substances. The point at which the rays meet, and where the greatest heat is produced, is called the *focus* or *burning point*. The rays of light or heat may be concentrated either by refraction or reflection; in the former case, they must pass through a transparent refracting substance; in the latter, they fall on a concave polished surface of silvered glass or bright metal.

BURNS.—Burns are generally considered fatal when they occur on the head, throat, chest, and bowels, from the inflammation induced in the important organs immediately beneath these parts. Burns over joints are particularly serious from the consequences so liable to ensue in such situations, namely, the formation of a stiff joint, and contraction of the cuticle, causing the limb to be drawn up or bent. The contraction is so great after all burns, that the greatest circumspection is necessary during the cure to avoid a malformation; for, if the part is kept long at rest, or two parts of the body in contact, such as the chin upon the breast, orthe arm by being bent, adhesion will take place, and either a very frightful or most inconvenient permanent disfigurement will be established.

The following remarks should be borne in mind by every one who has anything to do with a burn, and cannot be too firmly impressed on the memory. *First*, that as the exposure to the air of a burnt surface is the cause of the continuance of pain, the part cannot be too soon protected from the atmosphere. *Second*, that burns, if instantly wrapped up and kept excluded from the air, require no medicament whatever, and heal in a few days. *Third*, that when the clothes of a person are on fire, the person is to be instantly enveloped in the carpet, hearth-rug, blanket, coat, or any other article that, by smothering the fire, will extinguish the flames. *Fourth*, that the blister raised by burning is never to be broken, nor burnt clothes adhering to the flesh removed.

TREATMENT.—In whatever part of the body a burn may be situated, the treatment is the same; the part must be immediately covered with a double fold of wadding, laying the woolly side next the skin. Should pieces of the dress adhere to the cuticle, cut carefully all the loose edges off, and lay the wadding over what remains. If the burn has been extensive, and there is much prostration of strength, and a sinking pulse, brandy, ether, and ammonia must be given every half hour, to rouse the action of the heart, in draughts consisting of a tablespoonful of brandy, half a teaspoonful of sal volatile, twenty drops of ether, and a wineglassful of water; at the same time, to counteract the shivering and sense of cold that usually follow such accidents, apply heated bricks or bottles of hot water, to the feet, thighs, and arm-pits. Should the pain, in spite of the exclusion of air, continue an hour after encasing the part or parts in wadding, give 40 drops of laudanum in one of the above draughts, and repeat the same amount, if necessary, in an hour. This dose, of course, applies to adults; to a child from five to twelve years, from five to ten drops. When the wadding becomes moist from the exudation, on no account remove it, but lay over the moistened dressing another layer of wadding. When the pain and tenderness subside, the part is to be exercised as much as convenient, and the burnt surface kept constant-

ly covered till the new cuticle has formed and the dressings fall off by degrees.

Where neither wadding, wool, nor fine cotton can be procured to envelope the burn, cover the part instantly with handfuls of flour, violet powder, Peruvian bark, or any harmless impalpable powder, adding more whenever moisture appears through the thick cake thus made over it; and continue in the same manner as directed with the wadding, to apply fresh powder as the occasion demands, till the healing state of the burn warrants the application of a poultice, to bring off the collection. When softened and removed by one or two poultices, the part is to be again dusted lightly, or treated with the wadding, to protect the new cuticle. To those possessed of the domestic articles of medical use, recommended in the first number of this work, the following mode of procedure is advised as at once the most practical and efficacious.

Immediately pour over the burnt part, wherever it may be,—except the eye or mouth—sufficient of the extract of lead to wet the burn, and directly after, lay smoothly on, a piece of wadding a little larger than the size of the injury, and with the wool next the skin; over this apply a double fold of the same material, and secure it by a loose bandage; keep the patient quiet, and administer tablespoonfuls of brandy and water, or sweetened gruel with brandy, at the same time implicitly follow the previous directions.

When burns occur over vital organs, as the chest and belly, and the pulse is full and hard, with much difficulty of breathing, bleeding must be resorted to, and an immediate action established on the bowels, and the inflammatory state of the system provided for, by taking the following pills and mixture:—

Powdered aloes	24 grains
Powdered scammony . . .	24 grains
Colocynth	18 grains
Calomel	1 scruple

Mix; make into a mass, which divide into twelve pills. Two to be taken directly, and repeated every four hours, till they act freely. Mixture:—

Powdered nitre	1 drachm,
Camphor water	6 ounces,

Dissolve, and add

Tartar emetic	3 grains,
Tincture of squills	2 drachms,
Tincture of opium	2 drachms.

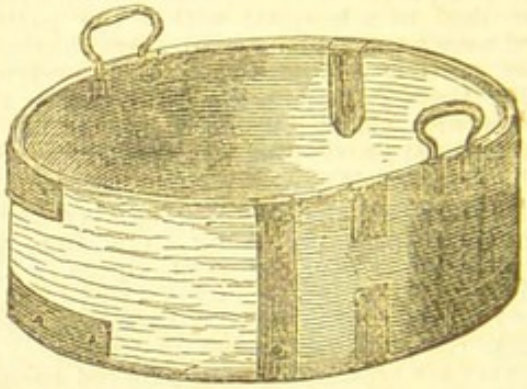
Mix; take two tablespoonfuls directly, and one every hour after.

Burns on the throat and chest often produce severe and difficult breathing, when, if not relieved, the patient might expire from suffocation. The feet and legs, must, therefore, be plunged into hot water of a sufficient temperature to attract a sudden supply of blood and make them look red, and the effect of this diversion continued by one or two mustard plasters to the feet, or a blister to each thigh.

Burns, the result of acids, must be treated first, by a free application of powdered chalk or magnesia, to counteract the acid, this is then to be washed off, and the wadding or wool applied. Burns caused by quick or slacked lime are to be washed directly with vinegar and water till all the corrosive substance has been neutralized, and then healed by dressing with the extract of lead and the wadding.

BURNT EAR.—See SMUT.

BUSHEL.—A measure of capacity for dry goods, as grain, fruit, pulse, and many other articles, containing four pecks, eight gallons, or thirty-two quarts. Corn is now invariably measured by the imperial bushel. It is of cooper-work, made of oak, and hooped with iron, and, according to the Weights and Measures Act, must be stamped by competent authority before it can be legally used; and having been declared the standard measure of capacity in the country for dry measure, it forms the basis of all contracts dependent on measures of capacity when otherwise indefinitely expressed. The bushel must contain just 2150·42 cubic inches, though its form may vary. The form



represented in the figure is the most convenient. It is not too broad for the mouth of an ordinary half-quarter sack, nor too deep to compress the grain too much, and its two handles are placed pretty high, so that it may be carried full without the risk of upsetting. Besides the standard or legal bushel there are several local bushels, or different dimensions, in different places. At Abingdon and Andover a bushel contains 9 gallons; at Appleby and Penrith, a bushel of pease, rye, and wheat, contains 16 gallons; of barley, big malt, mixed malt, and oats, 20 gallons; at Carlisle a bushel contains 24 gallons; at Chester a bushel of wheat, rye, &c., contains 32 gallons, and of oats, 40; at Dorchester, of malt and of oats, contains 10 gallons; at Falmouth, the bushel of stricken coals is 16 gallons, of other things, 20 and 21 gallons; at Kingston-upon-Thames, the bushel contains 8½; at Newbury, 9; at Reading and Wycombe, 8¾; at Stamford, 16 gallons.

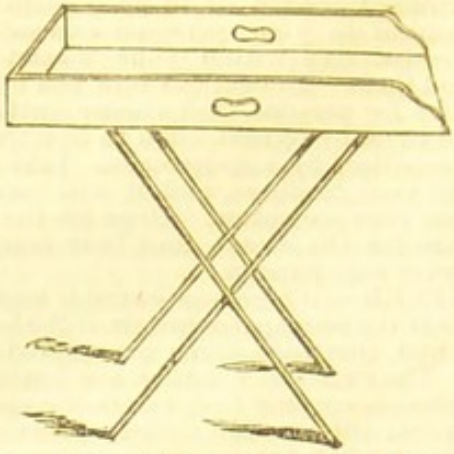
BUSINESS HABITS.—Every man who aims at becoming a clever and a successful man of business, must exhibit a regular and consistent line of conduct. He must have a character for strict regularity and attention to his duties. He must deny himself, in a great measure, to ordinary pleasures and amusements, and govern his private

and domestic conduct by a system of method and regularity similar to that observed in business pursuits. In addition to regularity and attention, and strict moral integrity, the possession of business habits implies also the possesion of a certain mental aptitude for conducting business. The chief intellectual qualities requisite are a sound understanding, quick perception, prompt decision, and firmness in execution. The two latter are qualities which every man must practise and improve for himself; the former are natural endowments which men do not possess in common—which are strong or weak in different men, but capable of being more or less strengthened and improved by all. To the foregoing qualifications may be added the cultivation of a pleasant and agreeable manner, for much depends on this. There is nothing that creates a more unfavourable impression than a rude, hasty, imperious, or uncourteous manner. On the other hand, a man who is courteous and obliging will always conciliate favour, for the nearer men approach to free and unreserved intercourse with each other, the more smoothly the affairs of life appear to move forward. It is a law of our nature that the more agreeable we are, the more gratification we experience. This we find demonstrated in our daily commerce with the world, and it is therefore of immense importance to a man of business that, in addition to his other qualifications, he should study to acquire an agreeable and conciliatory manner. The main principles in connection with the immediate conduct of business will be found to be conveyed in the following rules. Fulfil every engagement punctually. Do nothing carelessly or in a hurry. Employ nobody to do what you can easily do yourself. Keep everything in its proper place. Leave nothing undone that ought to be done, and which circumstances permit you to do. Keep your own business to yourself, and do not interfere with the business of others. Be prompt and decisive with your customers, and let your word be your bond. Be clear and explicit in all bargains, take care to understand every transaction thoroughly yourself, and do not let others misunderstand you. Leave nothing of consequence to memory which can and ought to be committed to writing. Retain copies of all letters, invoices, and other documents connected with business, tabulated, classified, and put away in such a manner that any document may be produced at a moment's notice. Never suffer your desk to be confused by many papers either lying inside or upon it. Have certain places for books, and other things in constant use, always keeping them in their places when not required, so that they may be readily found without confusion or loss of time. Superintend your own business affairs as much as possible; your personal attendance will be always more satisfactory to your customers, and will also ensure your servants paying proper attention to their duties. Examine your books day by day, so that you may inform yourself of the progress you are making with your customers, and the progress they are making with you. Avoid as much as possible all sorts of finessing in money matters, and do not lend your name to any transaction that is not straightforward or in good faith. Be economical in your personal expenditure, and rather live within your means than beyond them. Be cautious how you become security for persons, and choose rather to offend them by refusal, than to be unjust to your creditors by acquiescence. Take pleasure in your business, and it will soon become your recreation. Hope for the best, prepare for the worst, and bear manfully whatever may happen.

BUTLER.—Where no steward is kept, the butler is the principal domestic of the household, and, therefore, much is expected from him. The duties of a butler are limited or extended, according to the class of employer he serves; the average duties appertaining to this situation are nearly as follow:—1st, the cellar, including bottling wine and stacking it, brewing and bottling beer, and all the incidentals peculiar to these departments, with or without the aid of a professed brewer; 2ndly, cleaning boots and shoes, and brushing clothes; 3rdly, cleaning plate, and knives and forks, and waiting at table; 4thly, answering the door bell, and that of the sitting-room, occupied by the elder branches of the family. It is obvious therefore that a servant of this description requires considerable aptitude for his office; he must be quick without being noisy, methodical in his habits, scrupulously neat and clean in his personal appearance; he must also have a good address; and although many things may occur to try his temper, he must never be betrayed into any impertinent expression, or a churlish demeanour. The following is the routine of work for a day, and so arranged as to conduce to the various duties being performed in the easiest and most regular manner. Rise at 6 o'clock, and commence cleaning the boots and shoes, knives, &c. At 7 collect the gentlemen's clothes, brush them, and return them to the room. At half-past 7 prepare the table for breakfast. At 8 take your own breakfast. From half-past 8 to half-past 9 attend the family breakfast table. From half-past 9 till 10, clear away and wash the things used for breakfast. From 10 till 1 attend to the duties of the cellar, and to the answering of the bells. At 1 prepare luncheon, after this obtain your own dinner as soon as you can, and then devote the remainder of the afternoon to washing and polishing plate, cleaning and preparing lamps, &c. Then follow in regular succession, laying the dinner, waiting at table, and clearing away; finally, tea and coffee are to be served up, which, with the attendance on the drawing-room bell, completes the day's duties. Book: *Houlston and Wright's Industrial Library, The Butler.*

BUTLER'S TRAY.—A domestic contrivance consisting of an oblong tray, made of oak or other strong wood, having a ledge three or four inches in height extending all round it, and a space at each end to admit the hands when it is required to be removed

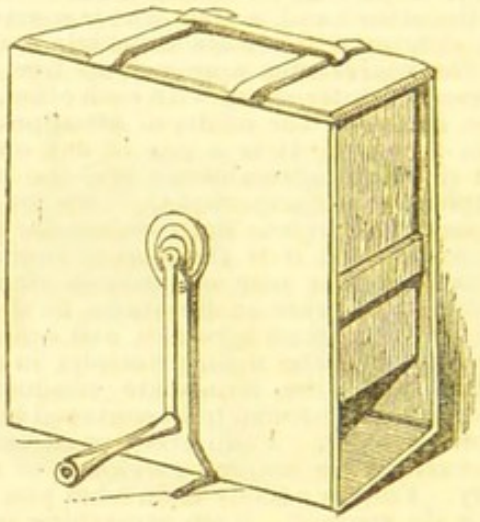
from one place to another. It usually rests on tressels which are placed in some remote part of the dining-room or outside the door, to facilitate the removal of dishes, &c., to



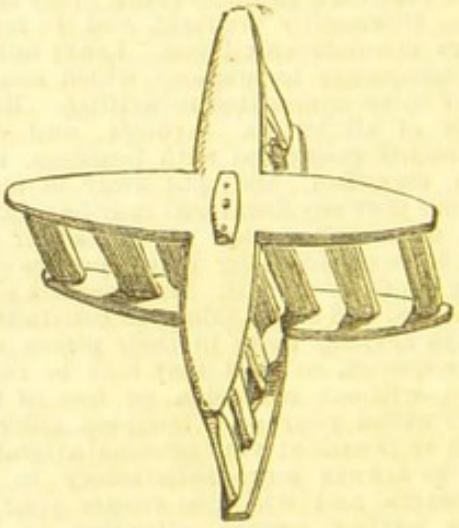
and from the table. Simple as this contrivance is, yet many establishments are without it, and the servant has, consequently, to make four or five journeys up and down stairs instead of one.

BUTTER, ADULTERATION OF. — Butter is chiefly adulterated with water and with salt, and these when introduced over and above the amount necessary to ensure preservation, are purposely added to increase the weight and bulk. A simple method of determining approximately the amount of water present in any sample, is to melt the butter, fill a small bottle with it, and place it near the fire for half an hour or so; when the water, on account of its weight, will sink to the bottom. Excess of salt may be easily detected by the taste and smell, and also betrays itself by exuding from the butter in greater or less quantities. Butter is also adulterated with lard and with flour, and in either case an unnatural whiteness is imparted, which soon leads to detection; when flour has been used especially, a pasty appearance will present itself, and instead of spreading readily on the bread, it will roll up and also cling to the knife, in spite of repeated efforts. Genuine butter is of a golden hue, and has a peculiarly fresh smell, which cannot be imitated.

BUTTER CHURNING. — This process, which is by no means difficult, is performed as follows:—The milk on being drawn from the cows, must be put into a tub and left to cool. After it has cooled, pass the milk through a milk-sieve into the milk-dishes, and fill them to the depth of two inches only. To know at once the age of milk in the dishes, *one* mark or score should be made on the dishes just filled, to show that they contain the last drawn milk; a second mark is made, at the same time, on the dishes containing the milking before this, and a third put on the dishes containing the milk drawn before the second milking, and which contain the third milking or oldest milk. The next thing to be done is to *take off the cream*. In ordinary summer weather, the cream should not be allowed to remain longer on the milk than three milkings. But should the weather be unusually warm, the milk should not be more than eighteen hours old, before the cream is taken off. The cream is skimmed off milk with a skimmer or creamer ordinarily; but in stationary coolers of metal or of stone, a spigot is drawn half out from the hole in the bottom, on the near side, through which the milk runs slowly into a vessel below, and leaves the cream on the bottom of the cooler. The cream, when taken off, is put into a cream jar, in which it accumulates until churned into butter. Every time a new portion of cream is put into the jar, its entire contents should be stirred, in order to mix the different portions of cream into a uniform mass. The cream soon becomes sour in the jar, and twice a week it should be made into butter, however small the quantity may be at a time. There are many varieties of churns, but the one now most generally used is the *Box hand-churn*. This is best made of birch



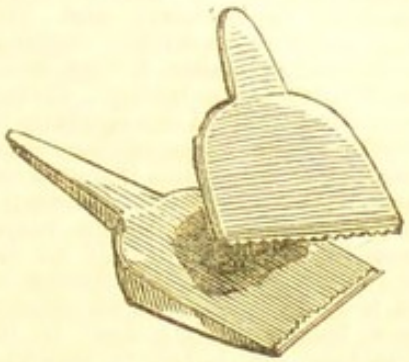
or plane tree, and requires to be carefully formed, so as to be water-tight. It is of very little consequence whether the bottom is formed to the circle of the agitator, or remains flat, as far as the production of butter is to be considered; but for the process of cleansing, the curved bottom will



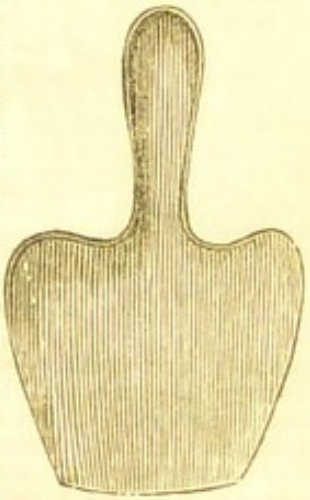
present some advantages. A cover is fitted close in the top of the box, with convenient handles. The *agitator* is of the usual form;

the dimensions of its parts are unimportant, except that they have sufficient strength and present sufficient surface to produce the requisite degree of agitation in the fluid. This form of churn may be enlarged to any dimensions to suit hand labour or power.

On converting the cream into butter, the first act is to put the churn into a proper state, assuming that the churn, when last used, was put aside in a thoroughly clean and dry state; about two quarts of hot water should be poured into it to scald and rinse it. In summer it should be rinsed with cold water after the hot, but not in winter. The churn being thus prepared, strain the cream into it through a bag of coarse linen cloth. To effect this, it must be dipped in water, and then held over the churn; and on the cream being slowly poured into it from the jar, the liquid part will run through into the churn, but the clotted part will remain in the bag. The best temperature at which cream can be put into a churn is 55 degrees Fahrenheit, and it is one easily attained in a cool apartment early of a summer's morning. The churning should be done slowly at first, until the cream has been completely broken and rendered a uniform mass; it then becomes thinner, and the churning is felt to be easier. The motion may then be slightly increased and continued until a change is heard in the sound within the churn, from a low smooth to a harsh tone, and until an unequal resistance is felt to be opposed to the agitators. The butter may soon be expected to form after this, and, by accelerating the motion a little more, it will form the sooner; the moment the mass within is felt to be firm and the agitators impeded, the motion should entirely cease. The rates of motion in churning butter at different times are of some importance, for when performed too slowly, the butter will be strong tasted; and when the motion is too rapid, the butter will be soft and frothy, and is said to have *burst*. In very warm weather, or when the cream is put in too warm, the churning is liable to burst with any degree of fast motion. The precise motions in churning, at the respective periods of the changes taking place in the cream, are difficult to determine, and much must be left to judgment. When butter forms from cream in churning rather less than an hour, it is satisfactory work; when it comes much sooner it is soft, and when much later it is strong tasted. *The utensils required for the use of butter* are a small tub for putting the butter into from the churn; a wooden flat shallow kit, to wash butter in; and a stoneware jar for keeping salt dry. Immediately on being formed, butter should be taken out of the churn and put into the small tub for the purpose. Cold water is then put into the flat kit, which is set in an inclined position, and the butter is washed, by being kneaded out and rolled up several times on the bottom of the kit amongst the water. Lumps of it are then taken in the hand, and beaten with the palms alternately, in order to extract every particle of the buttermilk, the least portion of which would soon render the butter rancid. The milky water is strained off, fresh water poured in, and the butter is again washed and worked as often as the water becomes milky. If intended to be kept or disposed of in a fresh state, the washed lump is divided into pound or half pound portions each, and placed in separate lumps in the tub amongst water. Each of these lumps is then clapped firmly by the hand, and moulded into the usual form, For the table, any requisite number of pounds should now be moulded from the lump into small pats; to accomplish this,



pat moulds and hands are used. Objections have been urged against the use of the hand in making up butter; and it is certain that hot clammy hands will impart a disagreeable taint and flavour to the butter; but naturally cool hands, made clean by washing in warm water and oatmeal, *not soap*, and then rinsed in cold water, may be employed. Under any circumstances, less handling can be given to the butter, by the partial use of the spade, which may be employed in the first process of the washing, by dividing and rubbing, and rolling it amongst the water on the bottom of the flat tube, before it is beaten by the hands.

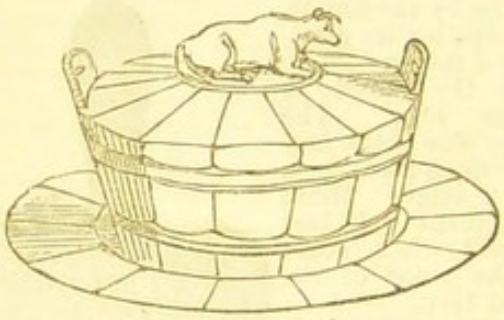


The spades are generally 4 inches square, with the handle 4 inches long. The lower side of the face is thinned away to a sharp edge. These implements will last longest when made of the wood of the apple tree.

Besides cream, butter is made from the *entire milk*, which is usually allowed to stand until it becomes sour, and requires a shorter time to convert it into butter than when the milk is sweet; but to obtain butter in these cases a large churn is required, and the churning must be continued for a long time, seldom less than three hours, and often as much as five. The butter obtained from this source is very good, and it has the advantage of possessing a uniform character in all seasons, the temperature of the milk being more easily obtained than that of the cream. The process of churning from the

whole milk is very simple. The milk is poured into coolers at first, and from them it is drawn off into vats sufficiently large; the vats are then put by, to stand totally undisturbed till the whole acquires a sufficient degree of acidity. The time required for this purpose varies a little, according to the heat of the weather, and the temperature of the milk-house. The point is ascertained by the formation of a thick scum on the surface. All the milk need not be of the same age—the milk of Sunday and Monday may be churned on the Thursday morning; that of Tuesday, Wednesday, and Thursday morning, on the Saturday evening; and that of Thursday evening, Friday, and Saturday, on the Monday morning. If the butter is intended to be salted it is specially treated. After being washed clean as above described, it is weighed in the scales, the salt weighed, and immediately applied to the lump. Practice varies considerably in the quantity of salt given to butter; but half an ounce of fine pure salt to a pound of butter is sufficient, if to be kept; or half an ounce to two pounds, if for immediate use. In the process of salting, the butter is spread out in the tub, after the washing, and the salt, ground fine, is sprinkled over it little by little; the butter is then rolled up and rubbed down with the lower part of the palm of the hand, until the whole mass appears uniformly incorporated with the salt. To ensure uniform salting, only half the salt should be applied at once, and the butter lumped and set aside until next day, when whatever of brine or milk may have exuded in the meantime, should be poured off. The other half of the salt should then be rubbed in in like manner, and the salted lump put into the jar or firkin on the second day.

BUTTER DISH.—Butter should always be kept in a pot or dish, in order that it may be



preserved firm and clean; it has also a more delicate appearance when thus sent to table than when exposed on a plate. Butter dishes may be made of either china-ware or glass, the latter, however, is preferable. They also appear in a great variety of designs, that shown in the engraving being one of the most chaste and elegant.

BUTTER, MELTED.—Put into a basin a dessertspoonful of flour and a little salt, then mix with them very gradually and very smoothly, a quarter of a pint of cold water; turn these into a small clean saucepan, and stir them constantly over a clear fire until they have boiled a couple of minutes, then add an ounce and a half of butter cut small; keep the sauce stirring until this is entirely dissolved.

BUTTER, RANCID, TO IMPROVE.—Wash it, melt it gradually, skim it, and put to it a slice of charred toast or some pieces of charcoal.

BUTTER, SALT, TO FRESHEN.—Churn it afresh with new milk, in the proportion of a pound of butter to a quart of milk.

BUTTER, TO CLARIFY.—Cut the butter in slices; put it into a jar, which set in a pan of boiling water until it melts. Skim it, take it out, and when it has cooled a little, pour it gently off, keeping back the curdy sediment.

BUTTER, TO PRESERVE.—Dry salt thoroughly before the fire; pound it as fine as possible; spread a layer of it at the bottom of a jar, then press and beat the butter down with a wooden rammer, cover the top with a thick layer of salt, so that when converted into brine it shall completely protect the butter.

BUTTER, USES AND PROPERTIES OF.—As an article of food in its natural state, and in cookery, for sauces, &c., is almost indispensable. When fresh, it forms a nutritious and instinctive addition to farinaceous food; and when melted is advantageously eaten with certain vegetables that are deficient in oily matter. Butter, however, must be used with moderation, as when eaten in excess it relaxes and debilitates the stomach, and gives rise to biliary derangements. Persons of a bilious temperament should be especially careful in the use of butter, eating it but seldom and then only in small quantities. When butter has been exposed, whether alone or combined with farinaceous articles, to a high temperature, such as of an oven, it becomes exceedingly unwholesome, and irritates weak stomachs to such a degree that it may be almost ranked as a poison.

BUTTERED BISCUITS.—Dissolve half a pound of butter in half a pint of warm milk, and with four pounds of flour make up a stiff but smooth paste, roll it very thin and stamp out the biscuits, prick them with a fork, and bake them on tins in a quick oven.

☞ Butter, ½lb.; milk, ½ pint; flour, 4lbs.

BUTTERFLY VIVARIUM.—See VIVARIUM.

BUTTERMILK.—The residuum of cream or milk deposited in the process of churning. It is sour to the taste, thick, and consists of butter, curd, and water. When fresh, it is a pleasant beverage, and if made of sweet cream is a delicious and wholesome food. It answers the purpose of cream to eat with fruit, when mixed with a little milk and sweetened with white sugar.

BUTTERMILK CAKES.—To a quart of flour add a pint of buttermilk and a teaspoonful of salt, dissolve a dessertspoonful of soda in a little warm water and stir it into the milk, which pour upon the flour while foaming. Beat all well together, adding flour enough to make a smooth dough. Roll it out, divide it into cake with a paste

cutter, and bake it in a quick oven for fifteen or twenty minutes.

☞ Flour, 1 quart; buttermilk, 1 pint; salt, 1 teaspoonful; soda, 1 dessertspoonful; spoonful; water, sufficient.

BUTTERMILK PUDDING. — Mix a quart of new milk with a pint of buttermilk; drain off the whey, and mix with the curd the crumb of a French roll grated, half a lemon peel grated, quarter of a pint of cream, three ounces of cold melted butter, the yolks of five and the whites of two eggs; sweeten the whole to taste, and bake with puff paste for half an hour.

☞ Milk, 1 quart; buttermilk, 1 pint; French roll, 1; lemon peel, ½ of one; cream, ¼ pint; butter melted, 3ozs.; eggs, 5 yolks, 2 whites.

BUYING AND SELLING, LAW RELATING TO.—This is a transmutation of property from one person to another in consideration of a certain price. No contract for the sale of goods to the value of £10 or upwards is valid, unless the buyer actually receive and accept part of the goods sold, or unless he give something by way of earnest to bind the bargain, or in part of payment, or unless some note or memorandum in writing be made and signed by the party or his agent who is to be charged with the contract. With regard to goods *under* the value of £10, no contract or agreement is binding unless the goods are to be delivered within a year, or unless the contract be made in writing signed by the party or his agent. The delivery of a penny or a glove is sufficient *earnest* within the statute; the acceptance of the key of the warehouse in which the goods are deposited; the payment of warehouse rent; the directing them to be conveyed by a particular carrier; or the re-sale of them to a third person, are all an affirmance of the bargain. The note or memorandum of a bargain for the price of £10 or upwards, must state the *price* for which the goods were sold. Where no act remains to be done by the vendor, as counting, weighing, or measuring, the moment the bargain is struck the property of the goods is vested in the purchaser and remains at his risk; so, if a horse die in the interval of sale and delivery, the vendor is entitled to his money, though no actual change of property has taken place.

As a general principle, the law affords no redress for *oversights* committed in the *purchase of estates*, which might have been avoided by ordinary judgment and vigilance. But if the vendor knowingly conceal *latent defects*, either as regards the estate or its title, he cannot compel the execution of the contract, though the estate be sold expressly subject to all its faults. If it be falsely asserted that a valuation has been made of an estate at a higher price than really was the case, the purchaser is not bound to complete the purchase. So if the particulars of the sale of a house describe it in good repair when it is not so, the purchaser need not fulfil the purchase, unless there be time to complete the repairs before his right of possession commences. A false affirmation of the amount of rent would relieve the purchaser. From the moment of sale the purchaser becomes the virtual owner, and, consequently, from that time entitled to any profit or subject to any loss that may subsequently accrue to the estate. And, on the other hand, the vendor is entitled to *interest* on the purchase money from the time of the bargain to that of payment.

The property in *horses* is not easily altered by sale without the express consent of the owner; for a purchaser gains no property in a horse that has been stolen, unless it it has been bought in a fair or open market. The owner's property in the horse stolen is not altered by sale in a fair, unless it be openly ridden, led, walked, or kept standing for one hour at least, and has been registered, for which the buyer pays one penny. Sellers of horses in fairs or markets must be known to the person who takes toll there, and who is bound by the statute to keep a place for that purpose from ten in the forenoon till sunset; sales made otherwise are void. The owner of a horse stolen, notwithstanding the *legal sale*, may redeem the same on the payment or tender of the price within six months after it is stolen.—See CONTRACT, DEPOSIT, EXCHANGE, SALE OR RETURN, WARRANTY, &c.

C.

CAB FARES, AND REGULATIONS.—Cabs may be hired either by distance or time. The fares are:—within and not exceeding one mile, sixpence; and at the rate of sixpence for every additional mile or part of a mile. For any *time* not exceeding one hour, two shillings. Where a fare is calculated according to distance, and the driver is required to stop on the way, a further sum of sixpence is to be paid for every quarter of an hour he shall have so been stopped. No back fare to be taken or demanded. Fares are to be paid according to distance or time—at the option of the hirer—to be expressed at the commencement of the hiring; if not otherwise expressed, the fare to be paid according to distance. For a fare to be paid according to time, no driver will be compellable to hire his carriage after eight o'clock in the evening or before six o'clock in the morning. Cabs are licensed to carry two persons. Two children under ten years of age to be counted as one adult; a special bargain is made when more than two persons are carried, but if no notice be taken of the extra number of persons by the cabman at the time of hiring, he cannot demand more than his legal fare. When more than two persons shall be carried inside a cab, with more luggage than can be taken inside, a further sum of twopence for every package carried outside is to be paid by the hirer, in addition to the fare; but all luggage that can be carried inside is not to be charged for. The amount of fare according to distance

and time which may be legally demanded, is to be distinctly painted both on the inside and the outside of the carriage. The driver must also produce a book of fares when required. No driver can be compelled to drive more than *six miles* from the place of hiring. When hired by time, no driver shall be required to drive at a faster rate than four miles an hour, unless he is paid an additional sixpence for every mile or part thereof exceeding four miles. A ticket on which is printed the number of the carriage, is to be delivered by the driver to the hirer at the time of hiring, whether he be asked for it or not. Drivers refusing to go, or exacting more than the legal fare, or not travelling with proper expedition, subject themselves to a penalty of forty shillings. Agreements to pay more than the legal fare are not binding; in such cases the excess paid may be recovered, and the driver fined forty shillings for his extortion. For a stated sum the driver may agree to drive any distance at discretion, and is liable to a penalty of forty shillings for demanding more than the sum agreed upon, though less than the legal fare. Deposit may be demanded for cabs waiting; refusing to wait or account for the deposit, or going away before the time has expired for which the deposit was made, incurs a penalty of forty shillings. *Check-strings* are to be provided, and while driving to be held by the driver, under a penalty of twenty shillings. Drivers not to permit any person to ride in, upon, or about any carriage, without the express consent of the person hiring the same, under a penalty of twenty shillings. Endangering any person by *intoxication*, *wanton and furious driving*, or using abusive and insulting language, or being guilty of other rude behaviour, subjects any proprietor, driver, or waterman, to a penalty of £3, and the licence may be revoked. Property left in a carriage is to be deposited by the driver at the police office within four and twenty hours, or in default a penalty of £10 or one month's imprisonment. Any property found by a passenger is to be given up to the driver or conductor, under a penalty of £10. Property not claimed within a twelvemonth to be disposed of, and the proceeds paid to the receiver-general of Inland Revenue. When disputes arise, the hirers may require the driver, without payment, to drive to the nearest police court, if the magistrate be sitting, if otherwise, to the nearest police station. When in a case of disputed distance it is agreed that it shall be by actual measurement, the cost of measuring must be paid beforehand by either of the parties or in equal portions by both, to be retained or refunded according to the merits of the decision. When a person is proved to have resisted the payment of the fare unjustly, he must pay all costs attendant upon the hearing of the case, and also compensate the driver for his loss of time, or in default may be imprisoned for one month.

CAB-HIRING, ADVICE AND CAUTIONS RESPECTING.—Upon hiring a cab, especially if accompanied by ladies, go to the stand personally and make your own selection, so as to ensure a clean and comfortable vehicle and a good horse. The best method of any when you have particular occasion for a cab, is to find out some respectable cab proprietor in your immediate neighbourhood, with whom you will be able to make satisfactory arrangements and terms. Always provide yourself with the amount of the fare previously to starting; cab drivers seldom if ever have any change. Whenever you find that a cab driver is intoxicated, stop the cab and get out immediately you make the discovery, in order to prevent accident or personal annoyance. Never attempt to argue with a cabman respecting his fare after giving him what you consider to be just. Hand him your card and leave him to his remedy. Do not attempt to resent insolence and abuse either by words or blows, put the law in force, or walk silently away, as best suits your feelings and convenience. When accompanied by ladies or children, do not pay the fare till they are safely deposited at their destination, you will then be in a less embarrassed position to resist extortion; the same remark holds good for luggage, &c. When you require a cab to be early at your door the following morning, bespeak one, of the waterman of the cabstand on the previous night, or of a cab proprietor in the neighbourhood, as before suggested.

CABBAGE, BOILED. Wash and pick it carefully, and if very large, quarter it. Put it into a saucepan with plenty of boiling water and a tablespoonful of salt; if any scum arises, take it off; boil till the stalk is tender. Keep the vegetable well covered with water all the time of boiling, and shut out any smoke or dirt arising from stirring the fire. The flavour of an old cabbage may be much improved by taking it up when half done, and putting it directly into another saucepan of fresh boiling water. When taken up, drain it in a cullender. It may either be served plain, or chopped up and seasoned with butter, pepper, and salt.

CABBAGE, CULTURE OF.—Of this vegetable there are many varieties, but some are better adapted for growing in gardens than others, the seed of which may be obtained at any respectable seed shop. To obtain cabbage early in spring, procure half an ounce of "Atkins's Matchless," and the same quantity of the early "Nonpareil," both being dwarf and early; or buy more or less, in proportion to the size of the ground you intend planting. Between the first and the twelfth of August select an open piece of ground, and, having dug it well, sow the seed, scattering it regularly over the space allotted. Then take the spade, and throw a little soil from the sides of the bed evenly over the surface; press the bed down with your feet; then take the rake and smooth it gently over, taking care not to rake so deep as to draw the seed into masses over the bed. Water plentifully during dry weather, and watch carefully that the birds do not molest the shoots when they are breaking through the ground. Sow also at the same time an equal

quantity of the "Emperor," or "Wheeler's Imperial," which are larger and somewhat later, and which will give a succession during the greater part of the summer, or, at all events, until the early spring sowing comes in. If the plants have progressed favourably, they will be fit to plant out in the early part of September; and if onions have been grown in the same garden, it would be advisable to plant the cabbage in that piece of ground after the onions are taken off, the ground selected for onions being generally the best in the garden. After properly digging the ground, proceed to mark out the plot for the early sorts, eighteen inches from row to row; commence planting, putting the plants one foot apart in their respective rows, and fifteen inches from each other. After planting, water must be given, unless it be rainy weather. Watch for slugs, and fill up any vacancies that may occur from the seed bed of each sort respectively. As soon as the ground becomes dry on the surface, loosen the earth between the plants to the depth of two inches, which will accelerate vegetation. As the plants advance, draw the earth about them with the hoe, in order to steady them against the wind and protect them from the frost. If these rules are observed, young cabbage fit for cutting, will, under ordinary circumstances, appear in May, although much of course must depend on the season. For a succession, sow early in March, of the large sorts, and again from the middle to the end of May; and should there be some plants left in the seed bed of August sowing, plant them out in March.

CABBAGE FLY.—The larvæ of this insect will live underground, in the roots and stems of the cabbage, eating passages through them, and causing them to rot. The eggs of this insect may be recognised during winter and spring by the appearance of numerous small excrescences covering the stems close to the ground. The only remedy in the case of young plants, is as soon as the symptoms appear, to pull up the plants and burn them, by which means a riddance is made of the brood. To cut off the excrescences would simply weaken the plants, without exterminating the pest.

CABBAGE LEAVES.—If the upper side of cabbage leaves be applied to a wound, the sore is protected and quickly heals, while the under side *draws* it, and produces a constant discharge. The inner leaves of the cabbage should be applied in preference to the outer.

CABBAGE MASHED WITH CREAM.—Mash the cabbage, slice and blanch it, boil it in water with a little salt, and when it is nearly tender, take it out and dip it in cold water; then put it into a saucepan with a piece of butter, and add as much cream as will cover it, cook gently for a quarter of an hour, and serve.

CABBAGE RED, TO PICKLE. — Choose two middling-sized, well coloured, and firm cabbages, shred them very finely, first pulling off the outside leaves; mix with them half a pound of salt, tie them up in a thin cloth, and let them hang for twelve hours, then boil a quart of vinegar with an ounce of ginger, half an ounce of black and Jamaica pepper, and a quarter of an ounce of cloves. Put the cabbage into jars, and pour the vinegar over it when cold.

☞ Cabbages, 2; salt, ½lb.; vinegar, 1 quart; ginger, 1 ounce; pepper, ½oz.; cloves, ¼oz.

CABBAGE SALAD.—Select a firm, and fresh white cabbage, trim off the outside leaves, and cut down the centre of it; take out the large part of the stalk; lay the flat side of the cabbage downwards, and cut it right through into strips of about a quarter of an inch thick; strew it in the salad bowl, season with pepper and salt, and add five tablespoonfuls of oil and three of vinegar. It is then ready to serve, and may be eaten with either hot or cold meat.

CABBAGE SAUCE, KRAUT FASHION.—Shred eighteen or twenty firm white-hearted cabbages. Fumigate a tight clean cask, or butter tub, by burning a handful of green wood in it. Rub the seams with a dough made of vinegar and flour, or leaven, and strew in a handful of salt, with a few caraway seeds; proceed thus with alternate layers of sliced cabbage, and salt and caraway seeds, till the vessel is filled, pressing each successive layer firmly down. Pour off part of the liquor which will collect on the top when the cabbage is pressed down. Cover, and place the vessel in a rather warm temperature, when the cabbage will quickly ferment. After fermenting for a fortnight, take off the scum; throw a piece of cloth over the cabbage, and put on the head of the cask; press this down on the cabbage with a heavy weight, at the same time keeping the vegetable always covered with the pickle liquor. This will keep in a cool dry cellar for years. When wanted for use, boil it in water for three or four hours; drain and stew in broth, or with a piece of coarse beef or a knuckle of ham. It is served with, or over dry hashes, beef-steak pie, goose, or duck.

CABBAGE, SAVORY.—Soak two good sized cabbages in scalding water and salt for twenty minutes, then take them out and dip them in cold water. Remove a portion of the centre of each cabbage, and fill it with chopped veal and fat bacon, seasoned with salt, pepper, and other spices, and make into a stuffing with eight yolks of eggs; then tie up the cabbages securely, so that they may retain the stuffing. Put at the bottom of a saucepan some slices of bacon, chopped carrots, onions, and sweet herbs; over which place the cabbages, moistening them from time to time with good stock. Stew the whole over a slow fire for an hour and a half, after which drain the cabbages, press

them a little, remove the strings, and serve up with brown gravy and any piquant sauce.

CABBAGE SOUP.—Cut a cabbage into pieces, and scald it half an hour, then take it out and put it into cold water for a few minutes; drain it, and squeeze it dry. Put some slices of bacon at the bottom of a stew-pan, lay the cabbage in it with some chopped carrots, celery, and onion, fill it up with stock, and let it stew for two hours. Put some toasted bread in sippets in the bottom, then the cabbage; and lastly, pour in the soup, after skimming it clean. Sausages may be added, if approved.

CABBAGE, STEWED.—Choose two large, firm cabbages, cut them into strips, and entirely remove the stalk; after well washing and draining, put them into a large pan of boiling water ready salted and skimmed, and when tender, which will be in from ten to fifteen minutes, pour them into a sieve or strainer, press the water thoroughly from them, and chop them slightly. Put two ounces of butter into a saucepan, and when it is dissolved, add the cabbage, with sufficient pepper and salt to season it; stir it over a clear fire until it appears tolerably dry; then shake lightly in a tablespoonful of flour, turn the whole well, and add by slow degrees a cup of thick cream: veal-gravy or good white sauce may be substituted for this, when preferred to it.

CABBAGE, TO PRESERVE.—Cut them so that they may have about two inches of stalk remaining below the leaves, scoop out the pith for some distance down, and suspend the cabbage by means of a cord in a perpendicular and inverted position. Fill up the hollow part of the stem daily with clean cold water. Cabbages may also be preserved by being buried in the ground during winter, and they will be firm and fresh in spring.

CABBAGE, USES AND PROPERTIES OF.—The *white* cabbage is generally dressed for food. The *red* cabbage is chiefly employed for pickling. The bluish juice extracted from the latter affords an excellent test for both acids and alkalies; for it turns red with the former, and green by the latter. From the extreme liability of this vegetable to pass into a state of putrefaction, it should always be dressed and eaten as soon after it is cut as possible. As an article of diet, cabbage is wholesome and nutritious, and supplies a valuable mixture with animal food. With some constitutions, however, particularly those who are dyspeptic, they are sometimes indigestible and productive of flatulency. Under any circumstances, they should only be eaten in a tender state, and well seasoned with pepper and salt. A few drops of vinegar also improve their flavour, and render them less likely to disagree with the stomach.

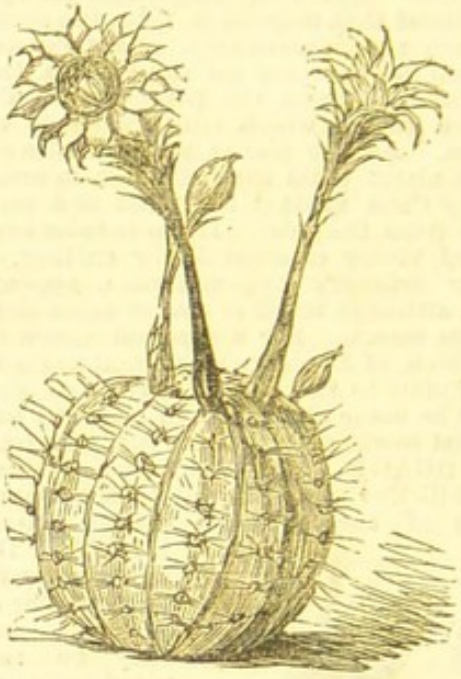
CABINET PUDDING.—Stone two dozen of large table raisins, butter the inside of a basin, and stick the raisins all over it, then fill up the basin with a thick custard made of three quarters of a pint of milk, four eggs, a teacupful of finely grated bread, two tablespoonfuls of sugar, and six chopped almonds. Boil for an hour and a half, and when turned out, the raisins will be outside.

☞ Raisins, 24; milk, ¾ pint; eggs, 4; bread grated, 1 teacupful; sugar, 2 tablespoonfuls; almonds, 6.

CABINET PUDDING, FRENCH.—Boil a pint of cream with half a lemon peel and a quarter of a pound of sugar; pour it hot over half a pound of newly baked Savoy biscuits, and when the cream is soaked up cover the dish. Add the yolks and whites of eight eggs well beaten separately. Bake in a moderate oven, and serve with sweet sauce; dates, currants, or raisins may be added, and also minced marrow, almonds, and grated citron.

☞ Cream, 1 pint; lemon peel, ½ of 1; sugar, ¼lb.; Savoy biscuits, ¼lb.; eggs, 8.

CACTUS.—A beautiful succulent perennial plant, indigenous to South America.



The soil best adapted for it is a light one mixed with brick refuse or cinders; and it grows most advantageously in pots. When received late in the year, it should not be potted till the following spring; and when raised from seed, it should be sown in silver sand, and the young plants when transplanted should not be watered for several days. It may also be propagated by cuttings. When each cutting has been laid by for a day or two till the cut end has dried, plant it in a pot of mould to strike. It produces blossoms the third year. The cactus will thrive very well in a warm room with a southern aspect, otherwise it requires a frame. It usually blooms in June, but bruising the end of each fleshy leaf will force it into flower at an earlier period.

CAFFEIN.—A bitter crystallizable substance contained in coffee, varying from half to three-quarters per cent. A similarity of composition has been established between caffein and taurine, one of the constituents of bile, and it is believed that the former assists in the production of the latter, and thus facilitates the process of respiration.

CAGE.—See AVIARY; also, SQUIRREL, WHITE MICE, &c.

CAKE.—Before proceeding to the actual operation of cake-making, the various materials which are to enter into their composition undergo a certain amount of preparation; for this purpose every article should be in readiness about an hour previously to its being wanted, and placed before the fire or upon a stove, that it may become gently heated; without these precautions it is impossible to produce a good cake. The *currants* should be carefully picked and washed, and dried in a cloth set before the fire. The *eggs* should be well beaten—the yolks and whites separately. A large tin basin answers best for this purpose, as the yolks or the butter can be heated in this, occasionally over the fire or in hot water, while the whisking is going on, which materially assists the process. It is a good test of beaten eggs, when they are sufficiently thick to carry the drop that falls from the whisk. If eggs are not properly managed at first, it is difficult to raise them to a cream afterwards. After being beaten they should always be strained. If the eggs are put into cold water some time before breaking them, they will beat to a finer froth and in a shorter time when cold. In summer, put them into water with a little ice. It is better to beat them in a cool place than a hot room. *Sugar* should be crushed with the rolling pin to a powder on a clean bread-board, and sifted through a fine hair sieve. *Flour* should be of good quality, dry, and sifted. *Butter* should be cut in small pieces, well washed, and drained before using it, this will conduce to the lightness of the cake; after it is melted it must be beaten up with a little warm milk. *Lemon peel* should be thinly pared and, with a little sugar, beaten in a mortar to a paste, then mixed with either wine, cream, or a little milk, so as to divide easily among the other ingredients. *Caraway seed*, *ginger*, and *spices* are added in the form of a fine powder, or made into an essence by dissolving them in spirits of wine. The *milk* and *water* is made lukewarm. When all these things are ready and have stood a sufficient time, they are put into buttered pans one after another in the proper order, and well beaten together; this should be done for at least half an hour, the lightness of the cake principally depending upon the ingredients being thoroughly intermingled. In *plum cakes*, as well as in some other varieties, a *little yeast* may be added after the butter, the mass allowed to rise a little, and then again well kneaded.

The *heat of the oven* is of great importance in baking cakes, especially those that are large. It should have rather a quick temperature, or the cake will not rise properly, and will turn out heavy. To ascertain when *baked sufficiently*, the oven door should be partly opened, and a bright knife plunged into the heart of the cake and quickly withdrawn. If done enough the knife will come out as clean as it went in; if not done enough some of the cake will be found adhering to the blade. In the latter case the cake must be immediately returned to the oven. The heat of the oven ought to be kept up equally throughout, by adding fresh fuel occasionally till the cake is drawn; but, above all, attention must be given till it is properly raised. Cakes should be kept in a dry place, wrapped up and set in a close pan, to prevent them from hardening. If made without yeast they will keep a very long time. They may be heated on the hob or in a slack oven, to refresh them, when to be used. In mixing cake, the hands should be brought into contact with the materials as little as possible, particularly in warm weather: it is preferable to use a wooden spatula or spoon. See ALMOND, APPLE, APRICOT, BANBURY, BATH, BEEF, BORDEAUX, BREAD, BRIDE, BRIOCHIC, BUTTERMILK, CARAWAY-SEED, CHEESE, CREAM, CURRANT, DUTCH, FRENCH, GERMAN, GINGERBREAD, HOMINY, HONEY, INDIAN, JERSEY, KENTISH, LANCASHIRE, LEMON, MADEIRA, MARLBOROUGH, MONTROSE, NAPLES, NAVARRE, NORFOLK, ORANGE-FLOWER, PLUM, PORTUGUESE, POUND, QUEEN, RASPBERRY, RATAFIA, RICE, ROCK, ROUT, RYE, SAFFRON, SAVOY, SCOTCH, SHREWSBURY, SODA, SPONGE, SUGAR, SUSSEX, TEA, TIPPERARY, TIPSY, TUNBRIDGE, VEAL, VENETIAN, VICTORIA, VIENNA, WASHINGTON, WIGG, WHORTLEBERRY, YORKSHIRE.

CAKE, DIETETIC PROPERTIES OF.—Cakes when plain are by no means injurious, but when rich they are indigestible, especially if eaten in any considerable quantity. As a general rule, cake should be given to young persons in small quantities; for although there may be no immediate symptoms of its unwholesomeness, the probability of indulgence in luxuries of this kind is that it will ultimately do great injury to the system, and it is certain that few stomachs will bear this kind of food long without injury to the digestion. Under any circumstances the cake given to children should be of the plainest kind.

CALCULATION, MENTAL.—Under this head are comprehended short practical methods of working arithmetical questions, partly or wholly by the mind. Mental calculation depends simply on an effort of memory, and inasmuch as this faculty is called into exercise to a certain extent, when figures are put down upon paper, so may it be employed in a degree sufficiently extended, to dispense with writing materials altogether. The principal recommendation in favour of this system is the immense amount of time and labour that it saves, for in cases where a number of calculations would demand hours to solve by the ordinary rule, they may, by this method, be determined in as many minutes. Another advantage in mental calculation is, that it does not admit of so many errors being committed, as when pen and paper are used. For in the latter process the mistakes that occur do not so much arise from the incorrect working of the question, as in writing down or carrying the wrong figures, and placing them in an irrelevant position. It is also a well known fact that there is no art in which practice so soon renders a person proficient; so much so, that it is possible for a person of average

intelligence, after a reasonable course of practice, to furnish correct answers to the most difficult arithmetical questions, almost simultaneously with their being propounded. The kind of questions most commonly occurring are computations of the aggregate value of a certain number of articles at a certain price, and the adding the whole together to find the sum total. One of the methods usually adopted is to calculate the value of any number of articles by the nearest round sum, and then to apply the difference. For instance, a person buys 30 yards of a material at 5½d., and the salesman tells him instantly that it comes to 13s. 9d. He knows it is so by saying internally to himself—30 yards at 6d. would be 15s.; then if I take 30 half-pence, that is 1s. 3d., from the 15s., I find that 13s. 9d. will remain. Another principle followed in this practical arithmetic is to work by aliquot parts. By remembering that a penny is the 12th of a shilling, or the 240th of a pound; that 3s. 4d. is the 6th of a pound, and so on, much of the ordinary figuring is saved. As an illustration, let it be required to find the value of 2780 articles at 3s. 4d. each. By the usual rules of arithmetic, this question would be performed by multiplying the 2780 by 40 (there being 40 pence in 3s. 4d.) and then dividing by 12 to bring into shillings, and by 20 to bring it into pounds. The practical method is much shorter; 3s. 4d. being the 6th of a pound, if 2780 be divided by 6 the amount is at once obtained thus—

6)2780

£463 6s. 8d.

The following rules and examples may be taken as the general groundwork for mental calculation, and will be found to provide for nearly every class of question that may arise:—*To find the value of* 12 *articles having the price of* 1 *given.* RULE—For every penny in the price, reckon a shilling; for every halfpenny, sixpence; and for every farthing, threepence. EXAMPLE—What will 12 yards of cloth cost at 2s. 4½d. per yard? 2s. 4½d. = 28½d., which, taken as shillings, give £1 8s. 6d.—*Ans.*

When the quantity is nearly a dozen, or some multiple of a dozen. RULE—Calculate the value of the nearest dozen or dozens, and add or subtract the value of the excess or deficiency. EXAMPLE—What is the value of 75 yards at 8¾d. per yard?

	£	s.	d.
6 doz. at 8¾d. =	2	12	6
3 extra =		2	2¼
	£2	14	8¼—*Ans.*

What is the price of 11 yards at 6¼d. per yard?

s.	d.	
6	3	price of 12
0	6¼	price of 1
5	8¾—*Ans.*	

When the quantity is not easily reducible to dozens, as in 57¾, 19½, *&c.* RULE—Take the articles as pence, and multiply by the money.

EXAMPLE—What is the value of 19½lbs. at 10d. per lb?

19½d. = 1 7½
10

16 3—*Ans.*

To find the value of any number of grosses, having the price of 1 *article given.* RULE—Find the value of 1 dozen, and take that amount as the value of another dozen. EXAMPLE—What is the value of 1 gross at 4½d. each? 1 doz. at 4½d. each = 4s. 6d., which, being taken again, give 54s. = £2 14s. 0d. the value of 1 gross.

To find the value of 20 *articles, having the price of* 1 *given.* RULE—For every shilling in the price reckon a pound, adding 10s. for 6d.; 5s. for 3d.; 1s. 8d. for 1d.; 10d. for ½d.; and 5d. for ¼d. EXAMPLE—What is the price of 20 yards of cloth at 2s. 4½d. per yard?

2s. 4½d. as pounds give £2 7s. 6d.

To calculate the cost of 240 *articles, having the price of* 1 *given.* RULE—For every penny in the price reckon a pound. EXAMPLE—What is the price of 240lbs. at 2s. 10½d. per lb?

2s. 10½d. = 34½d., which, taken as pounds, = £34 10s.

To find the cost of 100 *articles when the price of* 1 *is given.* RULE—If the price be an aliquot part of a penny, shilling, or pound, divide the quantity thereby, and the answer is shown in pence, shillings, or pounds. If the price be not an aliquot part, for every shilling in the price reckon £5, to which add 8s. 4d. multiplied by the pence for the answer; and for every farthing add 2s. 1d. EXAMPLE—What is the price of 100 yards at 3d. per yard?

100 pence = 8 4
3

£1 5 0—*Ans.*

To find the cost of 1000 *at any price per* 100. RULE—If the price be shillings, half the number of shillings per hundred will be the answer in pounds. If the price per hundred be pence, annex a cipher, and the price will be at once shown. A great assistance to mental calculation is the learning by heart the equivalent value of any number of farthings, pence, and shillings in pounds, Books: *Martin's Pounds, Shillings, and Pence; Ferguson's Complete System; Hopkins' Pupils' Manual; Harrison's New System; Arithmetic Made Easy; O'Gorman's Intuitive Calculator; Taylor's Buyers and Sellers' Calculator.*

CALEDONIAN CREAM.—Mince a tablespoonful of orange marmalade; add to it a quart of cream, a wineglassful of brandy, six ounces of pounded loaf sugar, and the juice of a lemon; whisk it for half an hour, and pour it into a shape with holes in it, or put it into a small hair sieve, with a piece of thin muslin laid into it. Serve in custard glasses.

☞ Orange marmalade, 1 tablespoonful; cream, 1 quart; sugar, 6 ozs.; lemon, juice of 1.

CALEDONIAN QUADRILLES. *First Figure.*—The first and opposite couples hands across, round the centre, and back to places—set and turn partners. Ladies' chain—half promenade. Half right and left, repeated by the side couples. *Second Figure.*—The first gentlemen advance and retire twice. All set at corners, each lady passing into the next lady's place on the right, promenade by all; repeated by the other couples. *Third Figure.*—The first lady and opposite gentleman advance and retire, bending to each other. First lady and opposite gentleman pass round each other to places. First couple cross over, having hold of hands, while the opposite couple cross on the outside of them—the same reversed. All set at corners, turn, and resume partners. All advance and retire twice, in a circle with hands joined—turn partners. *Fourth Figure.*—The first lady and opposite gentleman advance and stop; then their partners advance; turn partners to places. The four ladies move to right, each taking the next lady's place, and stop. The four gentlemen move to left, each taking the next gentleman's place, and stop. The ladies repeat the same to the right; then the gentlemen to the left. All join hands, and promenade round to places, and turn partners, repeated by the other couples. *Fifth Figure.*—The first couple promenade or waltz round inside the figure. The four ladies advance, join hands round, and retire—then the gentlemen perform the same—all set and turn partners. Chain figure of eight half round and set. All promenade to places and turn partners. All change sides, join right hands at corners and set—back again to places. Finish with grand promenade. — See GALOPADE, LANCERS, QUADRILLE, ETC.

CALF'S BRAINS, To DRESS.—Strip off the outer skin, and having well cleaned the brains, soak them for two hours in cold water; then blanch them in boiling water, in which has been put a handful of salt, and a tablespoonful of vinegar; take them out, and put them again in cold water; then stew them for an hour with a slice or two of streaked bacon, a bunch of sweet herbs, a shalot, a little parsley, two bay leaves, three cloves, and a gill of white wine; when done, drain the brains, and pour over them a sauce made from white wine, chopped mushrooms, and a bunch of fine herbs.

CALF'S CHITTERLINGS, To DRESS.—Clean some of the largest, and cut them into proper lengths for puddings; tying one of the ends securely. Cut fat bacon into the form of dice, and with it a calf's udder and the fat that comes off the chitterlings; put them into a stew-pan, with a seasoning of salt, pepper, and mace, two bay leaves, a shalot, and half a pint of milk, let this simmer; then take off the pan and thicken it with four or five yolks of eggs; and some bread-crumbs; fill the chitterlings with this mixture, which must be kept warm, and make the links like hog's puddings; before they are sent to table they must be boiled over a moderate fire; and left to cool in their own liquor.

CALF'S EARS, To DRESS.—Cut four calf's ears deep, and even at the bottom, so that they may stand; clean and wash them well, and boil them till tender in milk and water; fill them with forcemeat, tie them with thread, and stew them in a portion of the liquor they were boiled in; season with pepper, salt, mace, and a small onion minced. Before serving, thicken the sauce with the yolk of an egg beaten up in a little cream.

CALF'S FEET BROTH.—Take two calf's feet, two ounces of veal, two ounces of beef, a crust of bread, two or three blades of mace, half a nutmeg grated, and a little salt, boil in three quarts of water till it is reduced to three pints; strain and skim off the fat.

☞ Calf's feet, 2; veal, 2ozs.; beef, 2ozs.; bread, a crust; mace, 2 or 3 blades; nutmeg, ½ of 1; salt, sufficient; water, 3 quarts.

CALF'S FEET JELLY.—Boil two calf's feet with one ounce of isinglass, to bring it to a stiff jelly. Add two or three shreds of lemon-peel, a bunch of sweet herbs, thirty peppercorns, six cloves, a blade of mace, half a nutmeg, and half a saltspoonful of salt; when the jelly is done strain it; add to it lemon-juice and sherry to taste, boil it up, and pulp it through a sieve till fine.

☞ Calf's feet, 2; isinglass, 1oz.; lemon peel, 2 or 3 shreds; sweet herbs, 1 bunch; peppercorns, 30; cloves, 6; mace, 1 blade; nutmeg, ½ of 1; salt, ½ of 1 saltspoonful; lemon-juice and sherry to taste.

CALF'S FEET POTTED.—Boil the feet as for jelly, pick all the meat from the bones, add to it half a pint of gravy, and a seasoning of salt, pepper, nutmeg, garlic, shalot, and shred ham; simmer it for half an hour, dip a mould into water, put in a layer of meat, then some pickled beet-root, and some boiled minced parsley, upon this, a layer of meat, and so on, till the mould be filled; when cold, turn it out.

CALF'S FEET PUDDING.—Pick all the meat off three well-boiled calf's feet; chop it finely with half a pound of fresh beef suet; grate the crumb of a penny loaf; shred an ounce of orange-peel, and an ounce of citron; beat six eggs into a froth; mix their ingredients thoroughly together, and add a wineglassful of brandy, and half of a nutmeg grated; boil in a cloth for three hours. Serve with sweet sauce.

☞ Calf's feet, 3; beef suet, ½lb.; bread, 1 penny loaf; orange-peel, 1oz.; citron, 1oz.; eggs, 6; brandy, 1 wineglassful; nutmeg, ½ of 1.

CALF'S FEET STEWED.—Divide a calf's foot into four pieces, and put them to stew with half a pint of water; add a potato and onion sliced, and a seasoning of pepper and salt; let the whole simmer gently for two hours.

CALF'S FEET STOCK.—Scald, remove the hair from, and wash very clean four calf's feet; put them into a saucepan with two quarts of cold water, and when boiling point is reached let them simmer for six or seven hours; take out the feet, and strain the liquor into a deep dish. On the following day remove the fat from the surface, and give the liquor another boil, until it is reduced to a quart of stiff stock.

CALF'S HEAD BOILED.—Tie the head up in a cloth, and boil it for two hours and a half in plenty of water. Tie the brains up in a separate cloth, with a little parsley, and a leaf or two of sage. Boil them one hour; chop them small; warm them up in a saucepan, with a little butter, pepper, and salt; lay the tongue, which has been boiled at the same time, peeled, in the middle of a small dish; place the brains round it; serve with bacon or pickled pork in another dish.

CALF'S HEAD HASHED.—Cut the head, after it has been boiled, into slices, flour them, and put them into a stew-pan, with some of the liquor the head has been boiled in, two blades of mace, a saltspoonful of salt, four artichoke-bottoms parboiled, six oysters, an egg beat up in half a pint of milk, and a little flour to thicken; stir altogether till done, and serve in a hash-dish.

CALF'S HEAD PIE.—Well soak half a calf's head, and boil for half an hour, the tongue forty minutes; cut the meat into pieces, stew the bones with mace and pepper; place at the bottom of a pie dish some parsley, ham, tongue, and pieces of boiled egg; then put in some slices of the brains, a saltspoonful of salt, and a wineglassful of water; cover the whole with a crust. The liquor in which the bones are boiled should be reduced till it is strong and of a nice flavour; strain it, and while the pie is hot, pour as much of the liquor into the dish as it will hold. Let it stand for twelve hours, and when wanted, turn it out upside down, and serve with a garnish of parsley.

CALF'S HEAD ROASTED.—After having thoroughly washed a calf's head, dry it well in a cloth, and remove the bones. Make a seasoning of mace, pepper, salt, nutmeg, cloves, and grated bread; put this inside the head where the bones came from; roll it up, run two or three skewers through it, and tie it round with tape. Roast it for two hours, basting it with butter. Then prepare a sauce from a quart of stock gravy, a dozen oysters, and a thickening of flour. Cut the tape, remove the skewers, place the head on a dish, and pour the sauce over it; garnish with sliced lemon and fried parsley.

CALF'S HEAD SOUP.—Parboil a calf's head, take off the skin and cut it into pieces of about an inch and a half square; mince the fleshy part into smaller pieces; take out the black part of the eyes, and cut the remainder into rings; skin the tongue, and cut it into slices; turn the whole into three quarts of good stock, and season with cayenne pepper, two or three blades of mace, and salt; add the peel of half a lemon, half a pint of white wine, and a dozen forcemeat balls; stew the whole for an hour and a half. Rub down two tablespoonfuls of flour with a little cold water, mix it well with half a pint of the soup, and then stir it into the pot; add the juice of half a lemon, and the yolks of eight eggs, hard boiled; let it simmer for ten minutes, and serve in a tureen.

☞ Calf's head, 1; stock, 3 quarts; cayenne pepper and salt, sufficient; mace, 2 or 3 blades; lemon-peel, ½ of 1; white wine, ½ pint; flour, 2 tablespoonfuls; water, sufficient; lemon-juice, ½ of 1; eggs, 8 yolks.

CALF'S HEAD STEWED.—Remove the bones and eyes from a calf's head; make a forcemeat with one pound of beef suet, one pound of veal, two anchovies boned and cleaned, one nutmeg grated, two or three sprigs of thyme, the peel of one lemon, and the yolks of two eggs; mince all these together with some stale bread grated. With a portion of this forcemeat, stuff that part of the head where the bones have been taken out. Tie it up in a cloth; put it into three quarts of stock gravy. Keep it closely covered, and let it stew gently for two hours; while it is stewing, chop up the brains with some lemon-thyme, parsley, and grated nutmeg; mix with it the yolk of an egg, make the mixture into balls, and fry them in boiling fat. When the head is done, keep it hot before the fire; strain off the liquor in which the head has been stewed, add a gill of sherry, and warm it in a saucepan. Put the head into a hot dish, pour the sauce over it, and lay the forcemeat balls around.

CALF'S HEAD, TO CARVE.—Cut thin slices from the snout to the back of the head, passing the knife down to the bone. The part most esteemed is the throat sweetbread, which is situated at the thick part of the neck; this should be carved in slices, and helped with the other part. If the eye is wished for, force the point of the carving-knife down on one side to the bottom of the socket, and cut it clean out. The palate or roof of the mouth is also considered a great delicacy. The lean parts will be found on the lower jaw, and the fat about the ear.

CALF'S HEART BAKED.—Clean and stuff as directed for bullock's heart, then bake instead of roasting, and serve with a rich gravy.

CALF'S LIVER AND BACON.—Cut the liver into slices, and fry it in good beef dripping or butter; half fill the pan, and put the liver in when it boils. Lay toasted rashers of bacon round it, with some fried parsley; serve with a sauce made of veal-stock, ketchup, pepper, salt, butter, and a little flour to thicken; pour a portion over the liver, and send the remainder to table in a sauceboat.

CALF'S LIVER, BRAISED.—Lard a calf's liver with bacon, and let it be dressed in braise; when done, take it off and drain it; dish it up with a ragout of sweetbreads, veal, and mushrooms.

CALF'S LIVER SCOLLOPS.—Parboil a calf's liver, and cut it into slices. Stew some fine herbs, parsley, shalot, and onions; then add the calf's liver, and let it stew over a slow fire; when done on one side, turn, and season it with pepper and salt; then take out the liver, dredge in a little flour over the herbs, and add some more gravy; let this boil for ten minutes, then heat the liver in the sauce, and serve.

CALF'S TAILS, TO DRESS.—Clean, blanch, cut them at the joints, and brown them in butter or soft kidney fat. Drain, and stew them in good stock seasoned with parsley, onions, and a bay leaf. Add green peas to the stew, if in season, or some small mushrooms. Skim and serve the ragout.

CALICO.—The various kinds of calicoes made in this country are plain white calico, usually called cotton cloth. *Duck* is a stouter kind; and *double warp* is stouter still. *Calico shirting* or tunic cloth, is a very regular made calico, to imitate linen; a superior kind is called *patent twist:* the yarn is closer twisted than in common calico. *Sheeting calico* is a stout fabric, much used as a substitute for linen, and preferable for wear in cold weather. *Printed calicoes*, usually called *prints*, are manufactured in an infinity of patterns. Calicoes are frequently so full of dressing—a preparation of lime put in by the manufacturer — that it is difficult to ascertain the quality. It is best, therefore, to choose calico, if possible, free from dress, and to take particular note that the threads are straight and evenly wove.

CALICO FURNITURE, TO CLEAN.—When curtains or bed furniture of this description are to be taken down for the summer, shake off the loose dust, and brush them lightly with a small long-haired furniture brush. Wipe them afterwards with clean flannels, and rub them with dry bread. If properly done, they will look nearly as well as when new; and if the colour be not very light they will not require washing for years. Fold them up in large parcels, and put them by carefully. While the furniture remains up it should be preserved as much as possible from the sun and air, and as the dust collects it may be blown off with the bellows. Curtains may thus be kept clean, even to use with the linings after they have been washed and newly dipped.

CALICO FURNITURE, TO WASH.—Remove as much of the dirt as possible by brushing and shaking. On no account use a particle of soda, pearlash, or anything of the kind. Allow plenty of water and sufficient room in the tub. Use soft water, and let it be no hotter than would be pleasant for washing the hands. Rub with soap in the ordinary way. Mottled soap is preferable to yellow. If a general wash is about, the water in which flannels have been washed a second time does very well for the first washing of calico furniture, provided no soda or anything else of the kind has been used. When the first washing is completed, have ready another tub with water of the same degree of warmth, into which put each piece after wringing it out of the first liquor. Repeat the process of washing in the second water, carefully observing that every part is clean. On wringing out of the second liquor immediately plunge each piece into cold *spring* water for rinsing. On taking each piece out of the rinsing-water, immediately hang it out, and let it dry as quickly as possible. In hanging the articles up, put any thick double parts next the line, letting the thinner part hang down and blow about. When these are dry, the positions may be changed, and the thick parts hung downwards. If, through unfavourable weather, or any other circumstance, the drying cannot proceed at once, the things had better remain all night in the rinsing-water, rather than lie about in the damp. If they are half dry out of doors, when taken in for the night let them be hung or spread in a room, and again hung out early the next day. If there is no chance of favourable drying in the open air, they should be quickly dried before a fire or round a stove. If starching be required, a sufficient quantity of made starch may be stirred into the rinsing-water.

CALISTHENICS, the name given to that branch of education which relates to the healthy and graceful exercise of the body and its members. It is to be distinguished from gymnastics by the greater amount of intelligence with which it is combined. The relative position of the sciences of gymnastics and calisthenics may be illustrated thus: by means of the former a person may be brought to use a member of the body—say an arm, or a leg, or one hand - in a manner and with an effect wholly disproportioned to ordinary results; and the whole body may be rendered capable of extraordinary fatigues or labours. The latter sets out with the gradual cultivation of each member and faculty in its due proportion and with regard to its proper office; it is complete when all the elements of bodily strength and grace are immediately obedient to the will. This is the theory of calisthenics; practically it includes the apt and ready adoption of graceful attitudes and gestures at the command of a teacher. The importance of calisthenic training is now generally acknowledged, its fundamental maxims forming the basis of all true education. A good teacher of the system should unite temper with firmness. The lessons should be given regularly—at least once a day—at first during a short space and gradually lengthening; but should always cease with the slightest sign of fatigue in the pupils. A new position ought not to be gone into until the previous one has been successfully performed. The pupils should be made to realize the rule that action on their part is to follow immediately upon the word of command of the teacher. Of course the exercises may be extended to any length or may stop at a certain point, according to circumstances. It is usual to commence as follows:—

The teacher having taken a convenient place, gives the first word of command:—"A Line," when the pupils form a straight line before him. At the word "Prepare," each pupil, except the one to the extreme right, lays his left hand on his neighbour's right

shoulder, the fingers on the shoulder and the palm of the hand resting against it.

At the word of command "Take your distance," the line formed by the pupils extends from the left to the right, in the following manner: The first pupil at the teacher's right remains in his place, whilst every other pupil moves away from his neighbour at the left, until his own left arm and hand are freely stretched out, so that the points of his fingers only touch his neighbour's right shoulder. The movement

to attain this position soonest, is, by ordering the last pupil at the left of the teacher to move his own right, until he has taken his distance; then he must still move on with his neighbour at the left until he has also taken his distance, and the moving on to the left of the teacher must continue, until the second last of the line has taken his distance from the first pupil, who must not move. At the word of command "Close line," the expanded line formed by the pupils contracts from the right to the left into a straight line, the distance of each pupil from his neighbour remaining so as to admit freely the elbow of the drawn-in arm. The hands and arms are in the same positions as in "Prepare." The movement to effect the contraction of the line, begins with the second at the teacher's right and continues to the last at his left; each taking his distance by his neighbour to the left. These preparatory positions are followed by others, such as:—"Join heels;" "Hands down;" "Head up;" "Look before you;" "Shoulders back;" "Chest out;" "Feet outward," &c., &c. If care be taken to avoid every awkward or ungainly gesture, these preliminary poses may be made auxiliary to the teaching of deportment. The head is next placed in various positions; the face, eyes, shoulders, arms, hands, wrists, thumbs, fingers, the chest, legs, toes, feet, and the whole trunk are then taken in the order in which they are here enumerated; and the pupil is led by easy gradations from the simplest to the most compound movements. Book: *Calisthenics; or the Elements of Bodily Culture on Pestalozzian Principles, by Henry de Laspée.*—See DEPORTMENT, DRILLING, &c.

CALOMEL.—The submuriate or protochloride of mercury. Its constituents are—quicksilver, 79; oxygen, 9·5; muriatic acid, 11·5; or chlorine, 15·25; mercury, 84·75; in 100 parts of submuriate. There is, perhaps, no medicine that is so extensively employed as calomel; it is chiefly regarded, however, as an alterative, and in larger doses purgative. It is prescribed in doses of from half a grain up to a scruple; when given as a purgative, it is best combined with some other laxative, as extract of colocynth or rhubarb, and should be followed on the succeeding morning by some saline laxative combined with a bitter, as Epsom salts, and infusion of gentian or camomile. Calomel, like all other active preparations, particularly mercurials, is frequently abused, being prescribed by persons ignorant of its qualities; and when given in small doses, frequently repeated, it produces violent salivation. Care should be taken, therefore, not to repeat it too often, or quickly, as that effect might be produced.

CALUMBA.—The root of the *Cocculus*. It is dried in slices of a yellowish gray colour, and is generally worm-eaten. It has a bitter and slightly pungent taste, and is very mucilaginous. Calumba root is an excellent tonic medicine, especially in debility of the stomach and intestines: about ten grains of the powder may be taken twice or thrice a day.

CALVES, REARING OF.—Calves are either suckled by the mother or brought up on milk by hand. When they are suckled, if the byre be roomy enough, stalls are erected for them against the wall behind the cows, in which they are usually tied up: or they are put into large loose boxes at the ends of the byre; and unfastened at stated times to be suckled. When brought up by hand, they are put into a separate apartment from their mothers, and each confined in a crib, where the milk is given them. The crib for each calf should be four feet square and four feet in height. Abundance of light should be admitted, either by windows in the walls or sky-lights in the roof; thorough ventilation and a regular supply of fresh air should also be attended to. The crib should be fitted up with a manger to contain cut turnips or carrots, and a high rack for hay, the top of which should be as much elevated above the litter as to preclude the possibility of the calf getting its feet over it. The first food that the calf receives, consists of the milk obtained from the cow for the first four days after calving. It is then of the consistence of the yolk of an egg, and forms an appropriate food for the young calf. On giving it its first feed by the hand, in the crib, it may either be raised to its feet, or suffered to lie still. In whichever position the food is taken, it should be administered as follows:—Place the food in a small dish or pail; put the left arm round the neck of the calf, and support its lower jaw with the palm of the hand, keeping the mouth a little elevated and open, by introducing the thumb of the same hand into the side of its mouth. Then fill the hollow of the right hand with milk, and pour it into the calf's mouth, introducing a finger or two with it for the calf to suck while it is swallowing the liquid. Let it take handful after handful, in this manner, until it is satisfied. In this way it should be fed as often as the cow is milked, which is at first three times a day at least. After the first two or three days, the following method of feeding may be substituted: put a finger or two of the right hand into the calf's mouth, and holding the dish or pail of milk with the left

under its head, bring the head gradually down into the pail, and by aid of the fingers induce it to take a few draughts of the milk; while it is doing this, gently withdraw the fingers, holding the head down at the same time, taking care, however, not to dip its nostrils into the milk. In a few days the fingers will not be required, and in a few more the calf will drink of its own accord. For the first month the calf should have as much sweet milk warm from the cow as it can drink. It will be able to take three meals a day, and nearly three quarts at each meal. After the first month, to the end of the third, the quantity of milk is divided between two meals, morning and evening. In some cases half sweet and half-skimmed milk are given to the calves, and in others a substitute for milk is provided, by making gelatine of boiled linseed or sago. The linseed jelly is easily made by boiling good linseed in water, and while it is in a hot state to pour it into a vessel to cool, where it soon becomes a firm jelly; a portion of this is taken for every meal, and incorporated with a little warm milk. Sago may be prepared in the same manner; but a larger proportion of milk is required to be given with it. A third substance is made from pea-meal. For this purpose pour hot water upon the meal, and stir until the mixture is smooth; let it stand to cool, and when it becomes a jelly, mix a portion of it with as much new warm milk, into a consistence that the calf can easily drink. Suckling is a superior mode of rearing calves, provided the calf has free access to the cow which is supporting it; but if it be allowed to suckle at certain intervals only, bringing up by hand is preferable. As the season advances and the air becomes mild, and when the calves have attained the age of two months, they should have access to the open air during the day; and after some days endurance, may be sheltered at night under the shed instead of being again put in the crib. At this time sweet hay should be put in their racks, and the mangers in the shed provided with Swedish turnips. At three or four months old, according to the supply of milk, and the ready state of the grass to receive them, the calves should be weaned in the order of seniority, due regard being paid to their individual strength. When weaning is determined upon, the supply of milk should not be withdrawn all at once, but lessened daily, and given at longer intervals. At the same time that the supply of milk is diminished, the calf should be enticed to take other food, such as new bundles of the most cloverly portions of hay, fresh turnips or carrots sliced, a little pounded oil cake, and pure water at will. A small sheltered paddock, near the steading, is an excellent place for weaning calves, before turning them out into a pasture field. When calves are reared for *Veal*, they are suckled three or four times a day for the first three or four days, and then twice a day. They are placed in boarded boxes, four feet high, and just large enough inside to admit of the calf turning. The calf is fed thus for about ten weeks, when it will attain about 35lbs. per quarter, and is then considered prime veal. Calves are subject to many diseases. The *navel-ill* is a bleeding from the navel string; and in this case, a ligature should be passed close round it, a pledget of tow, well wetted with Friars' balsam, be placed over it, and changed every morning and night. Sometimes when there has been previous bleeding, inflammation suddenly appears about the navel between the third and tenth day. Fomentation should be applied, in order to disperse the tumour, and two or three doses of castor-oil given, made into an emulsion by mixing it with egg. If when the inflammation abates, extreme weakness should ensue, gentian and laudanum, with a small quantity of port wine, may be administered. For simple *costiveness*, the best remedy is the milk that comes from the cow for the first four days after calving. But in confirmed cases, doses of warm water, containing a solution of two or three ounces of Epsom salts, should be frequently administered. *Diarrhœa* is a disease to which calves are peculiarly liable. They are most subject to it when put out to grass at too early an age. The first application of a remedy should be a mild purgative, to remove, if possible, the irritation of the bowels; this should be followed by anodynes, astringents, and alkalies, with carminatives, the withdrawal of every sort of green food, and the administration of flour or pea-meal gruel. The following mixture is extremely serviceable in these cases, and it is one which may advantageously be kept always ready at hand:—

Prepared chalk . . .	1oz.
Winter's Bark, powdered.	1oz.
Laudanum	1oz.
Water	1 pint.

Give two or three tablespoonfuls, according to the age and condition of the animal, twice or thrice a day.

CAMBRIDGE DRINK.—This is merely a mixture of equal quantities of good ale and soda water; it is highly refreshing, and of a very agreeable flavour.

CAMBRIDGE MILK PUNCH.—To two quarts of new milk add the thinly pared rind of a lemon, and half a pound of loaf sugar; let it boil slowly, take out the lemon-peel, draw the liquor from the fire, and stir in quickly a couple of whisked eggs which have been mixed with half a pint of cold milk and strained through a sieve; after these are mixed the milk must not be suffered to boil. Add gradually a pint of rum, and a half pint of brandy; stir the punch to a froth, and serve it immediately in warm glasses.

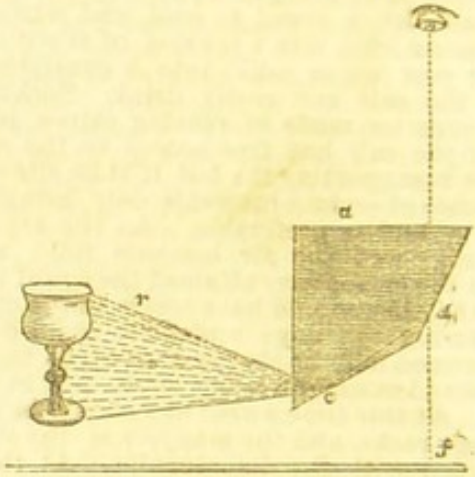
☞ New milk, 2 quarts; lemon peel, 1; eggs, 2; cold milk, ½ pint; rum, 1 pint; brandy, ½ pint.

CAMELIA. — A genus of ornamental green-house shrub, most of them of a hardy nature, and requiring little more care during winter than protection from frost. The camelia is propagated by cuttings, layers, and seeds for stocks; and with these the other sorts are generally marked, and sometimes budded or grafted. The cuttings are formed of ripened shoots of the pre-

ceding summer, which are taken off in August, cut smoothly across at a joint or bud, two or three of the lower leaves only taken off, and the cuttings then planted,

and made firm with a small dibble. They are put into pans of sand and loam, sand and peat, or sand alone. The pans are kept in a pit or cold frame without being covered with glasses, but shaded during powerful sunshine; and in the following spring, such as are struck will begin to push, when they must be placed in a gentle heat. In September or October following the rooted plants will be fit to pot off; and in the second or third spring they may be used as stocks. Although camelias grow pretty well in the open air, yet they flourish best in a house entirely devoted to them. Such a house should be rather lofty. The plants should be raised near to the glass by means of a stage, so contrived that it may be lowered in proportion as the plants increase in height. The temperature of the house should be between fifty and sixty degrees during the growing season; but when the flower-buds are formed it may be lower, till the beginning of winter, when the buds begin to swell. To grow the camelia to a high degree of perfection, considerable care is requisite. The roots are apt to get matted in the pot, and, by the space they occupy, so to compress the ball of mould as after a time to render it impervious to water. Hence frequent attention should be paid, to see that the water poured on the pots penetrates all the earth, and that it does not escape by the sides of the pot, moistening only the web of fibres. For the same reason, examining the roots, shifting, reducing, and replanting them, is necessary at least once a year. When the plants are in flower and in a growing state they require to be liberally watered. To form handsome plants, they should be trained with single stems to rods, and pruned, so as to make them throw outside branches from every part of the stem. In summer they may be set out of doors, in a sheltered but open situation, or the glass roof may be taken off. The hardier sorts, as the double-red, blush peony-flowered, &c., answer very well when planted in a bed or border of a conservatory, provided the roof or entire superstructure can be removed in summer, to admit the full influence of the temperature. Where this cannot be done, it is better grown in portable utensils, which admit of the roots being examined, and the plants being placed in the open air, or under shelter at pleasure. The single and double-red camelia will endure the open air when trained against a south wall.

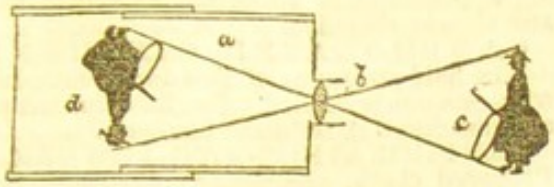
CAMERA LUCIDA.—An invention designed to facilitate the delineation of distant objects, by producing a reflected picture of them upon the paper, and also copying or reducing drawings. It consists of a solid prismatic piece of glass, mounted upon a brass frame. The prism has its angles so arranged that the rays from the object are reflected upon the paper, and is covered at top by a metallic eyepiece, the hole in which lies half over the edge of the prism, so as to afford a person looking through a view of the picture reflected through the glass, and a direct view of his pencil or tracing point. The operation of this instrument will be made more intelligible by the annexed figure. In this engraving *r* is the



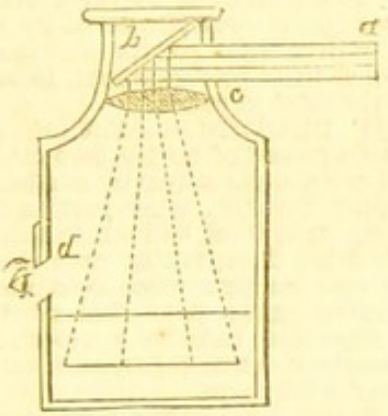
ray of light falling upon the quadrangular glass prism *a;* it is bent by two reflections *c* and *d*, and thrown upwards where it may be received by the eye, to which it will appear described on the table or sheet of paper *f* placed to receive it. The image may be magnified or lessened by placing a lens, so as either to intercept the rays before they strike the prism, or before they reach the eye. An ingenious person will be enabled readily to set up this instrument.

CAMERA OBSCURA.—An apparatus representing an artificial eye, in which the images of external objects, received through a double convex glass, are exhibited distinctly, and in their native colours, on a white ground, in the machine, in the focus of the glass. The simplest form of this instrument consists of a darkened chamber, into which no light is permitted to enter, except by a small hole in the window shutter. A picture of the objects opposite the hole will then be seen on the wall, or a white screen placed so as to receive the

light coming from the opening. A convex lens may be fixed in the hole of the shutter. Portable camera obscuras are constructed of various forms, but the design of them all is



to throw the images of external objects, as houses, trees, landscapes, &c., upon a plane or curved surface, for the purpose of drawing or amusement. The figure represents the revolving camera obscura. The rays coming from the object *a* are received on



a mirror *b*, placed in a square box, and inclined to the horizon at an angle of 45°. This mirror, with the box, is capable of being turned round, so that the opening in the side of the box where the rays enter may face the object or objects to be delineated. The rays which fall upon the mirror are reflected, and passing through the convex lens *c*, are conveyed to a focus, and form an image of the object *a*, which is seen through an opening in the sides of the chamber at *d*. The surface on which the image is seen may be white paper, and thus by introducing the hand the figures may be traced with the pencil; but the picture is most distinctly seen when the image is formed on the back of a silverized mirror.

CAMOMILE, CULTURE OF.—There are two varieties of camomile—the common single and the double flowering. They require a poor dry soil, to check their redundant growth, and to economize their medicinal qualities. They will grow in almost any situation, but the more open the better. They are generally propagated by parting the roots, and by offsets, which may be planted from the close of February until the end of May; the earlier, however, it is performed the better. Camomile may be also raised from seed, the proper time for sowing being the early spring months. It is advisable to raise fresh plants by this method, after the lapse of several years, during which time the old plant will have degenerated. Camomiles should be planted eighteen inches apart, and watered moderately if it be dry weather at the time of planting. If raised from seed they require no further attention than being kept free from weeds. When three or four inches high, they should be thinned out to about six inches apart; and thus remain until the following spring, then to be again thinned and finally transplanted. A very small bed will supply the largest family. In July the flowers are generally in perfection for gathering, the best indication being when the flowers are just opening. Particular care must be taken to dry the flowers before they are stored, otherwise they will not keep. If seed be required, some of the first opening flowers should be left ungathered and suffered to ripen till September, when the plant may be cut, and the seed dried, and rubbed out.

CAMOMILE, PROPERTIES AND USES OF.—Camomile flowers, either fresh or dried, are deservedly classed among the most useful, safe, and generally employed domestic remedies. These flowers possess a fragrant and grateful odour, and a warm bitter taste. They abound with a pungent aromatic oil, and act both as a tonic bitter, and a safe emetic; externally they are also employed as a mild discutient and emollient. The forms in which the flowers are used, are, in powder, either alone or combined with other bitters and aromatics in infusion, decoction, extract, and oil. The infusion is made by macerating half an ounce of the flowers, for half an hour in a pint of boiling water; this is what is usually denominated camomile tea: it may be taken alone, or in combination, in doses of a wineglassful twice or thrice a-day, in cases of *indigestion, hysteria, and nervous debility*. This, too, is the best form in which it can be employed as an *emetic*, a cupful being taken every few minutes until it operates. When used as a *tonic*, and with a view of *promoting digestion*, the same quantity of bruised ginger as of flowers, may be added to the boiling water and left to infuse for an hour. The *decoction used for fomentations and enemas*, is made by boiling an ounce of the flowers in water for fifteen or twenty minutes. The flowers have the faculty of retaining heat for a long time, they are therefore admirably adapted for outward application to parts that require soothing by the agency of warmth. The readiest mode of applying the flower

for this purpose is to have two flannel bags of the required size, in which the flowers are to be put, and heated either by having boiling water poured over them and suffered to remain covered for a few minutes, or by being held before the fire. The reason for having *two bags*, is, that one may be heated ready for application immediately the other is removed. The oil of camomile possesses the odour of the flower with a pungent taste, and its virtues are stimulant and antispasmodic. It is used alone in doses of from five to eight drops on a lump of sugar, in colics and cramps of the stomach, and as a corrective of purgative pills. In all cases of internal use, the single flowers are to be preferred to the double flowers. When applied as fomentation both are equally efficacious.

CAMPANULA.—A species of herbaceous plants, perennial, biennial, and annual. Many of the hardy perennials are dwarf plants, producing a profusion of flowers, more conspicuous than the leaves; which renders them particularly adapted for rock work, or growing in pots.—See BELL-FLOWER, CANTERBURY BELL, &c.

CAMPHINE.—The name given in commerce to rectified oil of turpentine when sold for burning in lamps, in order to disguise the inflammable character of the liquid. The term camphine is applied by chemists to a hypothetical substance, which is supposed to exist in the artificial camphor prepared by the action of hydrochloric acid on oil of turpentine.

CAMPHOR.—A concrete, volatile, and highly odorous substance, obtained by distillation from the *Laurus Camphora*, or camphor laurel, which is a native of China and Japan. It is also found in several other members of the vegetable kingdom, and exists in a greater or less quantity in the roots, branches, and leaves of many plants, particularly in the essential oils, as the oils of marjoram, sage, and lavender. What is called *crude* or *rough* camphor is in small gray pieces and crystals, it is purified by sublimation, and is found in commerce in circular cakes, weighing about 8lbs. each. Camphor is of use to put with clothes for the purpose of keeping away moths, &c., for its vapour, when diffused through the air, is poisonous to insects.

Camphor *used medicinally* acts as a sedative, narcotic, and anodyne. It is not a very reliable stimulant, as its effect is transitory. In moderate doses it acts as a diaphoretic and antispasmodic, increasing the heat of the body, allaying irritation and spasm. It is *used externally* as a liniment when dissolved in oil, alcohol, or acetic acid, being employed to allay rheumatic pains; it is also useful as an embrocation in sprains, bruises, and chilblains, and when combined with opium, it may be advantageously employed in flatulent colic and severe diarrhœa, being rubbed over the stomach. When reduced to a fine powder, by the addition of a little spirit of wine and friction, it is very useful as *a local stimulant to indolent ulcers*. When dissolved in oil of turpentine, and a few drops are placed in a hollow tooth and covered with jewellers' wool, or scraped lint, it gives almost instant *relief to toothache*.

CAMPHORATED LINIMENT.—Dissolve half an ounce of camphor in two ounces of olive oil. *Use*, as a stimulant, soothing application, in glandular enlargements, and rheumatic pains.

CAMPHORATED OINTMENT.—Mix half an ounce of powdered camphor with one ounce of lard. *Use*, for stimulating and accelerating indolent tumours.

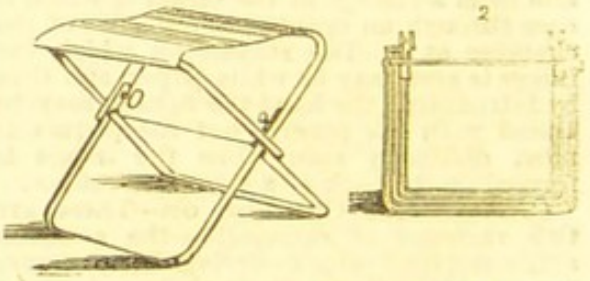
CAMPHORATED TOOTH-POWDER.—Prepared chalk, one pound; camphor, two drachms. The camphor must be finely powdered by moistening it with a little spirit of wine, and then intimately mixed with the chalk.

CAMPHOR BALLS, To PREVENT CHAPS.—Melt three drachms of spermaceti, four drachms of white wax, with one ounce of almond oil, and stir in three drachms of camphor (previously powdered by moistening it with a little spirits of wine); pour small quantities into gallipots, so as to turn out in the form of cakes.

CAMP PUDDINGS.—Put into a saucepan half a pound of butter, two tablespoonfuls of brown sugar, a quarter of a lemon peel, and a pint of water, when just on the point of boiling, take it off, and stir in half a pound of well-dried flour, taking care that it does not become lumpy; when cold, mix in six well-beaten eggs; pour this mixture into small cups and bake in a quick oven. A sauce made of wine, sugar, and butter, may be served with them.

☞ Butter, ½lb.; sugar, 2 tablespoonfuls; lemon peel, ¼ of 1; water, 1 pint; flour ½lb.; eggs, 6.

CAMP STOOL.—A kind of chair or stool chiefly designed for out of door use, and so contrived as to occupy a limited space and to be easily portable. These articles are made to fold up in a variety of convenient forms: one of the latest improvements is the double-action camp stool, which



has the peculiar advantage of folding into half its compass (fig. 2) without injury to its strength, easily carried in a small travelling-bag, and giving no increase to luggage.

CANARY.—This well-known cage-bird is never found in this country except in a state of confinement, and it breeds readily in a cage. The best canaries are of a bright yellow, with a few jet-black spots. Being originally from a warm climate, they are tender, and must be kept in rooms of an agreeable temperature; if exposed to cold either in rooms or the open air, they pine and die. In dry weather in summer, their cage should be hung in the open air, or at

least in the sunshine. If the apartment is kept too hot they will moult at an improper season, and this must be avoided. Only one male should be allowed in a cage. Females for breeding are the better for having a large cage, as it affords them space for exercise. As cleanliness is the most effectual preventative of many diseases to which this bird is subject, the bottom of the cage should be constructed to draw out, and should be cleansed and strewed with sand, at least once a week. The water in the cage must be changed once or even twice a day. The *best food* for the canary is German paste. Crushed hempseed may be given occasionally, but not too often. When the paste is given to them it should be made fresh every other day. When this is not convenient, a substitute may be found by taking the crumbs of stale white bread, and after drying it in an oven, pounding it in a mortar. The powder formed in this manner will keep good for several months, and a teaspoonful may be given every day to each bird, with as much cold or lukewarm milk as will form it into a stiff paste. In summer, green food may be given occasionally, such as lettuce-leaves, turnip-tops, groundsel, and watercress. Cake and other inappropriate delicacies which persons are in the habit of giving to canaries, are very injurious; a bird in full song may be at once rendered mute by partaking of improper food of this sort. The *breeding* of canaries requires additional accommodation. For this purpose a large cage must be provided, and the pair of birds put into it about the middle of April. The female ordinarily lays six eggs, one every day. Each egg should be taken away as laid, and an ivory one substituted; and when the laying is finished, all the six original eggs may be replaced. The period of incubation is thirteen days. When the young are hatched, finely minced egg and bread should be placed near the feeding-trough, to enable the parents to carry suitable food to their young. Canaries will mate with siskins, linnets, several of the finches, and other allied birds, producing, in many instances, highly-esteemed mules. The *diseases* to which canaries are most liable are the surfeit and the yellow scab. When a bird has *the surfeit*, if the feathers of the lower part of the body are blown aside, the body will be found to be swollen, and covered with little red veins. The best remedy is to mix oatmeal with the food for two or three days, and put a little saffron in the water. If the feathers on the head fall off, and any watery eruptions should appear, the head should be washed every day with spring water, in which a little salt has been dissolved, wiping the head afterwards quite dry, and anointing the skin with palm oil. The bird should be kept warm, and a little ground rice may be given to it, boiled in milk with stick-liquorice. The *yellow scab* which attacks the head and eyes of the canary, may be cured by anointing the part with fresh butter or lard. Canaries often sicken a great deal when they are moulting; at that season they should be kept warm, the cage being set in the sun when it shines powerfully, and the cage being shielded from cold winds. The food should be nourishing, such as Naples biscuits, bread, and the yolks of hard-boiled eggs chopped small. Canaries may be taught to sit upon the hand or the shoulder, and to fly about the room. The mode of teaching requires great patience: At first the cage door is left open when there is no one in the room, and a little hemp seed scattered on the table, the water being left in the cage. The bird will hop out and take the hemp seed, and then return to the cage to drink. The next day the same process is repeated with the owner of the bird in the room. The day following the master or mistress of the bird may be seated at the table; and, finally, the hemp seed may be laid upon the lap, and if the person is kept perfectly motionless, the bird will, in all probability, venture thus far. The same operation repeated for a few days will render the bird less timid, until at length he will perch upon any part of the body, even when in motion. Canaries may be also brought to fetch and carry, and to whistle tunes; the latter is taught by playing the tunes over repeatedly on a bird-organ or flute. They will also imitate the singing of the nightingale and other birds, if kept in the same room. Canaries may also be taught to sing at night by keeping the cages covered all day, but in this case the advantage gained is scarcely warranted by the punishment inflicted.

CANCER. — The parts most frequently attacked by this disease are the glands, breast, skin, tongue, eye, lips, nose, and the tonsils. Of all these, the breast of females and the lower lip in men, are the parts where the disease occurs most often. It is a disease purely of middle and advanced life, seldom occurring under 25 years of age, frequently from 30 to 40, and most frequently between 50 and 60. Age has a remarkable effect in determining the career of cancer, for the younger the patient is the more rapid is its progress; and a cancer in youth will often prove fatal in a few weeks, while in old age it will remain in a semi-passive state for many years.

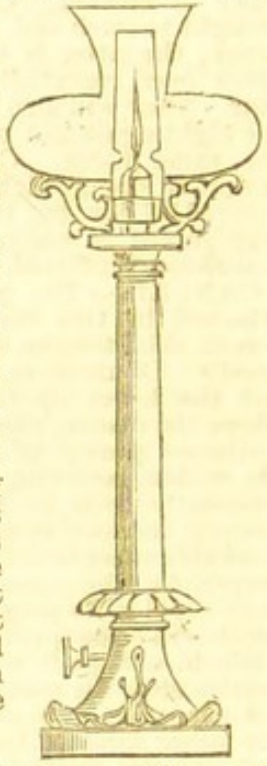
A cancerous tumour is distinguished from any other kind of tumour by its hardness and extreme apathy, neither enlarging nor diminishing under treatment as other diseased actions would do; and when situated in the breast, from the obstruction it causes to the absorbents, induces extreme emaciation, attended with cough and the usual symptoms of an impaired nutrition.

Treatment.—No disease has given rise to so many theories and schemes of treatment; and no drug has yet been discovered that can more than effect a temporary relief from pain in this truly formidable disease, for which there has been discovered but one, and not always permanent cure, and that is, excision by the knife. Smaller cancers, such as those of the lip and nose, may possibly be cured by means of powerful caustics, though the pain that such applications produce is much greater than that by by the operation of cutting out.

CANDIED FRUIT. — Fruit boiled in strong syrup and then dried. When finished in the syrup, put a layer of fruit into a new sieve, and dip it suddenly into hot water, to take off the syrup that hangs about it; then put it on a napkin before the fire to drain, and do some more in the sieve. Have ready sifted double-refined sugar, which strew over the fruit on all sides till quite white. Set it in a single layer on sieves in a lightly warm oven, and turn it two or three times. It must not be allowed to cool till dry.

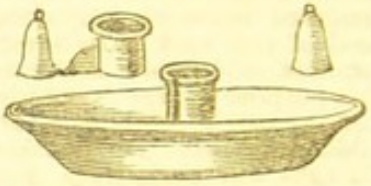
CANDIED PEEL.—Take out the pulps of lemons or oranges, soak the rinds six days in salt and water, and afterwards boil them till tender in spring water. Drain them on a sieve, make a thin syrup of loaf sugar and water, and boil the peels in it till the syrup begins to candy about them. Then take them out, grate fine sugar over them, drain them on a sieve, and dry them before the fire.

CANDLE LAMP. An improvement upon the ordinary lamp and candlestick. The candle is contained in a hollow stem with a spiral spring, which keeps it always at the same height; and the wick is elevated or depressed by means of a rack and pinion at the bottom, moved by a nut. By bringing the wick down enough the light can be extinguished. With candles of four or two to the pound, more light is given than by the same weight of candles in the common way. The smoke is also destroyed by the form of the glass cylinder put over the flame; by means of the contraction of the glass at the lower part the air is made to act upon the flame, and cause the combustion of what would otherwise escape as smoke.



CANDLES—From their portability and other qualities, supply a convenient and economical mode of obtaining artificial light for domestic purposes. They are made from various substances, wax, spermaceti, tallow, stearine, &c. Candles improve by keeping a few months. Those made in winter are the best. The most economical, as well as the most convenient plan, is to purchase them by the box, keeping them always in a cool dry place. If wax candles become discoloured or soiled, they may be restored by rubbing them over with a clean flannel slightly dipped in spirit of wine. Candles are sometimes difficult to light. They will ignite instantly, if, when preparing them for the evening, the tops are dipped in spirit of wine just before they are wanted. Light them always with a match, and do not hold them to the fire, as that will cause the tops to melt and drip. Always hold the match to the side of the wick, and not over the top. If the candles are too small for the candlesticks wrap a piece of white paper round the lower end, not allowing the paper to appear above the socket. Cut the wicks nearly close before lighting; for if the wick is too long, it will be very difficult to ignite, besides which it will cause the candle to gutter. Glass receivers for the droppings of candles are convenient and ornamental. The pieces of candle that are left each evening should be placed in a tin box kept for that purpose, and used for chamber lights.

CANDLESTICKS.—Of these there are a great variety of forms, according to the several uses for which they are required. An inconvenience often attends the candlesticks in common use, owing to the same socket not fitting any sized candle, and the consequence is that the candle must be made to fit by a troublesome and unsightly operation, which becomes more inconvenient when the candle burns down close to the socket, causing the paper to take fire, and the candle to be wasted. To remedy this, candlesticks are constructed with a cylindrical plate of metal within, fitted with a spring that gives way beneath the pressure of the candle, and keeps it fast without any papering. An improvement in the ordinary candlestick is shown in the engraving, the part in which the candle has been burnt is made to separate from the other portion of the candlestick, so that it can be more easily washed and cleaned without injury; the soldered parts of the candlestick, as usually made, being apt to loosen when immersed in hot water, or placed before the fire.



CANDLESTICKS, TO CLEAN.—Before commencing this operation, lay a sheet of brown paper upon the place where the candlesticks are cleaned, that the grease may not soil it. Scrape all the grease off the candlesticks on to the brown paper with a piece of firewood, and add the scrapings to the kitchen-stuff. Then set all the candlesticks upside down, in one of the deepest candlesticks, at a little distance from the fire, so that the grease may melt and drain into one; the candlesticks should then be wiped perfectly clean with a soft rag kept for the purpose. Polish with a little dry rotten-stone or whiting put on a leather.

CANDYTUFT.—The seeds of this flower should be sown in a rich light soil in autumn, where they are to remain, and be kept rather dry during winter. In spring they should be repeatedly thinned out and watered with liquid manure, taking care not to let the liquor touch the plants. When the plants are about to flower, those of the common kind should be six or eight inches apart every way: the rocket candytuft should be from one to two feet apart; thus treated, the flowers will be very large and fine. When it is not thought advisable to follow

these directions, the seeds may be sown very thin either in autumn or early in spring, alone, or mixed with mignonette; in both cases they will have a pretty appearance in the flower borders.

CANE SEATS, TO CLEAN.—Wash the underneath part with hot water and a sponge until the cane be well soaked; add soap if very dirty. Set them out in the open air to dry.

CANTERBURY BELL. — A beautiful flower with large drooping bells, particularly adapted for broad borders and shrubberies. The soil changes the colour of the flowers. In rich ground they are a deep and beautiful blue, in poor soils, they will become reddish white or very pale blue. It is propagated by seed and by parting the root. The seed should be sown in spring, and covered with a hand-glass: transplant the seedlings into a nursery bed to remain till the following spring; then plant out. Cut off the flowers as they decay, and others will arise; weaker, necessarily, but continuing later in flower.

CANTHARIDES.—A species of fly employed in medical practice, the effects of which are stimulant, diuretic, and blistering. It is sometimes used internally, but is chiefly applied as an external application in the form of blisters; it is also calculated to produce the growth of the hair. The extreme caution required in administering this agent renders it unfit for a domestic medicine.

CAOUTCHOUC. — A vegetable gum, which, when first taken from the tree in a liquid state, resembles in appearance and consistence buttermilk or cream; in this state it will keep for two or three months if not exposed to the air; at the end of which time it coagulates and becomes thick and solid. Though warmth softens solid caoutchouc a little, and heat causes it to melt, yet after being rendered liquid in this manner it does not return to its former condition, but remains always clammy. It may be dissolved, however, by boiling in spirits of turpentine, and putting in small pieces till it forms a solution. If half the quantity of drying linseed oil be added, and both boiled together for half an hour, a varnish will be made, impenetrable to water. By means of this substance the varnish for balloons is made. Caoutchouc tubes for various purposes are now made, which combine perfect flexibility with impermeability to air. It is also converted into stoppers for decanters and bottles.

CAPER.—A trailing shrub, producing a berry used for culinary purposes. It may be raised either from seed, cuttings, or pieces of the root. Propagation by cuttings is the preferable mode; they should be a foot long and planted in autumn. The autumn following, they will be fit to remove to a general plantation.

CAPER SAUCE.—Stir into a third of a pint of good melted butter, four dessertspoonfuls of capers, one spoonful minced, and the remainder divided in half; add a little of the vinegar in which they are preserved and dish the sauce as soon it boils. Keep it stirred after the berries are added. Nasturtiums may be substituted for capers, and prepared in the same manner.

CAPER SAUCE, FOR FISH.—To half a pint of rich melted butter add six tablespoonfuls of strong veal gravy or jelly, a tablespoonful of essence of anchovies, a dessertspoonful of chili vinegar, three tablespoonfuls of capers, and a wineglassful of mushroom ketchup.

☞ Melted butter, ½ pint; veal gravy or jelly, 6 tablespoonfuls; essence of anchovies, 1 tablespoonful; chili vinegar, 1 dessertspoonful; capers, 3 tablespoonfuls; mushroom ketchup, 1 wineglassful.

CAPERS, TO PRESERVE.—Put them as they are gathered into a jar with strong vinegar and salt, and repeat this daily until all are gathered, leaving two inches of vinegar over the capers, then tie the jar down with a skin; and if the capers are kept in a cool place, and a little fresh strong vinegar added from time to time they will remain good for four or five years.

CAPERS, USES AND PROPERTIES OF.—Capers are chiefly brought to England from Italy and the Mediterranean. They are principally used in sauces, and sometimes in medicine, having aperient properties. They provoke the appetite and fortify the stomach. They agree well with persons of a cold, phlegmatic temperament. If used immoderately, they heat and rarify the fluids too much.

CAPIAS—Is the name of the writ under the authority of which, the sheriff of a county, by his officer, arrests or takes in execution the person of a debtor, and keeps him at the debtors' prison for the county in which he is arrested until he has given bail or made deposit with him, or paid the debt, or by other lawful means shall be discharged from his custody. This is the highest execution which can be had against a defendant, and no other can be afterwards had against his lands or goods, unless he die in custody.

CAPILLAIRE.—Take fourteen pounds of good moist sugar, three of coarse sugar, and six eggs beaten well in with the shells, boil them together in three quarts of water and skim it carefully. Then add a quarter of a pint of orange-flower water, strain it off and put it into bottles. When cold, mix a spoonful or two of this syrup with any liquor that requires sweetening and flavouring.

CAPITAL LETTERS.—The proper use of capital letters is as follows:—1. The first word of every book, chapter, letter, note, or any other piece of writing. 2. The first word after a period, and, if the two sentences are totally independent, after a note of interrogation or exclamation. 3. The appellations of the Deity; as, God, Jehovah, Almighty, Supreme Being, Lord, Providence, Messiah, Holy Spirit. 4. Proper names of persons, places, streets, mountains, rivers, ships; as George, York, Cheapside, the Alps, the Thames, the Leviathan. 5. Adjectives derived from the proper names of places; as Grecian, Roman, English, French, Italian. 6. The first word of a quotation introduced after a colon, or when it is in a direct form;

as, "Always remember this ancient maxim: 'Know thyself.'" The first word of an example may also very properly begin with a capital. 7. Every substantive and principal word in the titles of books; as, Philp's History of Progress; the Useful Grammar. 8. The first word in every line of poetry. 9. The pronoun I and the interjection O are always written in capitals. Other words, besides the preceding, may be distinguished by capitals, when they are remarkably emphatic, or the principal subject of the composition.

CAPON ROASTED.—After having properly cleaned and trussed a capon, cover it with slices of fat bacon, envelope the whole in writing paper, and roast before a clear fire; baste first with a little butter, and afterwards with its own gravy; when done, serve with the gravy.

CAPON WITH RICE.—Having drawn and trussed it, cover it with slices of bacon, and put it into a stewpan with half a pound of rice, an onion stuck with cloves, a bay leaf, a bunch of sweet herbs, and some good gravy or stock; let it cook gently over a slow fire; serve it on a dish with the rice around the capon. See CHICKEN, FOWL, &c.

CAPSICUM, CULTURE OF.—Of this plant there are three species, the Guinea pepper, cherry pepper, and bell pepper; they are all raised from seed, the produce of two pods being a sufficient quantity of any one variety for an ordinary supply. Sow all the *annual* sorts at the end of March, or beginning or middle of April, in a moderate hotbed under a frame. Cover the seed a quarter of an inch deep. When the plants are two or three inches in growth, prick some into a new slender hotbed, to forward them for final transplanting; or in default of this, prick them into a bed of natural earth, at the beginning of May, if fine, settled, warm, weather; defend them at night, and in cold vicissitudes with a frame or awning of mats. Give water lightly at planting, and occasionally afterwards in moderate supplies, to assist their fresh rooting and subsequent growth. At the beginning of June, when the weather becomes settled, transplant them into the open garden, in beds of light, rich earth, from 12 to 18 inches apart, giving water. They will then advance freely, flower in July or August, and produce an abundance of pods until the end of September. To *save the seed* one or two of the largest pods should be left to ripen in autumn, and after being gathered hung up in a dry place; not taking out the seed till wanted for sowing in spring.

CAPSICUMS TO PICKLE.—Place the capsicums in a jar, boil a dessertspoonful of salt in a quart of vinegar, and pour it while hot upon the peppers; when cold place a plate on the jar, and tie over it bladder or leather. The pickle will be fit for use in a few weeks.

CAPTAINS' BISCUITS. — To seven pounds of fine flour add half a pound of butter and a quart of milk; mix them together well with the hands till they make a hard, even, tough dough, cut it into pieces and roll it out into a paste about half an inch thick, taking care that there is no dry flour on the board, as that would make them spotty; mould them into proper shapes and sizes, and dock them on both sides, or if on one side only, let the holes penetrate through. Bake in a quick oven for ten or twelve minutes. When they are of a light brown colour take them out. Put them in the drying stove till crisp. The drying stove should be somewhat open for the steam to escape, or they will become soft.

CARAGEEN MOSS.—An Irish moss frequently prescribed as a food by the medical faculty in pulmonary and some other diseases. Carageen moss possesses the advantage of being nutritious and at the same time soothing, and by thus strengthening the stomach, without overtaxing its powers, the patient is afforded a better chance of struggling with disease. The mode of preparing this food is exceedingly simple. If it be intended as a beverage, two ounces of it are to be well washed in cold water, and to be put over a slow fire in two quarts of cold water, to simmer until reduced to half the quantity; it is then to be strained. A large breakfast cupful of this should be taken every morning on rising from bed, without sugar or milk, unless the stomach of the patient can digest milk readily, in which case as much as one-third of boiled milk may be used; if it be found unpalatable without sugar, a very small quantity may be used; but it is preferable on the score of health to dispense with sugar altogether. In cases of indigestion, where the stomach at its first meal would be over excited by tea or coffee, and chocolate would be too heavy, a cup of this decoction is exceedingly beneficial, and the more so as the regular breakfast may be taken two or three hours afterwards without injury. A cup of the same beverage may be taken with advantage at night by dyspeptic patients, with the addition of a small portion of sherry or brandy, and as much sugar as will render it agreeable; but in pulmonary complaints it is advisable to make the moss almost an exclusive food, and for that purpose the preparation of it may be varied. It should be boiled down to one-third of the quantity of water into which it is put, and made into a jelly precisely in the same way as calf's foot jelly, with the addition of wine, sugar, and spice, as agreeable. Of this a portion may be taken at intervals during the day.

CARAMEL SUGAR.—Sugar when boiled undergoes certain changes according to the degree of boiling. The last stage is called caramel, and is chiefly employed in making confectionery. In boiling sugar the caramel degree may be ascertained thus:—Take out a little on the end of a piece of wood and dip it suddenly into very cold water, if the sugar snaps with a loud noise, and is of a bright yellow colour, it is done. The pan should then be immediately taken off the fire, and the bottom of it placed in a vessel of cold water, lest the heat which is in it continue so long as to make it darker than it ought to be.

CARAWAY SEED BISCUITS.—To two pounds of flour, add two ounces of butter rubbed in, half a pound of sugar, one ounce of caraway seeds, half an ounce of ground coriander seed, half a teaspoonful of carbonate of soda, and a tablespoonful of arrowroot; mix the whole well together and make a stiff paste with warm milk, cut into thin cakes, and prick over with a fork; bake slowly.

☞ Flour, 2lbs.; butter, 2ozs.; caraway seeds, 1oz.; coriander seed, ½oz.; carbonate of soda, ½ teaspoonful; arrowroot, 1 tablespoonful.

CARAWAY SEED CAKE.—Mix half a pound of sifted sugar with two pounds of flour in a large bowl or pan. Make a hole in the centre, and pour into it half a pint of lukewarm milk, and two tablespoonfuls of yeast. Draw a little of the surrounding flour into this, and, throwing a cloth over the vessel, set it in a warm place for an hour or two. Then add half a pound of melted butter, an ounce of caraway seed, a teaspoonful of allspice, ginger, and nutmeg, with milk sufficient to render the whole of a proper consistency. Mix it thoroughly, butter and paper a tin, and pour it in. Let it stand for half an hour at the mouth of the oven to rise; then bake it.

☞ Sugar, ½lb.; flour, 2lbs.; milk, ½ pint; yeast, 2 tablespoonfuls; butter melted, ½lb.; caraway seed, 1oz.; allspice, ginger, nutmeg, 1 teaspoonful mixed; milk, sufficient.

CARAWAY SEEDS are the fruit of an umbelliferous plant. They are a good carminative, may be given whole, or in the form of distilled water, a wineglassful at a time, or may be added to other medicines, such as senna.

CARBON.—This term is used in chemistry to signify the pure combustible base of the varieties of charcoal and other carbonaceous matters; the diamond is pure carbon in a crystalline form. Carbon is an elementary substance, which combines with oxygen in two proportions, forming carbonic acid and carbonic oxide.

CARBONIC ACID.—When carbon is ignited in oxygen gas, the oxygen disappears, and the product is a gas equally colourless, but of very different qualities; this is carbonic acid. The proportions of its component parts are, carbon 28, oxygen 72. Its specific gravity is much greater than atmospheric air, and it is unfit for respiration. It is this gas which is so peculiarly noxious to human life, it is generated by charcoal or wood burnt in ill-ventilated rooms, is extracted in profusion from fermented vegetable juices, and is likewise given off in large quantities by the burning of limestone. This gas is also produced during the respiration of animals. In medical practice carbonic acid is given in the form of effervescing drinks. Some mineral waters contain it naturally; soda water, and other similar fluids, are mechanically impregnated with the gas. In most cases, the action of carbonic acid, given in this way, has a beneficial effect upon the stomach.

CARBUNCLE, is a hard, circumscribed tumour of an inflammatory character, commencing in the cellular tissue and extending to the skin, and named, from the intense burning pain that attends its progress. A carbuncle in general appearance resembles a boil, but differs from it in not having a core, and terminating in a gangrenous slough, instead of as in the other, by suppuration.

In whatever part of the body a carbuncle is formed, it is first indicated by great redness and violent pain, excessive itching, and a burning heat.

Carbuncles are more frequent in advanced life than in the young; and are generally indications of a low, putrescent or typhoid state of the system; and not unfrequently the result of it. The extent of a carbuncle is as various as the part of the body in which it appears; it varies from the size of a walnut, to the dimensions of a plate; the parts of the body most subject to their attack are the neck, shoulder, arm-pit and hip.

Treatment.—The local remedies, from first to last, are warm emollient poultices; which are to be applied directly the tumour shows itself, and continued every three or four hours, till the healing process is fairly established. As soon as the swelling becomes conical, the top is to be freely opened. The best poultice to use is either bread and water or linseed meal. To meet the constitutional disturbance, a mild alterative pill of equal parts of extract of colocynth and henbane, should be given every second day, and when the febrile action is considerable, two tablespoonfuls of the following mixture every 4 or 6 hours.

Camphor water . . .	6 ounces.
Nitrate of potass . .	15 grains.
Tartar emetic	3 grains.
Syrup of saffron . . .	2 drachms.

In addition, when there is much pain and want of sleep, add 1 drachm of laudanum to the mixture; or give the patient 25 drops at bed time, while needed. When the abscess has been opened it will be necessary to administer tonics, with a liberal diet and wine. For this purpose the following mixture is to be taken in doses of two tablespoonfuls three times a day.

Quassia	½ a drachm.
Cardamom seeds .	2 drachms—bruised.
Boiling water . .	1 pint.

Infuse for six hours, strain, and add diluted nitric acid, 1 drachm.

If the debility is excessive it will be advisable to give stimulants, in which case the following mixture is to be employed. Take of

Camphor water	3 ounces.
Compound tincture of bark, ditto cinnamon, of each	½ ounce.
Spirits of sal volatile, ditto sulphuric ether, of each	1 drachm.

Give a tablespoonful every hour, increasing the interval, as the strength of the patient rallies; at the same time continue the wine, and if required, brandy.

CARDAMOMS.—Small brown seeds of an aromatic grateful taste and smell. They are

brought from the East Indies, and are carminative and stomachic. They are chiefly employed to communicate warmth to other medicines.

CARDOON.—A hardy perennial plant, resembling the artichoke, but much taller; it produces flowers like those of the artichoke in August and September. Though a perennial, it frequently dies in the winter, and therefore requires to be raised from seed almost every year; two ounces of seed are sufficient for a bed four feet by eight. The best soil is a light deep one, not too rich. The chief sowings are made in spring, for a small early crop in the last fortnight in March; and for the main crop in the first or second week of April; for a late full crop in the end of June. To sow for transplanting, choose a bed of light common earth moderately thin, and rake in the seed evenly. When the plants have risen, thin them to three or four inches distance, and when they have been raised about eight weeks transplant them; allotting an open compartment of well-dug ground. Plant them either in level ground or in drills, at four feet and a half distance. Give water at planting and occasionally until they take root. In their advancing growth, hoe and loosen the ground about the plants, cutting down all the weeds. When the crops are to remain, sow in small hollow patches, two or three seeds in each patch. When the plants have advanced in large growth in August, September, and October, proceed to land them up for blanching. First tie the leaves of each plant together with hay or straw bands, then digging and breaking the ground, earth up round each plant, a foot or more high. As the stems rise higher, tie and earth them up accordingly, giving them a final earthing in October. They may then be dug up as wanted throughout the winter.

CARDOONS, To Dress.—The chief use of cardoons is for stewing, and for soups and salads in autumn and winter. Sometimes, however, they are fried and buttered as follows: cut them about two inches long, string and tie them in bundles like asparagus, and cut them into dice; boil like peas; add butter, pepper and salt, and serve hot. Or, string them and cut them an inch long, and stew them in port wine, sufficient to cover them, until tender; season with pepper and salt, and thicken with floured butter; pour into a dish, add the juice of an orange, and scrape Cheshire cheese all over it; then brown in the oven, and serve hot.

CARD-PLAYING, Etiquette of.—When card-playing is proposed in private circles no one should refuse to take a hand, if requested, unless the objection is founded upon principle. When ladies are about to play they should be allowed to name the stake to be played for. It is customary for a gentleman to offer to deal or shuffle the cards for a lady, or to perform any other incidental office that involves trouble. One player should not endeavour to look over another's hand, nor should he jealously guard his cards as though he suspected his adversary. Money should be won and lost with equanimity; exuberance of joy at good fortune, and an ebullition of temper at bad fortune are equally vulgar and offensive. Husbands and wives should never appear anxious to become partners at the card table; for although no private signals and inuendoes may be intended or suspected, still it is but reasonable to suppose that they are better acquainted with each other's play than any casual partners could possibly be, and therefore an unfair advantage is established. In all disputes and differences of opinion persons should avoid being noisy and imperative; it is always easy to express one's self with firmness, and yet calmly, without any detriment to the cause espoused. Money lost at cards should be paid immediately, and as quietly and unostentatiously as possible. Persons should not be eager to continue playing against the general wish, even though they may have lost; the hope of retrieving ill-fortune may be delusive, and it is certainly more agreeable to all parties for the loser to submit with a good grace. All antics, grimaces, or covert words, which are supposed to convey some special intelligence to a partner or adversary, are tricks that no lady or gentleman will condescend to be guilty of. In dealing cards, the head and body should not be thrown into a variety of violent contortions, the only motion necessary may be confined to the arms and hands. While the cards are being dealt they should not be touched, such an interruption frequently causing a mis-deal. If a person has the misfortune to be associated with a bad player as a partner, such bad player should not be continually upbraided for his want of skill, but quietly reminded of any error committed, so that it may be avoided for the future. These and many other rules of conduct which good taste and common sense will dictate, are calculated to render card-playing an elegant and agreeable recreation.

CARDS OF ADDRESS.—With persons who mix in respectable society, cards of address are an absolute necessity. When one person calls upon another to whom he is wholly or partially unknown, the card of address is at once the medium of introduction. If a person makes a call upon another who is from home or engaged, the leaving a card is the best method of notifying the fact. In the higher walks of society card-leaving forms a regular portion of the day's occupations; the hours are usually from 1 to 5 in London, and from 12 to 4 in the country. The object of these visits is to make known the arrival of persons in the particular locality, and to remind each other, as it were, of their existence. When a person is about quitting his or her place of residence, it is usual to pay a farewell visit to friends and acquaintance; and if the lady of the house is absent, a card is left with P. P. C. (*pour prendre congé*) written in the corner. When the lady making a call is married to a gentleman so engaged as to preclude his calling with her, it is considered sufficient if she leave his card at the house for the master of it. In leaving cards upon a married couple, it is usual for the lady to leave only one card, and for a gentleman to leave two

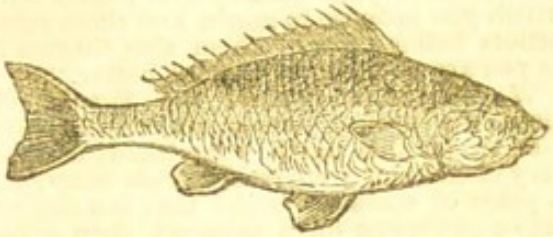
When there are daughters introduced into society, or female friends staying in the house, a card may be left for each of them, if they are personally known to the caller, or the end of that one designed for the mistress of the house may be turned up. A card is generally left on the day after a party, or within a day or two of that time. The turning up one corner of a card is usually understood to mean that the owner left it personally. Independently of the etiquette in connection with cards of address, it should be borne in mind that many emergencies may arise when they may be needed as vouchers to a certain extent of respectability. Every person removed above the lower ranks is supposed to have his card about him, failing which, any representation made would be regarded with a certain amount of suspicion and distrust.

CARMINATIVES.—Medicines that allay flatulency and spasmodic pains. See ANISEED, CARAWAY, CARDAMOMS, CASSIA, CINNAMON, GINGER, PEPPER, &c.

CARMINE.—A colouring substance, and the only one that can impart a life-like ruddiness to the portrait, or the bloom of nature to the artificial flower. The preparations of carmine are various; the French, which is as effective as any, is as follows:—Cochineal, one pound boiled for fifteen minutes in three gallons of water; one ounce of cream of tartar (in powder) is then added, the boiling further continued for ten minutes, an ounce and a half of alum thrown in, and another boil of two minutes given; the heat is then withdrawn, and in five or six minutes more the clean portion is decanted into porcelain vessels, which are set aside until the carmine falls down.

CARNATION.—Of this plant there are three varieties; the Flake, which is striped with broad bands of two colours; the Bizarre, striped with three colours; and the Picotee, bordered with a narrow margin, and dotted with small spots. Carnations should be grown in a rich loam, mixed with sand, or peat, and moderately manured. They grow best in pots, in which the earth should be pressed as firmly as possible. The plants raised from layers should be separated from the parent in August, and potted by threes in a five-inch pot. The pots should be well drained, and the plants frequently watered until the middle of October, when the watering should be gradually decreased. The layers, when first potted, may be kept in the open air, shading them from the sun for the first few days, and protecting them with hand-glasses at night if frost or biting winds are apprehended. In the middle of November remove the plants to a greenhouse or shed, and keep them entirely in the shade and protected from the frost. Let them remain here till March or April, according to the season; and after exposing them for a few days to the open air, re-pot them. In May they may be either planted out in beds, or removed to larger pots for flowering, which they will do in June and July. When the buds have formed, water the plants well morning and evening. The principal points of beauty in a carnation are, that the stem should be strong and erect, the calyx well and regularly opened, the flower round, with the petals uniformly disposed, and the stripes broadest at the margin of each petal. As the calyx of the carnation is apt to burst on one side before it opens on the other, thus spoiling the shape of the flower, many cultivators gently divide the sepals with a pin as soon as the buds are fully swelled; others slip a round piece of cardboard, with a hole in the centre, over the bud while it is yet quite small, and thrust it up over the calyx, so as to force it open first at the top. This piece of pasteboard is kept on after the expansion of the flower, and serves to retain the petals in their proper position. June and July are the months for making layers. For this purpose the outer, strongest, and lowest shoots of the plant should be preferred; and each shoot be cut about half through, in a slanting direction, at a joint. Make a furrow in the ground an inch or two deep, and bury the cut stem in it, fasten it down with a piece of hooked twig so as to completely cover the wounded part, the end of the layer standing upright an inch or two out of the earth. Water the layer moderately, and keep it shaded.

CARP is of three kinds, the river carp, the pond carp, and the crucian or Prussian carp as it is sometimes called; the first-named is the most prized by epicures, and in this country grows to the weigh of from



six to eight or nine pounds; the second obtains the larger growth of twelve or even fourteen pounds; but in Holland, Germany, and other parts of the world, they will even attain to the weight of thirty or forty pounds; the crucian or Prussian carp, also found in ponds, rarely if ever attains one pound in weight. The carp is of a golden, yellowish olive colour, with large scales, a single but wide dorsal fin, a small mouth without teeth, but (like the chub and barbel) with a bony apparatus in the throat performing some of their functions. The haunts of the river carp are, in the winter months, the broadest and most quiet parts of the river; but in summer they lie in deep holes, nooks, and reaches, near some scour, and under roots of trees, hollow banks, amongst or near beds of weeds, flags, &c. Carp deposit their spawn in May, in shallow retired water amongst weeds. There is, however, some difference of opinion as to the breeding time of the carp. The best months for fishing for carp are February, March, and April, when the weather is fine and open, and again in July, August, and September; although in the latter month, if the weather becomes sharp and cold, the angler will obtain but little success.

The tackle suitable for fishing for carp is the same as that used for bream fishing, except that the running-line and the gut should be somewhat finer, and the gut stained as near to the colour of the water to be fished in as possible; the hook should be, for worms, No. 7 or 8; and for paste, No. 9, with a short shank. The baits for carp are—malt, wheat, pastes, greaves, bullock's pith, gentles, caddis, wasp grubs, lob and red worms. (See BAIT.) The ground baits are the same as the baits.

Izaak Walton writes, "The carp bites either at worms or at paste; and of worms I think the bluish, marsh, or meadow worm is best; but possibly another worm not too big may do as well, and so may a green gentle; and as for pastes there are almost as many sorts as there are medicines for the toothache, but doubtless sweet pastes are best; I mean pastes made with honey or with sugar, which, that you may the better beguile this crafty fish, should be thrown in the pond or place in which you fish for him, some hours, or longer, before you undertake your trial of skill with the angle rod; and doubtless, if it be thrown into the water a day or two before, at several times, and in small pellets, you are the likelier to obtain your desired sport. Or in a large pond, to draw them to a certain place, either grains or blood mixed with cow dung or with bran, or any garbage, as chickens' guts, or the like (worms would be much better); and then some of your small sweet pellets with which you propose to angle, and these small pellets being a few of them also thrown in as you are angling, will be the better."

W. Wright, in *Fishers and Fishing*, advises the use of honey paste, and says, "To make this paste, your hands must be very clean, and well rinsed from soap; dip a piece of wheaten bread that is a day old into clean water for a moment, then press, and squeeze, and work it up into a stiff paste with honey; ascertain the depth of the spot where you propose to angle the day before, and make a mark so that you may know whether the water have risen or fallen; ground-bait the place with bread made into a paste, mixed with a little barley meal and a small quantity of honey, the night or even two nights before you angle; your hook must be short in the shank, and the hook should be hidden by the paste; the whole bait should be about the size of a marrow-fat pea. When fishing throw in, one at a time, very quietly, little pellets of plain paste, about the size of peas." See also *Bailey's Instructor* and *Ephemera's Walton and Cotton*.

CARP BROILED, WITH CAPER SAUCE.—Scale a large carp, crimp it, and put it in a dish with chopped parsley, salt, pepper, and oil; when it has lain in this for about an hour, broil it over a brisk fire; serve it up covered with caper sauce.

CARP FRIED.—Divide a carp by the back, flour it, and fry it quickly in good lard or oil.

CARP SOUSED.—Put the carp into a fish kettle, and pour over it boiling vinegar sufficient to cover it; let the fish boil for an hour or more, according to the size; then serve upon a dish covered with a cloth and garnished with parsley, without any of the liquid. Carp dressed in this way is generally eaten cold.

CARP STEWED.—Scale and clean the fish with exceeding care, lay it into a stew-pan, and cover it with cold broth of beef or veal. Add one small onion stuck with a few cloves, a bunch of savoury herbs, three or four slices of carrot, and a little salt; stew the carp as gently as possible for nearly an hour. Have ready some good brown gravy, mixed with two glassfuls of port wine, add a squeeze of lemon juice; dish the carp very carefully, pour the sauce over, and serve it immediately.

CARPETS, CHOICE OF.—Carpets are of various kinds, both as regards fabric and manufacture. *Brussels carpets* are composed of a warp and woof of strong linen thread, with worsted threads interwoven. When well made they are very durable. They, however, vary much in quality; the best quality ought to weigh 1¾lb. per yard, but latterly they seldom exceed 1¼lb. per yard. *Wilton carpets* are those having a long pile resembling plush or velvet, and they have the advantage of being executed in very elegant designs. *Axminster carpets* have a warp and shoot of strong linen with numerous small tufts of differently coloured worsted introduced. *Kidderminster carpets* are composed of two woollen webs which intersect each other in such a manner as to produce definite figures. They are made in various qualities ranging from 1s. 6d. to 3s. 6d. per yard. *Dutch carpet* is a very strong and cheap material. It is a yard wide, about 3s. per yard, all wool, and superior to Kidderminster. *Venetian carpets* are of the simplest kind, and low in price; they are chiefly used for bedrooms and staircases. In *choosing a carpet*, quality is not the only point to be studied, particular regard should be paid to the suitability of the carpet for the room where it is to be placed, and also to the harmony of contrast which should be established between it and the hangings and furniture of the apartment. For a carpet to produce the best possible effect, it is not enough that it be made in the best manner, that the pattern is excellent, and the distribution of the colours leave nothing to be desired; it is also requisite that the size should be proportionate to the nature of the ornaments, and that the colours of the carpet are in keeping with those of the objects most conspicuous in the apartment. Thus, the colours of the carpet should neither be so brilliant as to destroy the effect of those of the paper and the curtains, nor the contrary. A very brilliant colour, such as crimson, in the carpet may be associated with drab or other subdued colour in the curtains and paper; but at the same time, a portion of the brilliant colour should be introduced into both, as bordering or ornament. Thus a room, with a bright blue or crimson carpet, may have white, yellow, or drab curtains and paper; but blue or crimson bordering or ornaments should be introduced in them to harmonize the whole.

It would be bad taste, in the case of the blue carpet, to have green curtains or paper, or with the crimson to have scarlet, because these colours do not accord. A green carpet may have black, red, or white curtains with green borders and ornaments. A yellow carpet may have black curtains and a dark gray paper, with yellow borders and ornaments. These and other contrasts depend upon the simplest rules of art, and the eye soon informs the sense of that which offends and pleases. In addition to these considerations, the following general suggestions will be found worth attending to in selecting a carpet. Light coloured carpets are more serviceable than dark ones, because, in wearing, the gradual disappearance of the dyes from the threads is less discernible. Bright coloured carpets are most suitable for spacious apartments, because the amount of space covered tends to soften and harmonize tints, which in a small room would be too glaring. The brightest colours of a carpet should always be in the centre, so that the gradual softening off towards the borders of the tints may afford a better ground for the furniture. A sombre coloured carpet, such as one of green and black, is best suited for a room very full of furniture; for the combination mentioned controls the brilliancy of the furniture, and gives solidity and tone to the whole. Carpets of brilliant hues are best adapted for furniture made of yellow woods, such as maple, satin wood, or light oak, whilst for mahogany furniture, sombre coloured carpets are most suitable; a harmony of contrast being thus established in both instances. For drawing-rooms the best kind of carpet, generally speaking, is one of an elegant pattern and with a preponderance of light colours. For diningrooms and parlours a somewhat massive pattern and rich warm tint are to be preferred. For bedrooms the simpler the design the better, while at the same time, the colours should be cheerful without being obtrusive.

CARPETS, LAYING DOWN OF.—The most complete way of fitting a carpet to a room is to adjust it to all the recesses and angles; but this is the most expensive method and also entails waste. When economy is an object, the carpet may be square or oblong according to the shape of the room, but not fitted into the recesses; these must be covered in the best manner possible by furniture, oil-cloth, baize, drugget, &c.; or if left bare, painted in oil. A still more economical mode consists in having a border only of carpet round the room, with the middle part covered with a suitable drugget, which will look as though there was a large carpet underneath which the drugget covered. In bedrooms especially, this has the advantage of allowing the carpets to be easily taken up, to be shaken and cleaned. Carpets, also, that are not fitted to rooms, can have the wrong side uppermost for a time, to save the other side, which cannot well be done when the carpet is fitted in; they may likewise be reversed in their position, so as to equalize their wear. Thus a square carpet may have its position changed eight times, and an oblong one four times; whereas a fitted carpet cannot be altered in its position except the apartment have no recesses, which is very seldom the case. When it is decided upon having a carpet fitted to a room, an upholsterer's services should be engaged in preference to an inexperienced person, as there are few unconnected with the trade who can lay down a carpet without wasting the material, or causing it to fit loosely and unevenly.

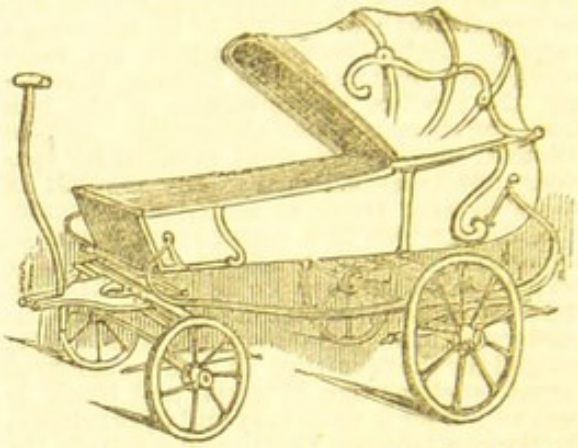
CARPETS, PRESERVATION OF.—In this, much depends upon the manner in which they are kept clean; if the dust is suffered to accumulate for too great a length of time, they require to be beaten with extra force, which has the effect of breaking the threads. It is important to the preservation of carpets that the boards are well laid; if there exist large crevices between them, the portion of the carpet that covers the crevices will be worn out in a disproportionately short space of time, and the whole of the carpet thus spoilt. Where this defect in the boards exists, and in fact in all cases, sheets of very thick brown paper should be pasted over the floor previously to laying down the carpet, which will be found an excellent preservative. As soon as a carpet begins to wear, its position should be altered, so that all parts may wear alike. It will also be found better both on the score of cleanliness and economy to have a strip of drugget or crumb-cloth to cover any portion of the carpet where there is the greatest traffic, such as from the door to the fireplace. Scouring carpets, except in extreme cases, is not to be recommended, as the process is liable to injure their texture. Generally speaking, it will be sufficient to beat them perfectly free from dust, and to sweep them afterwards with a carpet-broom as they lie upon the grass. In the meantime the floor should be thoroughly scrubbed and dried, or where it is covered with paper as previously recommended, the surface should be carefully cleaned with a damp flannel, and rubbed with a dry cloth. If, however, the carpet be very much soiled, take a pailful of clean cold water, and put into it three gills of ox-gall. Have ready another pail containing clean cold water only. Rub with a soft scrubbing brush some of the ox-gall water on the carpet until a lather is produced. When a conveniently sized portion is done, wash the lather off with a linen cloth dipped in the clean water. Let this water be changed frequently. When all the lather has disappeared, rub the part with a clean dry cloth. When the whole is finished, dry the carpet at an open window. This mode of cleaning will not only remove stains and dirt, but will also refreshen the colours. Kidderminster carpets will scarcely bear the above treatment without being rendered so soft as speedily to become dirty again. This may, in some measure, be prevented by brushing the carpet over with a hot weak solution of size in water, to which a little alum has been added. *Spots of grease* in carpeting should be covered with curd soap dissolved in boiling water, and rubbed with a brush until the stains are

removed, and the parts washed with warm water. The addition of a little gall to the soap renders it more efficacious. To *revive the colour* of Turkey carpet beat it well with a stick till all the dust is out, then with the juice of lemon or sorrel take out any spots of ink there may be. Wash the carpet in cold water, and afterwards shake it well. When it is perfectly dry, rub it all over with the crumb of a hot wheaten loaf; and if the weather be very fine, let the carpet remain in the open air for a night or two. To *beat a carpet* properly, hang it upon a stout line, and let three or four persons, each having a pliable stick, beat it with moderate force on the *wrong side:* the sticks used should have cloth tied at the ends in a knot, in order to prevent the carpet from being torn, or the seams split by the sharp end of the stick. When thoroughly beaten on the wrong side, the carpet should be turned and beaten on the right side.

CARRIAGE, BUYING AND HIRING.—The most satisfactory mode of obtaining a carriage is to have it built to order, as then it may be made to suit exactly the convenience and taste of those who require it. But it is very common for carriage-builders to let carriages upon a lease for a term of years, generally four or five, stipulating to keep it in repair all the time, accidents excepted: the hirer has thus the same advantage as with a ready furnished house. When the term expires the carriage reverts to the builder. A third method is to purchase a carriage ready built; in this manner one may generally be procured at a cheaper rate; but great judgment is necessary in the purchase. Carriages may likewise be hired for various limited periods, as by the hour, day, week, month, or year.

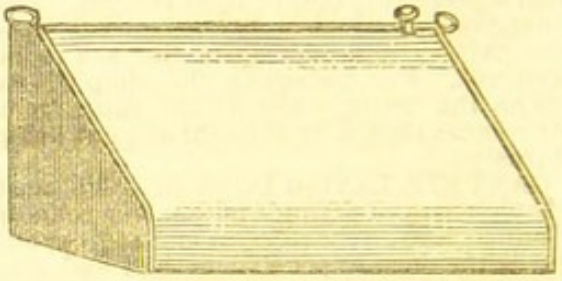
CARRIAGE, PRESERVATION OF.—The coach-house should have a boarded floor, laid hollow for the circulation of air beneath, and be extremely dry and well ventilated. It should not adjoin the stables, as the gases disengaged by the dungheaps, cesspools, or drains, have a very injurious effect upon the paint and varnish of the carriage. The carriage should not be exposed either to a too damp, or too dry situation, as from these causes the woodwork is liable to shrink or swell. The wheels require to be frequently wetted to prevent shrinking, particularly in summer. The plated and brass work should be rubbed every day to prevent their tarnishing. The leathern parts that are not japanned or blacked, require frequent oiling to preserve their tenacity. The cloths and linings of the inside should be kept free from damp, and protected from the sun; but above all, it is necessary, by frequent brushings and beatings, to keep away the moths. After the carriage has been out, it should be carefully washed and dried; cleaned, if possible, before the dirt hardens on, and well sluiced with plenty of water, to prevent any sand remaining that might scratch the varnish in rubbing. Stains on the varnish may be removed by rubbing with a piece of baize or leather dipped in sweet oil; drying the place off with flour; or if the stains resist this, a little rotten-stone or tripoli may be mixed with the oil. Rattling is a sure sign that something has come loose and requires to be tightened; a piece of leather properly adjusted will sometimes stop this. The shrill creaking noise that carriages often make, may be silenced by the application of a little oil.

CARRIAGES FOR INVALIDS.—These are made on a variety of principles, to adapt themselves to particular complaints and deformities. The carriage shown in the engraving is calculated for invalids generally,



who can take the air in a recumbent position only. This carriage may be made to partake of the character of a bed or couch, and being drawn by the hand, the invalid is subjected to as little motion as is possible. See BATH CHAIR, INVALID CHAIR, &c.

CARRIAGE WARMER.—A vessel made of tin, with an aperture in one corner fitting with a screw, into which the hot water is poured. The carriage warmer is placed at



the bottom of the carriage in front in such a position that the feet may rest upon it comfortably, and an agreeable warmth is thus imparted. The heat will be retained for three or four hours, and in long journeys a fresh supply of hot water may be easily obtained from houses on the road.

CARRIER.—A common carrier is one who undertakes for hire to transport from place to place the goods of such as choose to employ him. A railway company is a common carrier. He is bound to carry the goods of all persons offering to pay his hire, to take proper care of them in their passage, and to make a safe and right delivery of them. He is answerable for every loss or damage happening to them while in his custody, no matter by what cause occasioned, unless it were by the act of God, such as a tempest. In other cases, even his entire faultlessness does not excuse him, thus he is liable for damage done by accidental fire

or by a robbery; his liability continues up to the time of the goods being delivered. No common carrier by land for hire, is liable for the loss of, or injury to, gold or silver, precious stones, jewellery, watches, clocks, time-pieces, trinkets, bills, bank-notes, orders, notes or securities for payment of money, stamps, maps, writings, title deeds, paintings, engravings, pictures, gold or silver plate, or plated articles, glass, china, silks, manufactured or unmanufactured, wrought up or not wrought up with other materials, furs or lace, contained in any parcel, when the value exceeds the sum of £10, unless at the time of the delivery at the booking-office, the value and nature of the article shall have been declared, and the increased charges for insurance paid or agreed to be paid; and persons sending such parcels, are bound by a notice to that effect being affixed in the booking-office. Carriers must give a receipt for such a parcel, if required, acknowledging the same to have been insured, and such receipt is not liable to any stamp duty. Parties entitled to damages for parcels lost or damaged, may recover the extra charge for insurance. A carrier is not concluded as to the value of any parcel by the value declared; the person to whom the goods are sent is the proper person to sue the carrier in case of loss or damage.

CARROT, CULTURE OF.—Of this vegetable there are many varieties; but the two most commonly cultivated, are the *early horn* and the *long orange*. Select a piece of ground of a dry, deep, sandy soil, previously prepared and enriched by trenching, till October, the surest indication of fitness being when the leaves become yellow, and are diminished. For this operation choose a dry day, cut off the tops as they are drawn, and let them be exposed to the sun and wind previously to being stowed away. To prevent the attacks of insects and worms, to which carrots are subject, the best remedy is a liberal supply of chalk, lime, or lime-ashes, spread on the land and dug in previously to, or at the time of sowing and manuring in the preceding autumn. The ground being ready about the middle of March, mark it out in drills one foot apart and one inch deep. Take an ounce of the early horn kind, and as the seeds adhere very much together, mix them with more than two-thirds of their bulk of dry sand, and separate them by rubbing through the hands; then sow the seed and sand equally together through the drills. The quantity mentioned will sow about a perch of fifteen feet square; cover in the drills, and rake the whole earth over smoothly. This operation should be performed when the surface is dry. For a late or winter crop, use the long orange kind, sowing about the middle of April; this sort requires deeper ground than the former. As soon as they appear above ground, the hoe must be applied and all weeds removed. Should they appear in bunches, thin them with the hand when sufficiently large to take hold of, and repeat this process until they stand at from two to five inches apart. As they advance in growth the hoe must be used vigorously, all weeds exterminated, and nothing more than this will be required until they attain their final growth.

CARROT JAM.—Boil some carrots till quite tender, and rub them through a sieve. To one pound of the pulp add three quarters of a pound of loaf sugar; boil it to a jam, and when nearly cold, add the juice and the grated rinds of two lemons, and half a teaspoonful of essence of cloves.

☞ Carrot pulp, 1lb.; sugar, ¾lb.; lemons, 2; essence of cloves, ½ of 1 teaspoonful.

CARROT MARMALADE.—After having well washed and scraped some carrots, cut them into pieces of about two inches in length; put them into a pan with as much water only, as will prevent the bottom of the pan from burning its contents. Cover them close, and let them stew over a moderate fire until they are quite tender; then mash them thoroughly, and pass them through a hair sieve; prepare and clarify a syrup, using, for every pound of pulp, a pound of sifted sugar and half a pint of water; clarify it and boil it up until it adheres to the spoon; put in the pulp, boil it up until it forms a fitting marmalade; then put it into pots.

CARROT MASHED.—Boil till quite tender some fine, highly flavoured carrots, press the water from them, and rub them through a fine hair sieve; put them into a a clean saucepan or stewpan, and dry them thoroughly over a gentle fire; then for a dish of moderate size, mix well with them two or three ounces of good butter, cut into small bits, keeping them well stirred. Add a seasoning of salt and cayenne, and serve them very hot, garnished or not at pleasure, with small sippets of fried bread.

CARROT PUDDING.—Pound in a mortar the red part of two large carrots after they have been boiled; add a slice of grated bread, two ounces of melted butter, two ounces of sugar, a tablespoonful of marmalade, half a teaspoonful of grated nutmeg, and four well beaten eggs, mix all well together; bake it in a dish lined with puff paste.

☞ Carrots, 2 (red parts of); bread grated, 1 slice; butter melted 2 ozs.; sugar, 2 ozs.; marmalade, 1 tablespoonful; nutmeg, half of 1 teaspoonful; eggs, 4.

CARROT RAGOUT.—Cut carrots into pieces two inches long, and boil them in water for twenty minutes. Take them out, drain them in a sieve, and put them into a stewpan with some good gravy, a little white wine, a bunch of sweet herbs, and a seasoning of salt and pepper. Thicken the sauce if necessary, and serve.

CARROT SOUP.—Put some beef bones into a saucepan, with four quarts of the liquor in which beef or mutton has been boiled; add two large onions, a turnip, and a seasoning of pepper and salt; boil the whole for three hours. Have ready the red part of six large carrots scraped and sliced, strain the soup on them, and stew them till soft enough to pulp through a hair sieve or coarse cloth. Pulp in a mortar half a pound of cold roast beef or beefsteak, add all to the soup, and serve it very hot.

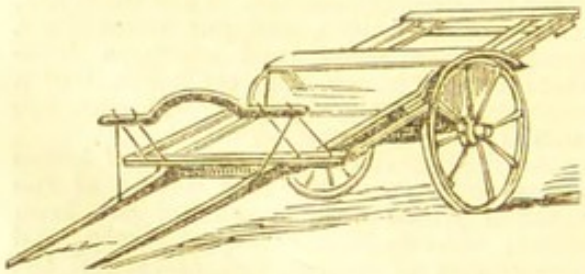
CARROT STEW.—Scrape and wash the carrots, and after blanching them, cut them in slices. Make a sauce with a slice of butter, some salt, pepper, and shred parsley; moisten with milk, and thicken with the yolks of three or four eggs. Let them stew a short time, and serve with the sauce. A few slices of bacon may be added and served with it.

CARROTS BOILED.—Scrape, wash, and clean them; if large, cut them into two or four pieces, set them over the fire in boiling water with some salt in it, and boil them for two or three hours. Very young carrots will only require one hour.

CARROTS, PRESERVATION OF.—To preserve carrots during the winter they should be taken from the ground a short time previously to the frost setting in. Put them in a dry, convenient place under cover, and lay them in a long ridge shape. Have ready some sand or fine coal ashes; commence by placing the carrots about two and a half feet wide at the bottom, with a layer of sand and ashes alternately until about three feet high, placing them in such a manner that the ridge shall come narrow at the top; then cover the whole a few inches thick with sand or ashes.

CARROTS, USES AND PROPERTIES OF.—This vegetable contains a large amount of nutriment, but is not easily digested by weak stomachs, and for this reason they should always be young, and boiled till quite tender. Carrots contain a considerable portion of saccharine matter, and an empyreumatic oil, which invests them with anti-scorbutic properties. For culinary purposes they are employed in a variety of forms, but chiefly to mix with soups, stews, &c., and they are almost universally eaten with boiled beef. Carrots form an excellent food for horses, and act as a remedy for shortness of wind. They also possess a healing property when applied to sores and wounds in the form of a poultice.

CART.—Vehicles of this class are constructed upon various principles suitable to the uses to which they are put. Carts are used for agricultural purposes more than any other, and they possess distinctive features according to the branch of agricultural operations they are employed in. One of the most recent improvements in this direction is a corn and hay cart, which is of simple construction, but possessing complete efficiency and remarkable safety from upsetting. It also possesses the advantage of easy conversion into an open dray-cart for carrying timber or other heavy loads. No cart that is used on roads should be without springs; they lessen the draught, and, by preventing jolting and shaking, add to the durability of the vehicle.



CARTILAGE.—The ends of the bones at the joints are capped by a smooth white substance, somewhat softer than themselves, upon which they move and turn; this is cartilage. It consists of coagulated albumen with a very little gelatine, and therefore is not soluble in boiling water, except by long-continued boiling under pressure. In very young animals the bones consist almost entirely of cartilage; as age advances, the bones become harder and more brittle, having more albumen and earthy matter, and less of gelatine. In some fishes, as in the skate, the bones are entirely cartilaginous.

CARVING.—One of the most important acquisitions in the routine of daily life, is to know how to carve well. Every person who mixes with society at all, is likely to be called upon at any moment to perform this office; to refuse to undertake it savours of ill-nature and selfishness; and to perform it in an awkward and bungling manner, is painful and unpleasant for lookers-on and exceedingly humiliating to the operator. The best method of becoming an adept in carving neatly, and expeditiously, is to dine at hotels and taverns, where there is a *table d'hôte* or ordinary, and daily assist in cutting up the dishes prepared for the public dinner. Carving is not to be considered alone as an accomplishment to be displayed at the tables of others; it is in fact a very requisite branch of domestic management, and highly important in an economical point of view; for it is notorious that a joint of meat ill carved will not serve nearly so many persons as it would if it were properly carved. But this art does not solely consist of *cutting up*, it requires a certain amount of tact and judgment to cut fairly, and to observe an equitable distribution of dainties so as to give general satisfaction. In the first place, whatever is to be carved should be set in a dish sufficiently large for turning it if necessary; but the dish itself should not be moved from its position, which should be so close before the carver as only to leave room for the plates. The carving knife should be light, sharp, well-tempered, and of a size proportioned to the joint, strength being less required than address in the manner of using it. The carver must carefully avoid all clumsiness of attitude and deportment; squaring the elbows, tucking up the coat-sleeves, dropping the knife and fork, splashing the gravy, and overturning glasses, are evidences of awkwardness and ungracefulness on the part of the carver. To carve standing is considered vulgar, and to obviate this the seat of the carver should be raised to the requisite height. In carving, the eye must be employed as well as the hand; there is an art in discovering when a person's plate needs replenishing, without appearing to be too solicitous, and there is also tact and delicacy in recommending some particular dainty, which you have reason to think will be acceptable.—See BEEF, DUCK, FOWL, GOOSE, MUTTON, PORK, TURKEY, VEAL, &c.

CASCARILLA.—The bark of *croton, eleutheria*, or the *sea-side balsam*, a tree growing in the Bahamas and Jamaica. It is an aromatic bitter, stomachic, and tonic. *Dose*, ten to thirty grains in the form of powder, infusion, or tincture; in diarrhœa, dysentery, dyspepsia, low fever, &c.

CASEINE.—A chemical element distinguished from fibrine and albumen by its *not coagulating*, either spontaneously or by heat, and by forming a skin when its solution is evaporated. It is found in vegetables, chiefly in seeds, and in largest proportion in leguminous seeds. In the animal kingdom it is chiefly found dissolved in milk, and it is also present in some vegetable juices. It is that principle in milk which is coagulated by an acid, and which forms cheese. Cheese made from skim-milk, and well pressed, is nearly pure caseine.

CASH AND CREDIT.—The consideration of these two modes of payment must be understood here to apply chiefly to domestic and personal expenditure. Every person, be he married or single, be his wants few or many, is compelled to expend money for the purchase of the comforts and necessaries of life. In procuring these, the question which suggests itself is, which system of expenditure is the most prudent and satisfactory; cash or credit. To solve this problem correctly, the first principle upon which the question hangs need only be inquired into. It must be conceded as a matter of course that the seller of goods makes a distinction between cash customers and customers on credit; it would be unreasonable and unjust to place both on a similar footing; in what, then, does this difference consist? In this—the articles sold for cash are charged at the smallest remunerative profit; those sold for credit are set down at any price best accordant with the seller's caprices and necessities; as a general rule, the difference between cash and credit prices may be fairly estimated at twenty per cent. At this rate, supposing a person makes purchases during the year to the extent of £250 on credit, he absolutely deprives himself and his family of £50 annually thereby, to cancel the obligation which he has accepted of his tradesmen; whereas a person purchasing for cash expends only £200 for articles of a similar quality, and to the like quantity, thereby not only saving the £50 excess, but having the opportunity of increasing the surplus amount by judicious outlay, interest, or otherwise. Again, a person purchasing for cash, receiving the articles at the time of payment, is pretty well assured that he has everything he pays for; but where articles are "booked," it may occur intentionally or unintentionally that some things are charged for that have not been delivered; and in disputed items tradesmen generally obtain the advantage over the customer. Finally, the person who pays cash may deal with any tradesman he thinks proper, his only object being to obtain the best value for his money. But the person who takes credit is, to a certain extent, coerced by the tradesman, and cannot deal with a rival shopkeeper without creating offence. In many instances, the person who takes credit is perfectly well aware that the articles vended to him are much dearer and not nearly so good as may be procured elsewhere; but with the fear of the account before his eyes, he can only utter a feeble complaint, and suffers the imposition until such time as he is able to purchase emancipation by the settlement of his bill. The fallacy of dealing systematically upon credit may be readily illustrated thus: Supposing a person in the receipt of an income of £250 from the age of twenty-five to fifty-five, deals exclusively on credit during the whole of that time, the positive sacrifice of income, as before stated, would be £50 per annum. This amount accruing from year to year, with interest added at the rate of five per cent., would realize upwards of £3,500. At the age of fifty-five, the energies of the man of business begin to fail him; and, in the course of nature, it is time for him to retire and leave his work to other hands. Now, if the foregoing calculation is taken as the basis of a man's income and expenditure, the result shown is, that the man who deals for cash during thirty years of his life, is, at the end of that time, in possession of a comfortable independence sufficient to enable him to retire; while he who lives upon credit finds himself in the autumn of life without any provision to fall back upon, and still condemned with impaired powers, and exhausted faculties to work for a livelihood, as unremittingly as in his younger days. Nor are pecuniary considerations the only ones in connection with this question. The man who pays cash has many advantages over his neighbour who deals for credit; he is freer from care and anxiety, he does not dread to meet a creditor at every turning he takes, or fear a dun in every knock; nor is he humiliated in the opinion of the world abroad, and in the eyes of his servants at home.

CASH-BOOK.—See BOOK-KEEPING.

CASINO.—A game of cards generally played by four people, but occasionally by three or two; the points consist of eleven, and the lurch is six. The points are thus calculated:—Great casino (ten of diamonds), 2 points; little casino, (deuce of spades), 1 point; each ace, 1 point; the majority in spades, 1 point; the majority of cards, 3 points; sweep before the end of the game, 1 point. In some deals at this game it may so happen that neither party wins anything, as the points are not set up according to the tricks, &c. obtained, but the smaller number is continually subtracted from the larger, both in cards and points, and if they both prove equal, the game is played over again, and the deal goes on in rotation. When three persons play, the two lowest add their points together, and subtract from the highest; but when their two numbers together either amount or exceed the highest then neither party scores.

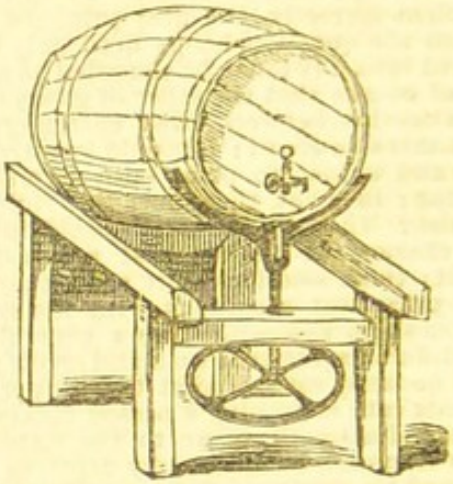
LAWS.—The deal and partners are determined by cutting. The dealer gives four cards by one at a time to each player, and either regularly as he deals, or by one, two, or more at a time, lays four more cards face

upwards on the board. After the first cards are played, four others are to be dealt to each person till the pack is exhausted; but it is in the first deal only that any cards are to be turned up. The deal is not lost by the dealer, unless it be in the first round before any of the four cards are turned up on the table. Any person playing with less than four cards must abide by the loss, and should a card be found, the player whose number is deficient appropriates the same. Each person plays one card at a time, with which he may not only take at once every card of the same denomination on the table, but also all that will combine therewith; as for instance, a ten takes not only every ten, but also nine and ace, eight and deuce, seven and three, six and four, or two fives; and if he clear the board before the conclusion of the game, he scores a point. Whenever any player cannot pair or combine, he has to put down a card. The number of tricks are not to be examined or counted before all the cards are played, nor may any trick but the last won be looked at. After all the pack is dealt, the player who obtains the last trick sweeps all the cards then remaining unmatched upon the table.

RULES.—The principal objects are to remember what has been played; and when no pairs or combinations can be made, to clear the hand of court cards, which cannot be combined, and which are only of service in pairing, or in gaining the final sweep; but if no court cards are left, it is best to play any small cards except aces, as thereby combinations are often prevented. In making pairs and combinations, the preference should be given to spades, for obtaining a majority of them may save the game. When three aces are out, play the fourth as soon as possible, as it cannot then pair, but when there is another ace remaining, it is better even to play the little casino, which can only make one point, than to risk the ace which may be paired by the opponent with a sacrifice of two points; and if great casino and an ace be on the board, prefer the ace, which may be paired or combined, whereas great casino can only be paired. Sweep the board when an opportunity offers; always prefer taking up the card laid down by the opponent; also as many as possible with one, endeavouring likewise to win the last cards or final sweep. While great or little casino is in, avoid playing either a ten or a deuce. When you hold a pair, lay down one of them, unless when there is a similar card on the table, and the fourth not yet out. Attend to the adversary's score, and, if possible, prevent them from saving their lurch, even though you otherwise apparently get less yourself; particularly if you can hinder them from clearing the board. At the commencement of the game, combine all the cards, if possible, that being more difficult than pairing; but when combinations cannot be made, do not omit to pair, and also carefully avoid losing opportunities of making tricks.

CASK.—A vessel of capacity for containing beer, wine, and other liquids. The care and management of casks is an important affair in a large establishment. It is found that they last longest when stored either in a dry situation, or in one uniformly very moist. Continual variations from one atmosphere to another speedily rot casks. As soon as casks are emptied they should be bunged down quite air-tight, with as much care as if they were full, by which means they will be preserved both sweet and sound. Should any of the hoops become loose, they should be immediately driven up tight, which will at once prevent the liability of their being lost or misplaced, as well as the casks becoming foul or musty from the admission of air. For this purpose those out of use should be occasionally examined. To *sweeten casks when musty*, it is best to unhead them and wash them with quick-lime, or they may be washed with oil of vitriol diluted with an equal weight of water. When casks are very foul and resist these remedies they should be charred; a simple and effectual method of performing this, is to wash the dry casks out with the strongest oil of vitriol. In all cases the greatest care must be taken to scald or soak, and well rinse out the casks after subjecting them to the purifying process.

CASK-STAND.—A stand upon which beer, wine, &c. is placed, made upon improved principles. This contrivance is fitted with a screw which supports the full cask in such a manner that it stands perfectly level; and as the liquid is withdrawn the screw is made to turn so that it lowers the front part of the cask by degrees, and facilitates the flow of the liquid without disturbing it. By this plan the beer is neither wasted nor deteriorated, as is frequently the case when a cask is tilted in the ordinary way.



CASSEROLE.—Having cleaned and drained half a pound of rice, moisten it in a stewpan, with some fat; that which gathers on the top of liquor in which meat has been boiled will do. Strain some broth or soup, add to it a large quantity of grease, some pieces of fat bacon and a little salt; mix it with the rice to make it swell as much as possible; stir it frequently over a slow fire to keep it from sticking; when it is soft strain it through a cullender and press it well with a wooden spoon. The mould being

selected for the casserole, raise it with the fat drained from the rice, taking care that every part of the inside of the mould be well greased, then cover it with rice, and place a piece of the crumb of bread in the middle, and cover it with rice also; press it in equally with a spoon, and let it cool. When the rice has become firm dip the outside of the mould into boiling water; add a covering of paste made with flour and water; flatten it all round with a spoon, and make an opening in the top with a knife, then put it into a very hot oven, baste it with the grease, and when it has become of a fine colour, take it out of the oven, remove the crust, and the bread; next displace some of the rice from the inside, leaving sufficient to resist the weight of whatever may be put inside it. Fill it with minced meat, ragout, fricassee of chickens, macaroni, or scallops of fish that have been already served at table; return it to the oven, and when thoroughly browned, serve.

CASSIA.—The bark of the *cinnamonum cassia*, imported from China, Malabar, Bombay, and the Mauritius. It resembles the true cinnamon in flavour, and is frequently substituted for it. The cassia bark may be distinguished from cinnamon by its being considerably thicker and coarser, having a short fracture and a smooth edge; the taste leaves a bitter astringent upon the tongue.

CASTILE SOAP. — A mixture compounded of soda and olive-oil; used in medicine for making pills, plasters, &c. It is sold both white and mottled; the former is preferable.

CASTOR OIL.—A well known aperient obtained from the seeds of the *ricinus communis*. The best kind of castor oil is that known as cold-drawn, which is prepared by pressing the seeds without the aid of heat, and is brought to this country from the East Indies in tin canisters. Castor oil is one of the safest and most certain aperients; it acts quickly without producing pain or constitutional disturbance, and instead of inducing costiveness, leaves a greater tendency to relaxation than previously existed; another advantage is that where repeated doses are necessary the quantity requires to be diminished instead of being increased. From early infancy to old age, castor oil may, as a general rule, be given with perfect safety; the dose for infants and children being from half a teaspoonful to two or more teaspoonfuls, according to the age. For grown-up persons the dose is one, two, or three tablespoonfuls. The great objection to castor oil is the nausea which is caused by it, so much so that some stomachs cannot possibly retain it; and in many instances the mere appearance of it will prevent persons taking it. Many methods are employed for disguising the taste of castor oil; one of the best is to beat it up with the yolk of an egg, and then add gradually a little cinnamon or peppermint-water, or a little plain water with two teaspoonfuls of the tincture of cardamoms. A common mode is to mix the castor oil with brandy, whisky, rum, or gin, but the oil being heavier than the spirits, it sinks to the bottom, or adheres to the sides of the cup or glass, and if taken in this way the oil and the spirits should be put into a phial together, well shaken, emptied into a wineglass, and swallowed before time is allowed them to separate. It should also be known that a piece of orange or lemon-peel, chewed previously to taking a dose, blunts the acuteness of the nerves of taste, and renders the oil less offensive.

CASTOR OIL POMADE. — Castor oil, four ounces; prepared lard, two ounces; white wax, two drachms; bergamot, two drachms; oil of lavender, twenty drops. Melt the fat with the oil, and on cooling add the scents, and stir till cold.

CASTS.—In preparing casts and moulds with *gelatine*, *wax*, *fusible metal*, and similar substances, it is important to use them at the lowest temperarure compatible with fluidity, as when only a few degrees hotter the water which adheres to the objects from which the casts are taken is converted into vapour and produces bubbles. Fusible metal may be allowed to cool in a teacup until just ready to set at the edges, and then poured into the moulds. When taking impressions from gems, seals, &c., the fused alloy should be placed on paper or pasteboard, and stirred about till it becomes of the consistence of cream, from incipient cooling, at which moment the die or seal should be suddenly stamped on it, and a perfect impression will be then obtained.

CAT. — Of this well-known domestic animal there are several varieties, the most valuable of which is the tortoiseshell. Another variety is of glossy black, and another white. White cats are generally very delicate, apt to take cold, and liable to various diseases. They are also frequently deaf. The most hardy and useful variety is the tabby, of a grayish brown colour variously marked with black. Cats are extremely useful in a house for destroying mice and other vermin, and their domestic habits and moderate appetite entail comparatively little trouble or expense in keeping them; a small portion of milk and the scraps of meat, &c., from the table is all that they require. The habits and instincts of the cat are distinct from those of any other animal. One most remarkable fact is that whenever a cat is removed from one house to another, even though it be blindfolded and carried in a bag, it will find its way back to its original home. To prevent this it is a common practice to butter a cat's feet on the first night of a removal, and as they are extremely sensitive in their feet, they will at once busy themselves in licking them clean, and in the meantime become more accustomed to their new abode. Cats are more attached to places than persons, and it is no uncommon thing for them to select a certain spot and occupy it every day for years. They are also fond of warmth, and of high positions, such as tables, window-sills, &c. Another peculiarity of the cat is the extreme caution and delicacy with which it moves, so much so, that it will walk from one end to the other of a narrow chimney-piece, crowded with ornaments, without

breaking or even displacing one of them. But the most striking peculiarity of all in connection with cats is, that whenever they fall or are thrown from a window or other high place, they almost invariably alight on their feet; this is accounted for as follows: when they find themselves falling with the head downwards they curve up their long slender bodies so that the back forms an arch, while the legs remain extended. This alters the course of the centre of gravity so much that the body of the cat makes a half-turn in the air, and the feet become lowest. This aërial manœuvre also breaks the force of the fall, so that a cat is scarcely ever killed, and seldom hurt through falling from a height. Cats are remarkably healthy animals; if they are affected by the distemper it is generally between the first and third month of their lives. The symptoms are, that the kitten will not take any food; it ceases to play; and appears to become very chilly, seeking the chimney-corner, or any warm place in which it can hide itself. When a kitten has this disease, it generally recovers; but if it is a full-grown cat, it frequently dies. The remedy is to give brimstone or some other aperient medicine, and to feed the cat with light biscuit spread with butter. With this a little manna may be given; the animal should then be left undisturbed for twenty-four hours, after which more biscuit, butter, and manna are administered; but by this time the cat is generally cured. A good plan to keep cats in health is occasionally to put sulphur in the milk or water that they drink.

CATALEPSY.—A disease purely of a nervous character, in which certain parts of the nervous system are in a state of profound coma, or sleep, and others preternaturally excited. The patient remains exactly in the position and attitude, in which he was when taken in the fit, for from two or three minutes, sometimes the period extends to several hours. The chief characteristic of this disease is the rigidity of the muscles and entire body; and though the limbs may be moved into any position, the patient himself has no control over them, or knowledge of what is done. The remote cause of this disease depends upon some of those half revealed phenomena that give rise to other maladies affecting the brain and spinal marrow; while the more immediate cause is often any sudden paroxysm of joy or anger, strong emotions of the mind, or inordinate grief. The attack generally comes on without any previous warning. The *treatment* is first to discover and remove all exciting causes and sources of irritation, and then by a course of alteratives and tonics, purify and brace the system. At the same time change of scene, exercise, and sea-bathing act as powerful auxiliary means. Should the attack be attended with headache, suffusion of the eyes, or ringing in the ears, blood-letting must be resorted to, and a blister applied on the nape of the neck, before adopting the course of systematic tonics already mentioned.—See EPILEPSY.

CATAPLASM.—See POULTICE.

CATARACT.—A disease of that part of the eye called the lens, situated near the centre of the organ, and the body that receives and transmits the rays of light to the retina. Cataracts are always slow in their formation, the obscuration commencing at the side, and gradually spreading over the entire lens; so that total blindness does not occur till the opacity is entire, the patient being frequently able to see objects from the side or corner of the eye, after the portion in the axis of vision is rendered white or milky.

Treatment.—It is very questionable if, without an entire change of occupation, and a long absence from all visual excitement, cataract is ever cured by medical means; if it is, however, it must be treated in the earliest stage of the disease, and by a long course of steady and energetic practice.

CATARRH is a falling down or flow of humours from the head; that running from the eyes and nose (the reaction from an exciting cause), and generally known as the first symptoms of a cold, and the precursor of measles.—See COLD, COUGH, &c.

CATECHU.—An extract obtained principally from a species of acacia tree, which grows in various parts of India. It is used both externally and internally. It is an excellent and very powerful astringent, and is frequently employed for that purpose to restrain purging, when unattended by inflammatory action. A little of it put into the mouth, and sucked slowly, is the best remedy for relaxation of the uvula or pap of the throat, when it hangs down and causes irritation, cough, and difficulty of swallowing. It is used in the same manner as a remedy for sponginess of the gums when they bleed from trivial causes; and also for slight ulcerations of the mouth. One of the most valuable external applications of catechu is in the sore and chapped nipples of nurses; it must be used in the form of tincture, put on the nipple each time after the infant has been nursed, by means of a small paint brush or feather, and wiped off with the damped corner of a towel before the infant is again put to the breast. The infusion of catechu is made as follows:—Extract of catechu, powdered, six drachms; cardamoms, bruised, one drachm; boiling water, one pint; let this simmer by the fire in a vessel lightly covered, and strain. *Dose*, from two to four tablespoonfuls.

CATERPILLARS.—These noxious insects, which derive their chief sustenance from leaves and flowers, are well known for the depredations they commit on the vegetable world. In August and September they destroy cabbages and turnips to an incredible extent, and commit their ravages in fields and gardens whenever easterly winds prevail. Various means have been devised for their destruction, and any of the following may be employed with good effect. Mix and heat three quarts of water, and one quart of vinegar, put in a pound of soot, and stir the whole well till thoroughly incorporated. Sprinkle the plants with this preparation every morning and evening, and

in a few days all traces of the destructive visitors will disappear. If any eggs are deposited they never come forward after this application; and if transformed into worms they will sicken, die, and fall off. *Cabbages and turnips* may be especially protected by sowing with hemp all the borders where they are planted, so as to enclose them, and not one of the vermin will approach. When *gooseberry or currant bushes* are attacked, put pieces of woollen rag in every bush; the caterpillars will take refuge in them during the night, and in the morning large numbers of them may be thus taken and destroyed. If this do not succeed effectually, dissolve an ounce of alum in a quart of tobacco liquor; and as soon as the leaves of the bushes appear in the least corroded, sprinkle the mixture on with a brush. The *leaves of plants* may be effectually dusted with sulphur put into a piece of muslin or a dredging-box; this not only destroys the insects, but materially promotes the health of the plants. When *fruit trees* are attacked by caterpillars, they may be destroyed by a strong decoction of equal quantities of rue, wormwood, and tobacco, sprinkled on the leaves and branches while the fruit is ripening. On placing a chafing-dish of burning charcoal, with a little brimstone thrown on it, under the branches of the tree, the ascending vapour will not only destroy all insects, but prevent the trees from being infested with them any more that season. Caterpillars also breed in the household and commit ravages on furniture and clothes. The best remedy in these cases is to strew about bay leaves, wormwood, lavender, or rue, walnut leaves, or black pepper in grains.

CATGUT.—Clean thoroughly the entrails from the newly-killed carcass of a sheep or any other animal. Soak them in soft water for two or three days, then scrape them with a small plate of copper having a semicircular hole cut in it, the edges of which must be perfectly smooth and incapable of cutting. Wash them; lay them in clean water till the next day, when they are again to be scraped. Let them soak in water again for one night; and two or three hours before they are taken out, add to each gallon of water two ounces of pearlash. Finally scrape them quite clean from their inner mucous coat. Wipe them dry, twist them slightly, and pass them through a hole in a piece of brass to equalize their size; as they dry they must be passed every two or three hours through other holes, each smaller than the preceding one. When thoroughly dry they will have attained a round and well polished surface, and being then oiled, they are fit for immediate use.

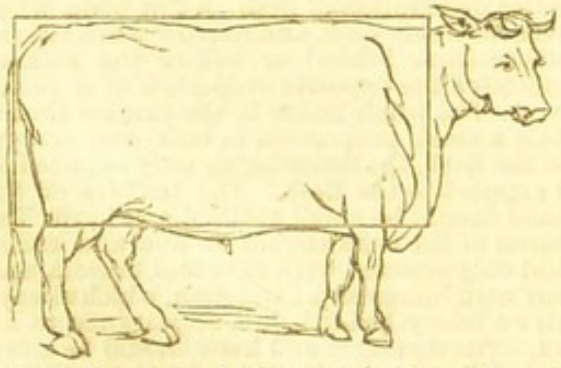
CATHARTICS—Medicines which, taken internally, produce a purgative effect. Cathartics are commonly divided into five classes: *stimulating*, such as jalap, aloes, colocynth; *refrigerating*, as glauber, Epsom salts, and cream of tartar; *astringent*, as rhubarb, and damask roses; *emollient*, as castor oil, manna, and mallows; and *narcotic*, as tobacco, henbane, and foxglove.—See PURGATIVES.

CATSUP.—See KETCHUP.

CATTLE.—Under this head is included the ox tribe. The first point to be ascertained in examining an ox is its purity of breed, and this may be arrived at from several indications. In a pure breed, the colour of the bald skin on the nose and round the eyes is always definite, and without spots. When horns exist they should be small, tapering, and sharp pointed, long or short, according to the breed, and of a white colour throughout in some breeds, and tipped with black in others. The second point to be ascertained, is the form of the carcass. It is found that the nearer the section of the carcass of a fat ox, taken longitudinally, vertical, transversely vertical, and horizontally, approaches to the figure of a parallelogram, the greater quantity of flesh will it carry within the same measurement: to do this, it should possess the following configuration:—The back should be straight from the top of the shoulder to the tail. The tail should fall perpendicularly from the line of the back. The buttocks and twist should be well filled out. The brisket should project to a line dropped from the middle of the neck. The belly should be straight longitudinally, round laterally, and filled at the flanks. The ribs should be round, projecting horizontally, and at right angles to the back. The hocks should be wide and flat; and the rump from the tail to the hocks should be well filled. The loin bones should be long, broad, flat, and well filled; but the space between the hocks and the short ribs should be rather short and well arched over, with a thickness of beef between the hocks. A long hollow from the hocks to the short ribs indicates a weak constitution, and an indifferent thriver. From the loin to the shoulder-blade should be nearly of one breadth, and from thence it should taper a little to the point of the shoulder. The neck-vein should be well filled forward, to complete the line from the neck to the brisket. The covering on the shoulder-blade should be as full out as the buttocks. The middle ribs should be well filled, to complete the line from the shoulders to the buttocks along the projection of the outside of the ribs; these constitute the principal points that are essential to a *fat ox*. The first of the points in judging of a *lean ox*, is the nature of the bone. A round thick bone indicates both a slow feeder and an inferior description of flesh. A flat bone, when seen on a side view, and narrow when viewed either from behind or before the animal, indicates the opposite properties of a round bone. The whole bones in the carcass should bear a small proportion in bulk and weight to the flesh, the bones being only required as a support to the flesh. The texture of the bone should be small grained and hard. The bones of the head should be fine and clean, and only covered with skin and muscle, and not with lumps of fat and flesh, which always give a heavy-headed dull appearance to an ox. The fore-arm and hock should be clean and full of muscle, to endure travelling. Large joints indicate bad feeders. The neck should be small from the middle to the head. A full, clear, and prominent eye, is a nice in-

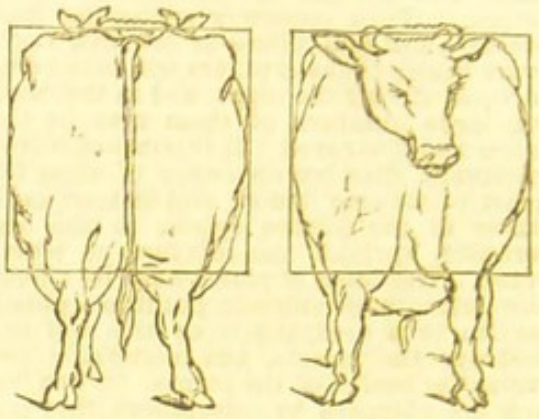
dication of good breeding, and an excellent index of many properties in the ox. A dull heavy eye unmistakeably indicates a slow feeder. A rolling eye, showing much white, is expressive of a restless capricious disposition, which is incompatible with quiet feeding. A cheerful clear eye accompanies good health; a dull one indicates the probable existence of some internal lingering disease; the dulness of eye, however, arising from internal disease is of a totally different character from a natural or constitutional phlegmatic dulness. The next point to be ascertained is the *state of the skin*. A thick firm skin, which is generally covered with a thick-set, hard, short hair, always feels hard to the touch, and indicates a bad feeder. A thin, meagre, papery skin, covered with thin silky hair is indicative of weakness of constitution, though of good feeding properties. A perfect skin is thick and loose, floating, as it were, on a layer of soft fat, yielding to the least pressure, and springing back to the finger, like a piece of soft, thick, chamois leather; it is also covered with thick glossy soft hair. The other greatest points are, that the head should be small and set on the neck, as if easily carried by the animal. The face long from the eyes to the point of the nose. The skull broad across the eyes, contracted a little above them, but tapering considerably below them to the nose. The muzzle fine and small; the nostrils capacious; the ears large, slightly erect, and transparent; the neck short and light. A droop of the neck from the top of the shoulder to the head indicates weakness of constitution. The legs below the knees should be rather short than long, and clean made. The tail rather thick than otherwise, and provided with a large tuft of long hair. The *position of the flesh* is important: that part called the spare rib in Edinburgh, and the fore and middle ribs in London, should be well covered. The division between the horns called the closing, should be characterized by a thick layer of fat, a thick flank, and a full neck bend. The last points are the shoulder joint and shoulder, and if these parts are well covered, the animal may be considered matured. When the frame of a short horn ox is scrutinized, it will be found to present a

Fig. 1.



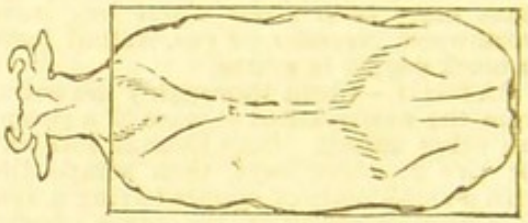
straight level back from behind the horns to the top of the tail, full buttocks, and a projecting brisket: in short, the rectangular figure represented by fig. 1. There is also the level loin across the hook-bones, the level top of the shoulder across the ox, and perpendicular lines down the hind and fore legs on both sides; these constituting the square forms when the ox is viewed before and behind, as represented in figures 2 and 3. There are also parallel lines from the

Fig. 2. Fig. 3.



sides of the shoulders, along the outmost points of the ribs, to the sides of the hind quarters; and these lines are connected at their ends by others of shorter and equal length, across the end of the rump and the top of the shoulder; thus constituting the rectangular form of the ox when viewed from above down upon the back, as represented by fig. 4. It may be pretty accurately

Fig. 4.



asserted, that the carcass of a full-fed, symmetrical, short-horn ox, included within the rectangle, is in length double its depth, and in depth equal to its breadth; hence, figs. 2 and 3 are squares, and figs. 1 and 4 each two similar squares placed in juxtaposition. The form of short-horn breed is perfect according to this rule.

CATTLE, Remedies for Diseases of. —*Cleansing drink.* One ounce of bayberry powdered, one ounce of brimstone powdered, one ounce of cumin seed powdered, one ounce of diapente. Boil these together for ten minutes, and administer in a little gruel. *Colic.* One pint of linseed oil, mixed with half an ounce of laudanum. *Cordial.* One ounce of caraway seeds, one ounce of aniseed, quarter of an ounce of ginger powdered, two ounces of fenugreek seeds. Boil these in a pint and a half of beer for ten minutes, and administer when cold. *Diarrhœa.* Half an ounce of powdered catechu, and ten grains of powdered opium in a little gruel. *Dysentery.* The same as for diarrhœa. *Fever.* Bleed; and then give one ounce of powdered nitre and two ounces of powdered brimstone in a little gruel. If the bowels

are constipated, give half a pound of Epsom salts in three pints of water daily, if needed. *Hoove* or *Hoven*. Use the elastic tube as a prevention, let the cattle be well supplied with common salt, and restrained from rapid feeding, when first grazing upon rank grass or clover. *Mange*. Half a pound of black brimstone, quarter of a pint of turpentine, one pint of train oil. Mix them together, and rub the mixture well in over the affected parts. *Milk Fever*. Two ounces of brimstone, one ounce of diapente, one ounce of cumin seed powdered, one ounce of powdered nitre. Give this in a little gruel, and well rub the udder with goose grease. *Murrain*. Half a pound of salts, two ounces of bruised coriander seed, one ounce of gentian powder. Give these in a little water. *Poisons* swallowed by cattle are commonly the yew, the water dropwort, and the common and water hemlock. One pint and a half of linseed oil is the best remedy. *Purge in poisoning*. Either one pound of salts in a quart of water or gruel, or from a pint to a pint and a half of linseed oil. *Redwater*. Bleed; and then give a dose of one pound of Epsom salts, and half pound doses repeated every eight hours until the bowels are acted upon. *Sprains*. Embrocation: Eight ounces of sweet oil, four ounces of spirits of hartshorn, half an ounce of oil of thyme. *Sting of the adder, or slowworm*. Apply immediately to the part strong spirits of hartshorn; for *sting of bees*, apply chalk or whiting mixed with vinegar. *Worms*. Half a pound of Epsom salts, with two ounces of coriander seed bruised in a quart of water. *Yellows*. Two ounces of diapente, two ounces of cumin seed powdered, two ounces of fenugreek powdered. Boil these for ten minutes in a quart of water, and give daily in a little gruel.

CAUDLE BROWN. — Mix two tablespoonfuls of finely ground oatmeal in mild sweet small beer two hours previous to using it; strain it from the grits and boil it. Add nutmeg and lemon-juice, and sweeten to taste.

CAUDLE, FOR PLUM OR MARROW PUDDING.—A wineglassful of white wine, two tablespoonfuls of rum, or rum-shrub, pounded sugar to taste, a little grated lemon-peel and cinnamon; stirred into thickened melted fresh butter; grate a little nutmeg on the top.

CAUDLE WHITE.—Made in the same way as brown caudle, substituting water for beer.

CAULIFLOWER, A LA FRANCAISE.—Strip off all the green leaves, and divide each cauliflower into three or four parts, trimming the stalks quite close; put them with the heads downwards into a stewpan, which will just hold them, half filled with boiling water, into which an ounce of butter and some salt have previously been thrown; when they are quite tender, drain the water from them, place a dish over the stewpan, and turn it gently upside down; arrange the vegetables neatly in the form of one large cauliflower, and cover it with melted butter into which some lemon-juice has been stirred.

CAULIFLOWER BOILED. — Choose those that are compact, of a good colour, and from five to eight inches in diameter. Strip off the outside leaves, and trim away the tops of the inner leaves; cut off the stalk at the bottom, and pare away the outer, husky skin. Wash them thoroughly, lay them, head downwards, in a pan of cold water and salt, which will draw out all the insects. Boil them open on a drainer, in plenty of boiling water, with a little salt; from ten to fifteen minutes will boil them, and when the stalks are tender they are ready. While boiling, skim the water well. If the heads vary in size, put in the larger ones first. Serve with or without melted butter.

CAULIFLOWER. CULTURE OF. — This vegetable is propagated by seed, of which half an ounce is sufficient for a bed four feet and a half wide, by ten feet in length. There are two varieties of cauliflower; the early, which is small and most fit for growth under glasses, for the winter-standing crop; and the large, for the open ground plantation. The *first sowing* should be at the close of January, or early in February, under a frame. The plants will be fit to prick out in March, and may be finally removed during April and May; a portion to be placed under hand glasses for more immediately succeeding winter-standing crops. At the beginning of March and April a *second sowing* is to be made in a sheltered border, the seedlings of which may be pricked out in May, and planted finally in June for production at the end of summer. A *third sowing* should take place in the last week of May; to be pricked out in June, and finally planted at the end of July, to produce during October and November, and in favourable seasons, until Christmas. The seed should be sown broadcast, and covered half an inch thick with fine mould. The seedlings are of sufficient size for pricking out when they have four or five leaves of about an inch in breadth; they must be set three or four inches apart each way. The mould must be frequently loosened by the hoe, and drawn up about their stems. In dry weather during summer, a cup-like hollow should be formed round each plant and filled twice a week with water; and as soon as the flower appears, it must be applied every other day. As the head appears exposed, it is advantageous to break some of the leaves, and turn them over it as a shelter from the sun; this preserves them from becoming of a yellow hue, and also retards their advancing to seed. For the *winter-standing crop* the seed should be sown in the third week of August, in a warm border, or an old hotbed, with the protection of a frame or hand glass. The seed bed, if not one that has grown cucumbers, &c., must be well manured with dung from a cucumber bed, or a basis five or six inches thick of dung in a perfectly decayed state must be formed, firmly trodden down, and covered with an equal depth of rich light mould; in this the seed is to be sown a quarter of an inch deep, and shade during the hottest part of the day with matting. Moderate watering must be given as may seem necessary. The plants appear in

about a week, and they must be shaded and watered in like manner. The plants are fit for pricking out at the close of September, when their leaves are rather more than an inch wide. They should be placed in a similar soil and situation to that from which they have been removed. At the latter part of October, or early in November, they must be removed and planted in clusters, of from three to six, in rows three feet apart each way, and sheltered with handglasses until spring. Late in February or early in March, part of the plants may be removed from under the handglasses, two strong ones being left under each glass, and set out in the open ground; the soil and sheltered situation resembling as nearly as possible that from which they are removed. Care must be taken to remove the plants with a considerable portion of earth adhering to the roots. Those continued under the glasses should have air freely admitted to them. Earth should be drawn carefully about their stems, without any being allowed to fall into their hearts. In mild weather, hot sunny days, and during genial showers, the glasses may be removed, but replaced at night. About the end of April, or early in May, the glasses may be entirely dispensed with. The leaves to be broken down over the heads, as previously directed. For the *production of seed*, some plants of the winter-standing crop that have fine heads must be selected. The seed ripens in September, and the branches should be gathered as soon as this occurs. If carefully preserved, the seed remains in a fit state for use until three or four years old.

CAULIFLOWER FRIED.—Select a fine large cauliflower, and lay it in cold water for an hour. Boil it for twenty-five minutes in a saucepan of hot water slightly salted; then divide into small portions, and spread it on a dish to cool. Prepare a batter, made in the proportion of one tablespoonful of flour, and two of milk, to each egg. When the cauliflower is cold, have ready a frying-pan over a clear fire, with a piece of fresh butter in it. When it begins to boil, dip each piece of cauliflower twice into the batter, and fry them a light brown; serve hot.

CAULIFLOWER PICKLED.—Choose the whitest and firmest cauliflowers. Divide the flower into small pieces, and lay them in a brine of salt and water strong enough for an egg to float on the surface, for a week or ten days. Take them out of the brine and put them into a saucepan of water. Boil them for ten or fifteen minutes; drain them and lay them on coarse cloths in the sun until all the moisture is evaporated. Put them into jars and pour over them, cold, a pickle of vinegar in which mace, long pepper, white peppercorns, and a few grains of allspice, have been simmered. Tie the jar down close, and add vinegar from time to time, as it becomes absorbed.

CAULIFLOWER PRESERVED.—Clean them and cut them into pieces; boil them in salt and water. Take them off, drain them, and put them in the sun to dry for two days; then put them into a cool oven until perfectly dry; when cold place them in paper bags, and hang them up until required.

CAULIFLOWER, PROPERTIES OF.—Although this vegetable does not of itself afford a large amount of nourishment, yet it is a valuable adjunct to animal food; and possesses antiscorbutic properties. Persons with weak stomachs should refrain from eating melted butter with cauliflower.

CAULIFLOWER RAGOUT.—Wash them thoroughly, and stew them in brown gravy with a seasoning of pepper and salt, till they are tender. Serve them in a dish with gravy poured over them.

CAULKING.—A process which consists of stuffing the crevices between boards with oakum, which is rope untwisted into its original state of fibre. The oakum is forced in by a blunt chisel and a mallet. When the crevices are caulked, melted pitch is poured on them; or laid on with a pitch mop. Caulking affords great support and serves to hold together more securely a vessel or any other moveable wooden body.

CAUSTICS.—Substances which corrode and destroy the texture of the skin, and also of organized bodies.—See LIME, NITRATE OF SILVER, POTASSA, &c.

CAUTIONS.—See ACCIDENTS, CHARCOAL, MEDICINE, POISONS, SICK ROOM, &c.

CAVIARE.—The prepared roe of the sturgeon. Caviare is made in Russia by rubbing the roe through a sieve, and salting it. It is then dried and sprinkled with fish-oil, and compressed for exportation.

CAYENNE, ADULTERATIONS OF.—Cayenne, when exposed to the light for any length of time, always loses the fine bright red colour it at first possesses, and therefore becomes deteriorated in the eyes of the purchaser; in order to remedy this, a quantity of red lead is added, which not only causes it to keep its colour for a length of time, but also adds to its weight, and consequently to the profit of the vendor. Cayenne pepper is also adulterated with common salt, and with finely pulverized brick-dust and ochre. Red lead may be easily detected by the rapidity with which it sinks in water, through which the pepper is diffused; or by digesting it in dilute nitric, or in acetic acid, and then applying to the filtered red solution the usual tests for the detection of lead, such as sulphurated hydrogen and sulphate of soda—the former giving a black and the latter a white precipitate. The presence of brick-dust and ochre may be ascertained, by incinerating the portion which could not be dissolved by the acid, when the above inorganic impurities will be left behind. The adulteration of salt may be detected by exposing a portion of the suspected compound to the action of the air, on paper, and if the colour becomes deeper, and the paper is stained and wetted, the presence of salt is a matter beyond a doubt. With regard to red lead it is a highly deleterious substance, characterized by a disposition to accumulate in the system, and finally to produce symptoms of a very serious nature. Thus it is that however small the dose taken from day to day, the constitution is sure to be at last brought under the in-

fluence of the poison and to become seriously affected.

CAYENNE ESSENCE.—Steep half an ounce of good cayenne in half a pint of strong spirits for a fortnight, strain and bottle it for use.

CAYENNE GARGLE.—In the early stage of sore throat, the best gargle is a wine glassful of half vinegar and half water, and as much cayenne pepper as will lie on a sixpence. If this be used as soon as the first symptoms of sore throat make themselves felt, the remedy is almost sure to be effectual after two or three applications. If, however, the symptoms do not abate after some hours it would be better not to persist with the gargle.

CAYENNE, PREPARATION OF.—A condiment produced from capsicums and chilies. This pepper is preferable when homemade, for there is no other way of ensuring its being genuine, and the manipulation is very simple. The flavour of chilies is superior to that of capsicums. Strip off the stalks from a hundred large chilies, put the pods into a cullender, and set them before the fire to dry for twelve hours. Then put them into a mortar with one-fourth their weight of salt; pound and rub them till they are as fine as possible, and put the powder into a well-stopped bottle; about two ounces of cayenne will be produced. Capsicums and chilies are ripe and in good condition during the months of September and October.

CAYENNE, USES AND PROPERTIES OF.—Cayenne used as a condiment to food promotes digestion and prevents flatulence; and when not immoderately used is undoubtedly serviceable to persons of languid digestion; in too large quantity it will prove an irritant poison. It may be employed medicinally with advantage in the form of a pill: two parts of cayenne, three of compound rhubarb pill, and one of quinine, form an excellent dinner pill, from three to six grains of which may be taken twenty minutes before the meal for a week or ten days consecutively, by persons of feeble habit of body with tendency to constipation.

CAYENNE VINEGAR.—Put half an ounce of cayenne pepper into a bottle, and pour on it a pint of pale vinegar. Cork it closely, and shake it well every two or three days. It may remain any length of time before it is poured off, but will very soon be ready for use.

CEDAR.—A native tree of the mountains of Libanus and other high adjacent regions, where it attains a great height, and grows to a protracted age. Cedars may be raised from seeds which ripen in England, or are imported from the Levant. When procured from cones, which is a work of some difficulty, they are sown in deep seed-pans or boxes; and when fit for removal the seedlings are nursed and placed in pots until they are large enough to be planted out in the open ground. While nurslings, many of them require a stake, to which a leader must be kept constantly trained, in order to ensure a regular growth. Cedar is employed for making a variety of articles of domestic use, but it is pre-eminently valued, both on account of freedom from warping and its aromatic smell, for making chests of drawers intended as receptacles for clothes.

CELERY BOILED.—This vegetable is extremely good when dressed like sea-kale, and served on a toast with rich melted butter. Wash it thoroughly, trim off the ends, take off the coarse outer leaves, cut the roots of equal length, tie them in bunches, and boil them in plenty of water with the usual proportion of salt, for twenty or five and twenty minutes.

CELERY, CULTURE OF.—Of this esculent there are several varieties. The *Italian* is preferable for general culture. The *red* variety is hardy to withstand the winter, and although coarse for salads, is well adapted for soups and stews. The *turnip rooted* is calculated on account of its root which is fit for use in September and October, and may be preserved throughout the winter. All the sorts are propagated from seed, half an ounce of which is sufficient for a bed four feet and a half by ten. The soil most suitable is a moist rich mould. Any of the varieties may be sown in the spring in the open garden, at two or three different times, from the 21st of March to the 7th of May; but the principal sowing should be made during the early part of April. For *early summer and autumn* celery, sow a small portion towards the end of February in a moderate hotbed. When the young plants are two inches high, prick out some into a warm border, two or three inches apart. When the leaves are six inches high, in May or June, transplant them into trenches for blanching. When they are advanced in the trenches from eight inches to twelve, begin to earth them up several inches on both sides of each row: continue earthing up by degrees as they rise higher, till they are whitened from six inches to twelve inches in length, when they may be taken up as wanted. To raise the *main crops* for summer, autumn, and winter, make a considerable sowing at the commencement of April. Sow, in beds of light mellow earth, and rake in the seed lightly and regularly. In very dry weather give moderate watering both before and after the plants come up. When they are three or four inches high, thin the seed-bed and prick out a quantity at successive times into intermediate beds, three or four inches asunder. Water those removed, and continue water till they have struck. When either the plants left in the seed-beds, or those removed, are from six to twelve inches high, *transplant them into trenches* for blanching. For this purpose allot an open compartment. Mark out the trenches one foot wide, and three feet distance; dig out each trench lengthwise, a spade in width and seven or eight inches deep. Lay the excavated earth smooth in the intervening spaces, making the edges of the trenches equally full and straight; loosen the bottom slighly in a level order, and dig in some rotten dung to a moderate depth. Then, having lifted the plants, trim any long straggling tops of the leaves and fibres of the roots, and slip off side shoots.

Plant a single row along the bottom of each trench four or five inches apart. Give an immediate watering, and occasionally afterwards, if the weather be dry, till the plants take root and show a renewed growth. Continue planting out a monthly succession in June, July, August, and September, thus providing for a supply from July and August of the present summer throughout the course of autumn and winter, until May in the following spring. As the plants from the trenches rise from ten to fifteen inches high, begin to *land up for blanching*, trimming in the earth gently, when first raised to the stems with a hoe or spade. When the plants are of more advanced growth, earth them up equally on both sides of each row three, four, or five inches, according to the height and strength of the different crops. Repeat this once a week or fortnight till by degrees they are landed up from twelve inches to two feet, in order to blanch them of some considerable length. Continue thus landing up the different crops from July to February. As the autumnal and main winter crops attain full growth, give them a final landing up near the tops, which will increase the extent of the blanched portion, and also protect the latter crops more effectually during the winter. For *late spring celery*, to stand till the end of May in the succeeding spring, it is expedient to make a small late sowing at the commencement of May. The plants when six weeks old may be pricked out on to intermediate beds in rows, six inches by three inches asunder, to remain till September or October; then transplant them into moderately capacious trenches; as they advance in growth, earth them up slightly in winter; and give them a final earthing up in February or March. In order to afford *occasional shelter*, on the approach of frost, take up a part of the crop, and lay it by under dry sand for winter use. To preserve the plants left in the bed, lay some dry litter over the tops; which remove during every interval of mild weather. To *take the crop*, it is best to begin at one end of a row, and dig clean down to the roots, which then loosen with a spade, that they may be drawn up entire without breaking the stalks. Celery is liable to be eaten by a maggot which breeds in the leaves, and to the attacks of a parasitical fungus. When either of these evils occur, there is nothing left but to destroy the plants, or to remove them altogether from the garden, and make a new plantation in a fresh soil.

CELERY ESSENCE.—Soak half an ounce of celery-seed in a gill of brandy. A few drops will flavour a pint of soup or broth, equal to a head of celery.

CELERY FRIED.—Blanch the celery in some rather strongly salted water, and let it stew gently in a little strong stock. Take out the celery, draw it, and dip it into batter; then fry it in boiling dripping. When it is done it is to be powdered with sugar, and candied with a salamander.

CELERY FRITTERS.—Cook the celery in a saucepan with a little fat bacon, sweet herbs, and salt, moisten with rich stock, and cover the whole with a few slices of bacon and some oiled paper. When thoroughly done, take out the celery, and soak it for some time in brandy and sugar, then dip it into thick butter, and fry, covering it with sugar, and candying as in the preceding.

CELERY, IN IMITATION OF PRESERVED GINGER.—Cut the blanched part of the celery in pieces, and boil it in water with a large quantity of ginger until it is quite tender, then throw it into cold water and allow it to remain for an hour. Put it over a slow fire in good syrup, with some pieces of ginger, and let it remain simmering for an hour. Cool it again, and in the meantime thicken the syrup by further evaporation. Put the celery in again, and repeat the same process. After a third simmering in this way, taking care to keep the syrup thick, put the celery into pots, and cover with a syrup.

CELERY, PRESERVATION OF.—Keep it in a cool dry place, the roots being covered with tan.

CELERY SAUCE.—Cut into small pieces six heads of white celery, with two small onions. Put them into a stewpan with a small piece of butter, and stew them over a slow fire till quite tender. Add two spoonfuls of flour, half a pint of broth, a wineglassful of cream or milk, and a little salt and pepper. Boil it for a quarter of an hour, and pass it through a fine hair sieve. When celery is not in season, a quarter of a drachm of celery seed, or a few drops of the essence, will impregnate half a pint of sauce with a perceptible flavour of the vegetable. This sauce is intended for boiled turkey, veal, or fowl.

CELERY SOUP.—Cut six heads of celery into pieces about two inches long, wash them well, drain them on a hair sieve, and put them into a soup saucepan, with three quarts of clear gravy. Stew it gently by the side of the fire for about an hour, till the celery is very tender. Remove the scum as it rises, and season the liquor with salt. When celery cannot be procured, half a drachm of the seed, pounded fine, will give a flavour to the soup, if put in a quarter of an hour before it is done. A little of the essence of celery will answer the same purpose.

CELERY STEWED.—Cut five or six roots of celery to the length of the inside of the dish in which they are to be served. Stew it in broth or common stock, and serve with a rich brown gravy.

CELERY, USES AND PROPERTIES OF.—In addition to the culinary uses to which celery is put, it is also eaten raw mixed with salad, and is generally introduced at the conclusion of a dinner with the cheese. When cooked it is a wholesome vegetable, although not affording much nourishment, but when eaten raw, it is frequently digested with difficulty, and on weak stomachs especially, it sits in a cold heavy mass, and materially interferes with the assimilation of food.

CELLAR.—In the construction of a cellar the first point is to provide such a drainage as will draw off the water at least one foot lower than the surface of the cellar floor. If the soil be naturally wet, the flooring should be of flag-stones or tiles, and laid hollow.

The walls should also be built hollow, and if convenient, with a powerful cement, rather than with common mortar; or at least they ought to be coated over with cement on the inside. In very cold, or extremely hot situations, cellars should be fitted with double doors and double windows, and the windows in all such cases ought to fit tightly. The space between the double windows need not be more than from six inches to a foot; but the space between the double doors ought to be at least three feet, so that one door may always be shut before the other is opened. Cellars need not exceed seven feet in height. In general they are better under ground and arched over with masonry; but the same results may be obtained above ground by double walls, very small and double windows, double or thickly thatched roofs, and double doors. Articles that are not frequently wanted are better kept in a dry cellar than in any other place, because they are there less subject to atmospheric changes. If cellars, however, are damp, they are unfit for storing anything except liquors in glass, or in earthen vessels. See BEER CELLAR, FRUIT CELLAR, WINE CELLAR.

CELLARET. — A capacious kind of drawer, usually forming part of a sideboard or cheffonier, constructed with partitions, &c., so that decanters and wine bottles may be placed in an upright position within it, and drawn to and fro without disturbing the liquors, or breaking the vessels that contain them.

CELLARIUS WALTZ.—The gentleman takes the lady's left hand with his right, moving one bar to the left by *glissade*, and two hops on his left foot, while the lady does the same to the right, on her right foot; at the second bar they both repeat the same with the other foot; this is repeated for sixteen bars; they then waltz sixteen bars, *glissade*, and two hops, taking care to occupy the time of two bars, to get quite round. The gentleman then takes both hands of the lady, and makes the grand square, moving three bars to his left, at the fourth bar making two beats while turning the angle; the same repeated for sixteen bars; the lady having her right foot forward, when the gentleman has his left foot forward; the waltz is again repeated; after which several other steps are introduced, which require to be seen to be understood.

CEMENT.—This term includes all those substances employed for the purpose of causing the adhesion of two or more bodies, whether originally separate, or divided by a fracture. As the substances that are required to be joined together are exceedingly various, and differ very much in their properties, texture, &c., a variety of cements possessing very different characteristics are employed. The following will be found to include all those that are best calculated for domestic manipulation: CHEESE CEMENT, *for earthenware, &c.*—Grated cheese, 2 parts; quicklime (in fine powder), 1 part; white of egg, sufficient; beat to a paste. CURD CEMENT, *for glass and earthenware.*—Obtain curd by adding vinegar or rennet to milk; add a little white of egg and powdered quicklime; beat the whole into a paste. CHINESE CEMENT, *for glass, china, fancy work, jewellery, &c.*—Finest pale orange shell-lac (broken small), one part; rectified spirit (strongest) two parts; digested together in a corked bottle in a warm place until dissolved. It should have about the consistence of treacle. DIAMOND CEMENT, *for glass, china, and polished steel.*—Dissolve five or six pieces of gum mastic, each the size of a large pea, in as much rectified spirit of wine as will serve to render it liquid; and in another vessel dissolve as much isinglass, previously softened a little in water (though none of the water must be used) in as much French brandy or good rum as will make a two ounce phialful of strong cement, adding two small pieces of gum galbanum or ammoniacum, which must be rubbed or ground till they are dissolved. Then mix the whole with a sufficient heat. Keep the glue in a phial closely stopped, and when it is to be used, set the phial in boiling water. EGG CEMENT, *for earthenware, glass, china, marble, alabaster, spar ornaments, &c.*—White of egg thickened with finely powdered quicklime. PARABOLIC CEMENT, *for glass earthenware, &c.*—Curdle skim milk with rennet or vinegar, press out the whey and dry the curd by a very gentle heat, but as quickly as possible. When it has become quite dry, grind it in a coffee or pepper mill, and afterwards triturate it in a mortar until reduced to a very fine powder. Mix this powder with one-tenth of its weight of new dry quicklime, also in a very fine powder, and to every ounce of the mixture add six grains of powdered camphor, triturate the whole well together, and keep it in small wide-mouthed phials, well corked. When required for use make into paste with water, and apply immediately.

In the application of cement many persons entertain a misconception which ought to be removed. Generally speaking, persons imagine that the thicker the cement is put on the edges, the firmer and readier the junction will be; whereas the exact opposite is the fact, the *thinner* the stratum of interposed cement the stronger will be the junction of the surfaces operated upon. And to effect this purpose the cement should be lightly applied to the edges of the fracture by means of a feather. See BOTTLE CEMENT, FIREPROOF, WATERPROOF, &c.

CERATE SIMPLE. — A composition of equal parts of yellow wax and olive oil, used alone as an emollient application to sores, or as a base to compound more active ointments.

CEREMONIES, MASTER OF.—A person appointed to arrange the dances at balls and to attend to the general conduct of the ball-room. He is the person with whom all complaints are lodged, and to whom the wishes of the dancers individually and collectively are made known. The master of the ceremonies is delegated with a certain amount of authority for the time being, which it is agreed on all hands to respect. He is supposed to preside over the comfort and happiness of the assembly generally, and it is a mark of ill-nature and question-

able taste, for any individual to obstruct and molest him in the performance of his duties. At assembly-rooms where a permanent master of the ceremonies is retained, he is supposed to be acquainted with the names, and, to a certain extent, the position of the frequenters of the rooms; and it is through him that the introduction of persons previously strangers to each other may be made. He is also the proper person to provide partners for dancers who are in want of them. The qualifications for a master of the ceremonies are, a perfect knowledge of dancing, a correct ear for music, a quick eye, energetic will, and unfailing urbanity and good temper. He must also be intimately acquainted with all the amenities and observances of social life. Finally, he should be somewhat above the middle height, of a light figure, neatly and appropriately dressed, and a gentleman in appearance, language, and manners.

CERTIORARI. — A writ directed to a judge of an inferior court directing him to certify or to return the record of a cause depending before him to a superior court, to the end that the party may have more sure and speedy justice; for instance, in criminal cases, a certiorari may issue at any time before trial, directing the removal of an indictment into the Court of Queen's Bench.

CERVELAS.—Chop up some fat streaky pork, with parsley, shalots, and a little garlic; season well with pepper, salt, and allspice; fill skins rather shorter and wider than those used ordinarily for sausages, and boil slowly for two or three hours.

CHAD GRILLED.—After having cleaned the chad, put it on a dish with a gill of Florence oil; add salt and pepper, and let it remain in this seasoning for an hour. Broil it over a slow fire, and serve with caper sauce.

CHAFF.—A food for horses, produced by cutting up hay with straw in a machine for that purpose. Sometimes it serves as an auxiliary for other food, and in many instances it is given alone. With hard worked horses, where it is desirable that the meal should be despatched as soon as possible, and rest taken immediately afterwards, feeding with chaff is generally practised. But in private stables, where there is no such object in view, chaff is only useful from the economical motive of inducing the horse to chew his corn, and as this object is thoroughly accomplished a regular supply is desirable. The best plan of all is to mix straw and clover with upland hay, in the proportion of nearly two of straw to one of hay.

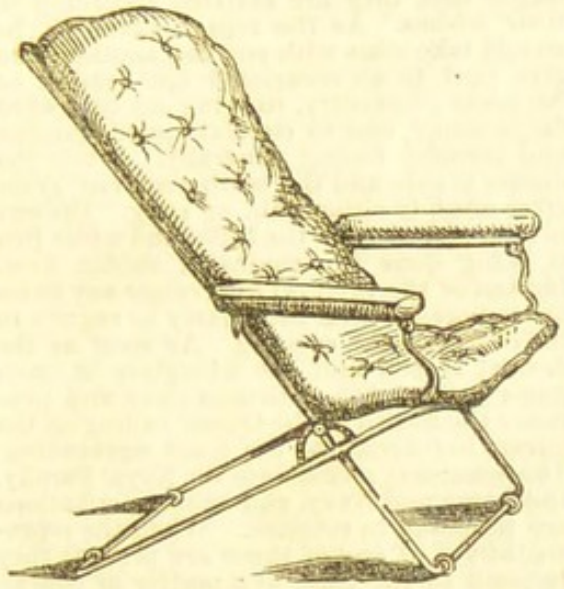
CHAFFINCH.—This bird is about the size of the house sparrow. The beak, which is conical, is white in winter, but at the time of pairing, when the bird begins to sing, it becomes dark blue, and remains so until the moulting season. The colour of the beak is therefore a sign whether or not the bird has begun to sing. The female is easily distinguished from the male, being smaller; the colour of the head, neck, and upper part of the back, is grayish brown; on the lower part, a light drab; and the breast reddish gray. The natural food of this bird in summer consists chiefly of insects, and in winter of seeds and grain. In confinement it may be fed upon rapeseed soaked in water the previous day, with occasionally a very little hempseed, green chickweed and plantain,

with now and then a little lettuce leaf, or slice of apple. It should also have mealworms and ants' eggs, and occasionally a little meat cut very small. Chaffinches are generally very ill at the moulting season, and frequently die. The bird, at this juncture, should be well fed with insects, meat cut very small, and bread boiled in milk. Its other diseases are generally cured by saffron or a rusty nail being put into its water. It should at all times be supplied with a large bathing-pan, the water in which should be changed every day. The feet of this bird frequently become swelled and covered with scales, which should be removed with a very sharp knife; and if the feet become sore, they should be dressed with lard or butter.

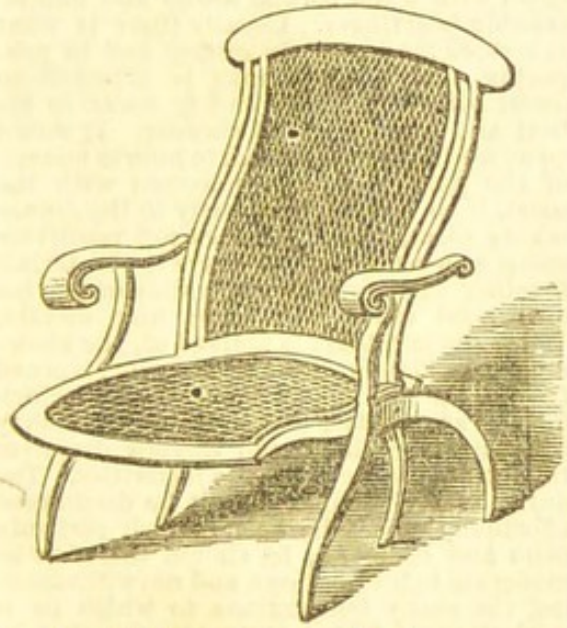
CHAFING IN INFANTS.—From a neglect of proper cleanliness, infants are very apt to become chafed in the wrinkles of the neck, behind the ears, and other parts of the body. To remedy this, the excoriated parts should be bathed twice or thrice a day with a little warm milk and water, and afterwards dusted with violet powder. In aggravated excoriation, a wash composed of two parts of rectified spirits and one of water, may be used. Great caution should, however, be observed in drying up discharges behind the ears of infants, as bad consequences are apt to ensue from an injudicious use of repellent applications in such cases. In some infants of a gross habit, and particularly about the time of teething, a species of excoriation sometimes appears low down in the neck, which at length degenerates into large deep sores, sometimes terminating in gangrene. To these fomentations of cinchona bark should be applied, and mild aperients administered at the same time.

CHAIR.—In the construction of chairs, comfort, elegance, and adaptability are alike to be studied. Chairs used in parlours and

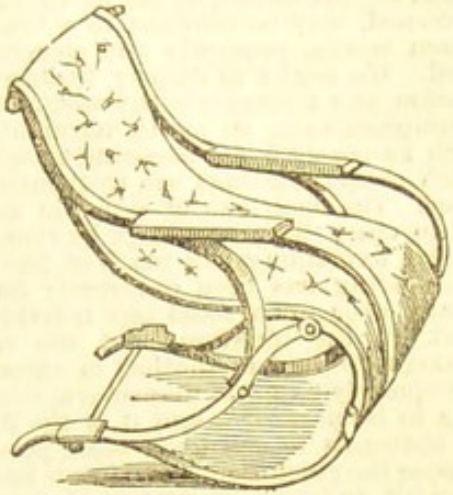
dining-rooms, should be substantially made and of capacious dimensions; those for drawing-rooms, light and tasty; and for bed-chambers and dressing rooms, neat and plain. To persons who are in the habit of sitting for many hours at a time, it is of the first importance that the shape of the chair be such that the weight of the body may not press unequally upon it. For this purpose both the seat and back of the chair should be of convenient depth and breadth. Many varieties of chairs are made with this view, and several improvements have lately come into vogue. The *reclining chair* is one



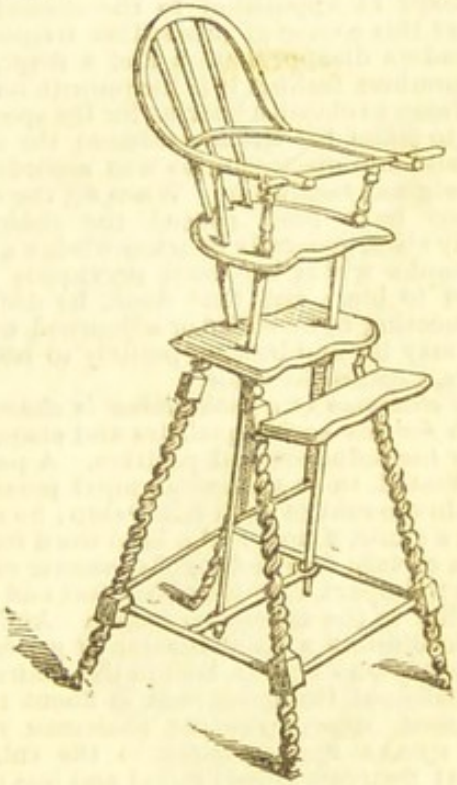
especially adapted for ease and comfort, being so constructed as to accommodate the body in any posture from the recumbent to the perpendicular. The *Derby chair* possesses



the two-fold advantage of being easy and portable, as it is made to fold up into a compact form, and may be carried from place to place without materially increasing the bulk of the luggage. The *rocking chair* is of American invention, and affords a delightful seat; by the mere movement of the body this chair rocks to and fro with an easy and regular motion, and will stand still when it is so desired. The rocking chair is especially adapted for persons of a nervous and irritable temperament, the oscillating motion tending to soothe and allay the nervous system by



congenial exercise. It is also the fact that many persons are able to obtain sleep almost at will after being seated in a chair of this description for a few minutes. The *nursing chair* is an excellent contrivance for lighten-



ing the labours of the nurse as well as pleasing the child. The infant is placed in the chair as seen in the engraving, with its feet resting on the board in front, and being protected by a rail from falling out. When the child is seated the weight of its body acts upon springs placed beneath, and it is moved up and down with an easy and regular motion, and without being subjected to those hazards which are frequently entailed by being tossed about in a person's arms.

CHAIRMAN.—Under this title is comprehended the person who is selected at a public meeting or a dinner to preside over the assembly. The chairman of a public meeting is generally a person of influence and position; he need not necessarily be an orator, for his duties, so far as speaking is concerned, may be confined to a few aptly chosen words, promptly and clearly delivered. He ought to display firmness and decision, and a bearing both conciliatory and uncompromising, so as to harmonize as much as possible the opposing elements of which public meetings are frequently composed. The chairman of a public meeting has to open the proceedings by rising and shortly explaining the motives for which the meeting has been convened; he then usually calls upon some one individual to speak to the question, and the various speakers follow one another in succession. It frequently happens that several *resolutions* have to be proposed, and it is the duty of the chairman to call upon some person to propose the resolution, and after it has been seconded, to ask the meeting to declare their opinion by *holding up their hands*. If the majority of hands be held up in favour of the resolution, it is then declared to be carried; others are successively disposed of in the same manner. Sometimes an *amendment* is proposed in opposition to the resolution; and as this course of proceeding frequently engenders disapprobation and a display of acrimonious feeling, it is incumbent on the chairman to obtain a hearing for the speaker, and to claim for the amendment the same free and fair discussion as was accorded to the original resolution. When all the resolutions have been passed, the chairman finally rises, generally to acknowledge a vote of thanks which has been previously proposed to him; and that done, he declares the meeting to be ended or adjourned, as the case may be, and bowing politely to his auditors, vacates the chair.

The chairman of a public dinner is chosen as much for his social qualities and eloquence as for his influence and position. A person so situated, to be successful, must possess a certain amount of good fellowship; he must have a smile, a nod, and a kind word for all, and a certain free and joyous manner calculated to impart a feeling of comfort and conviviality to the assembled guests. At large public dinners a toast-master is generally provided, who stands behind the chairman, and calls out the toast that is about to be proposed, whereupon the chairman rises, and speaks appropriately to the subject. But at festivals more limited and less ceremonious, and where a chairman appears to the best or worst advantage, he has to propose the toasts himself; and upon each occasion of his rising the vice-chairman, who faces him, or some person who sits by his side, claims the silence and attention of the guests by rapping on the table with a hammer provided for that purpose. Independent of the toasts incidental to the particular meeting, there are usually a round of loyal and patriotic sentiments proposed; these are taken in their order ,and together with any others written down on a slip of paper, which the chairman has by him, and which should be ticked off or marked out as they are disposed of. As soon as the chairman receives intimation that all the guests or the majority of them are assembled, and the table duly provisioned, he knocks on the table, and either says grace himself or calls upon some person to do so; the covers are then removed, and the chairman's duties begin. At this period of the dinner, he should chiefly study those placed near him, and who are generally supposed to be the most honoured guests, assisting them or seeing that they are assisted according to their wishes. As the repast advances, he should take wine with one and another, and give vent to an occasional apt remark or harmless pleasantry, to bring out backward dispositions, and to circulate good humour and friendly feeling generally. When the dinner is over and the cloth removed, grace after meat is either said or sung. Dessert is then placed upon the table, and while this is being done the chairman should avail himself of the interval to arrange any notes or memoranda that he is likely to require in the course of the evening. As soon as the dessert is set, and the wineglass of each guest is filled, the chairman rises and proposes the health of the Queen, calling on the guests to respond to the toast upstanding. The remaining members of the Royal Family, the Army and Navy, and other institutions are proposed in rotation. When the representatives of any of these are present they respond to the toast as a matter of course, and if there is any nice point to decide, or hesitation in the matter, the chairman may indicate such person as he deems most fit to reply. In all of these *routine toasts* the chairman should avoid prolixity, and dismiss them with a few cordial words and unmistakable heartiness. Usually there is what is termed *the toast of the evening*, and in proposing this the chairman is expected to dwell somewhat fully, and to speak in his best and most eloquent manner. It would be as well for the chairman to inform himself of the particulars in connection with the toast, if so needed, previously to the dinner taking place, and if he does not positively compose a set speech, to weave the materials together with such apposite allusions as his own good sense and taste may dictate. When the last toast is arrived at, the chairman intimates the fact; and having returned thanks for his health being drunk, which follows as a matter of course, he is at liberty to vacate the chair, and thereby dissolves the formal character of the festivities. The duties of a chairman cannot be discharged effectually unless he keep himself perfectly calm and collected; he should therefore be moderate in his libations, and notwithstanding the many temptations to which he is subject, avoid taking any more wine than he feels sure is beneficial for him. If unhappily any display of ill-feeling should obtrude itself among any of the guests, the chairman should promptly interfere, and courteously appeal to the better feelings of the contending parties. In short, the combined happiness and

comfort of a certain body of persons are, to a great extent, placed under the control of the chairman, and it is to him that the successful or unsuccessful issue of the dinner is mainly attributable.

CHALK. — A carbonate of lime, which exists in the hills and cliffs of England. Chalk is extremely useful for many purposes. Calcined like common lime, it is used for manure and for cement, in polishing metals and glass, also as a marking material, and in painting, whitewashing, and various other processes. Chalk has also medicinal properties: it is used internally in diarrhœa in the form of mixture, and externally as an application to burns, scalds, and excoriations.

CHALYBEATES. — Medicines containing iron. Chalybeate waters are, by virtue of the iron they contain, powerful tonics, and well adapted as curative agents in diseases of debility generally. Before having recourse to them, however, medical advice should always be taken. The more generally used chalybeate springs in this country are Tunbridge Wells, Cheltenham, and Scarborough; Leamington and Harrogate also possess chalybeate waters; and Hartfall and Peterhead, in Scotland.

CHAMPAGNE. — A wine made in the south of France, and exported in large quantities to England. There are many kinds of champagne, but the best are those which froth slightly. They are improved in the drinking by ice, which tends to repress the effervescence. Though one of the most delicious wines, champagne ought to be indulged in with great precaution. The piquancy of flavour and the sparkling brilliancy, are mainly derived from the presence of an acid, which, if not counteracted, is productive of deleterious consequences. The alcohol it contains is, though much less than the strongest of port or Madeira, peculiarly exciting, and stimulates the stomach to a greater action than it can well bear. Habitual indulgence in champagne has a tendency to produce gout, apoplexy, &c., with all the accompaniments of deranged digestion. A few grains of carbonate of soda thrown into the wineglass will obviate some of the ill effects, although it somewhat interferes with both the taste and appearance of the wine. To accomplish the same end, a little magnesia may be taken a few hours afterwards in a separate form.

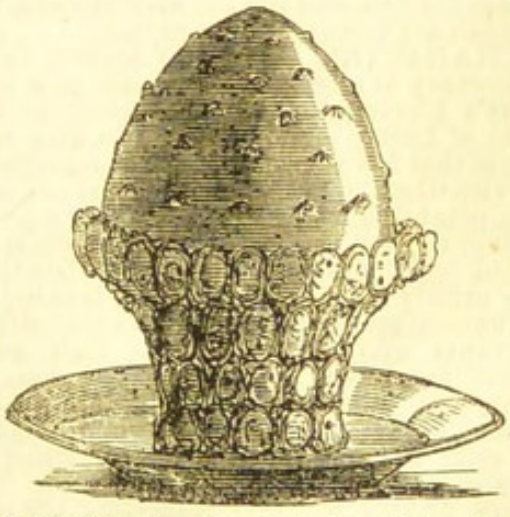
CHAMPAGNE BRITISH, RED.—Crush forty quarts of ripe green gooseberries in a tub, pour on them ten gallons of soft water that has been well boiled, and become cold, add three pounds of sliced beetroots that have been boiled for twenty minutes, without breaking their skins, stir all well together and leave them to steep for four days covered up, stirring well three times daily; strain the liquor and filter it through a flannel bag into the cask, add thirty pounds of loaf sugar in small lumps, two ounces of bruised ginger, the thin rinds of four lemons, and an ounce of isinglass dissolved in a quart of liquor; leave the bung out until the fermentation has ceased, then add a quart of brandy, put in the bung, and secure it with paper and sand. Keep it in a cool cellar for twelve months, then put it in champagne bottles, wire the corks and seal them. It will be in high perfection in six months more.

☞ Gooseberries, 40 quarts; water, 10 gallons; beetroots, 3lbs; sugar, 30lbs; ginger, 2ozs; lemon rinds, 4; isinglass, 1 oz (dissolved in a quart of liquor); brandy, 1 quart.

CHAMPAGNE BRITISH, WHITE. — Slice thirty pounds of fresh-gathered rhubarb stalks into a clean vessel, put upon them a peck of the tops of young spring nettles bruised or shred, and two ounces of best ginger sliced. Boil ten gallons of soft water for three-quarters of an hour, with thirty pounds of loaf sugar and the whites of twelve eggs well beaten, skimming the whole until it is perfectly clear. Pour this liquor boiling hot upon the nettles, and covering close, let them infuse for three or four days, stirring it well after the steam has subsided, and twice each day. Then strain the liquor into a clean vessel, and filter it through a jelly bag into a ten-gallon cask upon the thin rind of four lemons and four ounces of white sugar candy; fill the cask completely, put in the bung lightly, or cover the bung-hole with a tile, and when it has ceased fermenting add a quart of pale brandy, and stop it up for a year or more. Then draw it off into champagne bottles, fasten the corks with wire, and seal with green wax. It should be kept a year longer to be in perfection, and in a cool, dry cellar.

☞ Rhubarb, 30lbs; nettles, 1 peck; ginger, 2ozs; water, 10 gallons; sugar, 30lbs; eggs, 12 whites; lemon rinds, 4; sugar candy, ¼lb; brandy, pale, 1 quart.

CHANTILLY BASKET. — Bake sweet biscuits quite crisp, have ready some sugar clarified and boiled to crackling height. Stick a small skewer into each biscuit, and dip its edge in the sugar. Fix them one by one, as dipped, round a dish or mould that will shape the basket. When one row is done, begin another. The candied sugar



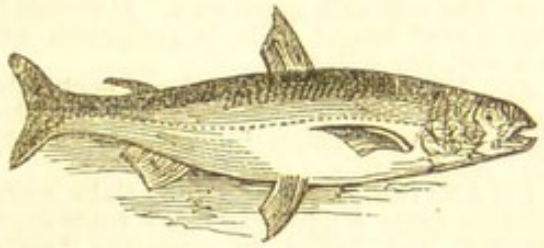
will make the biscuits instantly stick. Three or four tiers will be high enough. An ornamental border of coloured drops of gum-paste may be given to the basket. Any dry sweetmeat may be served in this basket, being previously lined with tissue paper.

The engraving illustrates a Chantilly basket, containing a tipsy cake, stuck over with almonds.

CHAPPED HANDS.—This troublesome complaint is caused by the action of the wind and frost on the skin. It may be avoided in a great measure by drying the hands thoroughly after washing them, and by never using warm water to wash with. When they have already appeared, however, the following lotion will be found useful:—borax, two scruples; glycerine, half an ounce; water, seven and a half ounces. This may be used twice a day.

CHAPPED LIPS.—Put into a tin saucepan a quarter of an ounce of benjamin, storax, and spermaceti, half an ounce of alkanet root, a large juicy apple chopped, a quarter of a pound of fresh butter, and two ounces of beeswax; simmer the ingredients together till all be dissolved, and strain it through linen. When cold melt it again, and pour it into small pots.

CHAR.—This fish seldom ventures into a running stream; its principal resort being the lakes of the colder regions. Very fine char have been found in the lakes of Westmoreland. The char is somewhat like the trout, but more slender and longer. The colour of the back is an olive green variegated with spots of a dusky white, and others of



a dull yellow. The belly is of a pale red, and in the female approaches to white. The whole body is covered with very minute scales. The manner of taking this fish is with nets, which are furnished with bait to allure the fish, and left for several days, till the fish are known to have entered.

CHARACTER OF SERVANTS.—It is customary to receive testimonials of a servant's trustworthiness and ability at the time of hiring them, and also to give servants that have formerly been in a person's service what is termed a character. Upon this point it is necessary to exercise a great deal of caution and discernment, in order to avoid being cheated with testimonials that are utterly false. For instance, it is not at all uncommon for dishonest persons—either servants who have sacrificed their good name for some previous indiscretion, or others whose sole aim is to obtain an introduction into a house with an evil design—to refer to some imaginary late employer, living at a distance, for a reference. The letter making inquiries respecting the servant is obtained possession of, and answered by some person in communication with the supposed servant, or even by the impostor himself. The testimonials given are of course the most flattering, and the unsuspecting employer unconsciously admits a thief, or even worse, into his house. Therefore no reference should be accepted unless it is a personal one. But even in these cases fraud is sometimes practised, and for the sake of a fee there are dishonest persons willing to vouch for the honesty and good qualities of persons of whom they know nothing. In these matters, therefore, an employer should exercise judgment and discretion, and if there is any circumstance that gives rise to suspicion in the most trifling degree, refuse to have anything more to say in the affair. With regard to the giving of characters by employers, it is established that an employer is not bound to give a servant a character; but if a character be given, it must be a true one; otherwise, if a servant is in a position to prove that he has sustained injury by a false and malicious character being given of him, an action for damages will lie against the person so giving it. But if the character be given without malice and to the best of his knowledge, no action lies.

It is customary with servants who have been in a particular employment at some distance of time previously, to return to their former employer, and ask him to give them a character, the idea being to impress persons into whose service they wish to enter with the belief that they have only recently left the employer whose testimonials they produce. Now, as it is possible that a servant may behave himself very well in one situation, and grossly misconduct himself in a subsequent one, an employer giving a character under the assumption before stated, clearly becomes a party to a species of fraud, and renders himself liable to very disagreeable consequences: at the same time the servant may have conducted himself properly, but owing to his last employers having left the country or died, or from some other cause, they cannot be personally referred to. In such a dilemma, therefore, it would be unjust to withhold the testimonials asked for; and in either case the servant may be obliged, and ill consequences averted, by simply stating the date when the servant left the particular employment, leaving the inquirer to act as he may think fit, with regard to the subsequent interval. In these transactions it behoves both the master and servant to speak truthfully, and to act in good faith, so that neither party concerned may sustain wrong or injury.

The penalties attaching to false characters are, that if any person falsely personate any master or mistress in order to give a servant a character; or if any master or mistress knowingly give in writing a false character of a servant, or account of his former service; or if any servant bring a false character, or alter a certificate of character, the offender forfeits upon conviction £20, with 10s. costs.

CHARADE. — A drawing-room entertainment both amusing and intellectual, in which any of the guests may become actors. For these performances a room with folding doors is the most suitable. At the further end of the room something like a stage is erected, with appropriate scenery contrived

from various household appliances. Characters dressed in costumes made up of handkerchiefs, coats, shawls, table covers, &c., then come on and perform an extempore play. This play is devised from a word of two or more syllables, each syllable expressing some familiar object, and the action and dialogue of the play are so ordered as to illustrate the word selected without actually uttering it.

By way of illustration, suppose that the word selected is *Band-age*. For the performance of this we may conceive the following characters:—Sir Anteek Yellowleaf, a rich old merchant from India; Lillie and Olivia, his nieces; Brown, Jones, and Robinson, their friends. The first scene represents a drawing-room, and Lillie and Olivia are discovered seated at table; they then enter into conversation, the gist of which is that they intend that night serenading their uncle, Sir Anteek, with the "waits," in celebration of his return to his native country, after an absence of fifty years. While thus discoursing, enter their three friends, Brown, Jones, and Robinson, dressed as street performers, and bringing in music-books and instruments (or where real instruments cannot be procured, suitable imitations of the voice may be substituted); the plan of serenading is then concerted, the performers go off to carry out the scheme, the young ladies retire, and the scene closes, having thus represented the word *Band*. *Scene* 2 represents an ante-room with a door at the back made to open and shut. *Enter* Sir Anteek Yellowleaf as from a bedroom, attired in dressing-gown, night-cap, and slippers, and carrying a chamber-candlestick. Sir Anteek appears very irritable, declares that the noise is so great that he cannot get a wink of sleep; and after denouncing everything and everybody, returns to his room. Lillie and Olivia then peep on from opposite corners, and stealthily approach. Sir Anteek disturbed by their footsteps, again comes out, and while he is doing so Olivia and Lillie steal off. Sir Anteek returns again to his room in a fury. At this juncture music is heard from without, faintly at first, and gradually louder; whereupon Sir Anteek rushes out in a great passion, with a water jug; after venting some of his spleen, he goes off at side; a crash is heard; the music ceases; and Sir Anteek returns looking pale and angry, thus representing the word *Age*. *Scene closes*. *Scene* 3 represents a breakfast parlour, Lillie and Olivia seated, and a vacant arm chair near the table; after a short conversation between the nieces, the uncle enters, who appears to be dreadfully alarmed by the supposition that in throwing the water jug out of the window he has sacrificed some person's life; while in this dilemma the servant enters, and announces the arrival of Messrs. Brown, Jones, and Robinson, who come on in their usual attire; but Brown has his head enveloped in a cloth, and is supported by his two friends; an explanation then ensues. Brown intimates that he is only slightly bruised, Sir Anteek apologizes; they all shake hands, and the end of this scene and the charade are both brought about, having thus illustrated the word *Bandage*.

The following is a limited list of words adapted for acting charades:—

Bag-dad	In-mate
Bar-gain	Key-stone
Boat-man	Kit-ten
Brace-let	Know-ledge
Break-fast	Land-lady
Bride-groom	Leap-frog
Broad-cloth	Life-guard
Bull-dog	Mag-pie
Car-pet	Mis-judge
Chair-man	Nan-keen
Cork-screw	Out-cry
Court-ship	Pad-lock
Death-watch	Pass-over
Ear-ring	Pick-pocket
Fare-well	Quick-silver
Fire-pan	Rid-dance
Foot-stool	Second-hand
Gun-powder	Thread-bare
Honey-comb	Toad-stool.

CHARCOAL.—A form of carbon obtained by burning wood with the imperfect access of air, or by heating or distilling it in iron cylinders so constructed as to allow of the collection of the volatile products. Charcoal, exclusive of its important use as a fuel, is possessed of some curious and valuable properties. It is a very bad conductor of heat; and hence powdered charcoal is used to surround tubes and vessels which are required to retain their heat. It is not injured by air and moisture, for which reason stakes and piles are superficially charred to preserve them. It is infusible; and provided air be carefully excluded, it undergoes no change in most intense heats. It not only absorbs air and moisture, but also the colouring and odoriferous parts of many animal and vegetable substances. Tainted flesh and putrid water are thus sweetened by the action of powdered charcoal. *Animal charcoal* is obtained by burning bone, or the clippings of hides, leather, &c. *Common charcoal* intended merely for fuel is prepared by cutting pieces of wood from one to three inches in diameter, into lengths of from one to three feet, forming them into a conical pile, and burning them to the required extent beneath a covering of turf or earth. *Cylinder charcoal* is obtained by distilling woods which are free from resin; this is employed in the manufacture of gunpowder. In *medicine* charcoal is principally used as an antiseptic or disinfectant, either in the form of a powder or made into a poultice. Used as a *dentifrice*, the teeth are rendered white and the breath sweet by it, where a scorbutic disposition of the gums exists.

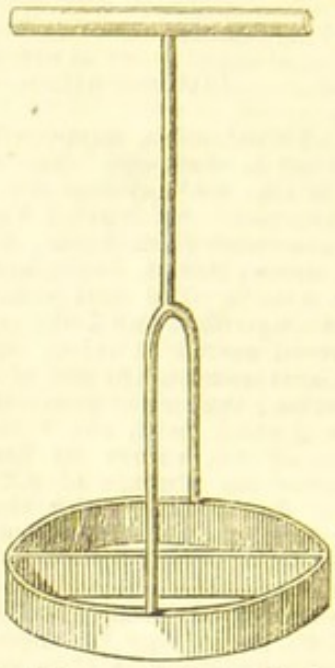
CHARCOAL, CAUTIONS RESPECTING.—Although charcoal is an economical fuel, it is by no means conducive to health, and is sometimes attended with dangerous consequences. Wherever charcoal is burnt a vessel of boiling water should be set over the burning fuel, the steam from which will counteract the dangerous fumes of the carbon. If a little vinegar be added, persons will be much less liable to headaches than they otherwise are. When a person has inhaled

the fumes of charcoal to such a degree as to become insensible, he should be immediately removed into the open air, cold water dashed on the head and body, the nostrils and lungs stimulated by hartshorn, at the same time rubbing the chest briskly.

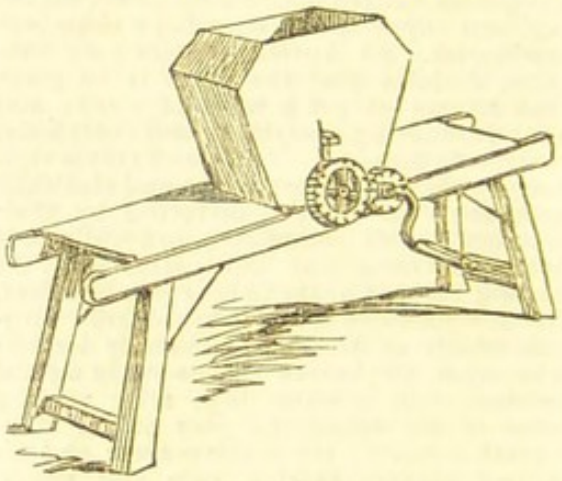
CHARITIES.—See CLOTHING CLUBS, INDUSTRIAL SOCIETIES, REFUGES FOR DESTITUTE, &c.

CHARWOMAN.—An occasional servant, usually hired for short periods, as the week, day, or hour. Although among this class of women there are many who are respectable and trustworthy, it is notorious that a large proportion of them are addicted to two besetting sins; pilfering and drunkenness. This may be partially accounted for by the fact, that their aid is generally called in when the household is disorganized, by the illness of the mistress, a domestic calamity, or some other distracting cause, which gives the charwoman opportunities for committing irregularities which servants generally, in a well ordered household, would never have. If occasion demand the assistance of a charwoman, therefore, the best way is to apply to some householder long resident in the neighbourhood, or to a respectable shopkeeper, such as the grocer, cheesemonger, or baker. The terms usually asked by charwomen are from one shilling and sixpence and upwards per day, together with their food and drink.

CHEESE.—The process of cheese-making in England differs somewhat in particulars, but the general principles and mode of manufacture do not vary essentially. The *utensils* required in cheese-making are a tub in which the milk is coagulated and the curd broken; a curd cutter; a curd breaker; a drainer to lay across the tub while the whey is straining from the curd; vats for forming the cheese; a cheese press; a furnace and pot for heating water and milk. Previously to commencing the process of making cheese, besides the milk, two materials must be ready for use—the rennet for coagulating the milk, and the substance for colouring the cheese, if the latter is to be employed. A calf's stomach is usually recommended for rennet; but as they are not always obtainable, a pig's stomach will answer the purpose. Let the inside skin of the stomach be taken out, any entrails on it removed, and the skin wiped clean with a cloth, but not washed. When the rennet is to be used, a brine of salt and barley-water, sufficiently strong to float an egg, is made, strained through a cloth, and left to cool. One skin is allowed to remain in three pints of brine in a jar, tied down for three or four days, when the coagulating strength of the brine is tested by pouring a drop or two into a teacupful of lukewarm milk; and when considered strong enough, the skin is taken out, bottled, and tightly corked for use. Half a teacupful of liquid rennet will coagulate as much milk as will make a cheese of 15lbs. weight. The *curd-cutter*, as seen in the engraving, is held by either one or both hands, and, on the instrument being used in a perpendicular direction and pressed down, it cuts the curd into as small pieces as are wished in the tub. The *curd-breaker* is represented in the following figure:—On using this machine, the curd cut in slices is placed in small tubs on the boarding; and

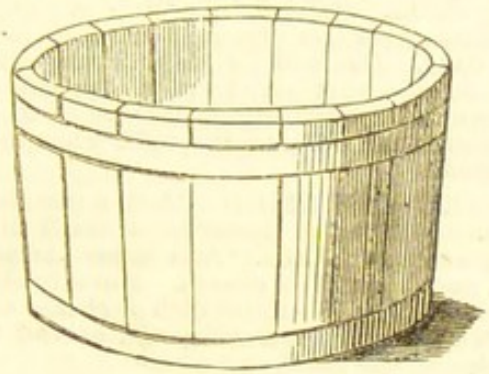


on a slice being put into the hopper, the winch-handle is moved round, and the curd is cut in pieces by the teeth, not exceeding a quarter of an inch in size. A tub is placed below the hopper to receive the cut curd as it descends. In this way one person may

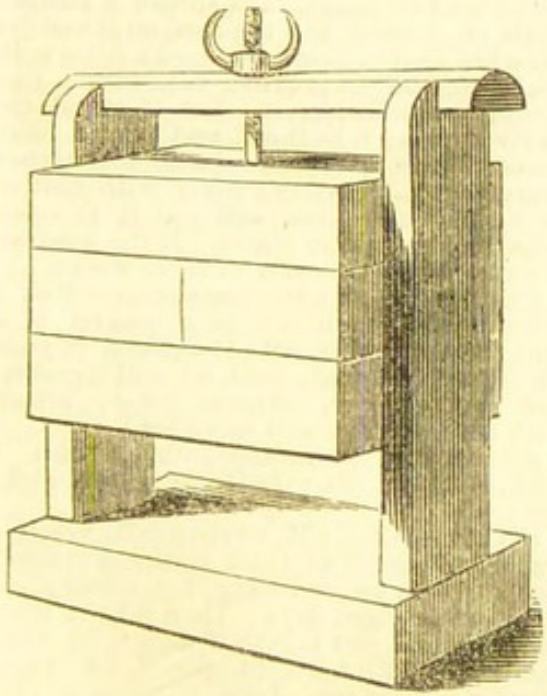


feed the slices into the hopper and drive the machine; but the process of curd-cutting is much expedited by one person feeding the hopper with slices, while another drives the handle of the machine. The curd, being reduced small enough, is salted to please the taste, with salt finely ground. After being salted the curd is put into a cheese-cloth, spread over a cheese vat, and firmly packed into the vat above its edge, and on the curd being covered with the remainder of the same cloth, the vat is placed in the cheese-press and subjected to pressure; upon which a quantity of whey exudes by the holes in the bottom of the vat. In the course of two hours or more, the cheese is turned out of the vat; a clean dry cheese-

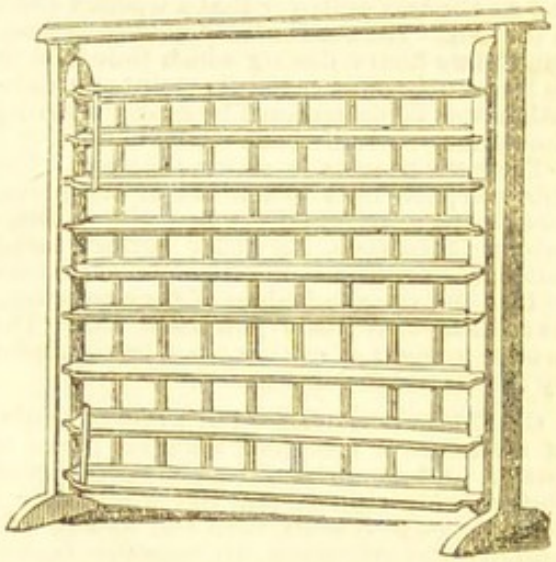
cloth put in; the cheese replaced into it upside down, and again subjected to increased pressure in the press. Should whey continue to exude, the cheese must again be taken out of the vat, a clean cloth substituted, and frequently renewed, and the pressure increased, as long as any whey exudes; but if the previous operations have been properly performed, the exudity should cease in about twelve hours, after which the pressure is continued until the press is wanted for a new cheese on the second day. The common *cheese-vat* or *chessart* is shown



in the accompanying illustration, the form varying according to that designed for the cheese. It is made of elm staves, hooped with iron, and the bottom pierced with holes, to allow the whey expressed to flow away. A wooden cover to fit the vat exactly is also a part of the utensil. In Cheshire, cheese-vats are made of tin pierced both at the bottom and the side. Of the *cheese press* the varieties are very numerous, but the old stone press, and the combined lever press, are those most commonly in use. The common stone cheese-press is shown in the



annexed figure; where presses of this kind are used, the cheese is subject to three degrees of pressure, the first being a quarter of a ton, the second half a ton, and the third and last, one ton. The cheese is then put into the cheese-room, and protected from excessive heat, drought, or damp at first, heat causing new cheeses to sweat; drought dries them too quickly and induces them to crack; and damp prevents them hardening, and induces a bitter taste. Exposed to a cool, dry, and calm air upon the shelves, the cheeses will dry by degrees and obtain a firm skin. The cheeses should be wiped with a dry cloth to remove any moisture, and turned daily. Some cheeses burst and throw out a serous-like fluid, in consequence of whey fermenting, which ought to have been pressed out. A cheese that changes its shape indicates some organic change going on within; but if it do not crack so as to admit the air, it will soon become ripe, and probably of fine flavour. The *cheese turner* is an invention designed to save much of the labour required



in the daily turning of a large number of cheeses in the drying-room. A cheese turner may be constructed to stand alone; or be fastened to the floor at the bottom and the joisting overhead. The moveable frame or rack is formed by two interior posts, and upon these, twelve shelves are framed, each fourteen inches broad, or more, according to the sizes of the cheeses manufactured. The shelf-frame thus formed is provided with two strong iron pivots fixed in the side posts at mid-height, and these are received into corresponding holes in the outer posts, so that the shelf-frame swings poised upon two pivots; it is further provided with an iron latch at top and bottom by which it may be tilted and secured with either the top or bottom shelf uppermost. The *colouring of cheese* is a general custom, but not a necessary operation; annatto is chiefly employed for this purpose. The usual mode of application, is to dip a piece of the requisite weight in a bowl of milk, and rub it on a smooth stone, until the milk assumes a deep-red colour. This infusion without the sediment, which is separated by standing a little, is to be added to the milk of which cheese is intended to be made, in such quantity as will impart to the whole a bright

orange colour. The addition of annatto in no way effects the smell or taste.

The *milk intended for making cheese* should be carefully passed through the sieve placed on the ladder over the cheese-tub, and, for the very best cheese, that produced at a single milking is preferable. The degree of heat most favourable for coagulation by rennet is from eighty-five to ninety degrees; if it is below eighty-five degrees, the milk must be brought to that temperature by artificial means. The proportions of rennet and colouring must be regulated by experience and practice. If there is too little rennet, the milk will not turn; if there is too much, the cheese will be apt to heave and to be rank and strong. A handful or two of salt added previously to mixing the rennet will promote coagulation. After all the materials are put into the tub, the whole is well stirred together, a wooden cover is put on the tub, and over that a woollen cloth is thrown. The usual *time of curdling* is from one to two hours, during which time it is to be frequently examined; the point of coagulation may be determined by gently pressing the surface with the back of the hand.

The next process is *salting the cheese.* For this purpose it is taken out of the press, and placed nearly mid-deep in the salting-tub for three days, its upper surface being uniformly covered over with salt; or instead of this, the sides and edges of the cheese may be rubbed with finely powdered salt. The precise amount of salting must be regulated by the size of the cheese.

CHEESE BOILED.—Put a tablespoonful of milk into a saucepan, with an ounce of butter, and a quarter of a pound of prime cheese finely grated; stir the whole over a slow fire until it boils, then add an egg well beaten; stir all thoroughly together, turn it into a dish, brown it with a salamander, and serve hot.

☞ Milk, 1 tablespoonful; butter, 1oz.; cheese, ¼lb.; egg, 1.

CHEESECAKE. — Beat eight eggs thoroughly while a quart of milk is boiling, and when it boils, put in the eggs and stir them till they come to a curd; then pour it out, and when it is cold, add a salt-spoonful of salt, two teaspoonfuls of rose-water, and three-quarters of a pound of currants well washed; put it into a puff paste and bake it. If tin patties are used for baking, they must be buttered; but if they are baked in glass or china, only an upper crust will be necessary.

☞ Eggs, 8; milk, 1 quart; salt, 1 salt-spoonful; rose-water, 2 teaspoonfuls; currants, ¾lb.

CHEESECAKE BREAD.—Slice a half-quartern loaf as thin as possible, pour on it a pint of boiling cream, let it stand for two hours; then take eight eggs, half a pound of butter, and a nutmeg grated, beat them well together, add half a pound of currants, and bake in patty-pans.

☞ Bread, half-quartern loaf; cream, 1 pint; eggs, 8; butter, ½lb.; nutmeg, 1; currants, ½lb.

CHEESE, BRITISH PARMESAN. — Heat the day's milk to a temperature of from seventy-five to seventy-seven degrees, and after it has settled, put in the rennet. When it has stood for an hour or more, place the coagulated milk on a slow clear fire, and heat it till the curd separates of itself. When separated, throw in cold water to reduce the temperature, and quickly collect the curd in a cloth, gathering it up at the corners. When drained, press it as other cheese. Next day it will be firm enough to turn. Let it dry slowly and gradually, often (at first about every hour) changing the wrapping-cloths. Rub it with a little salt daily, for three weeks, or plunge it in pickle for a few days. The curd for this, or any other cheese, may be coloured with a little saffron, or annatto, by putting a tincture of them, extracted in milk, to the milk when to be curdled.

CHEESE BRAISED.—Melt some slices of any rich mild cheese in a small dish, over a lamp or steam. Add butter and pepper, and mustard if chosen. Have ready a soft toast in a hot-water dish or cheese dish with a hot water reservoir, and spread the cheese on the toast.

CHEESE CRAB.—Cut some thin slices of any rich cheese, as Cheshire, double Gloucester, &c., and press them well with a knife, until it can be spread like butter. Then mix with it mustard, common and chili vinegar, cayenne pepper, salt, essence of anchovies, and any other sauce to taste. Mix all together thoroughly to a thick pulp.

CHEESE CREAM.—Put five quarts of the last of the milk into a pan with two tablespoonfuls of rennet. When the curd is produced, strike it down a few times with the skimming-dish, to break it. Leave it to stand for two hours, then spread a cheese-cloth on a sieve, put the curd on it and let the whey drain; break the curd a little with the hand, and put it into a vat, with a two pound weight upon it. Let it stand for twelve hours; take it out, and bind a fillet round. Turn it from one board to another every day, till it is dry; cover with nettles or clean dock leaves, and put it to ripen between two pewter plates. If the weather is warm, it will be ready in three weeks.

CHEESE CREAM, AMERICAN.—Melt a tablespoonful of butter in a quarter of a pint of cream: mix with it a pound of good cheese finely grated; beat all well together, and pour it over buttered toast; brown with a salamander and serve hot.

☞ Butter, 1 tablespoonful; cream, ¼ pint; cheese, 1lb.; buttered toast, sufficient.

CHEESE CREAM, WITHOUT RENNET.—Put any quantity of thick cream into a wet cloth. Tie it up, and hang it in a cool place for seven or eight days. Then take it from the cloth and put it into a mould (in another cloth) with a weight upon it, for two or three days longer. Turn it twice a day, when it will be fit for use.

CHEESE FRITTERS. — Pound good cheese with bread crumbs, raw yolks of eggs, rasped ham, and butter. Make this into

small oval balls; flatten, dip in stiff batter, and fry them.

CHEESE MELTED.—Grate two ounces each of good Cheshire and of Parmesan cheese; add the yolks of three eggs and four ounces of melted butter; mix them well together, add pepper and salt to taste, and then put to it the white of the eggs, which have been beaten separately; stir them lightly in, and bake the whole in a deep dish, but half full, as it will rise very much. Serve when quite hot.

☞ Cheese, Cheshire and Parmesan, 2ozs. each; eggs, 3; butter, ¼lb.; seasoning, to taste.

CHEESE POTTED.—Add to a pound of grated Cheshire cheese, three ounces of fresh butter, half a tablespoonful of sifted mace, and a teaspoonful of mustard. Mix all thoroughly in a marble mortar, put it into small pots, cover it with clarified butter, and set the pots in a cold, dry place.

☞ Cheshire cheese, 1lb.; butter, 3ozs.; mace, ½ teaspoonful; mustard, 1 teaspoonful.

CHEESE, PRESERVATION OF.—The portions of cheese in immediate use should be kept in a cool or rather damp place, and deposited in a covered pan. The other portion of the cheese not in use should be wrapped up in buttered paper, with an outer covering of brown paper. Dried pieces, when they cannot be presented at table, may be grated down, and employed in any of the preparations of the preceding receipts. Cheese may be ripened and made mellow by cutting a large hole in the centre, and filling it with good port wine or genuine porter.

CHEESE, PROPERTIES OF.—As an article of food, cheese is more wholesome when partaken of in small quantities, and accompanying other diet, than when eaten in large quantities or made a meal of. It is a generally received notion that cheese eaten at the conclusion of a dinner promotes digestion, its effects are however, of a negative kind, that is, by acting as a temporary stimulant on the stomach; and even this is the case only with sound old cheese, which is neither too fat nor too far advanced in the process of putrefaction. Decayed cheese and new cheese are both very unwholesome.

CHEESE PUDDING.—Grate Cheshire or any mild melting cheese, in the proportion of half a pound to two beaten eggs, with a little oiled butter, cream, and a tablespoonful of finely grated bread. Bake in a small dish lined with puff paste.

CHEESE PUFFS.—Strain some cheese-curd from the whey, and beat half a pint of it fine in a mortar, with a tablespoonful and a half of flour, the yolks of three eggs, and the white of one. Add two teaspoonfuls of orange-flower water, quarter of a nutmeg, and sugar sufficient to render slightly sweet. Lay a little of this paste, in small round cakes on a tin plate. Bake in a quick oven for fifteen or twenty minutes.

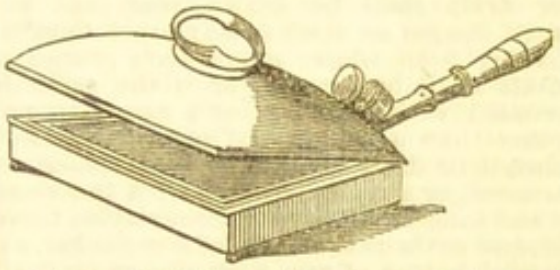
☞ Cheese-curd, ½ pint; flour, 1½ tablespoonful; eggs, 3 yolks, and 1 white; orange-flower water, 2 teaspoonfuls; nutmeg, ¼ of 1; sugar, to taste.

CHEESE SANDWICHES.—Take two parts of grated Parmesan or Cheshire cheese, one of butter, and a small proportion of made mustard; pound them in a mortar; cover slices of bread with a little of this, and lay over it slices of ham or any cured meat; cover with another slice of bread, press them together, and cut into mouthfuls that they may be lifted with a fork.

CHEESE SOUP.—Have ready some good stock; then take half a pound of new Gruyère cheese; grate half, and cut the remainder into thin slices. In an earthen pipkin put a thin layer of grated cheese with some bits of butter; cover this with thin slices of bread; then a layer of the cheese in slices; then bread; next grated cheese; continue this alternately till all the cheese is used. On the last layer, which ought to be sliced cheese, put some pieces of butter; moisten it with some of the stock; stew it till it adheres to the bottom, and the stock is all dried up; then add the remains of the stock with salt and pepper, and serve very hot.

CHEESE TOASTED.—This preparation is popularly known as *Welsh rabbit* or *rarebit*. Cut some double or single Gloucester cheese into thin shavings, and put it with a bit of butter into a cheese-toaster; place it before the fire until the cheese dissolves, stirring it occasionally. Serve with a slice of toasted bread divided into four, and the crust pared off. It is generally eaten with mustard, salt, and pepper.

CHEESE TOASTER.—A culinary utensil used for toasting cheese on the simplest and



readiest principles; the cheese being put in the receptacle indicated, the toaster is placed before the fire and in a few minutes the operation is finished.

CHEMISTRY.—The study of chemistry in connection with every-day life, should form a part of the education of every person, moving in the most ordinary spheres. If properly pursued it will not only prove instructive, but most entertaining and attractive. Books: *Johnston's Chemistry of Common Life; Scoffern's Subject Matter of Ten Lectures; Normandy's Handbook; Francis's Experiments; Mrs. Marcet's Conversations; Liebig's Chemistry of Food; Baxter's Handbook; Sparkes's Introduction; Balmain's Lessons; Fownes's Manual; Scoffern's Chemistry no Mystery; Raspail's Organic Chemistry; Reid's Practical; Griffith's Recreations; Thompson's School; Francis's Student's; Donovan's Treatise; Accum's Chemical Amusements; Forsyth's First Lines; Davy's Chemical Philosophy; Joyce's Dialogues; Harrington's Elucidation; Henry's Experimental; Liebig's Letters; Topham's Chemistry Made Easy; Hoblyn's Manual; Gregory's Outlines; Weale's*

Rudiments; Chambers's Rudiments; Mackenzie's Theory; Ede's Practical; Solley's Rural; Reid's Student's Text Book; Faraday's Chemical Manipulation; Scoffern's Manual of Chemical Analysis for the Young; Carey's Chemistry Compared; Venables' Aphorisms; Griffiths' Chemistry of the Four Seasons; Gregory's Introduction; Liebig & Kopp's Progress; Bateman's Chemist's Library; Graham's Catechism; Rose's Chemical Analysis; Ure's Dictionary.

CHEQUE is an order drawn upon a banker for the payment of money. The receiver of a cheque has till the close of the banking hours on the following day to present it. A banker is bound to present a crossed cheque the day he received it, and to pay a cheque within a reasonable time after he has received sufficient funds belonging to his customer. The holder of a cheque is not bound to give notice of its dishonour to the drawer; it is sufficient if presented with due diligence that he should give notice to the person from whom he received it. The presenting of a cheque should not be delayed beyond the day following its receipt. The new law in reference to "crossed cheques" enacts, that whenever a cheque or draft on any banker, payable to bearer or to order on demand, shall be issued, crossed with the name of a banker, or with two transverse lines with the words "and company," or with any abbreviation thereof, such crossing shall be deemed a material part of the cheque or draft, and, except as mentioned, shall not be obliterated, or added to, or altered by any person whomsoever after the issuing thereof, and the banker upon whom such cheque or draft shall be drawn shall not pay such cheque or draft to any other than the banker with whose name such cheque or draft shall be crossed, or if the same be crossed without a banker's name, to any other than a banker. Whenever any such cheque or draft shall have been issued uncrossed, or shall be crossed with the words "and company," or any abbreviation thereof, and without the name of any banker, any lawful holder of any such cheque or draft, while the same remains so uncrossed, or crossed with the words "and company," or any abbreviation thereof, without the name of any banker, may cross the same with the name of a banker; and whenever any such cheque or draft shall be uncrossed, any such lawful holder may cross the same with the words "and company," or any abbreviation thereof, with or without the name of a banker, and any such crossing shall be deemed a material part of the cheque or draft, and shall not be obliterated, or added to, or altered by any person whomsoever, after the making thereof; and the banker upon whom such cheque or draft shall be drawn shall not pay such cheque or draft to any other than a banker with whose name the cheque or draft shall be so crossed. Further, the Act declares that persons obliterating or altering the crossing with intent to defraud shall be deemed guilty of felony. Bankers are not to be responsible for paying a cheque which does not plainly appear to have been crossed or altered.

CHERRIES BOTTLED.—Gather the fruit before it becomes too ripe, and put it into bottles, filling them up quite close; cork them tightly and seal the corks. Place the bottles in a *bain-marie*, and as soon as the water begins to boil, lessen the fire, and a quarter of an hour after take the bottles out.

CHERRIES DRIED.—Stone eight pounds of cherries, and boil them slowly with four pounds of sugar, for ten minutes; pour them into a large bowl or pan, and leave them for two days in the syrup; then simmer them again for ten minutes, and set them by in it for two or three days; drain them slightly, and dry them gradually. Keep them in jars or tin canisters when done.

CHERRIES IN BRANDY.—Choose Morello cherries, cut the stalks short, prick the cherries with a needle, and strew sugar over them. Make a sufficient quantity of syrup to cover them, scald them over the fire, and lay them away until the next day: then scald them again, and put them by in jars. The syrup is then to be boiled until very thick, and if the quantity is not sufficient, more sugar may be added; when boiled sufficiently, it is to be poured into the jar, with an equal quantity of brandy.

CHERRIES PRESERVED.—To every pound of fruit add three quarters of a pound of powdered loaf sugar; stone the cherries, and as they are done, strew part of the sugar over them; boil them fast with the remainder of the sugar till the fruit is clear and the syrup thick; take off the scum as it rises; when done, take them out, lay them on tins or plates to dry, and powder them with sugar. When dry put in boxes.

CHERRIES, USES AND PROPERTIES OF.—Although with many persons cherries are difficult of digestion, they are generally regarded as a wholesome and nutritious food when partaken of in moderation. In eating them, care should be taken to avoid swallowing the stones. Dried cherries are, in many diseases, an excellent article of diet, on account of their cooling and antiseptic properties. They are excellent in scurvy, putrid fevers, and dysentery; they correct the blood when inclined to putrescency, and remove obstructions in the intestines. Persons who are troubled with bilious and vitiated stomachs, may eat dried cherries with advantage, especially early in the morning.

CHERRY BRANDY.—Gather cherries when full ripe, pick them clear from refuse; mash them in a clean wooden vessel, and press out the juice through a horsehair bag. Let it stand two hours to settle; then strain the clear liquor through a flannel bag until it is perfectly fine: and to every quart of the juice put a quart of French brandy and three quarters of a pound of white sugar-candy, dissolved in as little pure cold water as possible. Mix them well, and put the whole into a clean stone jar, in which has been previously put the thin rinds of one or more lemons, according to the quantity; put in the cork, seal it, and let it stand in a warm room for two months. Strain it

through a fine flannel bag until it is perfectly clear; then bottle it, seal the corks, and keep it twelve months longer.

CHERRY CAKES.—Cut a pound of paste, as for tarts, in half, and roll it out thin, chop preserved cherries into small pieces and drop them on the paste. Egg them round carefully, turn the paste over them, and press them gently together. Cut them into half circles, prick them, and wash them over with egg. Bake them on a well buttered tin in a quick oven.

CHERRY CHEESE. — Bruise and boil the fruit until it is sufficiently tender to press through a sieve, which it will be in from twenty minutes to half an hour. Weigh the pulp, and boil it quickly to a dry paste, stir into it sugar in the proportion of six ounces to one pound of fruit, and when this is dissolved, place the pan over a slow fire, and continue stirring the preserve until it is so dry as not to adhere to the finger when touched; then press it immediately into small moulds or pans, and turn it out when wanted for table.

CHERRY CORDIAL.—Take a clean dry stone jar, wide at the mouth, measure its contents with water, and fit a bung to it very tight. Pick ripe black cherries, clear from stalks, making use of none that are in the least spotted or unsound. Deposit a layer of sifted loaf sugar at the bottom of the jar, then a layer of the fruit, and so on until the vessel is full, the last layer being of sugar, and an inch thick. Put a tin funnel two inches through the sugar, and for every gallon of fruit in the jar pour in half a pint of genuine spirits of wine, and putting in the bung immediately fasten it with wire; tie bladder over it, and pour hot pitch over that. Bury it two feet deep in dry earth, and at the end of six months take it up, strain the cordial through muslin until it is perfectly bright, and put it into half pint bottles, corking and sealing them well. It should be kept in a cool dry place for twelve months, and will then be excellent.

CHERRY, CULTURE OF. — There are many varieties of this fruit, the following of which are most recommended: The May-Duke, Morello, Arch-Duke, Black Heart, White Heart, Bigaroon, Harrison's Heart, and Kentish. The cherry is *continued* by grafting or budding on stocks of the black or wild red cherries. Sometimes it is grafted on the Morello for the purpose of dwarfing the tree, and rendering it more prolific; but the most effectual dwarfing stock is the Mahaleb. *New varieties* are obtained from seed. Cherry-stones, whether for stocks or new varieties, are sown in light sandy earth in autumn, or are preserved in sand till spring, and then sown. They will come up the same season, and should not be removed till the second autumn after sowing. They may then be planted out in rows three feet apart, and the plants one foot asunder in the row. The succeeding summer they will be fit to bud, if intended for dwarfs; but if for standards, they will require to stand one or more seasons, generally till four years old. They should be budded or grafted about six feet from the ground; the usual way is to bud in summer, and graft those which do not succeed the following spring. The cherry delights in a warm sandy soil and an elevated situation; but some sorts, as the May-Duke, will thrive in all soils and aspects, and all the varieties may be planted in any common mellow garden or orchard ground. To obtain fruit easily, some sorts, as the May-Duke, are planted against walls; but all the varieties will do well as dwarfs or espaliers in general situations, and most of them as standards. For final planting, full standards should be planted from twenty feet to thirty feet apart; small standards fifteen to eighteen feet. The proper season for planting is from the middle or end of October, or any time in November or December, if open weather, till February or March. For wall-trees, a summer *pruning*, to commence in May or June, is necessary, to regulate the shoots of the same year. Disbud the superfluous and fore-right shoots; or, if they have been suffered to spring, pinch or cut them off. Retain a competent supply of some of the best, well-placed, side, and terminal shoots, to remain for selection at the winter pruning. Nail or lay in the reserve close to the wall, at their full length, and so as to air them during the summer. The winter pruning may be performed at the fall of the leaf, or at any time in moderate weather, till February or March. Carefully preserve the sound productive branches and bearers in their full expansion; and reduce or remove such as are only regular in growth, too crowded, unfruitful, decayed, or cankery. Any branches extending out of bounds, prune into some good lateral shoot or fruit bud. The new laterals and terminals are to be trained in at full length, as far as room will permit. They will come into bearing the first and second year. In pruning cherry-trees in general, be careful to preserve the small clustering fruit spurs, except where, in wall trees, any old spurs project considerably, and present a rugged disorderly appearance; cut such clean off. In pruning standards, give only occasional pruning, to reform or remove any casual irregularity from cross-placed or very crowded branches, and take away cankery or decayed wood. As cherries in a ripening state are frequently attacked by birds, it is advisable to have choice wall-trees or espaliers defended by large nets in due time. Old fishing-nets may also be spread over the branches of dwarf standards. To protect other standard trees, scarecrows and clapboards should be set up. Wall cherry-trees are often infested with the red spider, but standards, generally speaking, are not much injured by insects. The most effectual remedy is a mixture of pitch with one-sixteenth part of powdered orpiment, and one-sixteenth part of sulphur, dissolved over a slow fire in a pipkin, until the ingredients are well mixed; when cold, divide it into small pieces of about the size of a hen's egg, and burn it under the trees with damp straw, directing the smoke as much as possible where the insects are most numerous. In an hour afterwards (if the state of the fruit tree will permit) give the tree a good washing

with the garden-engine. Washing with tobacco water and soft soap, early in the morning, or late in the evening, will also destroy every insect which infests the cherry-tree.

CHERRY JAM. — Stone and boil three pounds of fine cherries, bruise them, and let the juice run from them; then boil together half a pint of red-currant juice and half a pound of loaf sugar, put the cherries into them while they are boiling, and strew on them three quarters of a pound of sifted sugar. Boil all together very fast for half an hour, and put away in pots covered with brandied paper.

☞ Cherries, 3lbs.; red-currant juice, ½ pint; sugar loaf, ½lb.; sugar sifted, ¾lb.

CHERRY JELLY.—Take the stones and stalks from two pounds of fine clear ripe cherries; mix them with a quarter of a pound of red currants from which the seeds have been extracted; press the juice from these fruits, filter and mix it with three quarters of a pound of clarified sugar, and one ounce of isinglass; pour into pots.

☞ Cherries, 2lbs.; red currants, ¼lb.; clarified sugar, ¾lb.; isinglass, 1oz.

CHERRY MARMALADE.—Remove the stones and stalks from the cherries and rub them through a sieve; add to this a little red-currant juice, in the proportion of half a pint to three pounds of cherries; put the whole over the fire, stirring into it three quarters of a pound of fine white sugar to every pound of fruit, and boil it until it becomes a thick jelly; pour it into jars or moulds, and when it is cold spread on the top of each jelly a paper dipped in brandy; cover each jar or mould securely, and keep it in a cool and dry place until it is wanted.

CHERRY PASTE. — Stone the cherries; boil them gently in their own juice for thirty minutes; press the whole through a sieve; reduce it to a very dry paste; then take it from the fire and weigh it; boil an equal proportion of sugar to the candying point; mix the fruit with it, and stir the paste without intermission over a moderate fire, until it is so dry as to form a ball round the spoon, and to quit the preserving-pan entirely; press it quickly into small moulds, and when it is cold, tie it down and store it like other preserves.

CHERRY PIE.—Line the inside of the pie-dish with paste, and fill the dish up with fruit previously well picked and washed; sweeten well with brown sugar; place a small teacup, reversed, in the centre of the dish; cover with paste, and bake in a quick oven.

CHERRY PUDDING. — Make a paste with butter, or suet chopped small, rubbed into flour and moistened with water; line a basin well buttered with this, put in picked cherries, cover the top with a crust, tie it in a cloth and boil it.

CHERRY PUDDING, AMERICAN.—Into ten tablespoonfuls of flour break six eggs, with a teaspoonful of salt; stir the eggs and flour together until the whole is moistened with the eggs, and no lumps remain; then add gradually one pint of milk. Have ready a quart of ripe cherries, stoned and well dredged with flour, and when the other ingredients have been rendered quite smooth, put in the cherries, stirring them lightly; pour the whole into a pudding-cloth, previously scalded and dredged with flour, tie it up firmly, and put it into a saucepan of boiling water, with a plate at the bottom of the saucepan; let it boil for one hour; serve with sweet sauce.

☞ Flour, 10 tablespoonfuls; eggs, 6; salt, 1 teaspoonful; milk, 1 pint; cherries, 1 quart.

CHERRY WATER.—This is drunk as a summer beverage. Pulp one pound of Kentish cherries in a mortar, bruising the kernels as well as the fruit; turn the mass into a basin, add one pint of syrup, the juice of three lemons, and a sufficient quantity of water; pass it through a sieve, and it will then be fit for use.

☞ Cherries, 1lb.; syrup, 1 pint; lemon-juice of 3; water, sufficient.

CHERRY WINE, BLACK.—Pick forty quarts of fine ripe black cherries, bruise them with the stones in a tub, and pour on them ten gallons of cold soft water that has been boiled, stir them well, and leave the vessel closely covered until the following day. Press the fruit in a hair-bag, strain the liquor through a fine sieve, let it settle for two hours, and repeat the straining; then filter it through flannel, and put it into a cask with twenty pounds of moist sugar, stirring it well for twenty minutes. Leave the bung out for five or six days, and when it has ceased fermenting pour in a quart of French brandy, and bung it securely. In three or four months draw out a wineglassful, and if it is perfectly clear and bright, it may be bottled a month afterwards; if not, rack it off, filter the lees thoroughly, and return all that is clear into the cask. Secure the bung again, and in three months it will be fit to bottle; keep it in bottle six months, or longer.

☞ Cherries, 40 quarts; water, 10 gallons; sugar, 20lbs.; brandy, 1 quart.

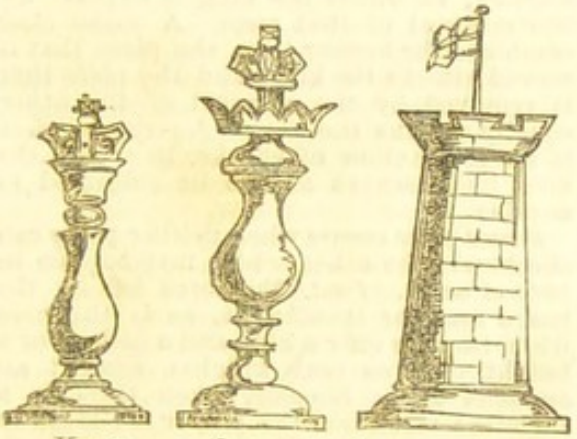
CHERRY WINE, RED.—Press ripe red cherries, breaking the stones amongst them, until you have obtained ten gallons of pure juice, to which add twenty-four pounds of moist sugar; mix it well, and let it remain for three days covered up, stirring twice daily. Press the fruit in a horsehair bag, and add the expressed juice, then mix them well, and strain the whole into a cask, adding five pints of French brandy, the rinds of six lemons thinly pared, and an ounce of isinglass dissolved in a little water. Bung the cask securely, and let it remain in a cool cellar for six months; then rack the wine off, filter the lees perfectly fine, and put all into the same cask again, with three ounces of sugar-candy. Secure the bung as before, keep the wine eighteen months, then bottle it. It will be in good condition after being six months in bottle, but the longer it is kept the better it will be.

☞ Cherries, to make 10 gallons of juice; sugar, 24lbs.; brandy, 5 pints; lemon rinds, 6; isinglass, 1oz.; sugar-candy, 3ozs.

CHERVIL.—A plant little known in England, but extensively used in France to

give flavour to soups, salads, and sauces; it is highly aromatic and stimulating, and should be used in small quantities. It is of two kinds; the common and the musk. The common chervil is used in cookery. It may be sown at any time of the year. Persons who like the flavour of this plant, and wish to introduce it into their kitchen gardens, should obtain, in the first instance, a little of the seed from France. The mode of using chervil there for salads, is to chop it very fine, and serve it in a plate separately from the salad, so that each guest may help himself according to taste. The leaves of chervil dried, and smoked as tobacco, are recommended for asthma.

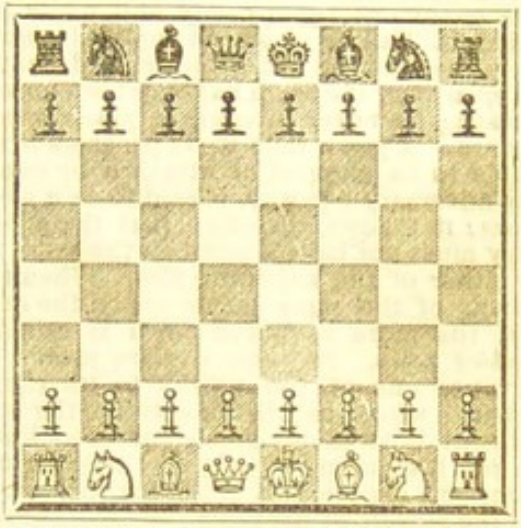
CHESS.—The game of chess is played (by two persons) on a board of 64 squares, 8 on each side. The squares are usually coloured black and white alternately, and the board is so placed that each player has a white square at his right-hand corner. This is not a matter of necessity, but of custom. The lines of squares from right to left are called *ranks*, those from one player to the other are called *files*, those running obliquely are called *diagonals*. Each player has eight pieces and eight pawns, and, for the sake of distinction, one set is usually white, and the other black or red. The pieces on each side are—a *king*, a *queen*, two *rooks* or *castles*, two *bishops*, and two *knights*, besides the eight pawns. The method of placing the pieces prior to beginning a game is thus: on each corner square of the side nearest the player is placed a rook; on the same side, and next to each rook, a knight; next to each knight, a bishop—leaving two squares for the king and queen.



KING. QUEEN. ROOK or CASTLE.

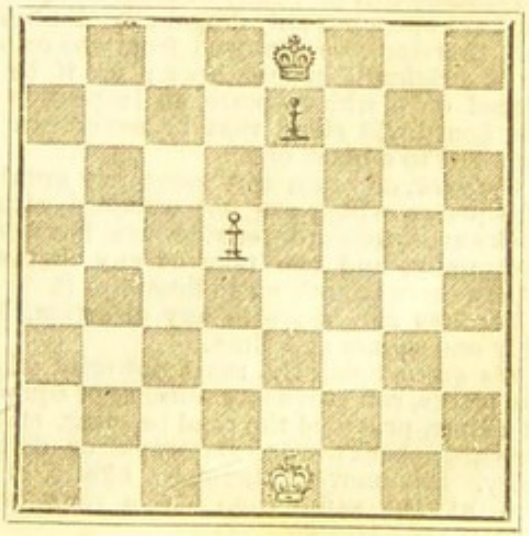
BISHOP. KNIGHT. PAWN.

The white queen is placed on a white square, the black queen on a black square; the remaining square is occupied by the king. This method of placing the king and queen is not essential to the game, but it is the custom and law; for it is a part of the constitution of the game, that the kings and queens shall be exactly opposite each other. The eight pawns are placed on the squares in front of the pieces.



These eight pawns are distinguished as dependent upon the pieces before which they stand at the commencement of the game. Thus, the one standing before the king is called the *king's pawn*; the next to that the *king's bishop's pawn*; the next to that the *king's knight's pawn*; the next to that the *king's rook's pawn*; and so of the others respectively before the queen and her attendants. The following are the moves peculiar to each piece:—

The pawn moves along the file on which it is placed, straight forward, but one square at a time, except on the first move, when it is allowed to move two squares; it is not allowed to move backward. It takes the adverse pieces diagonally to the right or left, one square forward, and continues on the new file until it captures another piece. A pawn has also the power of taking *en passant*, which will best be explained by an example:—



Suppose white has a pawn at his queen's fifth square, and black a pawn at his king's second square (as in the above diagram), if black plays now his pawn *two* squares, which he may, it being the first time the pawn is moved, white has the privilege of taking it *en passant*, that is, of taking it as if it had only been moved one square; he therefore would take the black pawn off the board, and place his own pawn on the king's sixth square, precisely as if black had played the pawn one square only, and white had taken it. Taking *en passant* applies to pawns only, not to the other pieces, and cannot happen after the pawn has once been moved, because he never afterwards *passes* over a square. A pawn that in its progress is not liable to be stopped or attacked by one of the adversary's pawns, is said to be a *passed pawn;* it follows, therefore, that the adversary must not have a pawn on the same file or either of the adjoining files. When two pawns of the same colour are on the same file, the more advanced pawn is called *a doubled pawn. To queen a pawn* means, to advance one of the pawns to its eighth square; when, as will be seen in the subsequent laws of the game, you are allowed to call it a queen, a rook, &c., in short any piece you choose, and it forthwith assumes all the powers of the piece you have named; by no means, however, can it *remain* a pawn.

The knight can move every way, either backwards, forwards, or sideways; it combines, therefore, the move of the rook and bishop, but is limited to one square of each. There is a very great peculiarity in his mode of making his step; it is this—he moves one square diagonally, and then one square forward. Perhaps the following method will explain more easily to the reader the move of the knight:—Place the knight on any part of the empty board, say the white king's fourth square, cover the eight adjoining squares with wafers, the knight may be played to any square adjoining those occupied by the wafers, and of a different colour from the one on which it stands; in this instance the knight, being on a white square, may be played to eight black ones. The knight is the only piece allowed to move over another.

The bishop can move any number of squares that are open, but only diagonally. He never can, therefore, be removed from the colour he is originally placed upon; for if he is placed on a white square, an inspection of the board will show that he never can be removed to a black one.

The rook, or *castle*, can move any number of squares which are not occupied, either backwards, forwards, or sideways, but never diagonally, and can take at any distance where there is nothing to interrupt it.

The king can move in any direction, but only one square at a time.

The queen, being the most powerful of all the pieces, can move any number of squares at a time, provided the road be clear, either forwards, backwards, sideways, or diagonally. She moves, therefore, like a king, and at the same time like a rook or a bishop.

All the pieces, except the pawns, capture in the direction in which they move; the method of taking is not, as in *draughts*, to pass over the piece, but to take up the piece of an opponent and put down your own in its place. Neither is there any obligation to take a piece which stands in the way—this is perfectly optional. The object of each player is to *checkmate* the adverse king; when this is effected, the party whose king is checkmated loses the game. It commonly happens that the game is given up when the player finds himself in a very bad position, or having lost one or more pieces, it is evidently of no use continuing the game.

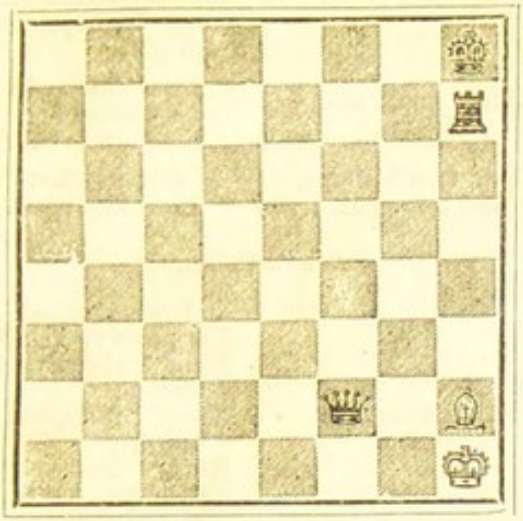
We now proceed to the *technical terms* of the game. *Checkmate* takes place when the king is attacked by one of the adversary's pieces, so that he cannot extricate himself either by taking the piece that attacks him, by interposing some piece, or moving to a square where he is not attacked. In all those cases the player who is checkmated loses the game. The game may therefore be finished when there are many or even all the pieces on the board.

To check means to attack the king. There are three sorts of check. A *simple check* is that in which the king is attacked only by the piece that is moved. A *discovered check*, or *check by discovery*, is when the king is *not* attacked by the piece that is moved, but by another, to which the king is exposed by the removal of that piece. A *double check* combines the former two; the piece that is moved attacks the king, and the piece that is removed by the removal of the other equally attacks the king. A *perpetual check* is an alternation of checks, in which the king only escapes one to be subjected to another.

Drawn game occurs when neither party can checkmate the other, which may happen in several ways. *First*, the force left on the board may be insufficient, as is the case when there is only a king and a bishop, or a knight, or even both knights, against an opposite king. *Secondly*, when there is a sufficient force, but the player is unable to checkmate with it. The rule is, that in such a case he must checkmate his adversary in fifty moves on each side at most. There are many instances for that, viz., if a player be left with a castle and a bishop against a castle; with both bishops, or with a knight and bishop against a king; with the queen against a rook, or against two knights, &c. In all those cases checkmate *can* be given, but only the experienced player will be able to do it in comparatively few moves. *Thirdly*, by a perpetual check. *Fourthly*, when both players act on the defensive, neither party choosing to attack his adversary. *Fifthly*, when both players have an equal but small force. And *sixthly*, when one of the kings is stalemated.

Stalemate is the name given to the termination of the game, when the king of one of the parties is so placed that, though not in check, he cannot move without going into check, and his player has nothing else to move. Upon stalemate being given, the

game is considered drawn. The following is an example of stalemate:—



In this position white has to move, and he cannot do so without his king going into check of the queen, or move his bishop without being exposed to the check of the castle —consequently, he is stalemated.

Castling is a combined move of the king and the rook, which is allowed to be made once in the game, and which is effected as follows :—First, with the king's rook. The rook must be placed at the king's bishop's square, and the king at the king's knight's square. Secondly, with the queen's rook. The rook must be placed on the queen's square, and the king at the queen's bishop's square. In order to be able to castle — First, the king must not be in check. Secondly, the space between the king and the rook must be unoccupied. Thirdly, neither the king nor the rook must have moved. And fourthly, the squares over which the king has to move must, *at the time*, be free from any attack of the adverse party.

To gain the exchange means, that a player gives a rook for a bishop or a knight, the former piece being more valuable than either of the latter.

Gambit is a corrupt word, derived from the Italian *gambetto*, signifying to trip up, or rather a tripping up of the heels. It is a peculiar mode of beginning the game, in which a pawn is sacrificed by the first player on the second move. There are two kinds of gambits — the king's gambit and the queen's gambit. In the king's gambit, each player begins by playing his king's pawn two squares, and the first player then moves his king's bishop's pawn two squares, which the second player may take with his king's pawn for nothing. The so-called *Muzio*, the *Salvio*, *Cochrane*, and *Cunningham* gambits, are varieties of the king's gambit. In all these openings the first player, after having moved his king's bishop's pawn two squares on his second move, plays his knight to king's bishop's third on the third move. The so-called *bishop's gambit* is, when the first player moves his king's bishop to the queen's bishop's fourth square at his third move, instead of king's knight to king's bishop's third square. The *queen's gambit* is begun in a similar manner, by playing, first, the queen's pawn two squares (on both sides), and then the queen's bishop's pawn two squares (on the part of the first player). The king's gambit is more attacking and entertaining than the queen's, but the latter is generally considered a safer game to play than the former. Besides, there are the *Scotch*, the *Evans*, and the *Lopez* gambits, in which a pawn is sacrificed by the first player, not on the second, but on the third, respectively on the fourth or fifth move. The following are instances of those openings :—

Scotch Gambit.

White.	*Black.*
1. Pawn to king's fourth.	1. Pawn to king's fourth.
2. King's knight to king's bishop's third.	2. Queen's knight to queen's bishop's third.
3. Pawn to queen's fourth.	3. Pawn takes pawn.
4. King's bishop to queen's bishop's fourth.	4. ——

Evans Gambit.

White.	*Black.*
1. Pawn to king's fourth.	1. Pawn to king's fourth.
2. King's knight to K. B. third.	2. Queen's knight to Q. B. third.
3. K. B. to queen's bishop's fourth.	3. K. B. to queen's bishop's fourth square.
4. Pawn to queen's knight's fourth.	4. Bishop takes pawn
5. Pawn to queen's bishop's third.	5. ——

Lopez Gambit.

White.	*Black.*
1. Pawn to king's fourth.	1. Pawn to king's fourth.
2. King's bishop to queen's B. fourth square.	2. K. B. to queen's bishop's fourth square.
3. Queen to king's second square.	3. Pawn to queen's third square.
4. Pawn to king's B. fourth.	4. ——

The King's Gambit.

White.	*Black.*
1. P. to K. 4th.	1. P. to K. 4th.
2. P. to K. B. 4th.	2. Q. to K. R. 5th (ch.).
3. P. to K. Kt. 3d.	3. Q. to K. B. 3d.
4. K. B. P. takes P.	4. Q. takes P.
5. K. B. to K. Kt. 2d.	5. P. to Q. 4th.
6. P. to Q. 4th.	6. Q. to K. 3d.
7. P. to K. 5th.	

The position of the white pieces is better than that of the black, the second player having lost several moves by playing his queen out so early in the game.

The following is a variation on the second move of black :—

White.	*Black.*
1. P. to K. 4th.	1. P. to K. 4th.
2. P. to K. B. 4th.	2. P. to Q. 4th.
3. K. P. takes P.	3. Q. takes P.
4. Q. Kt. to Q. B. 3d.	4. Q. to K. 3d.
5. K. Kt. to K. B. 3d.	5. P. takes P. (ch.).
6. K. to K. B. 2d.	6. P. to Q. B. 3d.

White has the better game.

Minor piece is an appellation common to the bishops and knights. A piece that is attacked by another is said to be *en prise* of that piece. The lines of squares running from your side of the board to your adversary's, are called *files;* those from your right hand to your left, *ranks.*

As to the *relative value of the pieces*, it is considered as being estimated at the beginning of the game; for it often occurs that their importance may vary much at different stages. The best criterion of value is that of *the pawn*, which is less valuable than any other piece. The centre pawns are more valuable than those at the side. A pawn attains to the power of queen when it reaches to the last row of squares on the adversary's side; and it may then be exchanged for any other piece the player pleases. The *knight* is more valuable than three pawns, but less so than four. The *bishop* is, generally speaking, of the same value as a knight, but less valuable during the progress of the game, because the knight can move every way, whereas the bishop is confined to his own colour; but at the end of the game the bishop is more valuable than the knight, because two bishops can checkmate, while two knights cannot. The *rook* is equal in value to a knight, or a bishop and two pawns. The rook and the queen are the only pieces which by themselves can give checkmate. The *queen* is the most valuable of all the pieces, being worth more than two castles at the beginning of the game. She attacks all the pieces by which she is attacked, except the knight, and she draws the game by a perpetual check, or by stalemate, more easily than any piece on the board. The *king* may be said to be invaluable, for he can never be taken or exchanged. For this reason there must always be one square at least between the two contending kings. He alone is invested with the peculiar privilege of castling. In the beginning of the game he is of little use, but towards the conclusion his importance increases.

In the following we give a summary account of the pieces that can win or draw the game.

Won Games.

King and queen, King and rook, King & both bishops King, bishop, and knight,	Win against the king.
King and queen	Win against King and rook. King & two knights. King, bishop, and knight.
King, rook, and bishop,	Sometimes win against King and rook.
King, two bishops, and a knight,	Win against King and rook.

Drawn Games.

King and queen	Draw against King and two rooks. King, rook, and bishop, King, rook, and knight, King and two bishops, or three minor pieces.
King & two knights	Draw against king.
King and bishop, King and knight,	Draw against King and rook.

The following are the most important laws of the game of chess :—1. The chess-board must be so placed that each player has a white corner square nearest his right hand. If the board has been improperly placed, it must be adjusted, provided *four* moves on each side have not been played, but not afterwards. 2. When no odds are given, the players must take the first move of each game alternately. If a game be drawn, the player who began it has the first move of the following one. 3. The player who gives odds has the right of moving first in each game, unless otherwise agreed. Whenever a pawn is given, it is understood to be always the king's bishop's pawn. 4. A piece or pawn touched must be played, unless, at the moment of touching it, the player say, "*J'adoube*," or words to that effect; but if a piece or pawn be displaced, or overturned by accident, it may be restored to its place. 5. While a player holds the piece or pawn he has touched, he may play it to any other than the square he took it from, but, having quitted it, he cannot recall the move. 6. Should a player touch one of his adversary's pieces or pawns without saying "*J'adoube*," or words to that effect, his adversary may compel him to take it; but if it cannot legally be taken, he may oblige him to move the king; should his king, however, be so posted that he cannot legally be moved, no penalty can be inflicted. 7. Should a player move one of his adversary's men, his antagonist has the option of compelling him—1, to replace the king or pawn, and move his king; 2, to replace the piece or pawn and take it; 3, to let the piece or pawn remain on the square, to which it had been played, as if the move were correct. 8. If a player take one of his adversary's men with one of his own that cannot take it without making a false move, his antagonist has the option of compelling him to take it with a piece or pawn that can

legally take it, or to move his own piece or pawn which he touched. 9. If a player makes a false move, i. e. plays a piece or pawn to any square to which it cannot legally be moved, his adversary has the choice of three penalties; viz. 1, of compelling him to let the piece or pawn remain on the square to which he played it; 2, to move it correctly to another square; 3, to replace the piece or pawn, and move his king. 10. If a player touch a piece or pawn that cannot be moved without leaving the king in check, he must replace the piece or pawn, and move his king; but if the king cannot be moved, no penalty can be inflicted. 11. If a player attack the adverse king without saying "check," his adversary is not obliged to attend to it; but if the former, in playing his next move, were to say "check," each player must retract his last move, and he that is under check must obviate it. 12. Should a player say "check" without giving it, and his adversary in consequence move his king, or touch a piece or pawn to interpose, he may retract such move, provided his adversary have not completed his next move. 13. Every pawn which has reached the eighth or last square of the chess-board, must be immediately exchanged for a queen, or any other piece the player may think fit, even though all the pieces remain on the board. It follows, therefore, that he may have two or more queens, three or more rooks, bishops, or knights. 14. If a player make a false move, castle improperly, &c., the adversary must take notice of such irregularity before he touches a piece or pawn, or he will not be allowed to inflict any penalty.

CHEST, WATER ON, is not in itself a disease, but the result or after-effect of some inflammatory or chronic disease of the heart, lungs, or lining membrane of that organ. See DROPSY.

CHEST, PAINS IN, may proceed from several causes, though the most common are those resulting from an inflammatory action, as in pleurisy or disease of the heart and lungs. To afford relief, the true cause must be first discovered and removed, when the pain will of course subside. Pains in the chest, however, may proceed from accidents, falls, blows, or broken ribs; or it may sometimes arise from diseased liver, or the presence of indigestible food in the stomach. Besides these causes, severe cold, influenza, and bronchial affections, will produce acute pains in the chest, in which case they are often attended with cold chills or shiverings, the pain being either in the front of the chest, or darting through the side; coming on occasionally, or only experienced when drawing a deep inspiration. When proceeding from the last named causes, ten grains of Dover's powder, taken in a little gruel at bed time, and followed in half an hour by a warm drink, made of sweetened gruel, with a little rum, will generally be found sufficient to remove all inconvenience. But when pain in the chest is the result of any of the other causes the treatment must be sought for under the particular disease that may appear to produce it.

CHESTNUT, CULTURE OF.—The chestnut may be propagated either from nuts or by grafting, but the latter mode is preferable. The tree flourishes best in a shady loam with a dry subsoil, but it will grow in any soil that is dry. Distribute the plants towards the northern boundary of orchards; and in larger groups, over any vacant tracts in extensive pleasure grounds or parks, to form spacious avenues or row along any outboundary. A great number should not be placed close to a residence, as the smell of the flowers is offensive. Plant them at not less than from thirty to fifty feet distance. Permit the trees to branch out freely above, and to form large regular heads. Give occasional pruning only to very irregular and cross branches, and low stragglers. After they have attained some tolerably branchy growth, they will come into bearing; and when they have expanded into large full heads, they may be expected to yield considerable quantities of nuts. The nuts ripen from the end of September to the end of October. When the outer capsule containing the nuts begins to divide and the nuts appear of a brown colour, their full maturity is indicated. They may be gathered by hand, or beaten down with long poles.

CHESTNUT CUSTARD. — Take three pounds of well washed chestnuts, and reduce them to a pulp with a pound of fresh butter; when a smooth paste is produced, add three quarters of a pound of powdered loaf sugar, the yolks of twelve eggs, a saltspoonful of salt, and four tablespoonfuls of cream; whip these well together and bake in a moderate oven.

☞ Chestnuts, 3lbs.; butter, 1lb.; sugar, ¾lb.; eggs, 12; salt, 1 saltspoonful; cream, 4 tablespoonfuls.

CHESTNUT SAUCE. — This is chiefly used for roast turkey. Scald a pound of sound chestnuts in hot water for five minutes, skin them, and stew them slowly for two hours in white stock, seasoned and thickened with butter and flour. Cut a pound of pork sausages into pieces of about an inch long; dust them with flour, and fry them of a light brown; lay them into the dish on which the turkey is to be served, and pour the chestnuts and sauce over them.

CHESTNUT SOUP.—Strip the outer rind from some fine large chestnuts, and throw them into a pan of warm water; when it begins to boil remove it from the fire, take out the chestnuts, peel them, and throw them into cold water. Wipe and weigh them; take three quarters of a pound for each quart of soup, cover them with good stock, and stew them gently for nearly an hour, drain, pound them smoothly, and rub them through a fine sieve, mix with them gradually the proper quantity of stock; add sufficient mace, cayenne, and salt, to season, and stir the soup frequently until it boils.

CHESTNUTS BOILED.—Make a slight incision in the outer skin only of each chestnut, to prevent its bursting, and when all are done, throw them into plenty of boiling water, with a dessertspoonful of salt to the half gallon. Some chestnuts will require to be boiled nearly an hour, others little more than half the time: the cook should try them occasionally, and as soon as they are soft through, drain them, wipe them in a coarse cloth, and send them to table quickly in a hot napkin.

CHESTNUTS ROASTED.—The best way of preparing these is to roast them in a coffee-roaster, after having first boiled them from seven to ten minutes, and wiped them dry. They should not be allowed to cool, and will require but ten or twelve minutes roasting. They may, when more convenient, be finished over the fire as usual, or in a Dutch or common oven; but in all cases, the previous boiling will be found an improvement. Never omit to cut the rind of each nut slightly before it is cooked. Serve the chestnuts in a napkin, very hot, and send salt to table with them.

CHICKEN BAKED IN RICE.—Cut a chicken into joints, season it well with pepper and salt, lay it into a pudding-dish lined with slices of ham or bacon, add a pint of veal gravy, and an onion finely minced; fill up the dish with boiled rice well pressed, and piled as high as the dish will hold, cover it with a paste; bake it one hour, and before serving, remove the paste.

CHICKEN BOILED.—When properly cleaned and trussed, put it in boiling water, and let it boil gently for half an hour. Serve with parsley and butter, or with the following sauce:—Melt in a teacupful of milk a large tablespoonful of butter kneaded in flour, beat up the yolk of an egg with a little cream, stir it into the butter and heat it over the fire, stirring continually.

CHICKEN BRAISED.—Bone and stuff chickens with forcemeat. Lay the bones and any other poultry trimmings into a stew-pan, and the chickens on them. Put to them a few onions, a bunch of herbs, three blades of mace, a pint of stock, and a glass or two of sherry. Cover the chickens with slices of bacon, and then white paper; cover the whole close, and put them over a slow fire for two hours. Then take them up, strain the braise, and skim off the fat carefully; set it on to boil very quick to a glaze, and brush the chickens over with it. Serve with gravy and ketchup.

CHICKEN BROILED.—Boil a chicken gently for five or ten minutes, leave it to become cold, then divide it, and dip it into egg and well-seasoned bread-crumbs, plentifully sprinkled with clarified butter; dip again into the crumbs, and broil over a clear and gentle fire from half to three-quarters of an hour. It should be served very hot, with mushroom-sauce or with good plain gravy thickened and flavoured. It should be opened at the back and evenly divided quite through; the legs trussed; the breast-bone removed, and both sides of the bird made as flat as possible, that the fire may penetrate every part equally: the inside being first laid towards it. The neck, feet, and gizzard may be boiled down with a small quantity of onion and carrot, previously browned in a morsel of butter to make the gravy; and the liver, after having been simmered with them for five or six minutes, may be used to thicken it after it is strained. A teaspoonful of lemon-juice, some cayenne pepper, and minced parsley, should be added to it, and a little arrowroot, or flour and butter.

CHICKEN BROTH.—Wash clean the half of a young and tender chicken, break the bones, cut it into pieces, and put them into a stew-pan with one quart of water; cover the stew-pan closely, set it upon a moderate fire, let it boil very gradually, then skim it well: add a saltspoonful of salt, cover it closely, let it boil for twenty minutes, strain it through a cullender and serve. If the broth is desired to be more nourishing, add a tablespoonful of washed rice when the liquor is put over the fire; stir well, and make the broth quite thick.

CHICKEN CURRY.—Remove the skin from a chicken, cut it up, and roll each piece in curry-powder and flour mixed together (a tablespoonful of flour to half an ounce of curry). Fry two or three sliced onions in butter, when of a light brown put in the chicken, and fry them together till the chicken becomes brown; then stew them together in a little water for two or three hours. More water may be added if too thick.

CHICKEN CUTLETS.—Skin and cut into joints one or two young chickens, and remove the bones with care from the breasts, merrythoughts, and thighs, which are to be separated from the legs. Mix well together a teaspoonful of salt, nearly a fourth as much of mace, a little grated nutmeg, and some cayenne; flatten and form into good shape the boned joints of chicken, and the flesh of the wings; rub a little of the seasoning over them in every part, dip them into beaten egg, and then into very fine bread-crumbs, and fry them gently in fresh butter until they are of a delicate brown. Some of the bones and trimmings may be boiled down in half a pint of water, with a roll of lemon-peel, and a little salt and pepper to make gravy, which, after being strained and cleared from fat, may be poured hot to some thickening made in the pan with a slice of fresh butter and a dessertspoonful of flour. Pile the cutlets high in the centre of the dish, and serve the sauce under them, or separately, in a tureen.

CHICKEN FRICASSEE.—Parboil chickens in a small quantity of water: let them cool; cut them up, and simmer them in a little gravy made from the liquor they were boiled in, together with a piece of veal or mutton, with onion, mace, and lemon-peel, some white pepper, and a bunch of sweet herbs. When quite tender, keep them hot while the sauce is being thickened in the following manner:—strain it off, and put it back into the saucepan with a little salt, nutmeg, flour, and butter; give it one boil, and just before serving beat up the yolk

of an egg in half a pint of cream, and stir them over the fire without allowing them to boil.

CHICKEN PANADA.—Boil a chicken in a quart of water till nearly done; then skin it, cut off the white meat, and pound it with a little of the liquor it was boiled in to a thick paste; season it with salt, nutmeg, and lemon-peel; boil it up all together for a few minutes.

CHICKEN PIE.—Cut up two chickens, season with white pepper, salt, a little mace, nutmeg, and cayenne pepper. Put into a dish in alternate layers, chicken, slices of ham, forcemeat balls, and hard-boiled eggs: with a little water. By the time it is taken from the oven, have ready, gravy made from knuckle of veal or scrag of mutton, seasoned with herbs, onion, mace, and white pepper; cover with a crust, and bake it thoroughly.

CHICKEN POTTED, WITH HAM.—Season some pieces of chicken, with mace, cloves, and pepper, and bake them for about three hours in a close covered pan with some water; then pound them quite small, moistening either with melted butter, or the liquor they were baked in. Pound also some ham, and put this with some chicken in alternate layers, into pots; press the meat down tight, and cover with clarified butter.

CHICKEN PUFFS.—Mince the breast of a chicken, some lean ham, half an anchovy, a little parsley, a few shalots, and lemon-peel; season with pepper, salt, cayenne, and beaten mace. Set them on the fire for a few minutes, in a little *bechamel sauce;* roll out some puff paste thin, cut it into squares, and lay in the square some of the above mixture; turn the paste over, fry them in boiling lard, and serve them on fried parsley.

CHICKEN ROASTED.—Draw and truss the chicken, and cover the breast with a slice of fat bacon; baste it first with butter, and afterwards with its own gravy. Cover the breast with a sheet of buttered paper; which must be removed about ten minutes before the chicken is done, that it may become of a good brown colour. A large chicken will require half an hour to roast, a small one twenty minutes.

CHICKEN SALAD.—Cut into fillets the meat of cold roast chicken; dispose them symmetrically, with a lettuce cut, at the bottom of a salad-bowl; arrange other lettuces cut, with fillets of anchovies; cover the whole with sauce made of oil, vinegar, mustard, and the yolks of hard-boiled eggs, rubbed smooth.

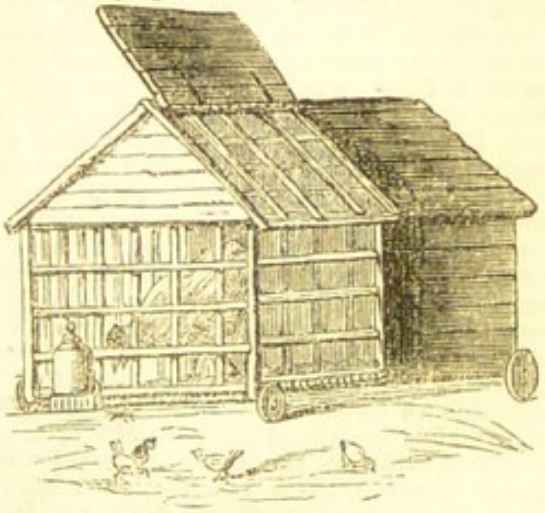
CHICKEN SCOLLOPS.—Mince the flesh of chicken very small, and set it over the fire for a few minutes, with a seasoning of nutmeg, pepper, and salt, and a little cream. Put it into the scollop shells, fill them with crumbs of bread, over which put some bits of butter, and brown them before the fire.

CHICKEN STEWED.—Draw and truss a chicken, and set it over the fire in an earthen pot with boiling water enough to cover it, and a little salt. After boiling the chicken slightly, put into a stew-pan a pinch of flour, a few oysters (if in season), and a seasoning of nutmeg, pepper, and salt; thicken this, put it over the fire, and when of a proper consistence and flavour, lay the chicken on a dish, and pour the sauce and oysters over them.

CHICKEN, TO CARVE.—See FOWL.

CHICKENS, TO PREPARE FOR COOKING.—For *Roasting:* pick the chickens carefully, and singe them well to remove all the hairs, &c.; then bruise the bone close to the foot, and draw the strings from the thigh. Cut a slit in the back of the neck, and take out the crop; then cut off the neck, leaving skin enough to fold over the back. Cut off the vent and take out the inside, being careful not to break the gall; break the backbone and the two bones leading to the pinions; wipe the chickens with a cloth, and put in a little pepper and salt. *Truss* as follows:—Turn the legs close down to the apron and run a skewer through; run another skewer in the joint of one wing through the body into the other wing; and having washed the liver and gizzard, place them in the pinions. To *truss for boiling:* the underneath part of the thigh must be cut and the legs placed under the apron, only letting the ends be seen. In both cases give the breast a full and plump appearance.

CHICKENS, TO REAR.—The mode of rearing chickens is very simple, and consists chiefly in bestowing a certain amount of care and attention, according to rules laid down. When chickens are just hatched, they may, if strong and lively, be removed from the nest, and placed with the hen in a coop, made to move upon wheels, and roofed and floored with thin wood, having clean straw laid at the bottom. After the lapse of a couple of days, provided the weather is warm and dry, the coop with the hen and chickens should be carried, after feeding, to some sunny spot in the garden, and left for



a few hours with the roof raised to admit a freer passage of air. It should not be moved, however, before the dew has thoroughly disappeared; and must not be placed on grass, unless it has been recently mown, and is also thoroughly dry. A handful of barley should be given to the hen while in the garden, a quantity of which she will break for the chickens. Before sunset begins to advance, the coop should be returned to the house, and, as evening closes, the last meal

given and the brood left for the night. Sometimes the hen is kept confined in this manner for a fortnight, the length of time, however, must be determined by the strength of the brood and the state of the weather. When the chickens have acquired sufficient strength to roam about, it is time for the hen to be allowed the liberty of the garden or the range of a field, where she will scratch up weeds and worms for her young. This should be continued until they are old enough to be taken into the poultry yard and fed along with other fowls. While thus rearing, pure water should always be left within their reach. This should be put into an utensil made for the purpose, which may be bought at any earthenware shop. By this means they are prevented from wetting their feet and feathers. The water should be changed frequently, for if suffered to remain till it becomes foul, it is liable to generate disease. Chickens are generally separated from the hen when about six or eight weeks old, but she does not entirely desert them until they are full-feathered and able to take care of themselves. The ordinary food for young chickens is a peculiar kind of small groats, which they devour with avidity, but it is very important, when they are in a state of confinement, to throw to them from time to time, small worms, grubs, and other insects. The coarse sand that they pick up materially aids digestion, and contributes to their strength; this may also be assisted by boiling an egg hard, pounding the shell up with it, and giving it to them occasionally for food. At six weeks old they may be fed upon corn, together with any scraps from the table. Barley meal mixed with milk should be frequently given, care being taken that too much milk is not used. Curds chopped small and the milk thoroughly squeezed out, form excellent additions to their food, and can easily be made by putting a piece of alum into a little boiling milk. If it is intended to fatten chickens, they cannot be too well fed, and should be kept upon barley meal and corn, with a little meat minced very small.

CHICKEN POX.—A very mild form of small pox, which it so closely resembles in its earlier features, as hardly to be distinguished from that more formidable disease. Chicken pox commences with chills, lassitude, loss of appetite and want of sleep, and the usual characteristics of fever, though generally of a very mild type. On the following day an eruption of small reddish pimples makes its appearance on the *back* and *shoulders*, which in the space of twenty-four hours become little vesicles or bladders filled with a clear colourless fluid, or else a yellow transparent liquid; these increase in size till the third day, when they burst and discharge, and a thin scab or pellicle is formed in the centre of each pock, which in the course of the next day, or by the end of the fifth day from the first attack, peels off without leaving any scar or mark on the skin. *Treatment.*—All that is necessary, is one or two doses of some mild aperient, such as the infusion of senna leaves, with a little manna; or a powder, consisting of two grains of gray powder, two grains of rhubarb, and five grains of scammony, for a child from five to seven years; and proportionately less to one younger. When the disease is confluent, it may be necessary to use the warm bath and a saline mixture, but this condition is so rare, as to render any special instruction almost unnecessary.

CHICORY.—A root belonging to the same natural family of plants as the dandelion, and resembling it very closely in its properties; the extract obtained from it is bitter and possesses diuretic and aperient qualities. The nutritive properties of this plant are inconsiderable, and its reputed wholesomeness is a matter of great doubt. Chicory is chiefly employed as a substitute and adulterant of coffee. In the preparation of chicory the older roots are selected; they are first cleansed in a very imperfect manner by washing, then cut into slices and dried in a kiln; it is then submitted to a rough kind of roasting process, and finally reduced to powder. The ground chicory of shops is almost universally adulterated—carrots, parsnips, mangold-wurzel, and beans, having some affinity to chicory, are all made use of; roasted grain, biscuit-powder, and burnt sugar, are also extensively employed in adulterating this article. Pigments are added to colour it, and especially an earth known as Venetian red. The adulteration of chicory may be detected as follows:—1. Powdered chicory thrown on water turns it reddish brown, and rapidly sinks, leaving light impurities either floating or diffused through the liquid. 2. The cold decoction tested with tincture or solution of iodine gives a brown colour; if it turn purple, blue, or black it indicates the presence of roasted beans, rye, or some other like substance containing starch. 3. The dry powder, when incinerated, should not leave more than 4½ or 5 degrees of ash, which should be of a grayish or fawn colour; the contrary indicates the presence of reddle, red clay, ochre, or the like. The adulteration of coffee with chicory is visited with heavy penalties, unless such mixture is properly labelled and sold according to the excise regulation.

CHICKWEED.—A low creeping weed, of which there are several varieties. The common chickweed has an annual, small, tapering root, flowering from March to December. Small birds and poultry eat the seeds and whole herb. Swine are extremely fond of it; and it is eaten by cows and horses. This weed grows in almost every situation, in damp or even boggy woods, and on the dryest gravel walks in gardens. The chickweed may be considered as a *natural barometer;* for if the flowers are closed, it is a certain sign of rain; while during dry weather, they are regularly open from nine o'clock in the morning till noon.

CHIFFONIER.—One of the most useful articles of furniture in a sitting-room, as a receptacle for things in frequent use, more especially as most modern houses have neither cupboards nor sideboards fitted to the rooms as formerly. Chiffoniers may be obtained at all prices and of various dimen-

sions; but as this article of furniture is called into frequent requisition, it should neither be too slender in its structure, nor limited in its capacity.

CHILBLAINS are the effect of inflammation of the skin, resulting from the sudden application of cold to a part previously hot and moist; they are attended with redness, heat, and swelling, and an intolerable degree of itching. Chilblains when neglected or in bad habits of body, are very prone to pass from their simple form to the broken or ulcerated state, which is preceded by increased redness, changing to a dark purple, great enlargement of the swelling, and small pustules or bladders forming on the cuticle; which in time break, and discharge a thin serous exudation, till the part beneath becoming abraded, an open and often a deep seated ulcer is formed, very obstinate of cure, and entirely incapacitating the part on which it occurs from use. Though chilblains may attack any exposed part of the body, they are most frequently found on the hands and feet, the latter more especially. Chilblains more frequently attack the weak than the robust; youth and age, rather than midlife; and those of a delicate organization, before those of strong and vigorous health.

Treatment.—The following simple mode of treatment will be found sufficient in nearly all cases and conditions:—Soak the part on which the chilblain is situated for a short time in warm water, to relax and open the pores of the skin; gently dry with a soft cloth, and having well wetted a double fold of lint in the pure "extract of lead," envelope the chilblain entirely in it and as the lint becomes dry, let it be re-wetted in the same manner and re-applied two or three times, or oftener if requisite. One or two applications will remove all inflammatory action, and cause the absorption of the swelling in cases of simple chilblain; while for the broken or ulcerated form, after the first application, a dressing of the extract of lead night and morning will be sufficient to ensure the contraction and closing of the ulcer. The best preventative for chilblains is to accustom the part usually affected to as uniform a temperature as possible, and render the skin strong and hardy by frequently washing it with cold water, and using friction with the hand; avoiding sudden changes, and being careful not to approach a fire after coming from the cold, till the circulation has become uniform through the body.

CHILDREN, DISCIPLINE OF.—It is a duty which parents owe to themselves, to their offspring, and to society at large, to train and educate their children on such principles as will best conduce to their well-being and well-doing hereafter. The best means for effecting this is a system of firmness blended with kindness, and a course of conduct invariably truthful and consistent. Nothing can be more impolitic and improper than the irregular and capricious manner in which many parents rule their children: as for instance, allowing them to commit some glaring error without a word of reproof, and chastising them severely for some trifling fault, which might have been dismissed with a few words of deprecation and caution; or indulging in jokes and pleasantry one minute, and then suddenly, without any perceptible cause, assuming a stern and forbidding demeanour the next. It almost amounts to a certainty that all children who dishonour their parents will be disreputable members of society; and it is equally true that the crimes committed by men and women may, in a great measure, be traced to the neglect and mismanagement they have experienced as children; on the other hand, a child who loves his parents is, generally speaking, blameless and upright in every other relation of life. But a child's love for its parents must be founded on respect, and respect must be founded on an appreciation of those qualities which every parent ought to display, and which every child knows how to estimate. Books: *Taylor's Duties of Parents and Children; Morrison's Parent's Friend; Houston's Parental Duties; King's Mother's Help; Aikin's Letters from a Father to his Son: Mrs. Palmerstone's Letters to her Daughter; Searle's Companion; Bakewell's Mother's Guide to Training; Lenoir's Morals for Children; Williams's Parent's Catechism.*

CHILDREN, DISEASES OF.—Every stage of childhood, from infancy upwards, has diseases more or less appertaining to its age; thus, thrush, teething, remittent fever, and diarrrhœa, may be said to apply more exclusively to the infant, while croup, measles, scarlet fever, hooping cough, &c., belong to the progressive stages of childhood. Children, from their delicate organization, are more easily influenced by medicine than adults, and when depressed rally much sooner than those more advanced in life. All drugs that act powerfully on the stomach and bowels should be withheld from children, such as croton oil, Epsom salts, gamboge—in fact all violent purgatives; and though the bowels and stomach are the seat of nearly all the affections of childhood, no practice is so injudicious as that of strong aperient medicine. The symptoms of serious illness that a child will present at one hour of the day, and, after a mild aperient, laugh and play in perfect health a few hours later, is no less singular than confirmatory of what has been advanced as to the seat of the illness, and the best means to remove it. As purgatives are inadmissible in childhood, stimulants are equally uncalled for, the natural vivacity of youth generally rendering such means unnecessary. When, however, such remedies are demanded, they should rather partake of tonic than stimulant properties, such as wine and food. Cases, of course, occur in which it is necessary to give small doses of brandy or other spirits, but these instances will be found under their proper head. See CROUP, MEASLES, SCARLET FEVER, &c.

CHILDREN, MATERNAL MANAGEMENT OF.—The period of *childhood* is generally considered as beginning with the second year, and terminating with the eighth. The management of children has an all-important influence on the health and happiness

of after years, for at this period the foundation is laid, either for irremediable debility, or for mental and bodily vigour. Consequently children require constant care, and indefatigable personal attention. The chief points in the physical and moral training of children are cleanliness, clothing, diet and regimen, air and exercise, sleep, education, and amusements.

CLEANLINESS.—It is of the utmost importance that the child's skin should be well and thoroughly cleansed: and this should be done by sponging the child from head to foot in a tub of water. If the weather be very cold the water may be slightly tepid. Two handfuls of table-salt may be dissolved in the water, and the back and loins should be particularly well washed. The head should be wetted before the child is placed in the tub, and he should not be allowed to remain in more than five minutes. After washing, the skin should be carefully and thoroughly dried, and finally well rubbed with a flannel or by the hands, and the surface should be warmed and stimulated by the assiduous gentle friction made use of. It is especially necessary to be careful to dry the arm-pits, groins, &c., and if the child is very fat, it would be as well to dust over those parts with violet powder or starch, so as to prevent excoriation. It should then be dressed expeditiously, and suffered to run about.

CLOTHING. — The clothing of children should afford due warmth, and yet be light, and so made as to occasion no unnatural constriction. Too little clothing is frequently productive of the most sudden attacks of acute disease; and in the variable climate of England, croup and other dangerous affections of the air-passages and lungs are frequently brought about. Nothing can be more cruel and absurd than dressing children in the semi-nude state, with the legs, chest, and

shoulders bare, as shown in the engraving, and as so frequently seen in this country. On the other hand, too much clothing is also a source of disease, sometimes even of the same diseases which originate in exposure to cold, and often renders the frame more susceptible to the impressions of cold, especially of cold air taken into the lungs. Regulate the clothing according to to the season; resume the winter dress early; lay it aside late; for it is in spring and autumn that the vicissitudes of our climate are greatest, and congestive and inflammatory complaints most common. With regard to *material*, flannel should be worn next the skin during the day and put off at night. In summer, cotton may be substituted, and flannel resumed early in the autumn. If flannel should prove irritating to the skin, fine fleecy hosiery will in general be easily endured,and will greatly conduce to the preservation of health. In every article of dress the principle should be carefully followed of placing no restraint upon the motions of any part. For the boy, tight-waisted trousers or braces, and for the girl, stays and corsets of all kinds must be forbidden during the whole period of childhood. All the muscles should have full liberty to act, as their free exercise promotes both their growth and activity, and thus ensures the regularity and efficiency of the several functions to which these muscles are subservient. Children should not wear garters or any other ligatures calculated to impede the circulation. Tight boots and shoes should also be carefully avoided, as they not only occasion corns, bunions, &c., but are also productive of general derangement of the system.

DIET AND REGIMEN.—In the early part of childhood the diet of the latter months of infancy is still to be continued, *occasionally* varied by a dinner of mealy mashed potato and gravy, or a few crumbs of bread and gravy. Rice pudding or batter pudding may be given for a change. At *eighteen months* old, if the child has most of his teeth, there is no objection to his taking a small slice of mutton, or, occasionally, of roast beef, which should be cut into small pieces, and mixed with a potato, a few crumbs and some gravy. In the generality of cases meat may be given for the first few months every other day, and potato and gravy, or rice and batter pudding, on the alternate days. Fruit puddings and pastry are objectionable. The meals should be given at intervals of about four hours; thus—*breakfast*, between seven and eight o'clock, to consist of tops-and-bottoms steeped in boiling water, a little fresh milk added, a few grains of salt, and loaf sugar to sweeten; or pour upon some bread just enough boiling water to soften it, cover it up for a minute or two in the steam, then add the fresh milk, salt, and sugar. *Dinner* about twelve o'clock. The *afternoon meal* about four o'clock, the same diet as formed the breakfast. At *seven*, a little arrowroot, made with a very small proportion of milk, and a biscuit, or a crust of bread. As the child grows older the quantity at each meal should be increased, and the quality somewhat altered. Pure milk, boiled or not, as it is found best to agree, may with bread form the morning and afternoon meals; and at dinner, meat and bread, with a small quantity of vegetable, and toast-and-water

may be taken daily. One essential rule in connection with diet should be laid down, and that is, that a child should eat slowly and masticate thoroughly. The healthy state of the child depends greatly upon the observance of this rule, nor are the advantages temporary only; a salutary habit is established which will be of life-long benefit. The following articles of diet should never be given to a child: pork, cakes, new bread, sweetmeats, sauces, dried fruits, nuts, and butter in excess. Tea, especially when strong, is hurtful to children. Wine, spirits, or beer given to a healthy child is highly reprehensible, they ought never to be given but medicinally. Toast-and-water, or plain water is the proper drink for children, and one that will cause them to relish their food with unalloyed zest.

AIR AND EXERCISE.—*Pure* air is essential to the health and growth of children, but it is erroneous to suppose that the colder the temperature of the open air, the more bracing it will prove. It is the temperate quality, not the coldness, which renders it pure and salubrious. Much caution, indeed, is necessary on this head in our unsettled climate. When children are taken out in the air, mothers should have those to whom they intrust their children under their immediate superintendence. Nursery-maids are notoriously careless and indiscreet, in keeping children too long in the air at a time, or in standing still or sitting down with them in a current of air. When children are out, they should be encouraged to play and run about, and to amuse themselves with any exercise calculated to promote the development and growth of the body. When the weather is wet and damp, or cold biting winds prevail, let the child run about a large room, or the hall. On no account suffer him to *sit* for any length of time, as it will induce an enervated and relaxed state of the frame, beyond the reach of remedy. The air within doors should also be carefully attended to. The nursery in which children generally pass the first years of their life should be large, lofty, and thoroughly ventilated. It should have a sufficient number of windows, and also a chimney, to ensure free admission of light, and an uninterrupted circulation of air. Whenever the child is out of the nursery, the windows should be thrown wide open, and the temperature of the apartment generally, should not exceed sixty degrees.

SLEEP.—From the second year up to the third and fourth, the child should be allowed to sleep for an hour or so before dinner; after this time it may be gradually discontinued. The child should be put to rest every evening between seven and eight; the definite number of hours that a child ought to sleep cannot precisely be stated, but if it is in good health, it will sleep on undisturbed until the following morning, and awake of its own accord. Keeping children up beyond their usual hours is very injurious. At evening parties, for instance, children generally become pale, jaded, and peevish as the night draws on; and the following morning, instead of awaking cheerful and lively as is customary, they sleep two or thee hours beyond their time, and are even then wearied and exhausted. The child's bed should consist of a mattress only, and the bed-clothes should not be so heavy as to cause perspiration. The bed should be open at the top and around, except where violent currents of air are to be guarded against. Children should not be allowed to sleep with persons in bad health, or who are far advanced in life.

EDUCATION. — Children should only be confined two or three hours a day, and what little they learn should be taught as an amusement rather than as a task. To accomplish this it is better to instruct a child by encouraging habits of observation on things around and about him, than by books; and on this principle every walk in the field or garden, while conducing to health, may also furnish its lesson.

AMUSEMENTS.—A child should be encouraged to engage in those amusements where the greatest number of muscles are brought into play, such as ball, hoop, skipping, running, &c. A child should never have toys given him that he can injure himself with, as toy-swords, knives, and bows and arrows; rocking-horses are also not wholly free from danger.

CHILI VINEGAR. — Put one ounce of ground chilies into a quart of good vinegar, let it digest for a fortnight, shaking the mixture once every day.

CHILLS.—By this term is meant that sensation of cold and shivering which usually follows the exposure to cold, or the application of damp or wet to the heated body. The symptoms that generally accompany chills are of a febrile nature, such as headache, lassitude, pain and sensation of cold in the back, sudden tremor or shivering, a white tongue, quick and often sharp pulse, drowsiness, and a desire for warmth. All severe colds, and all fevers and bronchial affections, commence with chills; and though Nature frequently cures herself by producing sleep, and an action on the skin during repose, these symptoms when neglected frequently merge into more severe indications of disease, and if unrelieved or curtailed, generally pass into some form of acute malady. Very often, however, the duration of chills is sufficiently long to constitute a stage, and allow time for some remedial means being applied to break their chain of symptoms, and possibly, in preventing their diseased action spreading, effect an entire cure. The most effectual means to ensure this desirable end is the immediate use of the hot bath, or the immersion of the feet and legs in warm water, going into a heated bed and drinking either a tumbler of cold water or some warm stimulating drink, such as half-a-pint of egg-flip with a little spirit in it. For ordinary cold chills, unattended with graver symptoms, either of these means may be employed, though it is more judicious to use the water draught in summer time, and the stronger potation in the winter. Should the lassitude, sense of cold and gaping, not yield to such means, ten grains of Dover's Powder should be taken at bed time in addition to the hot or foot bath, or a draught composed

of one ounce of camphor water, one and a half drachms of spirits of nitre, the same of ipecacuanha wine, and twenty drops of laudanum.

CHIMNEY, FIRE IN, TO EXTINGUISH.—Shut the doors and windows; throw some powdered brimstone on the fire in the grate, or ignite some on the hob, and then put a board in front of the fireplace to prevent the fumes from descending into the room. The vapour of the brimstone ascending the chimney, will then effectually extinguish the soot on fire.

CHIMNEY, SMOKY, TO CURE.—Smoky chimneys result from a variety of causes. The wind may be let in too freely above, or the smoke stifled below; the vent may also be too contracted, particularly where several open into the same funnel. The situation of a house may also affect the chimneys, especially if backed by higher ground or loftier buildings. In many cases the remedy for smoky chimneys is of the most simple kind, but the first step is to ascertain the cause of the defect. The following are some, among many others:—A single chimney is more liable to smoke than when it forms part of a stack. Straight funnels seldom draw well. A northern aspect often produces a smoky chimney. Large fire-places are apt to smoke, particularly when the aperture of the funnel does not correspond in size; for this a temporary remedy may be found in opening a door or window—a permanent cure by diminishing the lower aperture. When a smoky chimney is so incorrigible as to require a constant admission of fresh air into the room, the best mode is to introduce a pipe, one of the apertures of which communicates with the open air, and the other terminates underneath the grate; or openings may be made near the top of the apartment, if lofty, without any inconvenience even to persons sitting close by the fire. Where a chimney only smokes when a fire is first lighted, the defect may be guarded against by allowing the fire to kindle gradually; or more promptly by laying any inflammable substance, such as shavings, on the top of the grate; the rapid combustion of which will warm the air in the chimney, and give it a tendency upwards before any smoke is produced from the fire itself. Sometimes the fault lies in the grate not being placed *true* to the mouth of the chimney; this should be ascertained, and the grate set more backward or forward, as the case may be. The shortness of the funnel or the chimney may produce smoke; in this case the lower orifice must be contracted to as small dimensions as possible by means of an upright register. If a kitchen chimney overpowers that of the parlour, as is often the case in small houses, apply to each chimney a free admission of air until the evil ceases. When a chimney is filled with smoke, not of its own formation, but from the funnel next to it, cover each funnel with a conical top, or earthen crook; by means of which the two openings are separated a few inches, and the cold air or the gusts of wind cease to force the smoke down with them. If these remedies fail, it will be generally found that the chimney only smokes when the wind is in a particular quarter; the following is then the best remedy to adopt:—Put on the top of the chimney a box, in each of the sides of which is a door hanging on hinges, and kept open by a thin iron rod running from one to the other, and fastened by a ring in each end to a staple. When there is no wind these doors are at rest, and each forms an angle of forty-five degrees, which is decreased on the windward side in proportion to the force of the wind, and increased in the same ratio on the leeward side. If the wind be very strong, the door opposed to it becomes closed, whereby the opposite one is opened to its utmost width. If the wind shakes the corner of the box, it shuts two doors, and forces open those opposite. This scheme is infallible; the expense is trifling, and the apparatus simple.

CHINA WARE, TO CLEAN.—When china is very dirty and stained, clean it with moderately warm water in which finely powdered fuller's earth or soft soap is put: rinse well with cold water.

CHINA WARE, TO MEND.—When broken china requires riveting, the usual mode is to use a drill made of a splinter of diamond set into a handle, and this is an effectual mode; but as a diamond may not always be at hand for this purpose, the following substitute may be employed:—Procure a three-cornered file, and harden it completely by making the end red hot, and plunging it into cold water; then grind the point quite sharp on a grindstone, and afterwards on an oilstone. Then with the point of this tool, pick repeatedly on the spot to be bored, taking care not to use too much violence lest the object should break. In a short time a small conical piece about the size of a pin's head will be forced out, and the hole may afterwards be widened by introducing the point and working the file round; the wire may be then worked in, and fastened in the usual way.

CHINTZ, TO WASH.—Boil two pounds of rice in two gallons of water till soft, and pour it into a tub; let it stand until it subsides into a moderate warmth: put the chintz in, and wash it (without using soap) until the dirt disappears; then boil the same quantity of water and rice as before, but strain off the rice and mix it in warm water. Wash the chintz in this till quite clean; afterwards rinse it in the water the rice was boiled in; this will answer the end of starch, and dew will not affect it. After it is dried pass it through the mangle, but use no iron.

CHIVES.—The chive is a hardy perennial plant, sometimes found in meadows and pastures. The leaves are employed as an ingredient for salad in spring, being esteemed milder than onions. They are also used as a seasoning for omelets, soups, &c. Chives are readily propagated by parting the roots, either in autumn or spring, and they will grow in any soil or situation. They should be repeatedly cut during the summer, the successive leaves produced in this way being more tender. It will continue productive for three or four years.

CHLORIDE OF LIME.—This, with chloride of soda, are the substances now used as

the most convenient and effectual preparation for the purpose of disinfection. Upon chloride of lime being exposed to the atmosphere, it becomes decomposed by the lime taking carbonic acid from it, and consequently leaving the chlorine free to escape, which it does very slowly; the change is more rapid when the air is charged with putrid effluvia, because the carbonic acid then present promotes decomposition. Nothing more is necessary, therefore, than to put some chloride of lime, with forty times as much water, into dishes, and place them in the room which it is required to disinfect, to guard against contagion or to remove any offensive smells. A solution of chloride of lime in water may likewise be sprinkled over the apartment, to destroy disagreeable smells. A cloth wetted with it, and laid over a corpse for an hour or two where putridity has commenced, will prevent any effluvia from being perceived. Clothes worn by persons during pestilential diseases are disinfected by being washed in a solution of chloride of soda; and the linen of sick persons when there is any danger of infection, should be put into water with chloride of lime or soda as soon as it is taken off. This solution is also found extremely useful as an application to ulcers or putrescent sores. —See DISINFECTION.

CHLOROFORM.—A colourless fluid with a pleasant smell, somewhat resembling peach blossoms. Its power of producing insensibility to pain when inhaled, is universally known. It is, however, too potent an agent to be intrusted to non-professional hands, except under express medical sanction and direction in each particular case. In some of the more painful operations its use confers a great boon on the suffering patient, but in minor operations, such as tooth-drawing, its employment is hardly advisable. Fatal cases have followed the inhalation of chloroform, although the percentage is small; and cases do occur in which very disagreeable effects, such as headache, sickness, hysteria, &c., have succeeded the use of chloroform. On the whole, therefore, it is better not to employ this agent without being certain that no organic disease exists, to render its use dangerous and hurtful. Chloroform may be employed with perfect safety and much advantage as an external application in painful affections of the nerves, especially neuralgia and toothache. For this purpose, a piece of linen or lint of a size proportioned to the part affected, is to be soaked in the fluid and applied to the skin, covered with oiled silk, to prevent quick evaporation. A small portion of cotton wool soaked in chloroform will, sometimes, if placed in the affected cavity, allay the pain of toothache. Chloroform, taken into the stomach, is found useful in spasmodic diseases, asthma, hysteria, &c., and may be administered, in the absence of other remedies, in doses of from six to ten drops, along with a teaspoonful of brandy, in three tablespoonfuls of water.

CHOCOLATE.—Roasted cacao or chocolate beans or nuts, made into a paste by trituration, in a heated mortar, with sugar and aromatics. It is poured into tin moulds in a semi-fluid state, and left until cold. In this form it is called cake chocolate, or *chocolate paste*. When these lumps are reduced to coarse powder, by grinding, it is known under the name of *chocolate powder*. The chocolate commonly sold in England is prepared from the cake left after the expression of the oil, and this is frequently mixed with the roasted seeds of ground peas, and maize or potato flour, to which a sufficient quantity of inferior brown sugar or treacle and mutton suet is added to make it adhere together. Chocolate should never be made for the table before it is wanted, because heating it a second time injures the flavour, destroys the froth, and separates the body of the chocolate, the oil of the nut being observed after a few minutes, boiling, or even standing long by the fire, to rise to the top. This is one of the principal reasons why chocolate offends the stomach. *Chocolate for the table* is prepared by scraping the chocolate fine (from one to two squares to a pint, to suit the stomach), throwing it into boiling milk and water, and milling it well. It is served up with the froth. The sugar may either be put in with the scraped chocolate or added afterwards, at pleasure.

CHOCOLATE ALMONDS. — When the chocolate has been softened and mixed with an equal proportion of sugar, enclose singly in small portions of it some almonds, previously well dried, or even slightly coloured in the oven, after having been blanched. Roll them very smooth in the hand, and cover them with the comfits.

CHOCOLATE BISCUITS.—Put a quarter of a pound of chocolate into a tin and make it warm over the fire; then put a pound of powdered loaf sugar into a basin, and when the chocolate is quite warm and soft, add it to the sugar, and mix it well with eight whites of eggs; bring it to a paste, and roll it into masses the size of a walnut; put them into a moderate oven with three papers under them; bake them till they are crisp and firm, and when quite cold remove them from the paper.

☞ Chocolate, ¼lb.; sugar, 1lb.; eggs, 8 whites.

CHOCOLATE CREAM. — Scrape two squares of chocolate and put them into a stewpan with two ounces of sugar, a pint of milk, and half a pint of cream; let it boil till a third of it is consumed, and when half cold beat up the yolks of six eggs with it; strain the whole through a sieve, and then put the small cups or dishes, in which the cream is to be served, into a pan containing enough boiling water to reach above half way up the cream; cover the pan and lay fire on the lid, boil it till done, and serve cool.

☞ Chocolate, 2 squares; sugar, 2ozs.; milk, 1 pint; cream, ½ pint; eggs, 6 yolks.

CHOCOLATE DROPS.—Throw into a well-heated metal mortar from two to four ounces of chocolate broken small, and pound it with a warm pestle until it resembles a smooth paste or very thick batter; then add an equal weight of powdered sugar, and

beat them until they are thoroughly blended. Roll the mixture into small balls, lay them upon sheets of writing paper or upon clean dishes, and take them off when they are nearly cold; cover the top with white nonpareil comfits. More or less sugar can be worked into the paste, according to the taste.

CHOCOLATE ICE CREAM.—Scrape a quarter of a pound of the best chocolate; place it in a stew-pan over the fire, with just water enough to melt it, keep stirring it, and when it is melted have ready a quart of boiling milk, mix this with the chocolate gradually, and add half a pound of sugar and six eggs well beaten, stir all well together, and when cold, freeze.

☞ Chocolate, ¼lb.; water, sufficient; milk, 1 quart; sugar, ½lb.; eggs, 6.

CHOKING.—When any mass of food, such as a piece of meat, potato, or other substance, lodges in the fauces, or the base of the tongue, if in sight, but too far for the fingers to reach, it should be immediately grasped with a pair of pincers, or, what is better, a pair of curling-tongs, and dragged out. If neither are at hand, and as time is precious, press down the tongue with the fingers, and tickle all the surrounding parts with a feather, so as to induce heaving or vomiting, Nature by that action often getting rid of the obstruction. If, however, none of these means present a chance of relief, use the point of the curling-tongs as a probe, and push the obstruction into the gullet. However quickly these operations may have been carried on, the sufferer may have died before the obstacle has been displaced, or become so apparently lifeless as seemingly to render all further steps useless; this, however, is not the case, cold water must be dashed on the face and chest, ammonia applied to the nostrils, and the lungs inflated with air. When the lodgment has been lower down and taken place in the guliet proper—a fact that can be ascertained by an examination of the mouth, and also by the mute indication of the sufferer's fingers—the impediment to its descent to the stomach proceeds from some spasmodic action into which some of the muscular fibres are thrown, causing them to grip the body in its descent and retain it in that position, while its bulk pressing forward on the windpipe, causes the danger to life that results from the accident. Two or three sudden or sharp slaps between the shoulders, or water dashed abruptly in the face, will often, by producing a sudden gasp, release the spasm and cause the descent of the object; if not, a probe, flexible tube, or a quill, must be employed and the substance pushed past the constriction; when, however, the bulk is too large to be moved by such simple means, and while a messenger is sent for a surgeon to bring the proper instrument, endeavours should be made to keep up a partial supply of air in the lungs, by means of the bellows.

CHOLERA comprehends two distinct forms of the same disease, the English variety—or cholera morbus proper, and the cholera maligna, commonly called Asiatic or malignant cholera.

ENGLISH CHOLERA, or CHOLERA MORBUS.—*The symptoms* commence with nausea, pain, and a sense of distension in the stomach and bowels, succeeded in a very short time by violent vomiting and relaxation, at first of bile, and after a time of a mucous discharge; a quick, small, and often intermittent pulse, great thirst, heat, and cold sweating, prostration of strength, and considerable anxiety of countenance. In severe cases these symptoms are attended or followed by cramps and spasmodic contractions in the extremities, and sometimes universal convulsions, and in fatal cases with hiccough. The exciting causes are sudden transitions from heat to cold, great fatigue or muscular exertion in the sun, indigestible food, acid fruits, melons, cucumbers, or the inhalation of noxious gases. The diminution in the frequency of the vomiting, a soft moisture on the skin, and an inclination to sleep, are to be considered as favourable symptoms, prognosticating recovery.

Treatment.—As assistance is seldom sought till the most active symptoms have set in, the first and most important object to be effected is to suspend the preternatural action of the stomach and bowels; in some constitutions, and in mild cases, this may be achieved and the disease cured by a farinaceous diet and the total avoidance for several days of all solid food. But though this change of diet must be adopted in all cases, it will only occasionally act as a remedial agent. The vomiting must therefore be checked by other means, and for that purpose a small blister should be immediately applied to the pit of the stomach, and an effervescing draught of the following ingredients taken every quarter or half an hour:—In about the third part of a tumbler of cold water dissolve ten grains of carbonate of soda or carbonate of ammonia, with, for the first two or three draughts, seven or eight drops of laudanum. To this add ten grains of tartaric acid, and let the patient drink the whole while effervescing. The recumbent position on a sofa or bed must be preserved as much as possible, and the feet kept hot by heated bricks or bottles of water. As soon as the stomach has been partially tranquillized, or between the second and third draughts, give the patient a dessertspoonful of tincture of kino, which should be administered in a very small quantity of gruel, and can be repeated at the end of one or two hours, if the relaxation has not been materially checked. Should these means, however, not abate the action of the bowels, the following mixture must be employed, taking a tablespoonful every hour till the desired effect has been obtained.

Carbonate of ammonia	2 scruples,
Prepared chalk	4 drachms,
Decoction of logwood	6 ounces,

rub smooth in a mortar, and add tincture of kino three drachms—mix. When the diarrhœa is attended with cramps or spasms one of the annexed pills must be taken with each dose of the mixture.

Powdered camphor	4 grains,
Powdered opium	4 grains,
Rhubarb	4 grains,
Ginger	4 grains,
Extract of henbane	10 grains;

make into a mass and divide into six pills. As soon as the action of the bowels is suspended the mixture is to be discontinued, and so also with regard to the pills, as soon as the cramp or spasms are subdued. To restore the bowels to their natural action, a day or two after the choleraic discharges have been suppressed, the best aperient that can be taken is a dose of from six to eight drachms of castor oil. In mild cases of English cholera unattended with vomiting, but where the pains in the thighs are severe, the most simple treatment is half an ounce of castor oil, in peppermint water, with twenty drops of laudanum, repeating the same dose with either ten or twenty drops of laudanum in two hours after, according as the pain is subdued or remains unabated. Whenever the convenience of a hot bath can be obtained, it should be employed.

MALIGNANT CHOLERA, Asiatic, spasmodic, or epidemic, as this disease is variously denominated, is in all its general features precisely analogous to the cholera morbus of this country, with the special exceptions that all the symptoms are infinitely more severe, much shorter in their duration, there is a total absence of bile from the dejections, and the presence of the stage of lividity or collapse.

Symptoms.—Slight diarrhœa, quickly becoming excessive, and changing the character of the ordinary discharge till it assumes the appearance of thin gruel, and ultimately that *rice water semblance* which so remarkably denotes the disease; this is accompanied with short flying pains, and a sense of coldness in the bowels, the countenance is pale and anxious, and there is loss of appetite. Great agitation, prostration of strength, nausea, vomiting, and cramps in the legs and arms, commence the symptoms of the second stage; these are followed by increased pains in the loins and abdomen, small feeble pulse, cold clammy skin, and great thirst, with craving for cold water. The symptoms indicative of a fatal termination are intense lividity of the entire body and nails, absence of pulse at the wrist and temples, delirium, and a dark fur on the lips, tongue, and teeth. Those that prognosticate a favourable result; are the cessation of the cramps, a warm moisture on the body, the voice becoming firmer, and the restoration of all the secretions, especially the bile.

Treatment.—The patient should be supplied with frequent and copious draughts of water containing phosphate and carbonate of soda, potass, and other salines, or even cold water, or, what is probably better than either, abundant draughts of whey. The hot bath, by promoting expansion of the vessels, and a determination of blood to the skin, is an invaluable adjunct in every stage, and should be accompanied by friction, especially along the spine. Transfusion, and electricity are both efficacious means, more particularly the first. Opium, ether, ammonia, and all stimulants have been employed, and sometimes with benefit, though of all modes of treatment the most rational is that of the hot bath, whey and salines, with a suppositary of opium. In a disease that presents itself in so many forms, no regular course can at present be laid down, but the most formidable symptoms, as they present themselves must be met with energy and despatch, and either the whole or a part of the above mode of practice adopted, according to the emergency of the case.

CHOPS.—See LAMB CHOPS, MUTTON CHOPS, PORK CHOPS.

CHOWDER—A SEA DISH.—Cut off the fat part of a belly piece of pork, and lay it at the bottom of a kettle; slice some onions, and mix them with all kinds of sweet herbs, and strew them upon the pork; take a very fresh codfish, bone, slice, and flour it, and strew over it some pepper and salt; put a layer of cod upon the pork, then a thin layer of pork, then a layer of ship-biscuit, and so on until the kettle is nearly full; pour in a pint and a half of water, cover the whole with a paste, fasten down the top of the kettle very tight, put it on a slow fire for about four hours, laying hot embers on the lid of the kettle; when done, skim it well, and turn it into a dish, pour in a glass of Madeira wine, add stewed truffles and oysters, lay the paste over it and serve.

CHRISTENING.—This ceremony may be performed either in accordance with the rites of the Established Church or of Dissenting persuasions, or may be superseded altogether by the simple registration of the infant's birth, name, &c. The fees paid for christening vary with a variety of circumstances. Particulars should in each case be obtained of the clerk of the place of worship. It is usual to make a christening the occasion of festivity, but not in such a manner as to require special remark. The parents and sponsors of the child appear at the church at the appointed hour, the child being carried by the nurse. The dress befitting christenings is what is termed half costume, but the infant should be robed in the choicest manner that circumstances will allow. It is usual for the sponsors to present the child with a gift to be preserved in future years. Silver spoons, a silver knife and fork, a handsome bible, a silver cup, and other such articles are usually chosen. It is also usual to make a trifling present to the nurse.

CHRISTMAS.—The festival of the Christian churches in commemoration of our Saviour's nativity, on the 25th of December. In England, especially, this festival partakes of a universal interest. The houses both of the richest and the poorest are usually decorated with mistletoe, holly, and evergreens; the public entertainments are of a lively character, and the current literature is rendered congenial to the season.

CHRISTMAS PARTIES, ETIQUETTE OF.—Christmas parties are especially devoted to the reunion of relations and intimate friends; it is therefore customary, on these occasions, to throw aside the ceremony

and constraint which society ordinarily imposes, and for each person to determine upon being happy himself, and to contribute to the happiness of those around him. Young ladies, especially, should not display an ill-timed prudery at certain little freedoms which this season allows, such as kissing under the mistletoe. The youthful should not object to regulate their amusements for the convenience of the aged; nor should the latter disdain to enter into the sports of the young. The good things provided by the host and hostess should be more homely than upon other occasions; and there should be a marked heartiness in their demeanour towards those whom they entertain. Those who assemble may be freer in their intercourse than on ordinary occasions, the good wishes of the season being on every tongue. Dress should be less displayed now than at the fashionable parties that will commence about the middle of January; nor should the richer guests endeavour by a display of trinkets and jewellery to outshine their humbler relatives and friends; in a word, a Christmas party is supposed to level all grades and distinctions for the time being, with a view of contributing more certainly to the general happiness of the company assembled.

CHRISTMAS PUDDING. — Mix thoroughly one pound of finely grated bread, one pound of flour, two pounds of raisins stoned, two pounds of currants, two pounds of suet, minced small, one pound of sugar, half a pound of candied peel, one nutmeg, half an ounce of mixed spice, and the grated rinds of two lemons; mix the whole with sixteen eggs well beaten and strained, and add four wineglassfuls of brandy. These proportions will make three puddings of good size, each of which should be boiled six hours.

☞ Bread crumbs, 1lb.; flour, 1lb.; suet, 2lbs.; currants, 2lbs.; raisins, 2lbs.; sugar, ½lb.; candied peel, ¾lb.; lemon rinds, 2; nutmeg, 1; mixed spice, ½oz.; salt, ¼ teaspoonful; eggs, 16; brandy, 4 wineglassfuls.

Obs.—A fourth part of the ingredients given above will make a pudding of sufficient size for a small party: to render this very rich, half the flour and bread crumbs may be omitted, and a few spoonfuls of apricot marmalade well blended with the remainder of the mixture. Rather less liquid will be required to moisten the pudding when this is done, and four hours and a quarter will boil it.

CHRISTMAS TREE. — The custom of having illuminated trees at Christmas, laden with pretty little trifles, as mementoes to be presented to the guests of the Christmas party, is derived from Germany. A young fir is generally selected for the Christmas tree, and little presents of various kinds are bound on the branches, as, crochet-purses, bonbons, preserved fruits, alum-baskets, charms, dolls, toys in endless variety, &c., distributed over the tree according to fancy. The whole is illuminated by numerous little wax tapers, which are lighted just before the guests are admitted to inspect the tree. Before the tapers are quite burnt out the guests all assemble around the tree, and the *souvenirs* are taken off and presented to the guests whose names have either been previously appended to them, or at the discretion of the distributor.

CHRIST'S HOSPITAL.—A public institution, commonly known as the *Blue Coat School*, in which children are educated, clothed, and fed. The number of scholars on this establishment are, nine hundred at the town school in Newgate Street, and five hundred in a preparatory branch at Hertford (including seventy girls). No boy is admitted under seven or over nine years of age, and none can remain after fifteen, except the "King's Boys," numbering forty, or the "Grecians" and "Deputy Grecians" who have attained to the highest honours in the school. The education received at Christ's Hospital is of a first class, embracing the customary branches of learning, with Latin, Greek, French, German, mathematics, drawing, &c., so that if a boy choose to avail himself of the advantages which this institution affords, he cannot fail to lay the groundwork of future advancement in life. Admission into this school is obtained by means of presentation. These presentations are distributed among a certain number of governors annually, and the list of those governors is printed in the form of a book, which may be had at the counting-house attached to the school in London, on the payment of half-a-crown. It must be understood, however, that there is the greatest difficulty in obtaining a presentation, unless the applicant has some influence direct or indirect with the governor to whom the application is made. The value of a presentation is set down at £500, and a boon like this is naturally enough given by a governor to some one of his own connections, in preference to a stranger. Presentations are bespoken for years beforehand, so that a governor is, generally speaking, not only engaged as regards the presentation for the current year, but also for the one which is to follow three years after. It is therefore hopeless for a person who possesses no influence to apply for this privilege, the chances being that if every one of the governors on the list were written to, or waited upon personally, the answer in each case would be unsatisfactory.

CHRONOLOGY.—The art of measuring time, distinguishing its several constituent parts, such as centuries, years, &c., by appropriate marks and characters, and adjusting these parts in an orderly manner to past transactions, by means of eras, epochs, and cycles, for the illustration of history. Books: *Toone's Chronological Historian; Blair's Tables; Howlett's Tables; Boyle's Universal Chronologist; Alexander's Chronology of the World; Slater's Chronology, Ancient and Modern; Wade's Chronology of British History; Bickmore's Comparative Chronology; Maydwell's Epitome; Howlett's Metrical Chronology; Cuninghame's Scientific Chronology; Thomson's Chronology and History; Hale's New Analysis; Nicholas's Chronology of History; Haydn's Dictionary of Dates; Weale's Rudimentary Chronology; Kennedy's Chronology of the World; Salmon's Chronological Historian; Hampson's Dates, Charters, and Customs; British*

Chronologist; Annual Register; L'Art de Vérifier les Dates.

CHRONOMETER.—A timepiece of peculiar construction, at present much employed by navigators in determining the longitude at sea. Chronometers are, in general, much larger than common watches, and are hung in gimbals, in boxes six or eight inches square; but there are also many pocket chronometers which, externally, have all the appearance of the better sort of pocket watches, and internally differ from those only in the construction of the balance. The balance and hair-spring are the principal agents in regulating the going of an ordinary watch, being to this what a pendulum is to a common clock; and this spring in the former, like the pendulum in the latter, is subject to expansions and contractions under different degrees of heat and cold, which affect the speed or rate of the machine; and the methods of correcting this inaccuracy mark the difference between the watch and the chronometer.

CHRYSANTHEMUM.—A flower that contributes greatly to the beauty of the garden, in the latter months of the year, when scarcely any other plants are in bloom, and therefore doubly welcome on that account. It is easily propagated and cultivated. The root may be divided, suckers taken off, or cuttings obtained at any season of the year and at any period of the plant's growth. The following is the usual practice:—In the beginning of April take cuttings from the top shoots of last year's plants, plant them in pots called "small sixties," in mould made up, one half of equal portions of loam, sand, and bog-mould, and one half sand. Take the cuttings off about three inches long, and smoothly cut across at a joint; one is put in each pot, and the pots are set in a frame on a gentle bottom-heat. In three weeks or a month they are well rooted, and then hardened in a cold frame till the beginning of June, when they are shifted into 48-sized pots, and placed in an open airy situation. Here they are watered with liquid manure, in which soap-suds has been mixed. Nip off the tops of the plants about this time to make them bushy, but no more side shoots are allowed to remain for flowering than the plants are calculated to support. For culture in the open ground, many of the sorts may be planted out in warm borders, or compartments, or against walls, and will flower well in fine autumns; but their roots require protection through the winter, and they should be renewed about every two years; for as they increase much in size by suckers from the roots, the plants if left for a longer period become unsightly, and produce small and imperfect flowers. The early flowering varieties, as the purple, changeable white, rose, and buff, are the hardiest and most suitable for borders. Chrysanthemums are liable to become mildewed, and when they are observed to be in this state, they should be separated from the rest and dusted over with flower of sulphur; two or three days after the operation, the plants should be well syringed, to wash this off.

CHUB, the scientific name of which is *cyprinus cephalus*, much resembles the carp, its large scales being of a rather more silvery brightness and its body somewhat longer in proportion to its breadth; it is sometimes called the "silvery bluish carp." The head and back are of a deep shady green, the sides silvery, but with a golden tinge when in good season; the belly white, the pectoral fins of a pale yellow, the ventral and anal fins red, the tail forked, of a brownish hue tinged with blue at the end. The chub has a large mouth without teeth, but his throat is provided with a bony apparatus which crushes his food and prepares it for digestion; he is one of the "leather-mouthed" species. The chub spawns at the end of April until the middle of May, on a shallow gravelly bottom, and recovers its condition more quickly after this effort of nature than any other fish; it will then be found until from the middle to the end of June in sharp, shallow streams; after which time it seeks shelter under weirs, or overhanging and shelving banks, under trees overhanging the water, amongst the roots of those growing on the banks, amongst the boughs of those growing in, or such as have fallen into, the water, and under and amongst beds of aquatic plants. The chub is found in most of the rivers of this country, its general size being from one ounce up to four pounds, although in the Ouse, in Bedfordshire, and in the Trent it has been taken as heavy as seven pounds weight. The baits for fishing for chub are numerous, indeed there is scarcely any bait that a chub will not take—worms, snails, gentles, wasp grubs, paste, cheese,

cherries, greaves, bullock's pith, &c., at the bottom; minnows, small gudgeon, roach, and other fish in mid-water; and cockchafers, cockroaches, bees, wasps, grasshoppers, small moths, and all kinds of flies, both natural and artificial, on the surface, used either by casting or dipping or dapping. The best time for fishing for chub is from November to March, when he is also in the best condition and bites more freely: the best baits at this time are greaves and bullock's pith, using sheep's or bullock's brains for ground bait with the latter; for directions to prepare both these see "BAIT." The rod for chub fishing at bottom should be about twelve feet long, light and pliable; those made of deal for the first and second joints, and lance-wood or green heart for the third and top joints are perhaps the best. The reel, a full-sized wooden one; the line of fine twisted silk; the float, a swan quill or of cork made long and tapering, according to the depth of water and strength of stream; the bottom, three or four feet of fine round gut, and the hook No. 5 or 6. The books on angling treating of chub fishing are *Blaine*, *Daniel*, *Walton*, and *Ephemera*; but the best of all is *Bailey's Instructor*.

CHURCHWARDENS are parishioners chosen annually in Easter week, and being so chosen, are bound to serve the office (except peers, members of parliament, clergymen, Roman Catholic clergy, dissenting ministers or teachers, barristers, attorneys' clerks in court, physicians, surgeons, apothecaries and aldermen, who are exempt). They have the care and management of the repairs of the church, and the organ, bells, bible, and books, the making of church rates to repair the church, if the parishioners refuse to make one: also the ordering of sittings and enforcing good behaviour during divine service. They have the care of the benefice during its vacancy, and must see that the church is duly served by a curate; and they may not suffer a stranger to preach unless he appears qualified by producing a license. At the end of the year they are to render accounts of their receipts and expenditure.

CHURN.—See CHEESE.

CIDER.—A beverage made from the juice of the apple, and for which sour and rough-tasted apples are generally preferred The process of making cider varies in different localities, but in every case essentially consists of the collection of the fruit, and the expression and fermentation of the juice. The *collection of the fruit* should not be commenced before it has become sufficiently mature; they should be picked by the hand, and any unsound fruit, or such as may have lain on the soil, should be rejected. The apples after being gathered, are usually left for fourteen or fifteen days in a barn or loft to mellow, during which time the mucilage is decomposed, and alcohol and carbonic acid developed. When this process is completed, the fruit should be looked through, the bruised and decayed apples placed in a heap by themselves for an inferior cider, from which to make vinegar, the remainder wiped perfectly dry, and laid ready for use. The *expression of the juice* is the next step in cider-making. The apples are ground to a pulp in a mill, consisting of two fluted cylinders of hard wood or cast iron working against each other. The pulp is afterwards put into coarse strong bags, and pressed with a heavy weight so as to squeeze out of them all their juice. The juice is placed in large open tubs, and kept at a heat of about sixty degrees. They are now constantly attended to, and kept quite full, in order that the yeast, as it forms, may froth over and be carried off from the surface of the liquor. After two or three days for weak cider, and eight or ten days for strong cider, or as soon as the sediment has subsided, the liquor is "racked off" into clean casks. The casks are then stored in a cellar, shaded barn, or other cool place, where a low and regular temperature can be ensured, and are left to mature and ripen until the following spring, when it may be re-racked for use. The pressed pulp is again sprinkled with one third or half its weight of water, and re-pressed. The resulting liquor, when fermented, forms a weak kind of cider, which is reserved for domestic use in the same way as table-beer. The refuse pulp is an acceptable food for pigs and store cattle.

Preparatory to *bottling cider*, it should be examined, to see whether it is clear and sparkling. If not so, it should be clarified, and left for a fortnight. The night previous to bottling, the bung should be taken out of the cask, and left so until the next day, and the filled bottles should not be corked down until the day after; as, if this is done at once, many of the bottles will burst by keeping. The best corks should be used. Champagne bottles are the best for cider. It is usual to wire down the corks and to cover them with tinfoil, after the manner of champagne. A few bottles at a time may be kept in a warm place to ripen. When the cider is wanted for immediate use, or for consumption during the cooler season of the year, a small piece of lump sugar may be put into each bottle before corking it. When intended for keeping, it should be stored in a cool cellar when the quality will be greatly improved by age. Cider for bottling should be of good quality, sound and piquant, and at least a twelvemonth old. When out of condition, it is unfit for bottling.

CIDER CHAMPAGNE.—Cider, eighteen gallons, spirit, three pints, sugar, five pounds. Mix and let them rest for a fortnight, then fine with skimmed milk, 1 pint. Bottle in champagne bottles: when opened, it will be found to approach very nearly to genuine champagne.

☞ Cider, 18 gallons; spirit, 3 pints; sugar, 5lbs.; skimmed milk, 1 pint.

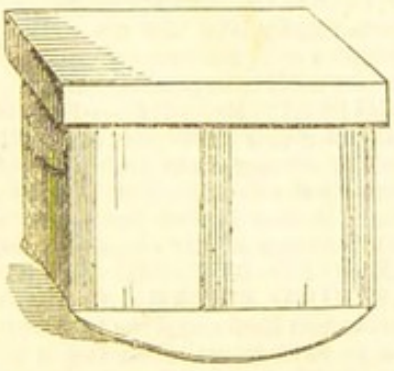
CIDER, PROPERTIES OF.—Cider is a pleasant and refreshing beverage, and with persons in good health is not unwholesome, when drunk in moderation. By persons suffering from indigestion, however, it should be carefully avoided; nor should it be drunk by persons when they are overheated, as it is apt to cause colic and other disagreeable symptoms. Cider has in some instances been found to contain lead, which it has probably imbibed from the leaden vessels in

which it is made or kept; under such circumstances, it becomes poisonous to a greater or less degree, according to the amount of lead taken up.

CIGARETTE.—A species of cigar made by rolling tobacco in thin paper; the implement for making them, and the suitable papers are usually sold at tobacconists. Cigarettes have economy to recommend them, as they do not cost more than a farthing each, whereas a good cigar is seldom to be purchased under threepence or fourpence; by many persons cigarettes are preferred to pipes.

CIGARS.—A form of manufactured tobacco extensively used for the purpose of smoking. The choicest kinds of cigars are those of foreign manufacture, such as Havanah, Cabana, Silva, Lopez, &c., and in imitation of these, British cigars are made bearing the same name. Generally speaking, cigars are not greatly adulterated; the fraud is chiefly confined to palming off home-made cigars as foreign, and in practising this, a number of petty artifices are used; the white spot, for instance, indicative of excellence in a genuine cigar, is produced by chemical agency in the spurious article; the square and sometimes almost flat shape which the foreign cigar attains after undergoing a long voyage in a closely packed chest, is counterfeited in the spurious cigar by pressing. So generally is this practised, that not more than one-third of the cigars sold are what they profess to be—namely, foreign made cigars. To a certain extent, however, the detection of this imposition rests with the purchaser; for notwithstanding the nicety with which the imitative article is made, it is next to impossible to deceive a person who has once been accustomed to cigars of foreign manufacture. A "patent self-lighting cigar" has lately been introduced, which is perfectly lighted by simple friction, thereby obviating an inconvenience which many persons experience, when they have omitted to provide themselves with matches; as well as doing away with the danger which carrying matches about the person is liable to entail. In order that no unpleasant flavour may be communicated to the cigar by this mode of lighting, a layer of pure tasteless matter is interposed between the cigar and the igniting compound.

CINDER SIFTER.—A domestic utensil



used for separating ashes from partially burnt coal. The ordinary cinder sifter is objectionable on account of the dust which it occasions whenever it is used. But an improvement has been introduced in the shape of an enclosed cinder-sifter, as shown in the engraving, and which may be employed without a particle of dust escaping. This sifter is agitated in the customary way, the ashes fall to the bottom and the cinders remain in the sieve, which rests on a ledge at a convenient depth in the box.

CINNAMON.—The inner bark of a tree which grows in the West Indies and in other warm climates; much used for flavouring dishes, pastry, beverages, &c. From the high price of this drug it has become the general practice to substitute the bark of cassia. Cassia is, however, not only thicker and coarser than cinnamon, but its fracture is short and resinous, and its flavour is more biting and hot, whilst it lacks the peculiar sweet taste of cinnamon. The thickness of cinnamon seldom exceeds that of good drawing paper. In addition to its culinary uses, cinnamon is also very useful in medicine, as an agreeable aromatic, and as a vehicle for the administration of other ingredients.

CINNAMON BISCUITS.—Half a pound of dry flour, one pound of loaf sugar finely sifted, one pound of butter, and an ounce of cinnamon powdered. Mix the whole with a wineglassful of brandy or rum, roll out to a thin paste, and bake in a quick oven.

☞ Flour, ½lb.; sugar, 1lb.; butter, 1lb.; cinnamon, 1oz.; brandy or rum, 1 wineglassful.

CINNAMON ESSENCE. - Infuse oil of cinnamon in highly rectified spirits of wine, in the proportion of half a drachm of the former to an ounce of the latter.

CINNAMON TINCTURE.—Put three ounces of cinnamon, bruised, into a quart of the best brandy, and let it infuse for three or four days.

CINNAMON WATER.—Bruise an ounce of cinnamon, and put it into two quarts of brandy, with a pint of water, the rind of a lemon, and an ounce of liquorice root; after it has infused for three or four days, distil it, and add a pound of sugar dissolved in a quart of water.

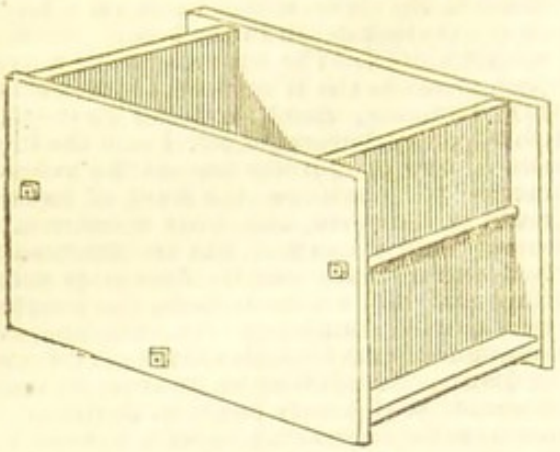
☞ Cinnamon, 1 oz.; brandy, 2 quarts; lemon, rind of 1; liquorice root, 1 oz.; water, 1 pint; sugar, 1lb.; water, 1 quart.

CIRCASSIAN CIRCLE.—A dance, as follows:—The company is arranged in couples round the room, the ladies being placed on the right of the gentlemen; after which the first and second couples lead off the dance. *Figure.*—Right and left set and turn partners—ladies chain, waltz. At the conclusion, the first couple with the fourth, and the second with the third couple, recommence the figure, and so on till they go completely round the circle, when the dance is concluded.

CIRCASSIAN CREAM.—Half a pint of almond emulsion, one drachm of essence of almonds, four grains of bichloride of mercury, and half a pint of spirits of wine, to which any perfume may be added.

CISTERN.—A receptacle for water, acting upon self-filling principles, and conveying water to various parts by means of pipes, &c. The best kind of cistern for the use of

a house is one made of slate. These are usually constructed from thin slabs of Welsh slate joined together with cement and by the aid of grooves. This kind of cistern is very durable, and not liable to get out of repair; nor does it, like lead, affect the taste of the water in any way. Every cistern



should be provided with a waste pipe, which tends to keep the cistern clean and the water pure. With some households the water is kept in butts and casks; before they are used they should be charred inside, as otherwise the water will imbibe an unpleasant flavour. They should be kept carefully covered and frequently cleaned out.

CITRIC ACID.—An acid peculiar to the vegetable kingdom, and found in the juices of several kinds of fruit, especially those of the genus *Citrus*. It is chiefly prepared from the juice of lemons. It is used medicinally in febrile and inflammatory complaints, and added to soda to form the ordinary effervescing draughts.

CITRON, CANDIED. — See CANDIED PEEL.

CITRON PUDDING.—Mix together a pint of cream and the yolks of six eggs, add a quarter of a pound of powdered loaf sugar, five ounces of citron shred fine, two tablespoonfuls of flour, and half a teaspoonful of nutmeg; place this mixture in a deep dish, bake it in a hot oven, and turn it out.

☞ Cream, 1 pint; eggs, 6 yolks; sugar, ¼lb.; citron, 5ozs.; flour, 2 tablespoonfuls; nutmeg, ½ of 1 teaspoonful.

CITRON RATAFIA. — Pare seven or eight citrons very thin; cut the peel into small pieces, and put them into a jar with three pints of brandy, and let them infuse for three weeks; add half a pound of sugar boiled in half a pint of water and well skimmed; let it stand for a fortnight, and bottle it.

CIVET PERFUME.—This substance is procured from the civet cat, and was first brought to this country by the Dutch. In its pure state, civet has a very disagreeable odour, but when diluted it becomes agreeable. *Extract of civet* is prepared by rubbing in a mortar one ounce of civet with an ounce of orris-root powder, or any other similar material that will assist to break up or divide the civet; and then placing the whole into a gallon of rectified spirits; after macerating for a month it is fit to strain off. From a quarter of a pint to

half a pint is the utmost that ought to be mixed with a gallon of any other perfume.

CLARET.—One of the most wholesome of the light wines. It contains 15·10 per cent. of alcohol. Claret is useful in many cases of convalescence from febrile complaints, where heavier and stronger wines would be inadmissible.

CLARIFICATION.—The act of clearing or making bright, commonly applied to the process of clearing liquids by chemical means instead of by filtration. The substances employed in the clarification of liquids operate by either mechanically embracing the feculous matter, and subsiding with it to the bottom of the vessel, or by inducing such a change in its nature and bulk that it subsides by its own density, in each case leaving the liquor transparent. Albumen, gelatine, the acids, certain salts, blood, lime, plaster of Paris, alum, heat, alcohol, &c., serve in many cases for this purpose. The first is used under the form of white of egg, for the clarification of syrups, as it combines with the liquid when cold, but on the application of heat rapidly coagulates and rises to the surface, carrying the refuse with it, forming a scum which is easily removed. Gelatine, under the form of isinglass dissolved in water or weak vinegar, is used to fine white wines, beer, cider, and similar liquors. Sulphuric acid is frequently added to weak liquors for the same purpose. Bullocks' blood is used in the same way as isinglass or white of eggs, for fining red wines, beer, and porter. Lime, alum, alcohol, the acids, and heat, act by curdling or coagulating the feculencies, and thus, by increasing their density, induce their subsidence. Plaster of Paris acts partly like the above and partly like albumen or gelatine, by developing and forcing down the suspended matter.

CLARIFIED BROTH. — Put broth or gravy into a clean stew-pan, break the white and shell of an egg, beat them together, and add them to the broth. Stir it with a whisk, and when it has boiled for a few minutes strain it through a hair sieve or a napkin.

CLARIFIED BUTTER.—See BUTTER.

CLARIFIED SUGAR. — Break into large lumps as much loaf sugar as is required, and dissolve it in a bowl, allowing a pound of sugar to half a pint of water. Set it over the fire, and add the white of an egg well whipped. Let it boil up, and when about to run over, pour in a little cold water, to check

it; but when it rises a second time, take it off the fire and set it by in a pan for a quarter of an hour. The foulness will then sink to the bottom, and leave a black scum on the top, which must be taken off gently with a skimmer. Then pour the syrup very quickly from the sediment, and set it by for use.

CLARIFIED SYRUP.—Break two pounds of double refined sugar, and put it into a stew-pan that is well tinned, with a pint of cold spring water. When the sugar is dissolved, set it over a moderate fire. Beat up half the white of an egg, put it to the sugar before it gets warm, and stir it well together. As soon as it boils take off the scum, and keep it boiling till it is perfectly clear. Run it through a clean napkin, put it into a close stopped bottle, and it will keep for months.

CLARY.—A plant, the leaves of which are used to flavour soups, the flowers for making a fermented wine, and the whole plant, somewhat like the sage, is esteemed medicinal. Clary is *raised* from seed, and sometimes from cuttings and slips. A small bed will supply most families, and a quarter of an ounce of seed will suffice for a seed-bed, to be transplanted from two feet by two. Sow, in the latter part of March or the beginning of April, in any bed or border thinly, and rake in the seed. In summer, when the plants are advanced two or three inches, transplant a portion of the strongest from twelve to eighteen inches apart, to allow competent room for the leaves to spread in full growth, when they will be fit for use the same year, and in continuation through winter until the following spring and summer.

CLARY WINE.—Boil fifteen gallons of water with forty-five pounds of sugar, and skim it clean. When cool put a little to a quarter of a pint of yeast, and so by degrees add a little more. In the course of an hour put the smaller to the larger quantity, pour the liquor on three gallons of clary flowers, picked when dry. When the liquor ceases to make a hissing noise, and the flowers are all in, stop it up for four months. Rack it off, empty the barrel of the dregs, and add a gallon of the best brandy. Return the liquor to the cask, close it up for six or eight weeks, and then bottle it off.

☞ Water, 15 gallons; sugar, 45lbs.; yeast ½ pint to ¼ pint; clary flowers, 3 gallons; brandy, 1 gallon.

CLEANLINESS, HOUSEHOLD. — There cannot be a doubt but that the comfort, health, and happiness of a home depend in a great measure on the exercise of cleanly and orderly habits. The best way to keep a house thoroughly and regularly clean is to apportion the process of cleaning the several parts of the house to certain days and hours. For instance, the apartments in use every day require daily cleaning, and this should be commenced and finished at an invariable hour. Other apartments that are less occupied will require seldomer attending to, but whether it be once, twice, or thrice a week, the days of cleaning should be perfectly understood and rigidly adhered to. Uncleanly and disorderly households are often the result of one unfortunate relaxation of the usual regulation. A housewife, for instance, starts in life with a determination to fulfil her domestic duties systematically and regularly. By-and-by a day arrives for cleaning a particular apartment, when on some frivolous pretext the process is postponed to another day; when that day arrives, instead of being devoted to the duties assigned it, it is interfered with by the back work, and matters become still more disarranged, until at length one day driven on to another, and one process confounded with others that precede or follow it, all arrangement and order are at an end, and everything is done how and when it can be. In addition to the moral and physical advantages of a cleanly dwelling, it also confers a species of rank on the promoters to whatever class in the scale of society they may belong. A dirty-looking house is naturally associated with careless and improvident inmates, whose lives are misspent in the indulgence of irregular habits, and vicious idleness. But a cleanly house, on the contrary, impresses the most superficial observer with feelings of respect for the occupants, and a conviction that their course of life is guided by proper principles. — See DUSTING, SCRUBBING, SWEEPING, WASHING, &c.

CLEANLINESS, PERSONAL. — Cleanliness has a powerful influence on the health and preservation of the body. Cleanliness in our garments and persons prevents the pernicious effects of dampness, bad smells, and contagious vapours arising from putrescent substances. Cleanliness keeps up a free perspiration, renews the air, refreshes the blood, and even animates and enlivens the mind.—See ABLUTION, BATHING, BEDROOM, SICK CHAMBER, &c.

CLEAR STARCHING. — See STARCHING.

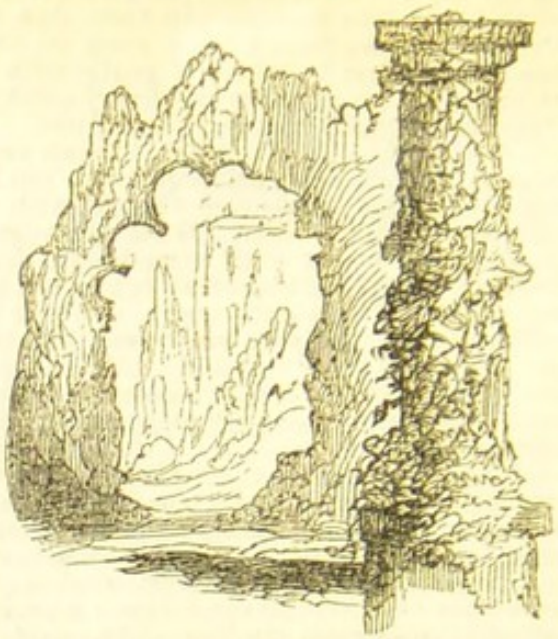
CLEMATIS. — A hardy climbing plant, suited to trellis-work, and propagated by layers. It may be propagated by parting its roots, and from seed. It requires but little attention, and flourishes in any soil.

CLERK.—Under this head are comprehended persons who earn a livelihood by keeping books of accounts, making out invoices, conducting correspondence, and attending generally to the duties of commerce where writing and arithmetic are concerned. The situation of clerk varies in value and importance, according to the nature of the business, and the class of establishment. In London, for instance, there are clerks at a salary of £50 a year, and others at £1000. Merchants' clerks are, as a body, liberally paid, and not severely tasked, a salary of from £150 to £300 a year is an ordinary one for a young man between the age of twenty-one and twenty-five, and to a person in middle life £400 or £500 is commonly given. Warehouse clerks rank next, their salaries being almost as large as those just stated, but the duties are rougher and heavier, and the hours longer. Lawyers' clerks are ill-paid as regards junior hands, but when they have established a position, they frequently receive liberal remuneration. The qualifications for a clerk in general are, that

he should be a good penman and arithmetician, able to indite a letter readily and correctly, punctual, intelligent, and of good address. It would also be as well if he were acquainted with French, German, Italian, and Spanish; the first-named language especially, for our increasing commerce with France renders the knowledge of the language of that country indispensable in many establishments. The situation of clerk is generally obtained by means of introduction; the usual routine is for a boy to be taken from school and inducted into the duties of a junior, gradually rising step by step as he advances in age, and his services become more valuable. One objection to this kind of employment is, that it is too sedentary and mechanical, as a person is required to bend over a desk for many hours daily, occupied in a set round of duties which offer little or no variety. On this account persons of a delicate constitution, especially those of a consumptive tendency, should not be placed out as clerks, as the nature of the occupation is inimical to health, especially to young persons, and is calculated to foster and hasten diseases that might otherwise be eradicated.—See APPOINTMENTS.

CLIMATE.—Many diseases owe their cure or amelioration to the influences of climate. This is especially the case in such complaints as pulmonary consumption, and some other fatal diseases of the chest; scrofulous affections; rheumatism; disorders of the digestive organs; hypochondriasis; and a numerous train of nervous disorders. The selection of a temporary residence for invalids is a matter of great importance; for one, an elevated situation and a dry bracing air will be most proper; a sheltered residence with a milder air, will be suitable for another; while the sea-side may be the situation indicated for a third. Foremost among eligible situations for patients, both as a summer and winter residence, is *Madeira;* the mildness and equability of the temperature from day to day throughout the year making it excel every other situation in the south of Europe. *Pisa* and *Rome* are the best situations in Italy, and *Pau* and *Hières* in the south of France. But in England many suitable situations exist for the invalid; among these are Undercliff, and the exterior of the Isle of Wight, Penzance, Malvern Wells, Torquay, Clifton, Hastings, Brighton, &c. After the month of March, many parts in the interior have a higher temperature than those just mentioned, namely, Exeter, Honiton, Dorking, Tunbridge Wells; and to these it would be advisable for the patient to remove in spring.

CLIMBING PLANTS are those which attach themselves to supporters by their natural appendages, as either by their tendrils or by their hooks. There is a great variety of them, and they are well adapted for covering walls, arbours, pillars and rafters of green-houses, trellis-work, &c. In order to give a pleasing variety to a garden, or to render an apartment picturesque, trellises of various designs, as seen in the engraving, may be introduced, and the plants trained to cover them according

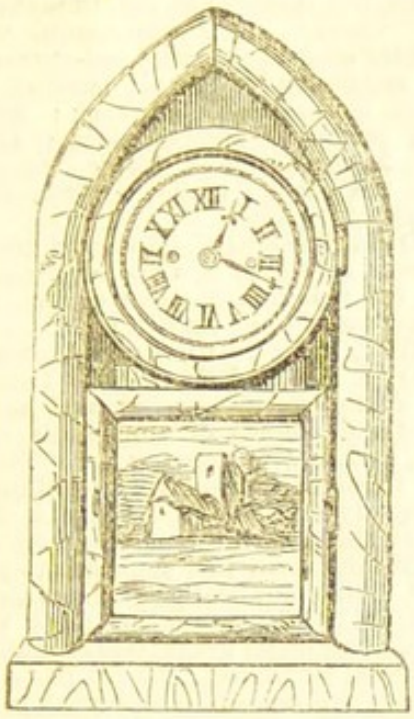


to fancy.—See CLEMATIS, HONEYSUCKLE, JESSAMINE, WOODBINE, &c.

CLIPPING.—An operation performed on horses for the purpose of beautifying their coats. For this process three pairs of scissors are required—one pair straight, one crooked in the shanks, and one crooked in the blade: thin and fine combs are also needed which can be bent to any crook by holding them before the fire, the crooked shape being required for the hollow parts. Previously to clipping, a horse should be well sweated, and then dressed, to remove all dust. The operation may be commenced at any part of the horse. The operator will find it easiest to work *from* him; and it will also rest the arms to move occasionally from place to place, instead of continuing straight on from one spot. Great care is required in finishing off, by gradations, at the mane and tail. The hollows of the head just over the eyes, are very troublesome, and must be clipped with the points of the comb and scissors, taking very few hairs at a time. The parts upon which the saddle and collar press should be left comparatively thick, to prevent chafing; the legs also may be left similarly protected. The coat should not be cut closer than about half an inch in length, or the skin will appear through it. If a horse be extremely rough, it is advisable to clip twice during the winter, at the middle of October and the end of November. By this means he will look well all the winter, and be less liable to take cold than if his coat were removed in one operation. For two or three days after the operation, the horse should be kept warm and dry by means of an extra rug, a hood when exercising, &c.

CLOCK.—Every house should have a clock fixed in one or more of its rooms, in order that the various domestic duties may be regularly performed. Fancy clocks for the chimney-piece are very convenient, but generally expensive; they are usually of somewhat delicate construction, requiring

great care and to be kept constantly covered. Dutch or German clocks are mostly employed for ordinary use; they may be obtained for a few shillings, and, with common care, will perform remarkably well. Within the last few years, American clocks have been introduced into England. They keep



time extremely well, have a picturesque appearance, and are moderate in price. They are adapted either for the parlour, hall, stair-landing, or kitchen. Generally speaking, clocks do not require an extraordinary amount of care and attention; they only need being wound up at the proper intervals, occasionally oiled with the very purest oil, and cleaned once a year, or once in two or three years, according to the construction of the clock.

CLOGS.—A kind of shoe to protect the feet from damp or dirt. Clogs are easier to walk in than pattens, but they throw up more dirt. French clogs are the best, combining both patten and clog; having the cleanliness of one, and the firmness and flexibility of the other.

CLOTH, CHOICE OF.—Particular attention must be paid to the firmness of the fabric and the closeness of the texture. If, on passing the hand lightly in a direction contrary to the nap, there be a general silkiness of feel, uninterrupted by harsh roughness, it is certain that the cloth is made of fine wool. The texture should not only be composed of fine threads, but it should have an even consistency, produced by the operation of felting, by which the fibres of the wool are so perfectly incorporated that they connect the tissue of the threads, and give the entire web the character of felt. The quality of cloth may also be tested as follows:—Take up a portion of the cloth loosely with both hands, press a fold of it between the thumb and forefinger of one hand, and give a sudden pull with the other; and according to the peculiar sharpness and vibratory clearness of the sound produced by the slipping of the fold, the goodness of the cloth is to be judged. The gloss on cloth should not be too satiny, as this causes it to spot with the rain.

CLOTH, RENOVATION OF.—See BLACK REVIVER.

CLOTH, SCOURING OF.—If black, blue, or brown, dry two ounces of fuller's earth, pour on it sufficient boiling water to dissolve it, and plaster the spots of grease with it; mix a pennyworth of bullock's gall with half a pint of chamber-lye and a little boiling water. Brush the spotted places with a hard brush dipped in this liquor, then immerse the article in a bucket of cold spring water. When nearly dry, lay the nap in its right position, and pass a drop of oil of olives over the brush to finish it. If gray, drab, or fawn, cut yellow soap into thin slices and pour water upon it, to moisten it. Rub the greasy and dirty spots. Let the article dry a little and then brush it with warm water, repeating, if necessary, as at first, and using the water a little hotter; rinse several times in warm water, and finish as before.

CLOTH, TABLE, LAYING.—This is the first preliminary for a repast, and though fashion occasionally varies the details, the principles remain the same. Great care is required in opening the tablecloth to avoid rumpling it, and for this purpose it should first be placed lengthwise on the table, opening it only so far as to be still double. The double edge is placed exactly down the middle of the table, and then the upper half is smoothly turned over the still uncovered portion of the table, and gently smoothed down with the hand, but leaving the folds apparent, and the middle one exactly corresponding with the central lines of the table. The knives and forks should then be arranged round the table, the knives on the right and the forks on the left of each guest, the drinking glasses are set near these upon a d'oyley, and a table napkin tastily folded in the centre; at each corner the salts and other condiments are placed, and the tablespoons near them in an oblique direction. The mats are then arranged down the centre of the table, the larger size at each end and the smaller ones between; at the same time, or previously, the servants will place what is likely to be wanted on the side board—such as extra plate, knives and forks, glasses, &c.—and by way of making sure that all is done, the servant should finally walk round the table and satisfy himself that nothing is wanting.

CLOTHES BAGS.—The best material for these receptacles of soiled linen, is canvas, or strong unbleached calico. They should be about two yards long and the same in breadth. They require to be strongly sewn, and to have strings which will draw, run in at the top.

CLOTHES CLOSETS.—These small useful compartments should be lined with wood very closely fitted; furnished with shelves and pegs, on which to suspend ladies' dresses and other articles that are injured by folding. Glazed linen curtains should be made

to draw closely round the shelves, so as to preclude either dust or insects from entering.

CLOTHES LINES should never be left out of doors when not in use. When no longer needed, they should be carefully wiped, and, if wet, hung up in the open air to dry; after which they should be put away in a bag. Before they are used again they should also be wiped, to prevent them from soiling or marking the linen. *Clothes pegs* and *clothes props* should be treated in the same manner.

CLOTHES POSTS. — These should be fitted into sockets so as to be removable, and they will then last for years, but if left standing in the ground, they will soon decay at the bottom and become useless. A cover should be fitted into each socket, to keep earth and litter from falling in, when the post is removed.

CLOTHING CLUBS.—Societies formed, usually under the superintendence of benevolent individuals, for the purpose of securing a necessary supply of clothing to the poorer classes. The system adopted with these clubs is for the members to subscribe a certain small sum weekly, according to their means, and at stated seasons of the year, the aggregate amount saved, receives the addition of a contribution by the projectors of the club, and the whole amount is laid out in clothing for the members and their families. These associations are distinguished by the same excellent features that distinguish kindred projects, namely, the encouragement of systematic savings however small, for the purpose of obtaining comforts which would not otherwise be attainable.

CLOVE.—The unopened flower-buds of a tree, native of the Malacca islands. These buds are carefully gathered and dried, and are thus exported. Cloves form one of our most agreeable spices, and are much employed in flavouring various dishes, preserves, liqueurs, &c. They contain a considerable quantity of essential oil, of a very pungent quality, in which their efficiency consists. Cloves are employed rather for their flavour than for their medicinal qualities; at the same time they are powerful stimulants to the stomach, and are used, but very sparingly, in conjunction with bitters.

CLOVE CAKES.—Beat six eggs with two teaspoonfuls of rose-water, half an ounce of cloves, quarter of a pound of sugar, and a pound of sifted flour; make it into a thin paste, divide into cakes, and bake them on white paper.

☞ Eggs, 6; rose-water, 2 teaspoonfuls; cloves, ½oz.; sugar, ¼lb.; flour, 1lb.

CLOVE CORDIAL.—Put into a large stone jar a quarter of a pound of cloves, half an ounce each of cinnamon, nutmeg, and coriander seeds; quarter of a pound of red currant jelly; ten ounces of sugar-candy; one ounce each of candied citron, orange, and lemon-peel, sliced; an ounce and a half of dissolved isinglass; three ounces of preserved ginger, sliced; two ounces of sweet and one ounce of bitter almonds, blanched and pounded; nine ounces of powdered loaf sugar; one pint of red cordial water; one gallon of proof spirit of wine. Stop up the jar effectually and shake it well daily for a month; then put it away in a dry room, and let it stand for twelve months. Strain and filter it into small bottles; cork and seal them. The cordial will be fit for use in two months, but further age will improve it.

☞ Cloves, ¼lb.; cinnamon, nutmeg, coriander seeds, ½oz. each; red-currant jelly, ¼lb.; sugar-candy, 10ozs.; candied citron, orange, lemon-peel, 1oz. each; isinglass, 1½oz.; preserved ginger, 3ozs.; almonds, sweet, 2ozs.; almonds, bitter, 1oz.; sugar, 9ozs.; red cordial water, 1 pint; spirit of wine proof, 1 gallon.

CLOVE ESSENCE.—Infuse a quarter of an ounce of cloves in two ounces of proof spirit for a fortnight, then strain. This is used for sweets and mulled wine.

CLOVE PINK, CULTURE OF. See PINK.

CLOVE PINK EXTRACT.—This is used as a syrup for flavouring and colouring. Take three pounds of the petals of clove pinks, and, after removing the white claws, steep them in four quarts of boiling water for twenty-four hours. Leave it to cool, then strain and filter clear. Add a small quantity of spirit, just sufficient to preserve it, put it in small bottles and seal the corks.

CLOVER. — One of the most valuable species of artificial grass, and of which there are several varieties. The red clover, which will last four years if not allowed to seed, is the most valuable. Clover should never be sown except when the land is in the best condition, if possible, with the crop immediately following the summer fallow, or after turnips or potatoes. When sown on land on which grain has been sown, it is customary to roll the ground, to assist in covering the light seeds. The *choice of seeds* demands great care, as there are always many worthless sorts in the market. Surface applications may be employed for the purpose of rendering the crop more abundant. Soot is a favourite ingredient, and has uniformly the effect of strengthening and forwarding the crop. Saltpetre forms an excellent top-dressing for seedling grasses. Liquid manures are also extensively used, and are lasting in their effects. The first cutting in ordinary practice is delayed until the plant is in full bloom, and sometimes until after the bloom has begun to decay; but to ensure a good second crop, the first should be cut before the plant comes to bloom. After the clover is cut down, if it is placed together in heaps, a slight degree of fermentation which ensues, will cause the seed to leave the husk more readily when thrashed; and on the fermented heaps being spread out to the sun, the crop will soon be dry enough to lead home to the steading. When a *large* quantity of clover is cultivated for seed, the threshing-machine may be employed to separate the seed; but for a *small* quantity it is better to use the flail. Should the farmer raise clover seed only for his own use, the seed may be sown in the husk; a plan which prevents the land from becoming clover-sick. The quantity of seed to be sown must depend on the condition of

the land, the presence or absence of grass seeds, and whether the land is to be unbroken for one, two, or more years.

CLUB. — An association of gentlemen, formed for the purpose of securing in a superior degree the comforts and pleasures of social and domestic life, at an economical rate, and on exclusive principles. Clubs are established in various parts of the country, but in London the advantages offered are more numerous, and the management vastly superior. The club-house generally comprises a library, public and private dining-rooms, dressing-rooms, bed-rooms, drawing-room, card-room, billiard, and smoking-room. One of the most important characteristics of a club-house is, that the viands supplied are of the best description, excellently prepared, and perfectly served; while the prices charged are most moderate. A person wishing to become a member of a club must be first proposed by some actual member, who thereby becomes responsible for his pretensions and eligibility; after due notice is given, the proposed member has to undergo the ordeal of the ballot-box, and is rejected or admitted in accordance with the established rules of election of the particular club. The entrance-fee payable on admission into a club varies from ten guineas up to thirty; and the annual subscription from £5 to £10. Notice is given when the subscriptions fall due, and if payment is not made within a certain time, the defaulter's name is taken off the books of the club, and he is no longer privileged to partake of any of its benefits.

CLUB-FOOT. See FOOT, DEFORMITIES OF.

CLYSTER. — A medical instrument for administering internal applications to the body. Clysters are most commonly employed as aperients, but they are also used as anodynes, or antispasmodics, for the purpose of dispelling wind, or as internal fermentations, or as styptics. The mechanical means used for the administration of clysters are very numerous; the most useful and convenient forms are the injecting syringe and the vulcanized India-rubber bag. The mode of application is simple and self-explanatory. Clysters, except in cases of obstinate constipation, should be rarely administered without the order or superintendence of a medical attendant. In cases of constipation, tepid water or gruel may be used. But it is extremely unwise to resort to this means of relief habitually, or the greatest injuries are liable to result. They should therefore be restricted to the accomplishment of temporary and occasional purposes; and as an assistant to the efforts of nature, not as a substitute.

COACH ACCIDENTS.—When the horses attached to a coach in which you are sitting run off in defiance of all restraint, you should prepare yourself for the possible upset that may follow. Keep your arms and legs from straggling, sit easily and compactly, and when the overturn does occur, instead of spreading abroad your arms, stretching out the body, &c., suffer yourself to roll over in the direction in which you are thrown, and in the majority of cases, the hurt received will be comparatively trifling. If run away with in a vehicle that affords an escape behind, you may, when the threatened danger is great, scramble over the back, and hang on by the hands until a favourable opportunity offers of dropping to the ground. But under ordinary circumstances, it is better to sit still and endeavour to be as calm and collected as possible. In many accidents of this kind persons lose all presence of mind and jump from the vehicle while it is moving rapidly. This is frequently attended with loss of life, and almost certainly with broken limbs and severe bruises.

COACH-HOUSE.—A coach-house should be constructed of such proportions as to hold the carriages which may be desired; it should be provided with a small fire, carrying a flue between it and the harness-room, so that both may be simultaneously provided with sufficient warmth.

COACHMAN, DUTIES OF. — A coachman, besides his skill in driving, requires complete experience of the stable of which he has the management. Where a single horse or a pair only are kept, a man frequently engages to do the entire work; to perform this satisfactorily, he should be energetic and in the prime of life, as the care of a carriage and pair of horses will occupy seven or eight hours daily, independent of the driving. A coachman should be scrupulously neat and clean in his personal appearance when engaged in driving; and above all, he should observe strictly sober habits, otherwise he will be unfitted for his duties, and may jeopardize his own life, and that of his employers.

COAL.—Coal is found in several districts in a great variety of quality. *Newcastle* coal is generally esteemed for its superior value, having a greater power of sustaining heat, making less dust, and leaving a smaller residue than any other. Yorkshire, Staffordshire, and Derbyshire supply what is termed *inland coal*, which is lower in price but does not throw out so great a heat as the Newcastle. With a little management, however, this coal will be found to answer ordinary purposes sufficiently well, and perhaps the best method of burning it is, to mix Newcastle coal with it in the proportion of about one half. When coals are stored in the cellar, the men who bring them should be directed to mix them properly, so that all the large coal does not lie on the top and the dust underneath; for when this is the case the coal is not used fairly; that is to say, the large and small coal should be burnt in equal portions together. The most economical method of *purchasing coal* is direct from the wharf; if they are procured through a "coal agent," a certain per-centage, which is allowed him as commission, is charged to the consumer. Nor should coal be bought in small quantities of retail dealers, for independent of the extra price charged, the full weight is seldom, if ever given. When coals are brought in, some one should watch while they are being shot into the cellar; noting if all the sacks are full, and count-

ing them when they are empty. If there is reason to suspect a deficiency of weight, the buyer should have each sack weighed before it leaves the waggon; coal merchants being bound by Act of Parliament to deposit weights and scales in their waggons for that purpose. The *economy of coal* is a great consideration, especially where a number of fires are kept burning at one time. The chief principles are, to make a good fire at once, not to poke it too frequently, and to burn the cinders that fall beneath, by throwing them on to the fire from time to time, instead of suffering them to accumulate, and ultimately perhaps to be thrown away. The *properties of coal*, when burning, are generally speaking not injurious to the health, especially when employed in open fire-places, or in stoves where there is a free egress for the sulphur and ammonia evolved; but if the chimney or stove smokes, the head and lungs may be seriously affected by the quantity of sulphur and ammonia confined in the room; and instances have been known where fatal consequences have attended imperfect draughts. When the price of coal is a consideration to the consumer, the following will be found an economical substitute:—Take fifty pounds of Newcastle coal in a state of dust, fifty pounds of dry sand, fifty pounds of powdered chalk, and twenty-five pounds of mineral pitch; melt the pitch in a large iron pan, and stir in the other articles; when the mixture is becoming cool, pour it into a sort of cake, and when quite dry and hard, break it into pieces of about the size of ordinary coal, and use it in the usual way.—See FIRES, MANAGEMENT OF.

COAL CLUBS.—Associations formed for the purpose of ensuring members a supply of coal during the winter season. The principles of management are, for the members to pay a certain sum weekly proportionate to the quantity of coal they require; and the supply thus secured is delivered at a specified time. The simple recommendation of a coal-club is, that it encourages persons to make a provision for the winter, which, under other circumstances, they would probably neglect. So that by the outlay of a small sum weekly at a favourable season of the year, an important domestic comfort is secured, which in many cases must otherwise be dispensed with, or purchased at an exorbitant rate. At the same time, due caution should be exercised in joining a coal-club; some of them are merely speculations got up by unscrupulous persons, for the purpose of disposing of inferior coal at a high price; but the criterion in this, as well as every other association of a similar character, is to ascertain the general mode of conducting business, the names of the promoters, the length of time it has been established, and other corroborations of soundness and fair dealing.

COAL-SCUTTLE. — In this domestic utensil several recent improvements have been introduced. The most convenient form of construction is that where the scuttle may be depressed obliquely when required for use, and swung back into its original position when not wanted; these scuttles are also fitted with a cover, and are otherwise ornamented, so that they may

occupy a corner of the room without appearing at all unsightly.

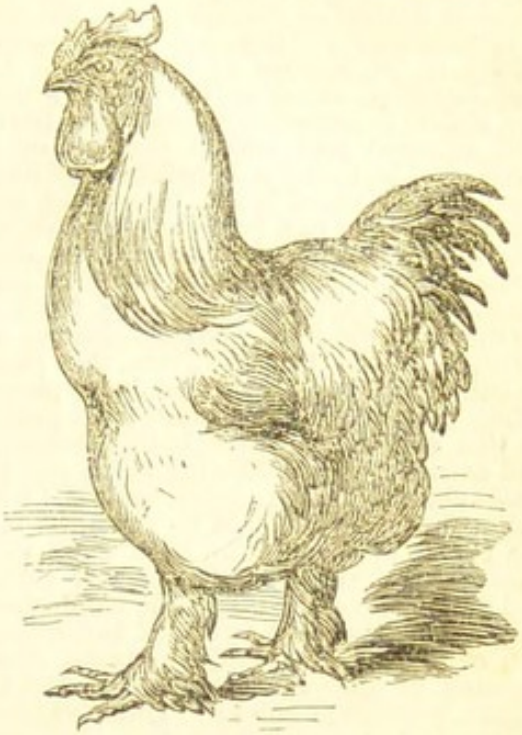
COAT. — As this article of male attire covers the most important organs of the body, it should be fashioned in such a manner as to afford a due amount of protection, without restraining the action of the members, or impeding the general organization. The fitting of a coat in connection with health, requires that it should be as easy when buttoned as when unbuttoned, so that without any unpleasant pressure upon the chest it can become closely buttoned up to the chin. The power of doing this, is a convenient provision against the sudden alternations from heat to cold, for this simple protection will prevent delicate persons from receiving many of those mischiefs which the inconstant climate of England occasions. In *choosing a coat*, whatever the prevailing fashion may be, the best plan is to order one from a respectable tailor, and to be measured for it expressly. The make of a coat, independently of the comfort or discomfort it imparts to the wearer, has greatly to do with the length of time that it will last, for if each section of the garment is made so as to adapt itself to that particular part of the body, every portion of it will wear uniformly; but if the coat is awkwardly cut and inartistically put together, there will be a greater stress upon one part than upon another, and the continual dragging thus kept up will cause one-half of the garment to give way before the other is scarcely worn. The *preservation* of a coat depends upon the simplest observances of care. For instance, the coat that is worn out of doors, should not be worn in doors to lounge about or write in; an old coat should always be kept at hand, so that a change may be readily made without inconvenience. Coats are liable to become soiled at the collar, this may be remedied by applying a little gin with a piece of sponge or rag. Another defect in a coat that has been worn for some time is an awkward projecting at the elbows; to rectify this, the part should be pressed

with a hot iron, and then hung up for a week with a weight suspended from the wrist. When coats are not in use, they should not be placed away in drawers or boxes, for it is almost impossible, even with the greatest care, to fold them so that they will not wrinkle when taken out, which gives them a very unsightly appearance; they should therefore be hung up in a closet or wardrobe, by which such consequences will be avoided. The *etiquette* in connection with the wearing of coats is extremely stringent; certain occasions and ceremonies requiring a dress coat to be worn, and others a frock coat, and a disregard of this custom in either case, would be regarded as a solecism in good breeding. *Dress coats* are worn at dinners, balls, theatres, at all visits of ceremony, and in the evening generally. *Frock coats* are worn at weddings, breakfasts, morning-concerts, pic-nics, when walking or riding, and in the morning generally. In connection with this subject, it should be generally known, that at the Opera a person is positively refused admission to the boxes, pit, or stalls, unless he is attired in a black dress coat.—See APPAREL.

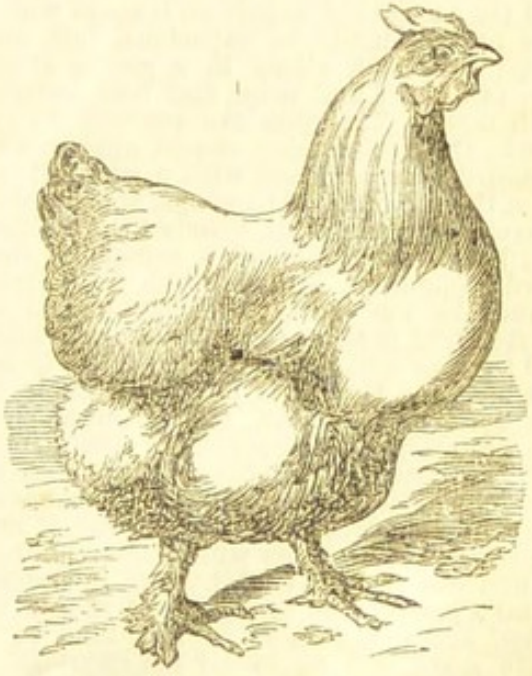
COBWEB.—This well-known production of the spider will be found an excellent styptic for arresting bleeding from simple flesh wounds, leech-bites, &c. The web of the black spider has been used with much success as a medicine for ague.—See AGUE.

COCCULUS INDICUS.—The fruit of an East Indian tree. It contains a bitter principle, and is frequently used in this country in the manufacture of beer, as a substitute for hops, and to increase the stupifying quality of the beverage. It is also used to poison fishes; a few handfuls of it ground into coarse powder, and thrown into a pond, bring the fish in the course of a few hours, to the surface, in an intoxicated or poisoned state; from which, however, they recover if quickly removed into fresh water.

COCHIN CHINA FOWLS.—The largest species of all domestic fowl. They derive their name from Cochin China, the place whence they are imported into England. The full-grown Cochin China cock weighs from nine to fifteen pounds, the hen from seven to ten. In height the male bird grows from twenty-two to twenty-five inches, the female from eighteen to twenty-two inches. Owing to the difficulty which this fowl has of ascending from and descending to the ground, the perches should not be raised much more than two feet. Where Cochin China fowls are kept in great numbers, a range of roosts should be erected: the first a foot in height, the second two feet, and so on, whilst the last should have an intervening space between it and the wall, sufficient to allow the birds abundant room when roosting. For obvious purposes of cleanliness, the perches should not be erected immediately one above another; they should be tolerably thick, because the great length of toe and weight of the body, character-



istics of this fowl, render it absolutely necessary that their claws should retain a firm clutch, without too great an effort to maintain their equilibrium. Sometimes they are suffered to roost on the ground, and in that case the litter must be cleansed away daily,



especially in summer time; but when perches are used, a thorough cleansing once or twice a week, according to the number kept, will be sufficient. The Cochin China hen is able to cover seventeen or eighteen eggs, but twelve or thirteen are a safer number, to

prevent her breaking any of them in the nest. The nest should be somewhat shallow, but of wide dimensions. The chickens are remarkably strong and hardy, thriving well from the moment of their birth until they arrive at mature growth. Rice is their natural and proper food; it should be prepared by boiling or steaming until the grain is considerably swollen, but on no account should it be mashed or broken up. This food, however, owing to its binding properties, should be occasionally changed. Barley, well steamed and soaked for five or six hours, will be found a beneficial and nutritious food. Sopped bread, bread and milk, boiled liver, and raw beef chopped fine, eggs boiled about twenty minutes and cut small, these may all be given by turns in small quantities. Young Cochin China fowls are particularly fond of mangold-wurzel and turnips. When these are given, they should be cut in half, and suspended by a piece of string just above their heads; the pecking at this will afford them both amusement and exercise. The following *points and properties* characterize the better class of Cochin China fowls, and should be attended to in the choice of them. The beak must at its base be very thick, short, slightly curved, and of a deep yellow tint. The comb should be particularly erect, without inclining to curl or droop; it should be single, evenly serrated, of fine grain and texture, and of a bright vermillion colour. Their wattles—double, and of a vermillion tint also—must be moderate in size; from top-knots they should be entirely free. The eye should be both bright and gentle; not glaring, but strong, and without a propensity to blink; the colour of the iris corresponding with the prevailing tint of the entire feather. The head ought to be well shaped and small, and the ear should betray no trace of white. The breast should be capacious, full, and deep; the back rising in a gentle slope. The tail short and firm, and well covered with down. The neck can scarcely be too short; the neck-hackle should appear well trimmed, compact, and with a graceful fall upon the shoulder. The wings, short and of convex form, must fit closely to the sides. The body should possess a somewhat forward inclination, although the head itself cannot be too erect. The legs should be particularly firm, shanks short and thick, and the toes well spread. Among the *diseases* to which the Cochin is peculiarly liable, is the *white speckled comb*, the accompanying appearance of which consists of small white spots scattered in patches on the surface of the comb; the disease will then spread over the whole surface of the body, and if not remedied, the feathers will ultimately drop in bunches from the bird. For this complaint a teaspoonful of castor oil should be given, and green meat of any kind in a crude state will be found beneficial as a temporary diet. Apoplexy and paralysis are also diseases to which this bird is very liable; and the treatment of this disease should be similar to the preceding. *Rupture of the foot* is another disease which demands especial attention. When lameness betrays the existence of this disorder, the bird should be subjected to a strict examination, and if a wound is observed, the affected part should be for several days bound up in bran poultices until all inflammatory symptoms have subsided; bandages of dry linen should then be employed for five or six weeks, and these should be changed every three or four days. Cochin China fowls are particularly subject to attacks of *indigestion*, for, being hearty feeders, they occasionally eat too fast and voraciously. When this is the case, the succeeding meal should consist of a small quantity of soft food only, such as meal, &c., together with green meat, either raw or boiled; should this not suffice, ten grains of jalap may be administered in the form of a pill; but this latter remedy should only be resorted to in extreme cases. In *breeding* from young pullets, cocks about three years old should be invariably paired with them; and their "setting" their first clutch of eggs, which are generally very small, is not to be recommended. To breed from cockerels, they should be paired with hens about two or three years old. At two years old the hens are of mature age, whilst cocks are frequently three years arriving at that stage. The average *cost per week* may be set down at threepence per pair, including all expenses, hatching and so forth. *Where the space for keeping poultry is limited*, Cochin China fowls will be found the most convenient to keep, by reason of their being better able to bear confinement than any other species. Another recommendation in their favour is, that at a time when new-laid eggs are rare, and, from their scarcity, of much higher value, a regular supply may be relied on from this bird. The *flavour of the flesh*, although not generally esteemed, may, by attention and fair and full feeding, be rendered both tender and nutritious. One of the great aims is, to bring both the crop and digestive organs to a state of healthy vigour, so as to compel the food to pass through all its stages speedily. To accomplish this, the bird should be fed chiefly upon barley-meal, mixed occasionally with two or three grains of cayenne pepper. The quality and flavour of the flesh will also be considerably enhanced if, previously to killing, the bird is deprived of food for seven or eight hours, and kept at the same time in a state of darkness.

COCHINEAL.—An insect which yields the well-known colouring matter, carmine. The insects are scraped from the plants into bags, killed by boiling water, and dried in the sun. Cochineal is sometimes adulterated by the admixture of a manufactured article composed of coloured dough. This is detected by the action of boiling water, which dissolves and disintegrates the imitation, but has little effect upon the real insect.

COCK-A-LEEKIE.—Boil from four to six pounds of good shin beef, well broken, till the liquor is very good. Strain it, and put to it a large fowl, trussed as for boiling, and, when it boils, add about a dozen leeks blanched, and cut in inch lengths; skim carefully. In half an hour add another

dozen of leeks, and a seasoning of pepper and salt; and, after a slight boil up, serve in a tureen.

COCKATOO.—This bird is of a species similar to the parrot. They are not easily taught to speak, and there is one species that does not speak at all; but this is in some measure compensated for, by the facility with which they are tamed. The temper of this bird is remarkably mild, and its disposition affectionate. Though cockatoos, like parrots generally, use their bill in ascending and descending, they have not their heavy and disagreeable step, but, on the contrary, are very active, and hop about nimbly.

COCKCHAFER.—A well-known insect, extremely destructive to vegetation. The female deposits her eggs in the ground, where, in a short time, they change into young grubs; these, when full fed, are about an inch and a half long; they are soft and white, with a reddish head and strong jaws.

In this state the insect remains four years, during which time it commits dreadful ravages on the roots of grass, plants, and even young trees. It also feeds on the leaves of apples, pears, and roses, gnawing them full of small holes, and even transferring its attacks to the young fruit of the apple. The only method of reducing the numbers of these beetles is by searching for them during the evening, particularly beneath the grass which they have cut up, where they will be found lying on their sides within the mould.

COCKLE SAUCE.—Scald the cockles in their own liquor, and when it settles add a little water if necessary; strain, and season with mixed spice. For brown sauce put in a little port wine, garlic, and an anchovy. For white sauce, use sherry, lemon-juice, and white pepper.

COCKLES, PICKLED.—Boil two quarts of cockles in their own liquor for half an hour, skimming them well; then take out the cockles, and strain the liquor through a cloth; take a pint of it, and add to it three quarters of an ounce of mace and half an ounce of cloves; boil these together once, and then add to it the cockles and remaining liquor; stir it well, add a tablespoonful of salt, three quarters of a pint of vinegar, and a quarter of an ounce of whole pepper. Let it stand until cold, then put the cockles into small barrels or jars as close as they will lie; pour the liquor over them, and as it becomes absorbed, add more. Cover them up close, and in a few days they will be fit to eat.

COCKLES, TO DRESS.—This fish should be procured a day or two before they are wanted, that they may be freed as much as possible from the grits. They are cleaned as follows: Put the cockles into a tub with plenty of water, and stir them up two or three times a day with a birch-broom. Change the water each day, and when they are properly cleaned, put them into a saucepan of hot water, and boil them. As soon as the shells open they are done.

COCKNEY DIALECT.—Persons native to London, or who have lived in it for some years, and have received only an imperfect education, commit a class of errors in speaking, which are popularly known as *Cockneyisms*. One of the most glaring blunders that Cockneys are guilty of, is the misapplication of the letters *v* and *w*, the word *w*erry being used for very, *v*alk for walk, *w*elvet for velvet, *v*ater for water, &c. The next most conspicuous error is in connection with the letter *h*, which is aspirated when it should be silent, and silent when it ought to be aspirated; as, for instance, "*H*edward, where's my 'at?" "'Elen, boil me a *h*egg." Another error consists of adding the letter *r* at the end of words; as idea*r* for idea, Maria*r* for Maria, and sometimes the sound is totally changed in this way, wind*er* being used for window, elb*er* for elbow, &c.; another blunder originates in the very opposite of this, namely, leaving out the *r* entirely, as ho*ss* for horse. Other errors occur in making use of such phrases as "this here" and "that ere," instead of simply this and that. All of these blunders may be easily remedied by the exercise of the most common intelligence, and by a determination to pronounce the words correctly whenever it is necessary to use them.—See ASPIRATION, PRONUNCIATION, &c.

COCKROACH.—See BEETLE.

COCOA, ADULTERATION OF.—The adulteration of this article is not of a serious nature, being confined to flour, starch, potato farina, arrowroot, "tous les mois," and animal fats; the latter are used as a matter of necessity, to prevent the grain from burning. When pure cocoa is required, the "nibs" or "beans" are easily procurable, and only require to be ground.

COCOA, PREPARATION OF.—Directions for making this beverage are usually sold with the prepared or best quality of cocoa, which is merely mixed with boiling water in the proportions indicated on the packets. That which is prepared from the nibs requires several hours' boiling, and should be left until quite cold, that the oil which rises to the surface may be cleared from it before it is again heated for table.

COCOA, PROPERTIES OF.—Cocoa is made by grinding the roasted cocoa or chocolate beans together with the husks. It is prepared either from the cake after expressing the oil from the beans, or from a powder. Cocoa forms a wholesome and nourishing beverage, especially for breakfast, and, being in a greater measure deprived of its oil, is much more grateful to the stomach than chocolate; and many persons find it a very digestible beverage when neither tea nor coffee will agree with them.

COCOA-NUT.—The fruit of one of the palms which grow wild in the eastern parts of Asia, and the islands of the Indian seas. The fruit is covered externally by a thin tough rind, immediately within which, is a quantity of tough fibres, and in the midst is enclosed the nut itself, which consists of a very hard shell, containing a kernel of a white substance, being itself hollow. The kernel in its fresh state is very nutritive, containing a good deal of fixed oil; but when it arrives in England, it is generally dry and indigestible. While the nut is green, the whole of the shell is filled with the juice called the milk, which is agreeably sweet and refreshing. But by the time the nut reaches England, it will seldom yield more than half a pint of milk at the utmost. The kernel of the nut, when pressed, affords a most excellent oil. From the outer shell of the nut bowls, drinking cups, &c., are made, and from the fibre a species of matting.

COCOA-NUT CAKES.—Having washed and dried the nut, pare off the rind and grate it; dissolve a quarter of a pound of loaf sugar in a little water, then add the nut, and stir it till it boils; when nearly cold, add the yolks of three eggs well beaten. Mix thoroughly, and bake in patty-pans lined with a puff paste.

COCOA-NUT FIBRE.—This material is of modern introduction, and is now extensively used in the manufacture of mattresses, and in making matting for kitchens, lobbies, &c. For both these purposes it is extremely well adapted, is readily cleaned, and may be procured at a moderate cost.

COCOA-NUT PUDDING.—Break the shell of a moderately-sized cocoa-nut, so as to leave the nut as whole as possible; grate it, after removing the brown skin, mix with it three ounces of powdered loaf sugar, and half an ounce of lemon-peel; mix the whole with milk, and put it into a tin lined with paste. Bake it of a light brown.

COCOA-NUT SWEETMEAT.—Pare the nut and throw it into cold water; then grate it, and boil it in clarified sugar (in the proportion of a pound to each pound of cocoa-nut) until quite thick; stir it frequently to prevent it burning. Then pour it on a well-buttered dish or marble slab, and cut it into any form desired.

COD BAKED.—Take the middle piece of the fish, and skin it; make a stuffing with a little of the roe parboiled, a piece of butter, the yolks of two hard-boiled eggs, some grated bread crumbs and lemon-peel, pepper, salt, and nutmeg; bind it with the beaten white of an egg; put it into the fish, and sew it up. Place the whole in a tin dish with bits of butter over the top of it, and bake it for an hour in a Dutch oven; turn and baste it frequently. Garnish with fried roe or oysters, and serve with melted butter, or oyster or shrimp sauce.

COD BOILED.—Wash the fish and cleanse the inside, the back-bone in particular, with the most scrupulous care; lay it into the fish-kettle and cover it well with cold water, mixed with five ounces of salt to the gallon, and about a quarter of an ounce of saltpetre to the whole. Place it over a moderate fire, clear off the scum perfectly, and let the fish boil gently until it is done. Drain it well, and dish it carefully upon a very hot napkin with the liver and the roe as a garnish. To these may be added tufts of lightly-scraped horse-radish round the edge. Serve oyster sauce, and place melted butter with it, or anchovy sauce when oysters cannot be procured.

COD BROILED.—Having well cleaned the fish, cut it into slices of about an inch thick; dry them well with a clean cloth, then rub them with thick melted butter, and sprinkle a little salt over them. Place them on a gridiron over a clear fire, and when one side is done, turn them carefully to broil the other. Serve with melted butter and anchovy sauce.

COD CRIMPED.—Cut a fresh cod into slices, lay them for three hours in salt and water, with a glass of vinegar added; the fish may then be either boiled, broiled, or fried.

COD CURRIED.—Slices of cold cod may be dressed in this way. Fry the slices with sliced onions in butter, then stew them in white gravy thickened with a dessertspoonful of curry powder and a teacupful of cream.

COD FRIED.—Cut the middle or tail of the fish into slices an inch thick, season them with salt and pepper, and fry them of a light brown on both sides; drain them on a sieve before the fire, and serve them on a well-heated napkin with plenty of crisped parsley round them. Serve with melted butter and anchovy sauce.

COD PIE.—Take dressed cod and cold oyster sauce; put a little of the sauce at the bottom of a pie-dish, then a layer of flakes of cod, with a little of the liver cut in small pieces; season with pepper, salt, and nutmeg; repeat the layers until the dish is full, cover it with bread crumbs and pieces of fresh butter; bake for three quarters of an hour, and let the top be quite brown. A couple of sounds well soaked, boiled tender, and cut in small pieces, are a great improvement.

COD, SALT, BOILED.—Before cooking, soak it for some hours in cold water, and then boil it gently until it is tender. It is usually eaten with melted butter and egg sauce, and served with boiled parsnips.

COD SOUNDS.—This is the white skin of the belly, and is reckoned a great delicacy; it may be either boiled, broiled, or fried. Previous to dressing either way, it should be well soaked, washed, and parboiled.

COD STEWED.—Cut four sounds of cod into slices, season them with pepper and salt, and put them into a stew-pan with half a pint of water, some good gravy, half a pint of wine, the juice of half a lemon, a dozen oysters, a piece of butter rolled in flour, and two or three blades of mace. The fish will be sufficiently stewed in about a quarter of an hour.

COD, TO CHOOSE.—This fish is best when thick towards the head, and the flesh cuts white and flaky. The gills should be very red, and the eyes bright; when dim and flabby the fish is not good. It is in its prime during the months of October and November; and if the weather be cold, from the latter end of March to May.

COD, TO PICKLE.—Cut the fish into slices and put them into boiling water, season with salt, pepper, sweet herbs, and spices. Let it *just* boil, but no more. Then take the slices out, and when they are cool lay them by closely in pairs. Boil half the quantity of vinegar that will be necessary to cover the fish with an equal quantity of brine, pour it over them, and when cold cover them well up.

COD WITH POTATOES.—Skin soaked dried cod, and hang it to dry; pare a dozen or more of fine large potatoes, wash them well, and put them into a saucepan. Lay as much cod as will be required on them, add hot water enough to cover all, close the saucepan, and let it boil for three quarters of an hour; then mash the potatoes with hot milk and butter; take out the bones from the fish, chop it fine, add them together and season to taste; lay slices of hard boiled eggs over, and sprigs of parsley around it.

COD'S HEAD AND SHOULDERS, TO CARVE.—Take off slices quite down to the bone, in the direction from *a* to *b*, and as low as *c*. With each slice of fish give a piece of the sound, which lies underneath

the back-bone and lines it, and which may be found by passing the slice under the bone. A few choice parts are in and about the head, as the soft part about the jaw-bone, and the palate and tongue; these may be removed with the fish-slice or a spoon.

COD'S HEAD AND SHOULDERS, TO DRESS.—This is considered the choice part of the fish, and is usually boiled. It will eat much finer if a little salt is rubbed down the bone, and along the thick part, if it be cooked the same day. To boil it, flour a cloth, tie it up securely, and put it on in cold water, into which put a handful of salt.

CODICIL.—A supplement or addition made to a will by a testator, adding to, explaining, or altering some part of his former disposition. It may be written on the same paper, or affixed to or folded up with the will, or it may be written on a different paper and deposited in a separate place. Though a man can properly only make one will, he may make as many codicils as he pleases, and the last is equally valid with the first, if not contradictory. If, by two codicils, the same thing is given to two individuals, the law enjoins that they must divide it between them. In general, the law relating to a codicil is the same as that regarding wills, and the like guarantees of signature and attestation are required.—See WILL.

CODLIN CREAM.—Pare and core a score of codlins; beat them in a mortar with a pint of cream; strain it into a dish, and add sugar, bread crumbs, and a glass of wine to it. Stir well, and serve in cups or glasses.

CODLIN TART.—Scald the fruit and take off the skin. Put a little of the liquor on the bottom of a dish, lay in the apples whole and strew them over with fine sugar. When cold, put a paste round the edges, and over the fruit. Moisten the crust with the white of an egg, and strew powdered loaf sugar over it.

CODLINS, TO PRESERVE.—This fruit may be kept for several months, if gathered of a middling size at Midsummer, and treated as follows:—Put them into an earthen pan, pour boiling water over them, and cover the pan with cabbage leaves. Keep them by the fire for some time, then pour off the water and leave them to cool. Then place the codlins in a stone jar with a small mouth, and pour on the water which previously scalded them. Cover the jar with bladder wetted and tied very close, and over that a paper tied again.

COD LIVER OIL.—A medicine that has recently acquired much reputation for its remedial powers in pulmonary consumption, scrofulous, and other glandular affections, chronic gout and rheumatism, certain skin diseases, and several other ailments. It is generally supposed that the *iodine* and *bromine* which are present in minute quantities in this fish are the substances to which it materially owes its efficacy. It may also be inferred that one of its most active constituents is *free phosphorus;* the marked action of this agent on the nervous, vascular, and secret organs being perfectly established. The difficulty of bringing it into a form for administration is removed by the employment of cod liver oil; and nature provides a remedy where art fails. The pale brown colour is the best; and when good, it has the odour of a boiled cod's liver, and is far from

being either rancid or nauseous. The best vehicle for taking cod liver oil in, is new milk; and the disagreeable flavour of the drug can easily be disguised by the addition of one drachm of orange-peel to every eight ounces of oil.

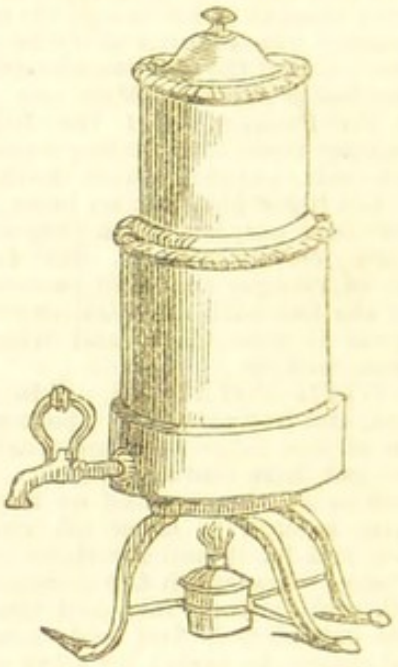
COFFEE, ADULTERATION OF.—The extensive adulteration of this article of consumption is betrayed by the fact that a much larger quantity of a substance *called* coffee is annually sold than passes through the Custom House. The chief articles with which coffee is adulterated are chicory, different kinds of grain, potatoes, and beans. In addition to these articles, another ingredient is used, known as the coffee colourer, and this consists chiefly of burnt sugar. When coffee is suspected, a portion of it should be placed gently on the surface of a glass of water; the genuine powder will remain swimming on the water, but the adulterants will sink to the bottom. The reason why the coffee floats upon the liquid is to be found in the quantity of essential oil which it contains, making it lighter than the water, which it at the same time repels. It will also be observed in repeating these experiments, that the water to which coffee alone has been added becomes scarcely coloured for some time, whilst that with the chicory, in less than a minute assumes a deep brown tint. The presence of roasted grain may also be detected by the blue colour produced on the addition of a solution of iodine to the cold decoction. These researches may be further aided by the use of a microscope, by which the difference in the grain of the coffee and other ingredients will be readily detected. Never buy *ground* coffee except of tradesmen of unquestionable integrity; some grocers make it a practice, in order to give their customers confidence, to grind the coffee while they wait for it. In such cases, chicory is frequently left in the mill to mingle with the coffee that is introduced, or a box of chicory nibs of about the size of coffee berries is kept upon the counter, a handful or so of which are adroitly thrown into the mill during the process of grinding. In choosing *whole* coffee care should be taken that the berry is not too dark; for, if so, it has been too much roasted, and some of its active properties have necessarily been injured or destroyed. Above all, the coffee drinker should never buy the coffee contained in canisters, for he may be assured that it is even more adulterated than other coffee not so packed.

COFFEE CREAM.—Having dissolved an ounce of isinglass, boil it with two quarts of cream, and mix it with a pint and a half of very strong coffee; sweeten well, whisk it for ten minutes, put it into custard cups and let them stand in boiling water until they become firm.

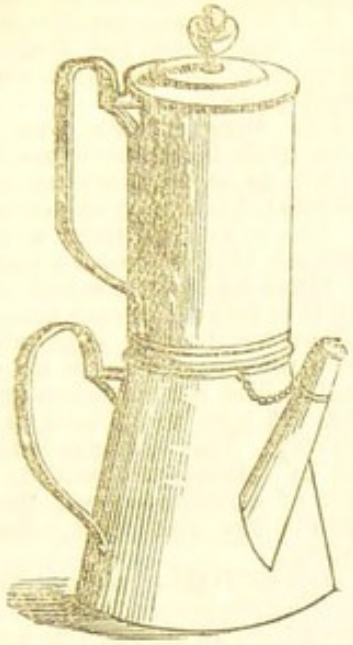
COFFEE ESSENCE.—Take two pounds of ground coffee; infuse one of the pounds in a quart of water, then let it stand to settle; when clear pour it off, and infuse the other pound of coffee in it; boil half a pound of sugar to caramel height, and put in the coffee to dissolve; then pour it into a pipkin with another half-pound of sugar; carefully close the lid of the pipkin, and let it simmer for eight or nine hours; then strain it, and when cold, pour it into bottles, cork them closely, and keep them in a cool place. When it is wanted for use put some of it into a cup with warm water, according to the strength the coffee is desired. This will be found very useful when travelling, or when there is not time or convenience to prepare the coffee in the usual manner.

COFFEE MILK.—Boil a dessertspoonful of coffee in about a pint of milk for a quarter of an hour, then put into it a shaving or two of isinglass, and clear it; let it boil a few minutes, and set it on the side of the fire to fine. Sweeten to taste.

COFFEE POT.—The vessel known generally as the coffee-pot has been objected to by many persons, as not being capable of producing the beverage sufficiently fine and clear, several improvements have therefore been introduced; one of these is the *percolator*, represented in the engraving. The size of the filter must be regulated by the number of persons for whom the coffee is to be prepared; for, if a large quantity of the powder be heaped into an insufficient space, there will not be room for it to swell, and the water will not pass through. Put three ounces of coffee into a percolator which will contain two pints and a half; shake the powder quite level and press it closely down; remove the presser, put on the top strainer, and pour round and round, so as to wet the coffee equally, about the third of a pint of boiling water. Let this drain quite through before more is added; then pour in more boiling water; and when that has passed through add the remainder; let it drain entirely through, then remove the top of the filter, put the cover on the part which contains the coffee, and serve it immediately. Another species of coffee-pot is the *cafetière*, by which the coffee is made upon somewhat the same principles as the percolator, but is of a slightly different construction. One thing is essential with coffee-



pots, whatever their fashion may be; and that is, to keep them scrupulously sweet and clean. To this end the vessel should be washed out thoroughly, immediately that it



is done with, the lid taken off, and the vessel itself set by, with the orifice downwards.

COFFEE, PREPARATION OF.—To produce this beverage in perfection it is necessary to employ the best materials in its preparation; and the coffee should also be fresh roasted and fresh ground. The proportion of coffee used should be *at least* one ounce to a pint and a half of water; and when desired stronger, the quantity of coffee should be increased accordingly. The coffee-pot should be heated previously to putting in the coffee with a little boiling water, the coffee may then be put in, and the boiling water poured over it. This simple infusion is all that is required to make good coffee, for all the useful and palatable matter in coffee is so very soluble that it yields immediately to the action of hot water. If, however, boiling be insisted upon, the process should be performed as follows: Put the necessary quantity of water, into a pot which it will not fill by some inches; when it boils stir in the coffee; the contents of the pot will then gradually rise to the top and afterwards fall; let it boil slowly for three minutes longer, then pour out a large cupful twice, hold it high over the coffee-pot, and pour it in again; then set it on the stove for ten minutes longer. It will be perfectly clear by this means without any fining.

Another method of making coffee is, to divide the water about to be used into two parts, and to set the coffee over the fire in one half of the *cold* water until it comes to a boil. After being set by the side of the fire for a few seconds, it should be poured off as clear as it will run. Immediately the remaining half of the water at a *boiling heat* should be poured on the grounds; the vessel is to be placed on the fire, and kept boiling for about three minutes. This will extract all the bitterness left in the grounds, and after a few moments' subsidence, the clear part is to be poured off, and mixed with the former liquor. This mixed liquor will contain all the qualities which originally existed in the roasted coffee in perfection, and will be as hot as any taste can desire it.

If, however, fining is necessary, it may be effected by adding a shred of isinglass, a small piece of clean eel or soleskin, or a spoonful of white of egg. Another plan is to place the vessel containing the made coffee upon the hearth, and to sprinkle over its surface half a cupful of cold water, which from its greater gravity descends and carries the foulness with it. Another method sometimes adopted is to wrap a damp cloth round the coffee-pot. The colour and flavour of coffee may both be improved by the addition of a single teaspoonful of port wine to a cupful of the beverage.

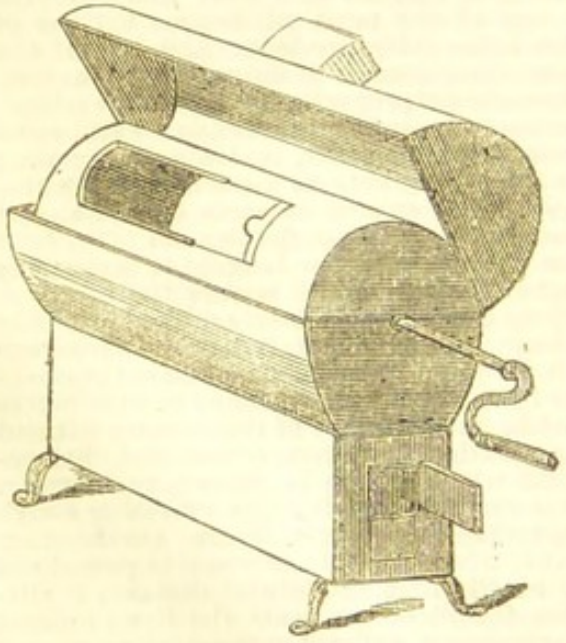
COFFEE, PROPERTIES OF.—Coffee, when properly prepared, and used in moderation, is to most persons an exhilarating, grateful beverage. With some persons, however, it is heating, and extremely difficult of digestion. If drunk in the morning for breakfast it should be of a proper strength, and well diluted with either cold or hot milk. Coffee is frequently employed after dinner as a digester; when thus employed a small cupful only should be taken, without milk, and sweetened with sugar-candy. In this guise it is also an excellent substitute for spirits or wine. Coffee taken at night generally prevents sleep, occasions the acceleration of the pulse, and produces increased vividness of ideas and hilarity. Persons, therefore, engaged in mental occupation at night will find this a far more agreeable and reliable resource than either wine or spirits. Difference of temperament may produce different effects on coffee-drinkers; but on the whole, it may be said that this beverage is one of the most wholesome articles of diet taken with prudence, and one of the most dangerous if indulged in to excess. The *medicinal* properties of coffee are various: persons who suffer from headache find relief from drinking coffee, and also in inhaling its fumes. It acts as a soother to the stomach after excess, corrects crudities, and removes colics and flatulencies. To both the nervous and the languid it is cheering and exhilarating, and repairs the injurious effects caused by excessive mental or bodily labour. As an opiate, it has an advantage which opium and other drugs do not possess; for it may be taken under any circumstances and in all conditions of the stomach without aggravating those congestions and obstructions which opium is known to increase. It is useful in allaying the irritating cough that often accompanies fevers. On the other hand, when drunk to excess it is prejudicial to health, and accelerates disease; it vitiates the blood, congests the liver, induces nervousness, and not unfrequently a species of palsy. It also occasions in some constitutions an eruption on the skin, and many other disorders. Coffee acts as an aperient if a glass of cold water be drunk immediately before it is partaken of. In cases of

poisoning by opiates, the use of very strong coffee with lemon-juice has also been found very beneficial. The mixing of brandy with coffee is very questionable, as the character of the beverage is thereby entirely altered, instead of being simply corrected, as is contemplated by the practice.

COFFEE RATAFIA.—A liqueur made as follows:—Best Turkey coffee ground, one pound; loaf sugar, twenty ounces; cinnamon and cloves, half an ounce each; nutmeg, three quarters of an ounce; sweet almonds beaten to a paste, one ounce; bitter almonds, half an ounce; isinglass dissolved in a little water, half an ounce; proof spirit of wine, one gallon. Cork up the jar immediately the spirit is added, seal, and tie bladder over it; put the jar in hot water for ten hours, then shake well, and set it in the sun for a month; at the end of that time it may be strained through a fine sieve, and filtered until perfectly clear; put it into small bottles, securely cork and seal them, and in a month the ratafia will be fit for use.

☞ Coffee, 1lb.; sugar, 20ozs.; cinnamon, ½oz.; cloves, ½oz.; nutmeg, ¾oz.; sweet almonds, 1oz.; bitter almonds, ½oz.; isinglass, ½oz.; proof spirit, 1 gallon.

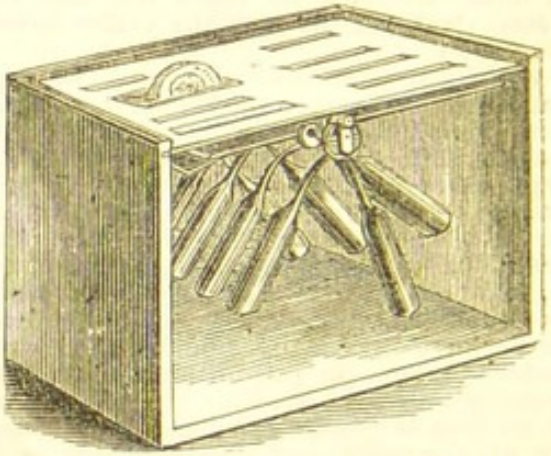
COFFEE ROASTER.—Persons who drink coffee habitually, and are very particular about its flavour and quality, should purchase the best kind in a raw state, keep it for some months, and have it roasted at home. This can be cheaply done in small quantities by means of the apparatus seen in the engraving; the cost of which does not exceed eight or ten shillings, and the supply of charcoal needed for it being very trifling indeed. The cylinder which contains the coffee should only be half filled, and it should be turned rather slowly over the fire, which ought to be of a moderate heat, until the aromatic smell is emitted; the movement should then be



quickened, as the grain is in that case quite heated, and it will become too highly coloured before it is roasted through, if slowly finished. When it is of a fine light brown, spread it quickly upon a large dish, and throw a thickly folded cloth over it. To ascertain whether it is sufficiently roasted, the door of the cylinder must be drawn back occasionally towards the end of the process, and the progress of the roasting noted. Let it remain on the dish until it is quite cold, then put it immediately into canisters or bottles, and exclude the air carefully from it.

COFFEE, SUBSTITUTES FOR.—Several substances have been made use of at different times as substitutes for coffee, and the imitations have proved tolerably successful. *Rye* is one of these articles, and the following is the process employed:—The rye must be well cleaned, and then boiled till it is soft; but care must be taken that it does not burst. It should be dried afterwards in the sun or in an oven, and then roasted like coffee; when ground it is fit for use. It may be infused or boiled in the usual way. This beverage is also greatly improved by mixing the powder with half its weight of genuine coffee. Peas, beans, and almonds are also used.—See ACORN, CHICORY, &c.

COIN DETECTOR.—A simple implement by which the genuineness of coin is tested. An improvement in this article has recently



been introduced, in the shape of a small cup fixed in a stem containing a strong acid, the coin on being submitted to which, if good, will not change colour, but if base, will be discoloured immediately.

COINS, IMPRESSIONS FROM.—Melt a little isinglass glue with brandy, and pour it thinly over the coin, so as to cover its whole surface; let it remain for a day or two until it has thoroughly dried and hardened, then take it off, and a clear, firm, impression of the coin will be produced.

COKE.—Coke is prepared from coal by depriving it of its hydrogen; consequently it can yield neither flame nor smoke. The chief part of this combustible used for domestic purposes is, that which remains in the iron retorts after the gas has been extracted from the coal for illumination. From the clearness with which it burns, and the intensity of its radiant heat, coke is excellent for certain culinary operations where a bright clear fire is wanted, as broiling, roasting, &c.; but it is difficult to kindle, and does not answer well in a grate without an admixture with coal; the two together

make the best of fires. Coke, when used in an ordinary grate, should be broken of the size of a goose egg, and laid on the top of the fire when it is already clear; the pieces will collect the radiant heat that would have escaped up the chimney, and soon themselves become red-hot, in which state alone they are effective. Care should be taken that the pieces of coke do not fall into the front of the fire before they are red-hot, as they will only obstruct the rays of heat. There is some difference in the density, and consequently in the strength of the coke, according to the kind of coal from which it is produced, or in the mode of preparing it. The heaviest, gives the most heat, and will last longest; but that which is shining and light will burn most readily. Coke burned by itself has all the bad qualities of charcoal, in giving out carbonic acid gas, which, if the current or draught up the chimney is not sufficient, will fall down into the apartment. But while it is burning in a well constructed fireplace there is no danger of this, as the current upwards carries the carbonic acid along with it. Coke, when properly managed, is an economical fuel; it is sold at from ten to twelve shillings per chaldron, and is best purchased at a gas factory.

COLCHICUM.—This is the well-known plant called meadow saffron, which grows wild in all the fields and rich soils of Europe. On man the plant acts in an overdose as a strong irritant poison, its juices being so acrid that no animal will crop it from the pastures. The bulb and seeds are the principal parts used for medicinal purposes, and these are gathered in August, from which the plant obtains its common name of *colchicum autumnale*. It acts powerfully on all the secretions, especially on those of the alimentary canal; hence its remarkable efficacy in gout and rheumatic gout, for which diseases it was long considered a specific. The forms in which it is most frequently administered are those of the powder, tincture, vinegar, and wine. The ordinary dose of the powder is from five to fifteen grains; and of the other preparations from one to two drachms.

COLD, ACTION OF.—The animated human frame is endowed with the power of maintaining a certain average temperature which, except in rare cases, is higher than that of the surrounding medium, and this power is adequate to resist all ordinary impressions of cold; but when from great intensity, or long continuance, the depressing influence of cold is much augmented, the powers of life sink, and disease or death is the consequence. The fatal effect is ascribed to the heated state of the body, and to the shock communicated to the stomach and its numerous nervous connections, while the system generally is exhausted. The effect of cold, not extreme, but long continued, especially if combined with moisture, is one of the most fertile sources of disease. The young and the aged are more peculiarly liable to suffer, and for this reason require especial protection. The partial application of cold, particularly by a moving current of air, most generally produces disease of a neuralgic or rheumatic character, incipient paralysis, or erysipelas. The partial application of cold and wet may produce inflammatory action in the immediate vicinity of the part exposed, or, as in the case of wet feet, in some distant organ. When, in consequence of long exposure to extreme cold, drowsiness comes on, both mind and body must be exerted to repel the influence, muscular motion must be kept up, and stimulants administered. Those who are likely to be exposed to great continued cold should provide abundant nourishment, particularly of a fat oily character, and should never be without a flask of spirits, which, however, should only be depended on as a last resource.—See FROST BITE.

COLD CREAM.—An unguent employed to cure chapped skin and skin wounds. It may be prepared from various ingredients as follows:—1. Take a quarter of an ounce of white wax, and shred it into a basin, with one ounce of almond oil. Place the basin by the fire till the wax is dissolved; then add very slowly one ounce of rose-water, little by little, and during this, beat smartly with a fork to make the water incorporate, and continue beating till it is accomplished; then pour it into jars for use. 2. Lard, six ounces; spermaceti, one ounce and a drachm and a half; white wax, three drachms; rose-water, three ounces; carbonate of potass, fifteen grains; spirit of wine, three quarters of an ounce; essential oil of bergamot, three drachms. Melt the lard, spermaceti, and white wax, then add the rose-water, carbonate of potass, and spirit of wine, stirring well, and when nearly cold, add the perfume. 3. Almond oil, four ounces; green oil, four ounces; juice of cucumbers, four ounces; wax and spermaceti, quarter of an ounce each; oil of neroli, five drops. Slice the cucumber very thin, and place the slices in the oil; after remaining together for twenty-four hours, repeat the operation, using fresh fruit in the strained oil; no warmth is necessary, or, at most, not more than a summer heat; then proceed to make the cold cream in the usual manner, adding the oil thus odorized, and the other ingredients in the usual way.

COLD IN THE HEAD.—This distressing affection may either be a primary symptom of a severe catarrh, or exist without any general constitutional disturbance. Cold in the head is attended with a sense of oppression and fulness in the head, hot and sometimes bloodshot eyes, with frequent effusion of tears, and constant running from the nose; these symptoms are usually attended with more or less of sore throat, slight deafness, and a contraction of the scalp. The *treatment* of cold in the head is generally very simple, and if not attended with shiverings and headache, seldom requires more than a hot bath for the feet, the following powder, and a copious drink of warm gruel; the whole being adopted at once, and about the usual hour of bed-time.

Take of Dover's powder ten grains, and antimonial powder four grains; mix.

COLD VICTUALS, Economy of.—A number of savoury dishes may be made from cold meat and vegetables, which will not only be favourable to economical housekeeping, but also afford a grateful variety to the dietary arrangements. The frequent recurrence of cold meat for dinner always creates repugnance and dissatisfaction in a family, and betrays an amount of ignorance and indifference on the part of the housewife perfectly inexcusable. For instructions for the conversion of cold edibles into savoury dishes, see Beef, Bubble and Squeak, Beef Cold, Beef Fricassee, Beef Hash, Beef Minced, Beef Patties, Beef Sanders, Mutton Haricot, Mutton Hashed, Mutton with Endive, Veal Hashed, Veal Minced, Veal Ragout, Veal Rissoles, &c.

COLD WATER CURE.—See Hydropathy.

COLIC.—This is a disease that, unless greatly neglected, seldom proves fatal, and is caused entirely by some irritating substance in the stomach and bowels, or from the application of cold to the heated body. The most general exciting causes of colic are acrid and indigestible fruits, an excess of bile, powerful medicines, worms, wind, and cold to the extremities. Colic can always be distinguished from inflammation of the bowels by the peculiar twisting nature of the pain, and by its being relieved by pressure. The *treatment* of colic consists in removing the cause and allaying the pain: to effect the first object most speedily, the patient should take the two subjoined pills immediately, and two tablespoonfuls of the mixture every hour, till the pain is abated. using at the same time hot fomentations to the stomach. Should the pills not act freely within two hours, they are to be repeated. As a general rule, no other treatment is needed, with this exception, that when the colic proceeds in part or wholly from flatulence, the compound assafœtida pill is to be substituted for the colocynth ordered in the prescription.—*Pills:*

Compound extract of colocynth	6 grains.
Calomel	4 grains.
Croton oil	1 drop.

Mix and divide into two pills.

Mixture.—Take of thick mucilage and castor oil, of each one ounce; mix thoroughly, adding by degrees—

Peppermint water . .	4 ounces.
Spirits of nitre, Friar's balsam,	of each 2 drachms.
Laudanum . .	1½ drachm—Mix.

COLIC, PAINTER'S.—This is a much more serious disease than the former, as in this case it is the constitution that is first affected; and as it is the result of the absorption of mineral poison, the consequences it entails are serious. The disease derives its name from the frequency of its occurrence among painters, though it may occur in any one exposed to the same influence. This disease arises from the absorption into the body of white lead, though it may proceed from any other mineral poison getting into the system; and in cases of intentional poisoning by mineral drugs, it often supervenes after the dangerous symptoms have been subdued.

The symptoms of painter's colic only differ from the other form of colic in coming on more slowly, and being attended with pains in the limbs, shaking of the hands, and in severe cases, complete paralysis.

Treatment.—The hot bath or fomentations as in colic, with leeches when necessary to the abdomen, clysters of warm gruel and turpentine, and one of the following pills every four hours, and two tablespoonfuls of the above mixture, without the laudanum, every two hours, are the usual means employed.—*Pills:*

Camphor . . .	9 grains.
Powdered opium .	12 grains.
Calomel . . .	24 grains.
Extract of hemlock,	

enough to make into a mass, which is to be divided into twelve pills. When the pain and other symptoms are subdued, it may be necessary to give frequent doses of castor oil, so as to effect a perfect cleansing of the alimentary canal; or if the bowels are obstinate, the purgative pills ordered in simple colic.

COLEWORT.—This term is applied to cabbages cut young or previously to their hearts becoming firm. The varieties of cabbage principally employed for the raising of

coleworts are the Large York, Sugar-loaf, Early York, East Ham, Battersea, Antwerp, and London Hollow. Sowings may be performed during the middle of June

and July, to be repeated at the end of the latter month; for transplanting in August, September, and October, for a continual supply in September until the close of March. A fourth must be made the first week in August for succeeding the others in spring; but if of sufficient extent, then various plantations may be made from the seed-beds of the cabbage crops made at these several periods, as directed under that head; the chief object of growing coleworts being to have a supply of greens sooner than can be obtained from the plantations of cabbages if left to form hearts. The observations upon transplanting, and the directions for cultivating cabbages, apply without any modification to coleworts; but the distance at which the plants may be set is much less. The best mode of taking coleworts is to pull up or cut every other one; these openings are beneficial to the remaining plants, and some, especially of the August-raised plants may be left, if required for cabbaging.—See CABBAGE.

COLLARING.—A culinary process employed for the purpose of preserving meat, fish, &c., on the following general principles: Care must be taken that the article is properly rolled up and well bound together; it should also be thoroughly boiled, and be quite cold before being put into the pickle, in which it should lie for a night, when the binding may be taken off, and the preparation will be ready for use. The pickle may be water, in which as much salt is dissolved as the water will take up, to every pint of which add half a pint of vinegar; it should be sufficient to cover the article completely, and it will be desirable to add a fresh pickle to it occasionally, by which means the meat, &c., will keep much longer. — See BEEF, EELS, MUTTON, PORK, SHEEP'S HEAD, SALMON, VEAL, &c.

COLLEGE EDUCATION. —A superior class of instruction in connection with the universities, by which young men are prepared for the various professions, and are rendered fit to mingle with the higher and more intelligent orders of the community. The system of education pursued at the various colleges, although differing in detail, is essentially the same. The college education, in a restricted sense, is nothing more than a preparation for the public examinations; for it is upon the result of these examinations that the degrees (which are in some sort a certificate of efficiency) are either awarded or withheld. The every-day business of the college is conducted in a large hall, furnished with books, maps, mathematical diagrams, &c., and the students, generally from the ages of sixteen to twenty-one, are divided into classes of from five to fifteen members, and at the head of each class a master of arts presides and conducts the business. A certain number of tutors are also appointed to give lectures. Directions are given, as often as may be needful, respecting the mode of preparing for these lectures, the books to be consulted, method of analysis and illustration, and the like. When the lecture comes on, the several members of the class are called on in turn to translate, construe, or illustrate the subject-matter appropriately. The usual routine of attendance at the lectures is for each student to attend two, three, or even four lectures, each inculcating a different branch of literature or science. But the duties of the college tutor do not terminate with these class lectures. He from time to time has interviews with his pupils separately, for the purpose of ascertaining more exactly the individual's state of preparation for his public examination, consulting with him on the most effectual methods of removing his peculiar difficulties, and arranging his plans of study. In addition to these teachers connected with the university, a very numerous class also exists, denominated *private tutors*, whose business it is to superintend and assist the studies of individuals, without superseding or interfering with the operation of the college lectures; these are occupied rather in securing for the student the best use of the lectures, in so preparing him for attendance on them as to enable him readily to answer the lecturer's questions, and follow him in his remarks, and in giving him assistance, perhaps, in those portions of his studies in which accident may have precluded him from receiving the assistance of a college tutor. These private tutors, therefore, although not absolutely necessary to the student's progress, are still highly useful to several descriptions of students. The course of college and hall lectures closes, at the end of each term, with the formal examination of each member separately by the head of the college and tutors, who assemble for this purpose. Each student presents himself in turn, with the books in which he has been lectured during the term, essays, exercises, analyses, &c. In addition to these modes of direct instruction, other means of indirectly promoting the studies of the place are furnished by premiums, in the shape of *exhibitions*, *scholarships*, and *fellowships*, to which certain privileges and emoluments are attached. The examination statute requires that the candidate for the degree of B.A.—the *education* degree—be tried in translating from the original language of the Gospels. His acquirements in Latin and Greek must be proved by examination in at least three different authors. He is also examined in ancient history and philosophy. This applies to those candidates who aim at no more than barely to satisfy the requisitions of the statute. But a much higher standard of qualification is expected by a portion; and for these, honours additional to that of a mere degree are provided. It is provided, for example, that the names of those who are found deserving of these extra honours should be printed and arranged in four classes, according to a fixed standard of merit for each class. It will be seen that the examination for the degree of B.A. is the mainspring of college education. The degree of Master of Arts is obtained without any specific examination or exercise. The degrees in the higher faculties, as Bachelor and Doctor in Divinity, Law, and Medicine, are no further connected with education than as they

may be considered in the light of encouragements and inducements, which the university holds out for the attainment of a certain proficiency in the several studies to which they refer. The degrees in music are conferred without any reference to a previous degree, and are preceded by a trial in the public schools. Although the *expense of a college education* is seldom less than £200 or £300 a year, and oftentimes more, the ordinary college account for the year, including university and college fees of all kinds, boarding, lodging, washing, coals, and attendance, oftener falls short of £80 or £90 than it exceeds £100. But as the students generally belong to the richer classes, habits of extravagant expenditure are acquired; but these habits do not arise out of the demands of the university or of the several colleges and halls. In connection with this part of the subject it is much to be regretted, that a system of unlimited credit prevails at the university towns, which entices the students to an outlay far beyond their means, and in many instances inflicts much pecuniary inconvenience on the student's family. But it cannot be denied that on the whole, a college education confers a decided advantage upon a man in after life, and is a constant source of congratulation, even if it is not made use of as a means of advancement.

COLLEGE PUDDINGS.—1. Beat six yolks and three whites of eggs; mix them to a sm oth batter with three tablespoonfuls of flour, half a nutmeg, and sugar to taste. Add four ounces of suet, four of currants, and one ounce of candied orange-peel. Bake in patty-pans, or fry them; serve with pudding sauce and sliced lemon. 2. Boil half a pint of cream, stir in a quarter of a pound of butter, beat the whites of two eggs and the yolks of four, and mix them with two ounces of flour, and one ounce of sifted sugar. When the cream is slightly cool, stir it into the flour and eggs; let it stand for a quarter of an hour before the fire, and then bake in a quick oven for twenty or twenty-five minutes. 3. Grate two pounds of the crumb of bread, shred half a pound of suet, and mix with half a pound of currants, an ounce of citron, and an ounce of orange-peel, a quarter of a pound of sugar, half a nutmeg, three eggs beaten, whites and yolks separately. Mix and make into the size and shape of a goose egg. Put half a pound of butter into a frying-pan, and when melted and quite hot, stew them gently in it over a stove; turn two or three times till they are of a fine light brown. Mix a glass of brandy with the butter, and serve with pudding sauce.

☞ 1. Eggs, 6 yolks, 3 whites; flour, 3 tablespoonfuls; nutmeg, ½ of 1; sugar, to taste; suet, ¼lb.; currants, ¼lb.; candied peel, 1oz. 2. Cream, ½ pint; butter, ¼lb.; eggs, 2 whites, 4 yolks; flour, 2ozs.; sugar, 1oz. 3. Bread, 2lbs.; suet, ½lb.; currants, ½lb.; citron, 1oz.; orange-peel, 1oz.; sugar, ½lb.; nutmeg, ½ of 1; eggs, 3; butter, ½lb.; brandy, 1 wineglassful.

COLLOPS, A LA BECHAMEL.—Soak a slice of ham with a piece of butter, chopped parsley, shalots, and half a bay-leaf; simmer these on a slow fire for about a quarter of an hour; then add a tablespoonful of stock gravy, a tablespoonful of cream, and a sprinkling of flour and pepper; reduce the liquor till quite thick, and strain it through a sieve; cut the breast of roasted poultry into small pieces; put the meat into the sauce with the yolk of an egg, and boil all together; then cut thin pieces of paste to any form desired; put portions of the ragout between two pieces, pinch all round to secure the sauce, and fry them of a fine brown colour.

COLLOPS, AU NATUREL.—Mince finely a pound of tender rumpsteak, free from fat or skin; season it with a moderate quantity of pepper and salt, set it over a gentle fire, and keep it stirred with a fork until it is quite hot. Simmer it very slowly in its own gravy from ten to twelve minutes, and then, should it be too dry, add a little boiling water, broth, or gravy; stew it for two minutes longer, and serve it directly. This dish will be found peculiarly suited to persons in delicate health, or of weak digestion. It will also afford an agreeable variety to the customary repast, when a dish is required on an emergency.

COLLOPS, OF PRESERVES.—Roll out some puff paste very thin, wet it, and lay on it at intervals any kind of preserve; roll the paste over, press the ends together, and place them on a tin; just before they are wanted fry them lightly; drain them, and sprinkle them with sugar.

COLLOPS, SAVOURY.—Make a little thickening with about an ounce and a half of butter and a dessertspoonful of flour; when it begins to be coloured, shake into it a teaspoonful of finely shred parsley, or mixed savoury herbs, and a seasoning of salt and pepper. Keep these stirred over a gentle fire until the thickening is of a deep yellow brown, then add a pound of rumpsteak finely minced, and keep it well separated with a fork until it is quite hot; next pour to it gradually a teacupful of boiling water, and stir the collops gently for ten minutes. Before they are served, stir to them a little ketchup, chili vinegar, or lemon-juice; a small quantity of minced onion or shalot may be added, if the flavour is not objected to.

COLLOPS, SCOTCH.—Cut small slices out of the fillet of any kind of meat; flour and then brown them in fresh butter in the frying-pan. Have a little weak broth or boiling water ready in the stew-pan, put the slices of veal into it, let them simmer very gently, and when they are nearly done, add the juice of a lemon, a teaspoonful of ketchup, a little mace, pepper, and salt; take out the collops, keep them hot in the dish they are to be served in, thicken the sauce with browned flour, pour it hot over the collops, and garnish them with curled slices of bacon.

COLOGNE WATER.—See EAU DE COLOGNE.

COLOMBO.—A plant growing on the east coast of South Africa, the root of which is held in high esteem as a mild tonic and

stomachic, having no astringent quality, and being but very slightly stimulant. When the liver is excited and produces an immoderate quantity of bile, colombo is an excellent remedy. When there is a loss of appetite, attended by flatulency, acidity, nausea, and the usual train of symptoms arising from a debilitated state of the stomach, colombo is of the greatest service, and agrees with the most delicate organization. The dose of colombo root in powder is from fifteen to sixty grains. The tincture is given in doses of two or three teaspoonfuls. The dose of the infusion, which is made in the following manner, is two or three tablespoonfuls, repeated three or four times a day:—

Colombo root sliced . . 5 drachms.
Boiling water . . . . 1 pint.

Macerate for two hours, and then strain through a linen rag.

Note.—This infusion should be kept closely corked, as it spoils if kept long.

COLOMBO WATER.—A specific employed to provoke appetite and promote digestion; it is made as follows:—Take four drachms of bruised colombo root, one drachm of bitter orange-peel, and two drachms of liquorice root; add a quart of cold soft water, and simmer as gently as possible over a slow fire, until half the water is evaporated, then strain the liquid and filter it; add to this about one-sixth of good brandy, and bottle it up for use. An hour before dinner take of this mixture the third of the contents of a wine glass, filling up the glass with water.

COLOUR, HARMONY OF.—See APPAREL, HOUSE DECORATION, &c.

COLOURED ARTICLES, TO WASH.—Boil a quarter of a pound of soap until nearly dissolved, then add a small piece of alum and boil with it. Wash the articles in this lather, but do not soap them. If they require a second water, put alum to that also, as well as to the swilling and blue-water—this will preserve them.

COLOURING, FOR CAKES, JELLIES, &c.—For a brilliant *red*, boil fifteen grains of cochineal in the finest powder, with a drachm and a half of cream of tartar, in half a pint of water, very slowly, for half an hour. Add, in boiling, a piece of alum the size of a pea; or substitute beet-root sliced, and some liquor poured over. For *white*, use almonds finely powdered with a little drop of water, or employ cream. For *yellow*, yolks of eggs or a bit of saffron steeped in the liquor, and squeezed. For *green*, pound spinach or beet-leaves, express the juice, and boil in a teacup placed in a saucepan, to take off the rawness. The mixture of *two coloured* jellies or of blanc mange, or cream with jelly, is made by allowing the first layer in the mould to harden sufficiently to bear the succeeding one of a different colour without intermixture; several colours may be added in this way.

COLOURING, FOR SOUPS, GRAVIES, &c.—See BROWNING.

COLT BREAKING.—A species of training pursued with young horses, by which the natural wilfulness of their tempers is subdued, and they are brought into a state of subjection. This process is commenced in accordance with the constitution and temper of the horse, but generally speaking it is completed by the third year. *The application of the cavesson* (as seen in the engraving), is the first active restraint applied to saddle-horses, but before putting this on, it is prudent to boot the young horse's legs, to prevent them knocking against each other. Thus equipped the colt is led about the country, by the breaker on foot or mounted on a steady hack; and for a week he may be generally confined to soft turf, which will not require his being shod. *Shoeing* must be commenced as soon as the colt is in a state to be taken on the roads, but in this great discretion must be exercised: the shoes should be nailed on very carefully, and they should be very neat and light in their make; the feet also should afterwards be regularly examined, and the shoes removed every three weeks. The next process is the *tying up in the stall*. To accomplish this effectually, the headstall should fit very closely and the throat-lash be sufficiently tight to prevent the colt from pulling it off in his efforts to free himself. All the ordinary stable practices may now be gradually taught, such as washing out the feet, dressing, hard rubbing the legs, &c. *Lounging* may now be commenced, which will require the aid of a second hand. The cavesson, boots, roller, crupper, &c., are all put on, and a long leading rein is attached to the ring in the noose of the cavesson. But instead of merely leading, the colt is made to walk round a circle on some piece of soft turf. As soon as he has gone round a dozen times in one direction, he may be turned and made to reverse it, so as not to cause giddiness or an undue strain on one leg. This process is repeated at various times throughout the breaking. The *saddling of the colt for the first time* requires caution; the girths should not be drawn tight at first, and care is required that the crupper be smooth, and that it does not press heavily on the back or tail; nor should the stirrups be left to hang loose from the saddle in early lessons. The bearing up of the bridle, likewise, must be gradual, and reining back by way of sup-

pling the shoulders and giving sensation to the mouth, must not be roughly or prematurely pressed on him. The backing of the colt should be proceeded with very cautiously, and it would be as well that it should only be attempted by one with whom the colt is familiar. An assistant is requisite, and the act of mounting must be gradual and gentle, the assistant bearing on the stirrup-leather of the off-side against the weight of the mounting rider on the near. During the course of breaking it is always safer to keep the colt rather underfed with corn, and until he is able to begin his cantering exercise he will scarcely bear an increase. Bad tempered horses especially, require light feeding during breaking, and extra time as well as care must be bestowed upon them. When all these points are accomplished, the breaking in of the colt may be said to have terminated. These are the chief features which have characterized the tuition of young horses, as universally practised up to the present day; it is, however, a subject to which the public attention has been specially directed of late. A system formed upon a totally distinct and novel treatment has been partially introduced into this country by Mr. Rarey, the celebrated American horse-tamer. This system, however, is as yet in its infancy, and but imperfectly developed; full particulars will therefore be found hereafter under the head of HORSE TAMING.

COLTSFOOT.—A herb of demulcent bitter qualities, slightly stomachic and tonic. It is much esteemed as a remedy for shortness of breath, and other affections of the chest. The leaves form the basis of most of the British herb tobaccos, and have been recommended to be smoked in asthma and difficulty of breathing. The decoction is made by infusing one ounce of coltsfoot in a pint of water. The dose—one or two wine glasses, according to circumstances.

COLTSFOOT SYRUP. — Coltsfoot, six ounces; maidenhair, two ounces; hyssop, one ounce; liquorice root, one ounce; boil these ingredients in two quarts of spring water, till a fourth part is consumed; then strain it, and put to the liquor two pounds of powdered loaf sugar; clarify it with the whites of eggs, and boil it till it is of the consistence of honey. A teaspoonful taken occasionally in cases of cough and cold will prove beneficial.

COLTSFOOT WINE. — Boil one gallon of water with two pounds and a half of moist sugar, and the beaten white of an egg, for three quarters of an hour; pour the liquor boiling upon a quarter of a peck of fresh gathered coltsfoot flowers, and a pound of raisins stoned and cut small; cover the vessel close, and let the ingredients infuse for three days, stirring thrice daily. Then add a tablespoonful of yeast; keep it well mixed and covered close, until it has worked freely; then strain into a cask upon half an ounce of the best bruised ginger, and the thin rind of half a Seville orange; let it remain open, covering the bung hole with a tile, until it has ceased fermenting. Add a gill of French brandy, stop it up securely and keep it for twelve months, then bottle it, and drink in six months more.

☞ Water, 1 gallon; sugar, 2½lbs.; coltsfoot flowers, ¼ peck; raisins, 1lb.; yeast, 1 tablespoonful; ginger, ½oz.; orange-peel, ½ of 1; brandy, 1 gill.

COLUMBINE. — A perennial, growing two or three feet high, blowing a blue, red,

or variegated flower in June or July. It requires shade and a stiff soil to grow in; and may be propagated by separating the roots in autumn.

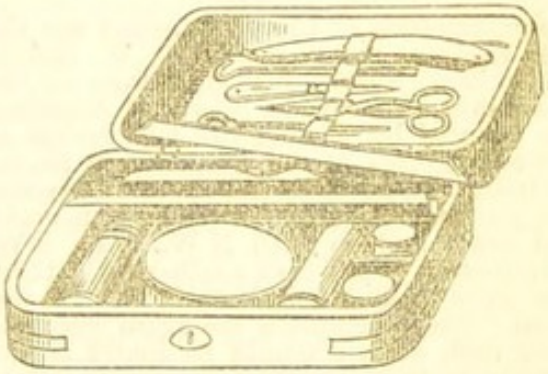
COMBS. — Well-known instruments for disentangling and adjusting the hair; they are made of various forms and materials, according to the particular use to which they are to be put. The combs used for fastening the hair are usually made of tortoiseshell. Those for disentangling the hair are more varied; for this latter purpose combs made of caoutchouc have recently been introduced, which are chiefly to be recommended for their plastic properties. Leaden combs are also used to impart an artificial dark tint to light hair, but the use of these is considered as somewhat injurious to the roots of the hair. Combs may be cleaned by working a piece of cardboard between the teeth, and then rubbing them with a flannel.

COMMA.—In punctuation, that point usually separating those parts of a sentence which, though very closely connected in sense and construction, require a pause between them. *Rule* 1. A short simple sentence generally requires no points till the end. But where the sentence is a long one, and the nominative case is accompanied by inseparable adjuncts, a pause may be admitted immediately before the verb; as, "The good taste of the present age, has not allowed us to neglect the cultivation of the English language." *Rule* 2. When the connection of the different parts of a simple sentence is interrupted by an imperfect phrase, a comma is usually introduced before the beginning and at the end of the phrase; as, "I remember, *with gratitude*, his goodness to me." *Rule* 3. When two or more nouns occur in the same construction, they are parted by a comma; as, "The husband, wife, and children, suffered extremely." There is an exception to this rule when two nouns are closely connected by a conjunction; as "Virtue *and* vice form a strong contrast to each other." *Rule* 4. Two or more adjectives, belonging to the same substantive, are likewise separated by commas; as, "Plain, honest, truth requires not artificial covering." But two adjectives immediately connected by a conjunction are not separated; as, "Truth is fair *and* artless." *Rule* 5. Two or more verbs, having the same nominative case, and immediately following one another, are also separated by commas; as, "In a letter we may advise, exhort, console, and discuss." Two verbs immediately connected by a conjunction, are an exception to the rule; as, "The study of natural history expands *and* elevates the mind." *Rule* 6. Two or more adverbs immediately succeeding each other, must be separated by commas; as, "We are fearfully, wonderfully framed." When two adverbs are formed by a conjunction they are not parted by a comma; as, "Some men sin deliberately and presumptuously." *Rule* 7. Relative pronouns generally admit a comma before them; as, "He preaches sublimely, who lives a virtuous life." But when two members of a sentence are closely connected by a relative restraining the general notion of the antecedent to a particular sense, the comma should be omitted; as "Self-denial is the sacrifice which virtue must make." *Rule* 8. A simple member of a sentence, contained within another or following another, must be distinguished by a comma; as, "To improve time while we are blessed with health, will smooth the bed of sickness." If, however, the members succeeding each other are very closely connected, the comma is unnecessary; as, "Revelation tells us how we may attain happiness." *Rule* 9. The words *however*, *nay*, *so*, *hence*, *again*, *firstly*, *secondly*, *formerly*, *now*, *lastly*, *once more*, *on the contrary*, *in the next place*, and words and phrases of a similar nature, must generally be separated from the context by a comma. *Note.*—In long sentences where two or more commas are employed, the best method of ascertaining if a comma be wrongly placed, is to read the sentence on, omitting that part of it where the commas are placed, and if the sense remains unbroken the points are rightly used, but if the sense is disturbed, the comma is wrongly placed.

COMMISSION.—In commerce, the allowance to a factor, agent, or broker, for transacting the business of others. It is generally charged at so much per cent., the amount being regulated either by stipulation or the usage of trade. A commission *del credere* is a higher rate charged in those cases where the factor, or other agent guarantees his dealings, or in other words, engages to be answerable. The charge for commission is recoverable by law, although no written agreement or instructions may exist to support the claim. Thus, if a person is verbally instructed by another to make a certain sale, upon the completion of such sale, the agent is entitled to claim a reasonable percentage on the amount; because the seller is supposed to have benefited by the transaction, through the medium of the agent's exertions and judgment.

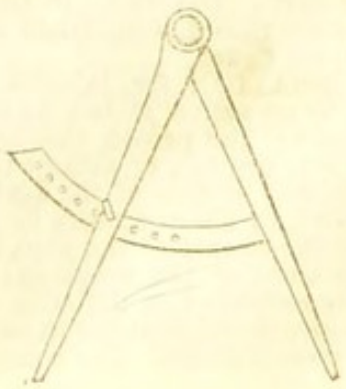
COMMITTEE.—A body of persons voluntarily bound together by certain laws and regulations, for the carrying out of some specific object; the general principles upon which a committee acts, being that they are the guardians of the interests of those on whose behalf they are appointed, and the administrators of affairs for the general good. A committee is usually presided over by a chairman, who is assisted by a secretary and other officers.

COMPANION.—Under this title, various portable cases are made to contain the usual



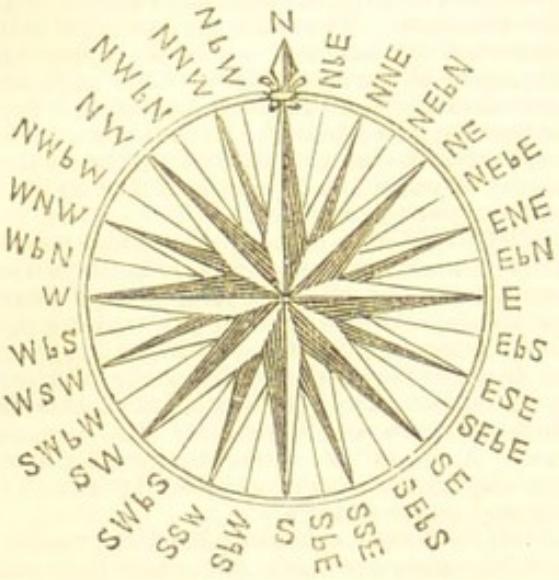
requisites of the toilette, &c.; that shown in the engraving is adapted for a gentleman's use, those for ladies being of somewhat the same construction, but supplied with different articles.

COMPASS, GROUND.—This is an in-



strument used in laying out a garden; for by employing them, the curvilinear parts of parterres can be described with perfect accuracy. The stationary foot is placed on a slip of board a few inches square, with a pin beneath to retain it in its place, and a leaden cap above for the point of the foot.

COMPASS, MARINER'S.—An instrument contrived to indicate the magnetic meridian, or the position of objects with respect to that meridian. The notation of the mariner's compass is as follows:—The circumference being divided into the four quadrants by two diameters at right angles,



the extremities of these diameters are the four cardinal points N., S., E., W. (north, south, east, west). Bisecting each of the quadrants, the several points of bisection are denoted by placing the two letters at the extremities of the quadrant in juxtaposition. Thus, N.E. (north-east) denotes the point which is half-way between north and east; and so with N.W., S.E., S.W. (north-west, south-east, south-west); these are again divided into N.N.E., E.N.E., and so on. These distances are again bisected; then each of the points so found is expressed by that one of the preceding points already named to which it is nearest, followed by the name of the cardinal point towards which its departure from the nearest point leads it, the two being separated by the letter *b* (by). Thus, the point half-way between N. and N.N.E. is N. by E. (north by east). The whole of the thirty-two points are thus distinguished as in the accompanying figure.

COMPENSATION for injuries may be recovered by an action at law by the party injured against the person through whose wrongful act, neglect, or default the injury is suffered, and in case of the death of the party injured, by his executors or administrators for the benefit of the wife, husband, parent, or child of the deceased; and the amount so recovered is divisible amongst the above-mentioned relatives in such shares as the jury shall direct. The compensation is confined to the pecuniary loss, and the mental sufferings of the survivors cannot be taken into consideration. A jury must be satisfied that there has been a loss of a sensible and appreciable pecuniary benefit, which might have been reasonably expected from the continuance of the life. Nothing can be recovered for the funeral or expenses of mourning.

COMPLEXION.—The beauty of the complexion is an interesting matter, especially among females. To ensure this important boon, natural means are far better than any artificial ones that can be conceived. Painting the face is a most injurious habit as well as an unnatural one, for as it chokes up the pores of the skin and drives the humours back into the blood, its ill effects may be readily imagined. It totally changes the texture of the skin, and produces pimples; attacks the teeth, destroys the enamel, and loosens them. It also affects the eyes, and renders them painful and watery. Lastly, it penetrates the pores of the skin, acting by degrees on the spongy substance of the lungs and inducing disease. Violet powder is no further injurious than by stopping the pores of the skin; but this is quite injury enough to preclude its use. The effect of painting and powdering the face is bad morally as well as physically; the former habit especially is always associated with immodesty and lax principles. Again, the object in view is thwarted rather than attained. A female subjects her complexion to artificial tints under the impression that they will be mistaken for the bloom of nature, and that she will be admired accordingly. But, although to her partial view the artifice may be hidden, in the eyes of others it becomes palpable enough; and, instead of evoking admiration, only inspires disgust and contempt. Those who live temperately, keep regular hours, are actively employed, and take a due amount of air and exercise, will, generally speaking, have no cause to be ashamed of their complexions. But, if some insuperable defect does exist in spite of every precaution, all the nostrums that it is capable to conceive will not efface the defect; and it is therefore wiser and better to reconcile one's self to the misfortune, than to struggle fruitlessly against it.

COMPOSITION.—In literature, the act of inventing or combining ideas, furnishing them with words, arranging them in order, and committing them to writing. To express ourselves with perspicuity and propriety, it is necessary that the letters, words, and phrases in every written sentence, should be placed in the order assigned to them by certain definite rules; and a writer, therefore, furnishes evidences of his ignorance or intelligence, according as he obeys or ignores these principles.

Books: *Graham's Art of Composition; Brenan's Composition and Punctuation; Irving's Elements; Johnson's Essays; Parker's Exercises; Banks's Guide; Carey's Introduction; Booth's Principles; Reid's Rudiments; Rippingham's Rules; Rice's Steps; Burnside's Theory; Williams's Treatise.*

COMPOST.—Composts are mixtures of several earths, or earthy substances or dungs, either for the improvement of the general soil under culture or for the culture of particular plants. In respect to *composts for the amendment of the general soil* of the garden, their quality must depend on that of the natural soil; if this be light, loose, or sandy, it may be assisted by the addition of heavy loams, clays, &c., from ponds and ditches, and cleanings of sewers. On the other hand, heavy, clayey, and all stubborn soils, may be assisted by light composts of sandy earth, drift, and sea sand, the shovellings of turnpike roads, the cleansing of streets, all kinds of ashes, rotten tanners' bark, rotten wood, sawdust, and other similar light opening materials that can be the most conveniently procured. *Composts for particular* plants may be reduced to light sandy loam from old pastures; strong loam, approaching nearly to brick earth, from the same source, peat earth from the surface of commons and heaths; bog earth from bogs and morasses; vegetable earth from decayed leaves, stalks, cow-dung, &c.; sand, either sea sand, drift sand, or powdered stone, so as to be as free as possible from iron; lime rubbish; and lastly, common garden earth. There are no known plants that will not grow or thrive in one or other of these earths, alone, or mixed with some other earth, or with rotten dung or leaves. The *preparation* requisite for the heavy and light composts for general enrichment, and of the above different earths, consists in collecting each sort in the compost-ground, in separate ridges of three or four feet broad and as many high, and turning them every six weeks or two months for a year, or a year and a half before they are used. Peat earth or heath earth, being generally procured in the state of turfs full of the roots and tops of heath, requires two or three years to rot; but, after it has lain one year it may be sifted, and what passes through a small sieve will be found fit for use. The *compost-ground* may be placed in any situation concealed from the general view, but at the same time exposed to the free action of the sun, air, and rain. Its size will depend on that of the garden, and on the sorts of culture for which the moulds are adapted. It should generally form part of the enclosure used as hot-bed ground; and, where there are hot-houses, both the hot-bed and compost-ground should be situated as near them as possible.

COMPOTE.—A preparation in confectionery applicable to various fruits.—See APPLE, APRICOT, CURRANT, GOOSEBERRY, PLUM, RHUBARB, &c.

CONCUSSION OF THE BRAIN.—This is an accident that may arise from falls, blows, collisions in carriages, or from any cause that jerking the body may produce a concussion or shaking of the brain. Concussion may occur with or without injury to the head, or it may exist with fracture, ulceration, or compression, with which latter it bears a very remarkable resemblance, being only distinguished from it by the undilated pupil, and the absence of the stertorous breathing. Concussion is divided into three stages: total insensibility, marked by difficult breathing, intermittent pulse, and cold extremities; this is succeeded by partial sensibility, when the patient is for a moment or two, at a time, capable of answering questions put to him; but immediately relapsing into forgetfulness, in this stage the breathing becomes easier, and the pulse more natural, while a gentle warmth diffuses itself over the body. As the stupor and insensibility abate, the third stage of inflammation sets in, which is the most formidable condition of all.

Treatment.—In the first stage few or no active measures can be adopted; as bleeding, so necessary in the second and third stage, if practised in this would destroy life. As reaction sets in, bleeding must be resorted to, strong purgatives given, heat applied to the feet, and a blister to the nape of the neck; perfect silence, a dark room, and cold lotions or ice constantly retained on the head, and the usual means of an antiphlogistic system unremittingly adopted.

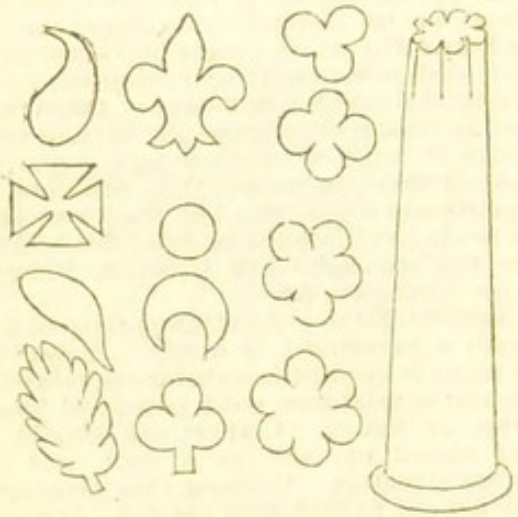
CONDIMENTS.—Substances taken with food, to season or improve its flavour, or to render it more wholesome and digestible. Most of them, in moderation, promote the appetite and digestion; but their excessive use tends to vitiate the gastric juice, and injure the stomach.—See GINGER, PEPPER, SALT, VINEGAR, &c.

CONFECTION.—Anything prepared with sugar; a sweetmeat, or candy. In *medicine*, the name is applied to substances, mixed up to a soft consistence, with powdered sugar, syrup, or honey. Confections should be kept closed up, and in a cool, but not too dry situation. Without this precaution they are apt to mould on the top. If at any time the mass ferments and swells up, the fermentative process may be arrested, by placing the jar in a bath of boiling water, for an hour or two, or until the whole becomes pretty hot; when it should be removed from the heat, and stirred occasionally until cold. Should the sugar crystallize out of the confection, or "candy," as it is called, the same method may be followed. As *remedial agents*, confections possess little value, and are chiefly useful as vehicles for the administration of more active medicines.—See AROMATIC, ORANGE FLOWER, ROSES, &c.

CONFECTIONERY, DIETETIC PROPERTIES OF.—Articles of confectionery are regarded generally as unwholesome, especially when mixed with much butter, made of bad materials, or mingled with deleterious ingredients. Baked confectionery, in which the butter and grease are of an acrid quality, by the heat employed in its preparation, is always liable to disagree, especially with weak stomachs. The introduction into confectionery of ingredients that are always hurtful, and sometimes positively poisonous, render an indulgence in such articles doubly hazardous. Several of the flavouring ingredients are actual poisons, such as the oil of bitter almond, peach kernel, and laurel flavouring. Other agents, as the "jargonelle pear" recently introduced, have been

known to produce the most serious consequences in children who have partaken of them. The colouring matter used is, in nearly every case, derived from deleterious substances; and even where no colouring is used, the sugar is somewhat freely mixed with plaster of Paris. The greatest caution, therefore, is necessary in partaking of confectionery, and especially in giving it to children.

CONFECTIONERY, PREPARATION OF. — The great difficulty, in general, in the art of confectionery, arises from the want of knowledge in preparing and boiling sugar and syrups. The various processes will be found under their several heads. The directions given ought to be most scrupulously attended to, much depending on the execution of them with exactness, as frequently the article is spoiled and irrevocably lost by inattention. The accom-



panying engraving illustrates a variety of *confectionery cutters*, suggestive as figures best calculated to please the eye.—See CANDIED FRUIT, CARAMEL, CLARIFICATION, NOUGAT, &c.

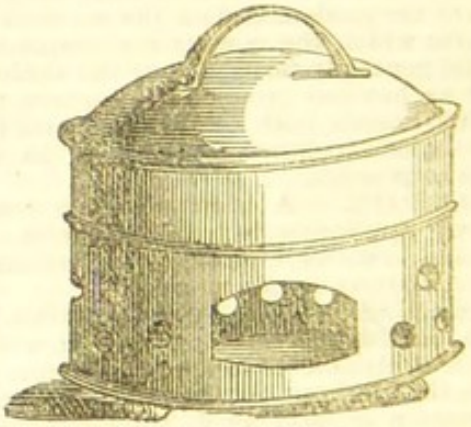
CONFIRMATION. — A religious observance in connection with the Established Church, by which persons who have arrived at years of discretion are received into the bosom of the church, and are thereby qualified to receive the sacrament, and to become partakers in other ordinances which their previous tender age debarred them from. Confirmations are held periodically by the bishop of the diocese; and consist chiefly of his placing his hand on the heads of the young persons who are brought before him: and who are thus *confirmed* as members of the church of Christ. Preparatory to this ceremony it is usual to undergo a religious examination from the clergyman of the parish, who thus ascertains and establishes the fitness of the candidates for confirmation. Although no precise costume is ordered to be worn on the occasion of confirmation, it is usual for females to be dressed in plain white materials, with neat caps, and for males to be attired as modestly and plainly as possible.

CONGESTION.—Any organ is said to be congested when it contains a larger quantity of blood than is necessary for its healthy function. The term defines no actual amount, but implies either a moderate excess, or a complete engorgement. The organs most frequently subject to congestion are the lungs, brain, and liver, resulting either in apoplexy, pneumonia, or inflammation. Partial congestion often takes place during or after disease; in any case it is a very formidable symptom, and requires to be energetically treated. When occurring in the head, it is indicated by flushed face, red eyes, ringing in the ears, sparks of fire flashing before the vision, headache, insensibility, coma, and stertorous breathing: in the lungs, by pain in the chest, great anxiety, and oppression of breathing, cold skin, a slow jerking pulse, and cold extremities: in the liver, by acute pain through the abdomen, a quick full pulse, and the usual characteristics of inflammation.

The *treatment* of congestion is by bleeding, blisters, purgatives, the hot bath, and what is called the depleting system; but though this is, as a general rule, the practice, cases of partial congestion sometimes occur, in which it is necessary to greatly modify this mode of treatment, as in the congestion of old age, when a stimulating system must be adopted.

CONJUNCTION.—In grammar, a part of speech, used to join words and propositions together. Conjunctions are of two sorts, *copulative* and *disjunctive*. The copulative not only joins words, but indicates that the objects are to be united; while it is the office of the disjunctive to unite the words, but to keep separate the objects. The difference between the two kinds of conjunction is illustrated in the following:—"Will you have an apple *and* an orange?" "Will you have an apple *or* an orange?" In the first case it is asked if you will have both these things—we therefore use a copulative conjunction; in the second, one of the two objects is offered only—we therefore use a disjunctive conjunction.

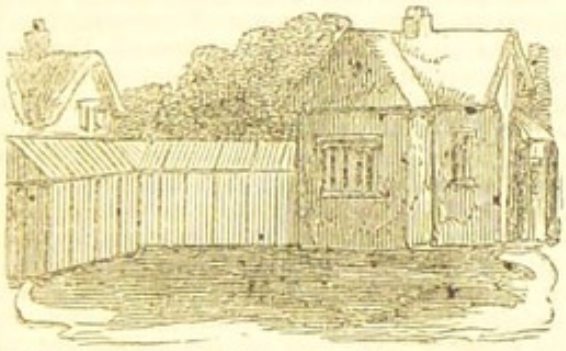
CONJUROR.—A culinary utensil which being compact and portable, becomes an excellent contrivance, for persons who



make long voyages or journeys. By this apparatus steaks or cutlets may be quickly cooked with a small quantity of lighted paper only. Lift off the cover and lay in the meat properly seasoned, with a small piece of butter under it, and insert the

lighted paper in the aperture shown in the engraving; in from eight to ten minutes the meat will be done, and found to be remarkably tender and very palatable; it must be turned and moved occasionally during the process. From the close fitting of the cover and the broad make, water is quickly boiled; a thing greatly to be desired on emergencies. The conjuror may be used in a carriage, and is excellent for a sick room or nursery, where ordinary cooks are not to be depended upon for the diet of invalids or children. It will also be found of the greatest service where the meals of any member of the family are irregular or interrupted.

CONSERVATORY.—Among the various appendages which it is desirable that a house should possess, few are more important than the conservatory, which, when appropriately placed, may be regarded as an extension of the drawing-room; or at least, if it is in the vicinity of the house, and properly connected with it, it is admirably adapted as a place for walking and recreation in all kinds of weather. If possible, it should be made contiguous to some one of the public rooms or the corridor, and should be easily accessible by the family without their leaving the house, or at most, passing along a glazed passage or veranda. When the conservatory enters into the original arrangements, one or the other of these expedients may generally be practicable; but if it is entirely an after-thought, it sometimes happens that a suitable site cannot be obtained. It has wants of its own. It requires free air and open sunshine, and cannot stand on the northern side of the house. There is nothing, however, in itself to prevent it occupying such a site, or any of the remaining three sides that will harmonize with the other buildings of the house, or will suit the internal arrangements and communications. In comparatively humble and economical residences, the conservatory may consist of a number of rectangular sashes, connected and supported by means of light iron rafters, as seen in the engraving.



In the beginning of summer the sashes may be removed and applied to other purposes in horticulture. The light iron framework may either be removed, or can remain and be disguised by annual creepers, or by vines of the narrow-leaved sorts. The internal arrangements of a conservatory should be simple, its passages of ample width, and its whole appliances such as to permit a free exhibition of the plants without the chance of their being crushed. The shelving and stages, when introduced, should be kept low, so that the plants may be conveniently situated for the view. Elaborate decoration in this department has a tendency to detract from the effect of the plants. Fine mouldings and carvings harbour insects, collect dust, and being difficult to clean, contract an untidy appearance in a very short time. The heating process is generally best accomplished by hot water pipes, and the boiler may be placed at a distance of more than a hundred feet, without any material disadvantage, provided the pipes are laid underground in a dry and double-cased drain, to prevent the escape of heat from the water in its passage to the conservatory. Wood and iron are generally employed for the framework of conservatories. Stone pilasters of slender proportions may be introduced, to give a somewhat architectural air to the structure. The glass used for the sashes should be good, and free from impurities and irregularities; it should also take the form of large squares, or in panes, long at least, if not broad, contracted squares of glass, with a multitude of overlaps, imparting a mean and contemptible appearance to the whole structure.

CONSERVES.—Literally, recent vegetable matter, as flowers, herbs, roots, fruit, and seed, beaten with powdered sugar to the consistence of a stiff paste, so as to preserve them, as nearly as possible, in their natural freshness. Conserves are chiefly used as a vehicle in medicine.

CONSIGNMENT.—An expression employed to designate any transaction by which an individual in one place transacts or consigns goods to an individual in another place, to be at his disposal under conditions expressed or implied. The person who sends the goods is called the consignor, he who receives them the consignee. The most ordinary description of consignment is that to a factor, who has to traffic with the goods for the use of his principal, and who may deal with third parties not warned of limitations to his power, as if he were the principal. Cargoes are sometimes consigned from debtors to creditors in satisfaction of debt, and sometimes as a fund of credit for advances, the consignor being entitled to draw on the consignee to a certain amount, or the latter advancing cash to the former. On failure of the consignor, the consignee has a lien on the goods in his hand for the advances made.

CONSOLS.—A term familiarly used to denote a considerable portion of the public debt of this kingdom, more correctly known as the Three per Cent. *Consolidated* Annuities. This portion of the debt originated under an Act 25 Geo. 2, whereby various perpetual and lottery annuities then outstanding, and which, from the time of their creation, had respectively borne an interest of three per cent., were brought under one head in the public accounts.—See FUNDS, PUBLIC.

CONSOMME.—A kind of *stock* used in cookery, made as follows:—Take a proper tinned pot, heat slightly, and wipe it well; put in it a piece of buttock or shin of beef, a

neck of veal, a fowl, an old rabbit, hare, or partridge; add a little stock, and reduce it to a glaze, or till the meat coagulates; then fill it up with stock or water; boil quickly, and skim it; add to it three carrots, three turnips, three large onions, each stuck with a clove, and two or three heads of celery; set it by the side of the fire to simmer, having taken care to put in the meats in such a manner, that what takes the shortest time to cook may be taken out first, and so on, as all those meats are to be dressed for the table; strain the stock through a damp napkin. The napkin is wetted, to avoid waste and to prevent the escape of fat.—See GLAZE, STOCK, &c.

CONSTANTIA JELLY.—Infuse in a pint of water, for five minutes, the rind of half a Seville orange, pared extremely thin; add an ounce of isinglass; and when this is dissolved throw in four ounces of lump sugar; stir well, and simmer the whole for a few minutes, then mix with it four wineglassfuls of Constantia wine, and strain the jelly through a fine cloth; let it settle and cool, then pour it gently from any sediment there may be into a mould which has been laid for an hour or two in water.

☞ Water, 1 pint; orange-peel, ½ of 1; isinglass, 1oz.; sugar, 4ozs.; Constantia wine, 4 wineglassfuls.

CONSTIPATION is that condition of the body, when, either from a natural sluggish state of the system, or from the previous relaxing influence of powerful medicines, the action of the bowels is unhealthily confined. This condition of the body is usually accompanied by a furred tongue, cracked lips, hot or fœtid breath, headache, and a dry rough skin.

Constipation is often hereditary in many constitutions, and very frequently an attendant of old age, becoming more obstinate with the increase of years. To the individual of a naturally costive habit, nothing is more injurious than the custom of resorting to the aid of medicine on every occasion, as active purgatives invariably produce an opposite effect, when the first influence has passed away. Persons so situated should endeavour to acquire a regular habit of body, by taking quick walking exercise, eating coarse bread, or bread made of flour in which a large proportion of the chaff or husk of the wheat is retained, by a more perfect mastication, or by taking a glass of cold water upon going to bed. For the constipation of old age one of either of the following forms of aperient may be taken early in the morning, twice or three times a week.

Aperient Pills, No. 1.—Take of

Compound colocynth pill, }
Ditto assafœtida pill, } of each
Extract of hyoscyamus, } 1 scruple.

Mix, and divide into twelve pills.

Aperient Pills, No. 2.—Take of

Compound rhubarb pill, }
Ditto colocynth pill, } of each ½ drachm.

Mix, and divide into twelve pills.

To females and persons of delicate habit the No. 1 pill will be found highly beneficial; or where there is an antipathy to pills, stewed prunes eaten warm will be found to possess gentle aperient properties; while a more powerful, but still mild, laxative will be obtained by taking a dessertspoonful of the confection of senna or lenitive electuary.

CONSUMPTION. — The persons most prone to consumption, are those of a sanguine or phlegmatic temperament, with long neck, sharp shoulders, narrow chest, slender fingers, clear skin, fair hair, and rosy complexion. The disease usually begins with a short dry cough, followed, after a certain length of time, by a gradual loss of strength, lassitude, and great fatigue upon small exertions; the pulse is quick and small, while the cough, at first confined to the day, begins to extend into and through the night; the breathing is hurried, with a sense of tightness at the chest, accompanied with shooting pains; the expectoration, at first frothy, becomes viscid, opaque, often tinged with blood; and very copious in the morning. As the disease advances, emaciation takes place, the cough, pain, and difficulty of breathing increase, the face is flushed, the soles of the feet and palms of the hands are affected with a dry burning heat, the tongue, formerly white, now becomes clean and red, the pulse is smaller and quicker, and hectic fever sets in, attended with profuse perspiration; generally occurring twice a day, and, as the symptoms grow more formidable, the appetite usually increases, filling the patient with delusive hopes of recovery. The final symptoms and those that indicate approaching dissolution, are the setting in of diarrhœa, night sweats, prominent cheek bones, hollow and cadaverous countenance, swollen legs, great emaciation, and curved fingernails. The expectoration has at the same time altered its character with each stage of the disease; at first scanty and frothy, it becomes opaque and presents a mixture of mucus and pus, occasionally streaked with blood, and finally becomes all purulent, sinking in water, and often combined with irregular pieces of green or yellow substances.

Treatment.—There are three objects to be aimed at, in the treatment of consumption; first, to promote the absorption of the diseased matter; second, to subdue inflammation; and, third to improve the general health. For the first effect, it is the general practice to slightly salivate the system by small doses of calomel and kino, followed by a course of iodine, either in the form of burnt sponge, hydriodate of potass, or tincture of iodine. Inflammation is subdued by small bleedings, two or three times repeated, leeches on the chest, blisters, or the counter irritation of the tartar emetic ointment. The general health is to be improved by exercise, cold ablutions, and friction every morning, by a light and generous diet, and tonics with the mineral acids. In confirmed consumption and where all the worst symptoms are in operation, the treatment must depend greatly on the actual state of the patient, though the most ordinary course is comprised in the following means and remedies: counter irritation over the chest, by the tartar emetic ointment;

an opiate at bed-time; and two tablespoonfuls of such a mixture as the following, every four or six hours. Take of

Tartar emetic . .	20 grains.
Infusion of gentian .	6 ounces.
Powdered nitre . .	½ drachm.

Mix.—Where the sweatings are excessive, or there is spitting of blood with the cough, from fifteen to thirty drops of the elixir of vitriol in a wineglass of water, is to be sucked through a quill every three or four hours. No practice is so fatal as the mistake of sending a consumptive patient to a warm climate, or even to remove him to a warmer residence in his own country, as the increased temperature only developes the worst symptoms more rapidly. To a patient only *predisposed* to consumption, change of scene and climate is highly beneficial, but with the disease on him, it is suicidal. The modern practice of deluging the stomach with rancid fish oil, is a very questionable procedure, as any good that can result from its use must depend upon the amount of iodine or nitrogen, the cod liver oil may possess; remedies that can be given in greater quantities, in a much less objectionable way. In every stage of consumption, but especially in the early part of the disease, the patient should exercise the lungs as much as possible, by drawing deep inspirations of air, and inflating the organ to its fullest extent, and then slowly expiring what he has imbibed, repeating the process for ten minutes at a time; and resuming it four or five times a day. For this purpose he can either stand at a window, on a hill, or wherever the air is pure: when the atmosphere is damp, the air must be drawn through a veil, folded three or four times. This makes an infinitely better respirator than the metallic one sold in the shops. As the natural stimulant of the lungs is air, no means are so likely to excite absorption of the tuberculous matter, as that which expands every air cell of its structure, and while healthily exercising the organ, stimulates it to increased action. That consumption is curable, is a theory now rapidly gaining ground; but this can only be effected by converting the acute into a chronic disease, and in that form following the admonitions of nature as a guide to the practice; and the most important of these is exercising the lungs themselves.

CONTAGION.—Contagious diseases may be communicated by actual contact of the body, by articles of clothing or furniture, and by the atmosphere. Peculiar atmospheric conditions favour the propagation of disease by contagion, and this especially applies to dirty and crowded places, whence noxious exhalations arise. Old and soiled furniture and clothing are also much more favourable to the reception of the disease than when new and clean. Wool, cotton, and other loose textures seem particularly apt to attract and retain contagious emanations; whilst, on the other hand, polished surfaces and hard substances are with difficulty impregnated. Chambers in which persons afflicted with contagious maladies are, should be kept scrupulously clean, regularly ventilated, and fumigated two or three times a day. Attendants on the patient should be dressed in silk or other material having a glazed surface; and it will be found an excellent plan to put on a large apron made of oiled silk. The furniture should consist as much as possible of articles having hard and polished surfaces, and instead of being crowded with furniture, the room should contain only such articles as are indispensably necessary. When the patient quits the chamber in which he has lain, every article that has come in contact with his person, should be first fumigated with chlorine in a close apartment, then exposed to the air, and finally washed; the furniture and clothing should undergo an appropriate and thorough cleansing. The bed requires the greatest amount of care; if of wool, it is better destroyed altogether; if of hair or feathers, these should be exposed to a heat of at least 210 degrees by re-baking. With regard to the chamber itself, it should be thoroughly fumigated with the doors and windows shut, and then left open to the influence of the air for several days. And, as a last precaution, the walls, ceiling, wainscot, &c., should be re-washed, papered, and painted. Until all these precautions have been taken the furniture and clothes should not again be brought into use, and the apartment should remain unoccupied. — See CHLORIDE OF LIME.

CONTRACT.—An agreement or mutual bargain between two contracting parties entered into, either verbally or by writing. When reduced into writing, it is either subscribed with the hands and seals of both the contracting parties, or merely with one or both their signatures. Such contracts as are reduced to writing under hand and seal, are technically called *deeds* or *specialties*; and those which are simply by parol, or in writing not under seal, are denominated simple contracts. Contracts to a certain amount and under certain circumstances, in order to be valid, must be in *writing*; but, though written, they still continue, like all other contracts not under seal, to be considered simple contracts. In support of an action on simple contract, the creditor must prove that it was founded on a sufficient consideration; but in proceeding on a contract by deed, the want of consideration forms no defence to the action. The obligation of a deed can only be avoided by a release *under seal*, and not by parol. And, lastly, as a special contract is considered a more deliberate and solemn engagement than by parol, the party bound thereby is not allowed to plead against any stipulation it contains, that it was executed with a different *intent* to what the terms of the deed itself import.

CONTUSIONS are such injuries as are inflicted by blunt instruments, severe falls or blows, and are divided into those which merely produce discoloration and swelling of the soft parts, and those injuries where, in addition, the cuticle has been cut, and the adjacent muscles and integuments, by the force of the accident, been disorganized, and their structure rendered soft and pulpy,

Such compound injuries are often attended with serious consequences, such as gangrene and sloughing; and, from the danger of erysipelas supervening, require considerable care in their treatment. Contusions are more serious when occurring over bones but slightly covered with muscle, such as the shin, head, and fore-arm; and of less importance when happening on well-defended parts. Contusions are generally characterized by discoloration, pain, and more or less of swelling, caused by the rupture of some vessels below the cuticle, and the effusion of blood into the cellular tissue; and when the force of the accident has been severe, by the partial or entire death of the parts injured.

Treatment.—In both conditions of contusion, the practice is precisely the same. If the cuticle is torn or drawn from its position, the parts are to be placed as smoothly as possible, and, if from a fall, any gravel or foreign substance removed. The part injured is then to be covered with a folded pledget of lint well wetted with the extract of lead, a warm bran poultice placed over the lint, and the whole secured with a bandage. This dressing is to be repeated every four hours during the first day, if the accident has been severe, but only occasionally for more trivial injuries. For contusions on the head, it may be necessary, in addition to the dressing, to extract blood from the arm, apply leeches, or give opium, where the symptoms demand a narcotic treatment.—See HEAD, INJURIES OF.

CONVERSATION.—The art of conversation is deserving of cultivation, as it forms one of the greatest charms of society. The following rules ought to be observed by those who wish to acquit themselves creditably in this department of etiquette:—Speak distinctly, neither too rapidly nor too slowly. Accommodate the pitch of your voice to the hearing of the person with whom you are conversing. Never speak with your mouth full. Do not whisper or talk in an under tone to any one person when others are present, it is extremely disrespectful to the company generally, and compromises the person whom you address as well as yourself. Dispense with superfluous phrases and vulgar ejaculations, such as "Well, I should think," "Don't you see," "I say," "You know," &c. Adapt the topics of your discourse to what you conceive to be the taste and capacities of those present. Avoid politics, theology, and all other matters involving strong differences of opinion, especially in the presence of ladies. Never interrupt any one while speaking, and if when about to make a remark, another person essays to speak, suffer him to proceed. A *gentleman* should render his conversation interesting and agreeable, by an even flow of language, and by occasional recitals and anecdotes, calculated to affect and impress the hearer. He should avoid long and tedious narratives, eschew quotations from foreign languages, and avoid pedantry generally. Punning is a low and offensive habit; and when jokes are made, others should be left to laugh at them. A gentleman should never assume an intellectual superiority over another, and should not betray impatience at, or signify dissent to the arguments of others, if not precisely in accordance with his own. The *lady* who wishes her conversation to be agreeable, will avoid conceit or affectation, and laughter which is not natural and spontaneous. Her language will be easy and unstudied, marked by a graceful carelessness, which, at the same time, never oversteps the limits of propriety. Her lips will readily yield to a pleasant smile; she will not love to hear herself talk, and her tones will bear the impress of sincerity. If these rules are borne in mind and acted upon, the members of both sexes cannot fail to render their conversation invariably agreeable, and their society consequently always welcome.

CONVOLVULUS. — Ornamental plants with trumpet-shaped flowers, which are great favourites in gardens. The best known are the convolvulus major, and the convolvulus minor. The colours of the convolvulus major are varied: deep purple, violet, light blue, white, pale rose, deep rose-

crimson, and blue and white striped. This convolvulus should be sown in April, in patches, around a post or pillar, at the foot of a tree, or in any situation where it can be accommodated with tall branchy stakes on which to twine. The plant will grow ten feet in height, and in season be covered with bloom. A characteristic of this plant is to close its flowers during rains, or in very cloudy weather, and at the approach of night. The varieties seed freely; but as the seeds soon shed after ripening, the pods must be watched narrowly. It may also be sown in pots in March, and kept in frames till May, thence to be planted out. The convolvulus minor is a suitable border-plant, and, where the beds are large, it is a good flower for masses. All of the varieties should be planted in a dry, well-drained situation, in good light garden soil. The half-hardy kinds chiefly need protection at the root against wet and cold.

CONVULSIONS are irregular muscular contractions, depending upon some cause of irritation affecting directly or indirectly the nervous system.

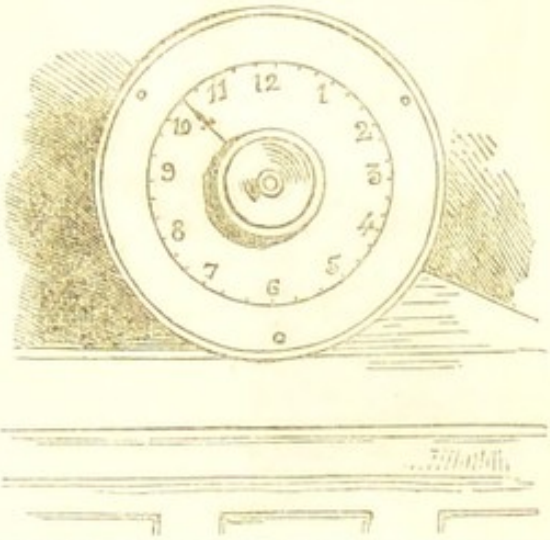
Treatment.—Convulsions must be treated according to the requirements of the disease that calls them into existence. For the convulsions of infancy, the warm bath and friction along the spine is the best and most certain remedy; and when teething is the cause, in addition, the gums should be lanced. When they proceed from worms, a strong aperient powder of jalap, scammony, and calomel must be given. When caused by indigestible fruit or other sources of gastric irritation, an emetic of sulphate of zinc and ipecacuanha; and from protracted labours, instrumental delivery; but in all cases, where it can be obtained, the hot bath and spinal friction forms the best and most certain means of benefit and cure.

COOK, DUTIES OF. — A cook who performs her duty well is sure to become a favourite domestic in the household. She should be scrupulously neat and clean, orderly in her habits, good tempered, obliging, and respectful. The kitchen should be kept tidy, and everything connected always assigned to its appointed place. Before proceeding to her various operations, every duty should be pre-arranged, and a certain portion of time allotted to each, so that there can be no confusion or needless hurry. Never undertake more work than you feel quite certain you can do well; if you are ordered to prepare a larger dinner than you think you can send up with ease, or to dress any dish that you are not acquainted with, requesting your employers to let you have some help rather than risk the spoiling of a dinner, from a fear of confirming inability. If your mistress professes to understand cookery, follow her directions; and allow her to have all the praise. Do not intrust any part of your work to others without overlooking them, to ensure its proper performance. Never forget, while preparing a dish, that your produce has presently to be eaten, relished, or condemned, to your honour or to your discredit. Whatever can be tasted during the process of preparation, must be flavoured by the judgment of the palate. Whatever may not be tasted before serving must be done strictly and invariably by rule. Though certain methods of doing things may claim the merit of being long-established, there is no reason why improvement or advantageous changes should not be made. The combinations and changes in cookery by means of the same materials are endless, therefore *always think*. Cooks must not only please the palate, but likewise the stomach. The cook who attends to the niceties of the art is a superior servant; but if ignorant or neglectful, is worthless.

COOKERY, VARIOUS PROCESSES IN.—See BAKING, BOILING, BROILING, FRYING, GRILLING, ROASTING, STEWING, &c.

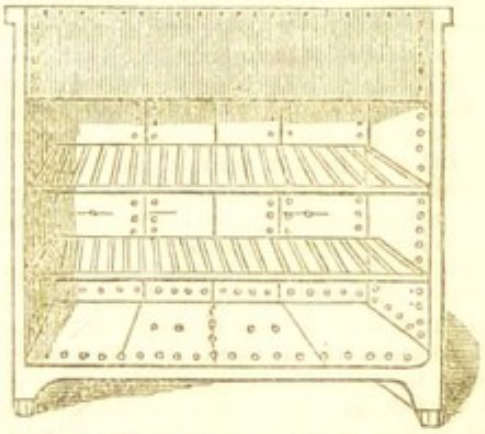
COOKERY BOOKS: — *Acton's Modern Cookery; Meg Dod's Cook and Housewife's Manual; Dolby's Cooks' Dictionary; Merle's Domestic Dictionary; Wife's Own Book of Cookery; Soyer's Modern Housewife; Dalgairn's Practice of Cookery; Cobbett's English Housekeeper; Eaton's Cook and Housewife's Dictionary; Hale's New Cookery Book; Modern Domestic Cookery by a Lady; French Cookery for the Unlearned; Kitchener's Cooks' Oracle; Hammon's Domestic Economy; Jenning's Recipes in Cookery; Bliss's Practical Cookery Book; Enquire Within; Corner Cupboard.*

COOKING CLOCK.—This is a simple contrivance on somewhat the same principle as the alarum; the progress of the cooking



is notified on the face of the clock, and when it is completed, the alarum strikes, and apprises the cook of the fact.

COOKING SCREEN.—This acts an important part in the roasting of meat, for being lined with polished tin, it concentrates and throws back the heat; its back and sides are also turned so as to keep out the draught from the door, &c. It is usually

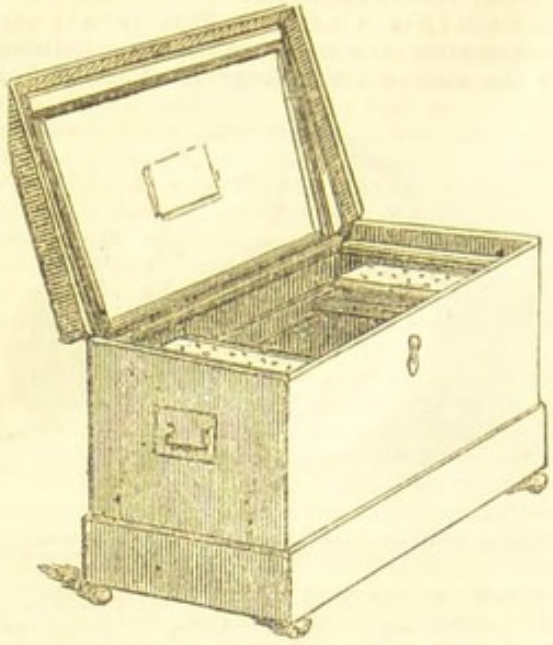


fitted up with shelves and sliding doors at the back, so that dishes and plates may be heated at the same time that the meat is being cooked.

COOKING UTENSILS. — See BAIN MARIE, CONJURER, CRADLE SPIT, CUTLET PAN, DIGESTER, GRIDIRON, POTATO STEAMER, STOCKPOT, &c.

COOLER.—In the summer months, especially when the heat is unusually intense, a receptacle for keeping wine, butter, and other articles, at a proper temperature, becomes a necessary adjunct to the household. They are best situated in some shady place, adjoining the wine cellar or ice cellar, and a quantity of ice should be put in for daily use. Coolers are made in every variety of form, and may be lined either with wood or

lead. Another kind of cooler made of earthenware, has recently been introduced, and is easily obtainable. Half an hour before



they are to be used, they are put to soak in cold water, of which they will imbibe a considerable quantity. When wanted for use, they are taken out of the water and the decanter of wine placed in them. The evaporation from the surface of the cooler, of the water which has been imbibed, abstracts the heat from the air of the interior, and consequently from the wine. Some have a duplicate form, with a space between for ice or ice water. When these coolers require cleaning, a hard brush and a coarse cloth, with *sand only*, should be used.

COPAL.—A resinous substance employed for making varnishes, and when applied in that form to pasteboard, wood, metals, &c., will take a better polish than any other varnish. It may be used on paintings with great advantage, and be found to considerably heighten their beauty.

COPPER ARTICLES, TO CLEAN.—Powder rottenstone very finely and sift it, then mix with soft soap and oil of turpentine, until it is brought to the consistency of stiff putty. First wash the articles with hot water, in order to remove all grease; then rub a little of the paste, mixed with water, over the metal; remove it briskly with a dry clean rag or leather, and a beautiful polish will be obtained.

COPPER PLATES, TO REMOVE GREASE FROM.—When the plates are designed for etching, being first finished with the burnisher, they should be well washed with clean water and then dried by the fire; after which they should be wiped dry with a linen cloth, and to ensure their freedom from grease, they should be rubbed over with the crumb of stale bread. Scraping very soft chalk over a plate, and rubbing the plate well, are also very sure means of preventing either any grease, bread, or other foulness remaining.

COPPER UTENSILS, CAUTION RESPECTING.—Many serious accidents have occurred through the injudicious use of copper cooking utensils. Fruit prepared in copper stewpans, coffee-grounds left in a copper coffee-pot and afterwards mixed with fresh coffee, and other similar processes, are highly injurious. The best antidote in such accidents, is to take immediately a large teaspoonful of powdered charcoal, mixed with honey, butter, or treacle; and within two hours afterwards, an emetic or a cathartic to expel the poison. It should be known that fat and oily substances, and vegetable acids, do not attack copper while hot, and therefore if no liquor were suffered to remain and grow cold in copper vessels, they might be used with safety. It is important, therefore, to clean and dry copper vessels before they become cold.

COPYING LETTERS.—Dissolve lump sugar in the ink ordinarily used, in the proportion of one drachm to one ounce of ink. Moisten a piece of unsized paper lightly with a wet sponge, and then lay it in soft paper to absorb the superfluous moisture. Put the moistened paper on the writing, place both between some soft paper, and pass an iron or other weight over it three or four times, when the copy will be immediately produced.

COPYING PRINTS.—Moisten a piece of paper with a solution of soap and alum, lay it on the print, and pass it under a rolling press. Impressions may also be transferred by mixing a little vermillion with linseed oil, dipping a pen in it, and tracing every line of the print accurately. The print should then be turned with its face downwards on a sheet of white paper, the back of the print wetted, another sheet laid on it, and both submitted to pressure, till the red lines are completely transferred.

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CORAL, ARTIFICIAL.—This may be employed for forming grottos, and for similar ornamentation. To two drachms of vermilion add one ounce of resin, and melt them together. Have ready the branches or twigs peeled and dried, and paint them over with this mixture while hot. The twigs being covered, hold them over a gentle fire, turning them round till they are perfectly covered and smooth. White coral may also be made with white lead, and black, with lampblack mixed with resin. When irregular branches are required, the sprays of an old blackthorn are best adapted for the purpose; and for regular branches the young shoots of the elm tree are most suitable. Cinders, stones, or any other materials may be dipped into the mixture, and made to assume the appearance of coral.

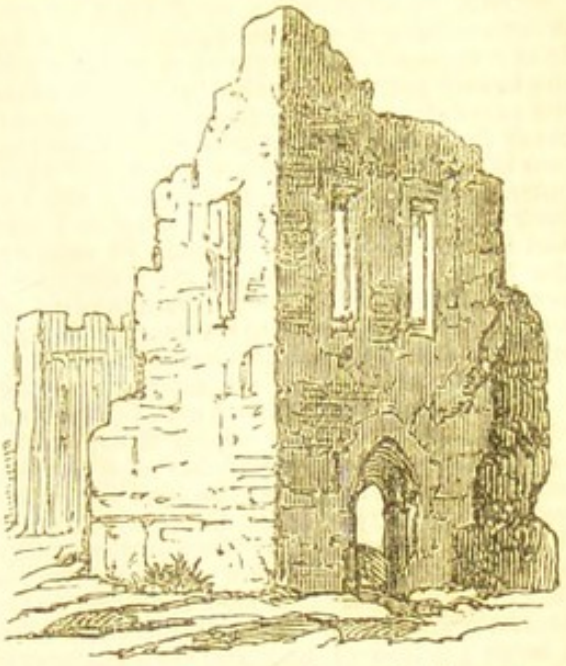
CORDIALS.—See ANISEED, CARAWAY, CORIANDER, CURACOA, CLOVE, LOVAGE, NOYAU, PEPPERMINT, RASPBERRY, RATAFIA, &c.

CORIANDER.—An aromatic plant, the seeds of which are much used in medicine, on account of the agreeable warmth they impart to the stomach. They are also employed in a variety of culinary operations.

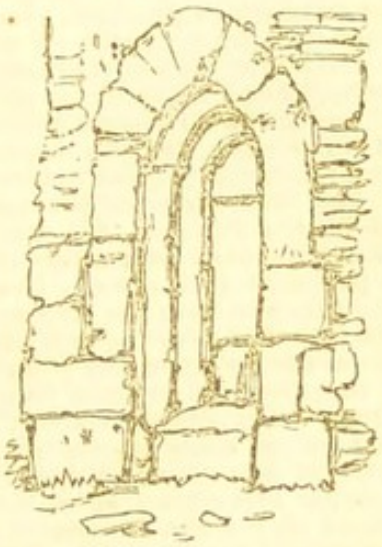
CORIANDER CORDIAL.—To half a gallon of spirits put half a pound of coriander seeds, quarter of a pound of caraway seeds, half a pound of sugar, and one drop of oil of orange. Make it up to three quarts with water. The coriander seed must be bruised and steeped in the spirit for ten or twelve days, and well stirred two or three times a day.

CORKING LIQUORS.—When bottles containing liquors are corked, they should be laid on their sides, so that the liquid by swelling the corks may render them quite tight. The corks should be driven by easy stages, and not at one blow. If the cork is forced down even with the neck of the bottle, it is too small, and a larger one should be substituted. When a bottle of ketchup, anchovy, or other sauce is opened, the original cork should be thrown away, and the bottle supplied with a new one.

CORK MODELS.—These, when fashioned with care and taste, form very interesting and elegant ornaments for the household. The cork used should be of particularly fine texture, and free from knots, holes, and other flaws. The cork may be cut with a penknife having a keen edge, which edge must always be maintained, otherwise the parts cut will present a rough and unsightly appearance. The corks should be cut into long narrow slips, and then subdivided into little oblong cubes, care being taken that their sides are perfectly parallel to each other. The intended size of the model will, as a matter of course, regulate the dimensions of the cubes with which the model is formed. The mouldings round doors, windows, &c., may be made of thin strips of cork, glued upon each other, to imitate the different rows of moulding; and these should not be glued to the model until it approaches its completion. The same precaution is to be observed with all ornaments employed. The glue must be applied neatly and with care, so that no daub or smear may



appear on the surface. Ivy and other creeping plants, may be represented by moss. To attain to skill in making cork models, it



would be as well to make in the first instance copies of old ruins, in preference to attempting to glue pieces of cork together with an indefinite purpose.

CORKS.—It is of the highest importance in domestic economy that the corks which are used should be of the best quality. Buying low-priced corks for the sake of saving a few shillings is short-sighted economy, inasmuch as it endangers the loss of some valuable article intended to be preserved. The best kind are those called "velvet corks," and are imported from France. None but these should be used for liquors destined to be kept any length of time. Corks may be rendered impervious to air, and other external influences, by the following method. Melt together two parts of white wax and one part of beef suet; dip the corks in this mixture, and imme-

diately dry them in a stove upon an iron plate; repeat this operation twice, and the corks will then be fit for use.

CORK WAISTCOAT.—A kind of garment used as a protection against drowning. It is composed of four pieces of cork, two for the breast and two for the back, each about the same size as the sections of a waistcoat; cover the whole with coarse canvas, leaving two holes to put the arms through. There must also be a space left between the two back pieces, and the same between each back and breast piece, that they may fit easier to the body. By this means the waistcoat is open only before, and may be fastened on the wearer by strings; or to render it still more secure, with buckles and leathern straps.

CORN.—The season for sowing corn extends from September to April, but ordinarily that succeeds best which is committed to the ground during October and November. It is desirable that the land be neither wet nor very dry, so that the precise time of sowing is determined by the weather; but it is well to proceed as soon after the first of October as the land is moist enough to ensure a regular germination of the seed. Over a large portion of England corn is the crop usually sown after clover or one year's seeds. In such cases the land is ploughed in the end of September, immediately harrowed, and wheat sown upon it by a drilling machine. The land from which potatoes, beans, peas, or vetches have been cleared off will next demand attention. When these crops have been carefully hoed, all that is required is to clear off the haulm, to plough and sow. If the land is not clean, recourse must be had to a short fallowing process before sowing wheat. For this purpose the surface is loosened by the grubber, the weeds harrowed out and raked off; after which the land is ploughed and sown. Great care should be taken to have the land so cleaned beforehand, that the sowing and harrowing may follow closely upon the ploughing, to prevent these operations from being interfered with by unseasonable weather. As the crops of turnips, mangold-wurtzel, or carrots arrive at maturity and are either removed to the store-heap or consumed by sheep where they grow, successive sowings of wheat can be made as the ploughing is accomplished, and as the weather permits. It is to be noted, however, that it is only on dry soils, and which are also clean and in a high state of fertility, that wheat sowing can be continued with advantage during the months of December and January. If the whole of these conditions do not exist, it is wiser to refrain until February or March. The *sowing of spring-wheat* is only expedient on dry and fertile soils with a free exposure. Unless the whole conditions are favourable, there is much risk of spring-sown wheat being too late to get properly ripened or well harvested. The *quantity of seed* employed, depends upon the method pursued, whether thick or thin seeding be adopted. The best crops are perhaps secured by using two bushels per acre for the sowing, made early in October, and by increasing this quantity at the rate of half a peck a week, until three bushels are reached, which may be held as the maximum. These are the quantities to be used in broad-cast sowing; when drilling or dibbling is resorted to, two-fifths less seed will suffice. The *method of sowing*, that is to say, broad-cast, in opposition to drilling, is next to be considered. Generally speaking, larger crops are secured by broad-cast sowing than by drilling. The latter mode is, however, to be preferred wherever the land is affected by annual weeds, which cannot be got rid of by hoeing. When clover and grass-seeds are sown with the grain crop, it is believed that the grain grows better from being sown in rows, owing to their freer exposure to light and air. It is believed also that in highly manured soils of a loose texture, grain deposited somewhat deeply in rows is less liable to lodge than when sown broad-cast and shallower. The *rolling of wheat* is always a process beneficial to the crop, especially where the plants have been loosened by severe frosts, or are suffering from the attacks of wire-worms. Corn should be reaped before it is what is called *dead* ripe. When the grains cease to yield a milky fluid on being pressed under the thumb-nail, and when the ears and a few inches of the stem have become yellow, the sooner it is reaped the better. Several distinct *modes of reaping* are in use. The practice of mowing has increased of late years, and would be more rapidly extended but for the greater difficulty of finding good mowers than good reapers. The chief recommendation of mowing is, that mown sheaves dry most quickly, and suffer least from a drenching rain. This arises from the stems being less handled, and so forming an open sheaf, through which the wind penetrates freely. Before the corn is *tied up in sheaves*, it is of great consequence to see that it is dry; also that the sheaves are not too tightly bound, and that every sheaf is kept constantly on foot. Rapid drying is to be aimed at, and for this purpose, the sheaves should be small individually, and set but four or six of them together. It requires no little discrimination to know when sheaves are dry enough to keep in a stack. On thrusting the hand into a sheaf sufficiently dried, there is a lightness and kindliness to the touch not easily mistaken when once understood. Whenever this is ascertained, the crop should be carried with the utmost despatch. *Carrying* is next accomplished by using one-horse carts, and by building the sheaves into round stacks of ten or twelve loads each. Corn is in a much fitter state to keep in small stacks than in large ones, and sooner gets into condition for market; the crop is more accessible for threshing in ten-load quantities than in huge ricks, and the crop of different fields and kinds of grain more easily kept separate. It is always desirable to have the stacks built upon frames or stools elevated eighteen or twenty inches from the ground. Besides the security from vermin thus attained, there is a free admission of air to every part, particularly when aided by a triangle of rough timber in the centre, which speedily ensures thorough dryness in the whole stack. As the stacks are built they should be thatched without

delay. For this purpose ample stores of thatch, and straw ropes should be provided beforehand. With proper machinery propelled by steam or water, the *threshing and dressing* of corn is a simple and inexpensive process. In *preparing a parcel for market*, it is a good plan to measure a few sacks very carefully, ascertain the average weight of them, and then fill every remaining sack to that weight exactly.

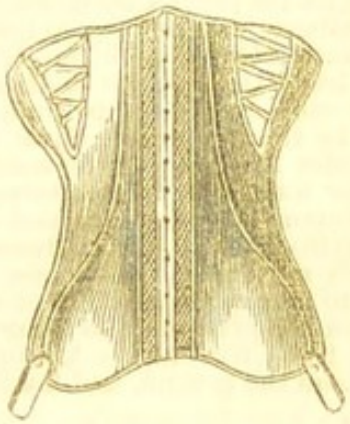
CORN BOX.—A receptacle for corn, oil-cake, and other substances, so that when standing in the open air it may be protected from the weather, and sheep may feed from it with impunity. The construction is simple, and self-explanatory.

CORN CHEST.—The most convenient form of corn chest is one about five feet long and four and a half feet high. A part of the front folds down with hinges, to give easier access to the corn as it gets low in the chest. Part of the lid is made fast to receive the spout for conveying the corn into it from the granary, and to render its moveable part lighter. To ascertain the quantity of corn at any time in the chest, the best way is to mark lines on the inside of the chest indicative of every quarter of corn which it contains. A certain quantity of corn being originally put in, and a certain quantity allowed each day, a check may thus be kept upon the current consumption. The key of the corn-chest should be confided to the custody of the farm steward, or to the person who gives out the corn where no farm steward is kept.

CORN SALAD.—A species of lettuce grown for winter and spring salads. It will thrive in any soil that is not particularly heavy; but the best is a sandy, moderately fertile loam, in an open situation. Sown in the months of February, March, and April, and once a month during the summer if in request. Lastly, during August and early in September, so that they may be ready at the commencement of spring, or during the winter, if mild. Three sowings are, in general, quite sufficient for a family, viz., one at the end of February, a second early in August, and a third early in September. Sow in drills, six inches apart. The only cultivation required is frequent hoeing, the plants being thinned to four inches asunder. In summer, the whole plant may be cut, as they soon advance to seed at this season; but in spring and winter the outer leaves only should be gathered. To *obtain seed*, some of the spring-raised plants must be left ungathered from. They flower in June, and perfect their seed during the two following months.

CORNS.—Horny indurations of the skin, with a central core, very sensitive at the base. The common cause of corns is continued pressure over the projection of the bones, from boots or shoes. They are of two kinds, hard and soft. The first grow on the exposed portion of the joints; the last, between the toes. *Prevention:*—This consists in keeping the feet clean, by frequently washing them in warm water, and in the use of easy boots and shoes. Without the latter precaution corns will generally return, even after they appear to have been perfectly removed. *Treatment:*—After soaking the feet in warm water for a few minutes, pare the corns as close as possible with a sharp knife, taking care not to make them bleed. Afterwards touch them over with a little lunar caustic; repeat the application every three or four days for a fortnight, accompanied by the use of soft loose shoes, and a cure will be generally effected. Soft corns may be removed by applying ivy leaf, previously soaked in strong vinegar, changing the piece every morning; or by placing a dressing of soap cerate, spread on a bit of lint or old rag, between the toes.

CORSET.—An article of female dress, for supporting and compressing the chest and waist. When corsets are tightly laced or fastened they give rise to many serious disadvantages. The proper development of the chest is prevented by the unnatural compression, and the functions of the lungs, the liver, and the heart are interrupted from the same cause. Other organs are also more or less interfered with, and the whole system thus becomes deranged. A new kind of corset has been recently introduced, and would seem to possess peculiar advantages. Its



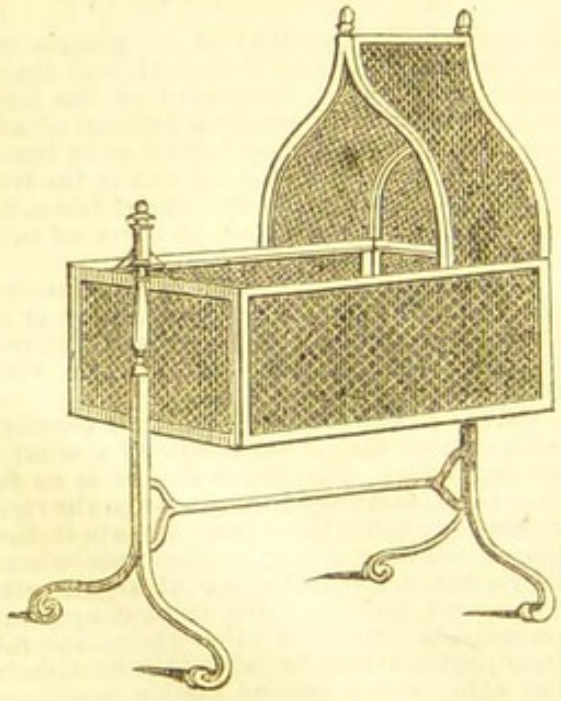
framework is constructed of pliable and elastic materials, and is so contrived that it yields with every movement of the body, and yet affords the required amount of support. Instead of lacing behind, as in the ordinary mode of stays, it fastens in the front with a species of stud and eyelet holes, and these are so situated as to allow of being loosened or tightened as required.

COSMETICS.—External applications employed for the purpose of preserving or restoring personal beauty.—See CARMINE; PEARL WHITE; ROUGE; VIOLET POWDER, &c.

COTILLON.—A dance which is practised with various distinctions, but all similar in general effect. The *March Cotillon* is as follows:—First couple promenade to the right, around the other three (who remain in their places) till they arrive at the place whence they started, but facing a contrary direction from first position; the third couple then promenade round the other three, and take their position directly behind the first, facing the same way; second couple promenade round, and take their places next to the third; fourth couple promenade round the whole, and take their position behind the second, each lady in the set taking the arm

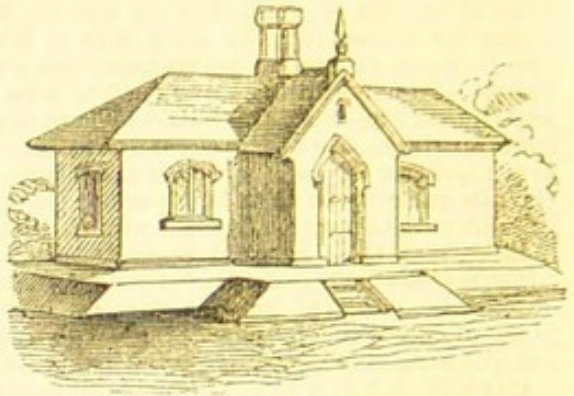
of her partner. *March.*—All march forward till they arrive at the end of the room; the ladies turn to the right and the gentlemen to the left, as fast as they reach the place where the first couple turned—the ladies march down on one side and the gentlemen on the other, till they arrive at the opposite end of the room—here the ladies meet their partners, and taking arms, again turn up the room to their places, where they stop or march again as the leader of the dance may direct. When there are a number of cotillons on the floor at once, after the promenade, and previous to the march, they may form a line, or number of lines, reaching the whole length of the room, without deranging the figure. When the march is ended, the two columns of ladies and gentlemen face each other—gentlemen standing directly opposite their partners. The figure generally terminates with the following dance: The couple at the top of the column balance to each other, turn partners twice round, take hands and promenade down between the columns till having arrived at the foot, the lady takes up her position on the ladies' side, and her partner opposite; after they have begun the promenade down, the second couple balance, and so on with the third and fourth until all have gone through; as fast as they leave the top, the column move up so that each couple starts from the same place. In the promenade down the centre the couples may use a promenade, march, dance, or walk. The dance being finished, both columns move forward and back—forward again—then all turn partners to places, in which movement, every one should be careful to take the same hand or side which they occupied previously to the promenade.

COT, FOR CHILDREN.—A kind of cradle raised from the ground, and made to swing

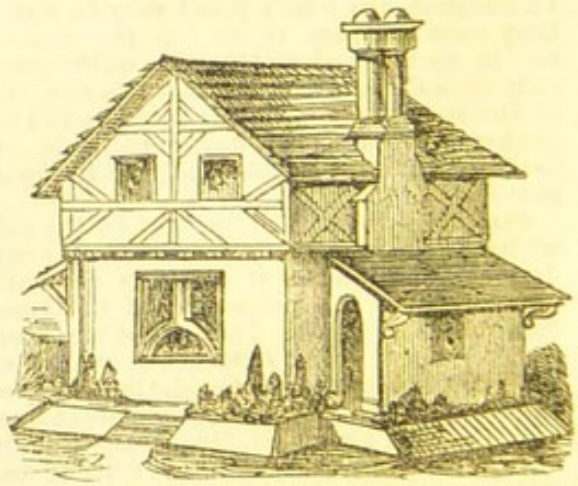


backwards and forwards with an easy and gentle motion. Although these places of repose are no doubt very gratifying to infants, and productive of slumber, they have nevertheless been objected to on account of their so accustoming children to the motion, that they cannot be induced to sleep without it.

COTTAGE.—A dwelling ordinarily occupied by the humbler classes of society. Their space is, in general, more contracted than the houses of the higher classes, the rooms being smaller and lower, and the passages, staircase, &c., being brought to the narrowest limits. Although the elegancies of life are not to be met with in a cottage, it is not precluded from administering to the social wants of the inmates generally; so much so that in England cottage life is habitually associated with comfort and domestic enjoyment. Cottages may be built in every variety of style and capacity, according to the requirements of the family. The accompanying engraving represents one of these buildings, capable of accommodating



a man and his wife. It contains a kitchen with two closets, a bed-room with a recess for a cupboard; a porch; a back room, in which there might be a boiler and an oven for baking, and also for heating water; a place for fuel, and other conveniences. The walls may be built of stone or brick; and the roof covered with slates or flat tiles projecting a few inches over the walls, so as to deliver the water which falls upon it into the gutter. The chimney tops are round, terminating with small capitals. The pediment over the entrance has a pinnacle formed of oak; a veranda between the tops of the windows and the eaves of the roof might be pro-



duced with pleasing effect. The cost of building a cottage such as this need not exceed £120 or £150. The next engraving re-

presents *a cottage for a married couple and one or two children.* It consists of three rooms in two stories; and contains on the ground-floor an entrance porch or lobby; a wash-house, with a place for an oven; a kitchen or living room; a large closet under the staircase; pantry, fuel-house, pig-sty, &c. The walls, as high as the bed-room floor, may be built of stone or brick, and above that of brick nogging. These walls should be plastered within and without. The chimneys may be built of brick and covered with cement, or be formed of cement only. The windows may have wooden mullions and wooden casements, if economy is particularly desired. The cost of erecting this cottage might be limited to £150 or £170. *A cottage for a married couple with a family of children* might be thus arranged:—The basement is a porch, staircase, and passage, kitchen, closet under the stairs, back kitchen, sittingroom, woodhouse, &c. The chamber floor contains a bedroom, two closets, a second bedroom, staircase and landing. The extra amount of material here required may be compensated for by cheapness. The walls may be built of brick stud-work, plastered outside; and the roof thatched with reeds or straw. The windows to have mullions of timber painted in imitation of stone. The chimney stacks to be formed of cement, and in short the most inexpensive materials to be employed at every point. The cost for erecting a cottage of this description need not exceed £180 or £200.

COTTAGE PUDDINGS.—Chop a pound of suet finely, add to it a pound of currants, well washed and dried, the same quantity of crumb of bread grated, quarter of a nutmeg, a wineglassful of ratafia, and two teaspoonfuls of orange-flower water. Mix the whole well together, and with ten eggs well beaten form a stiff paste; then rub the hands well with flour, roll the paste into small balls, and fry to a good colour, keeping them briskly moved about in the frying pan, to prevent their burning; when done, serve with sugar strewed over them, and sweet sauce.

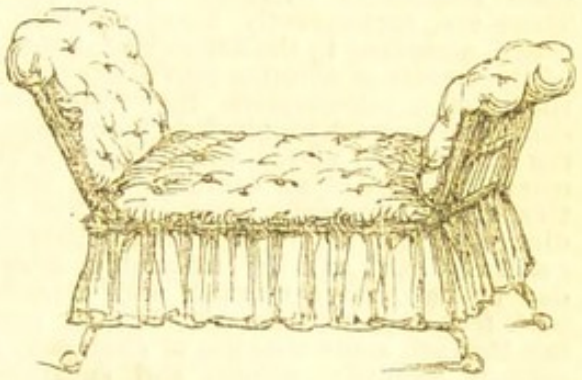
☞ Suet, 1lb.; currants, 1lb.; bread crumbs, 1lb.; nutmeg, ¼ of 1; ratafia, 1 wineglassful; orange-flower water, 2 teaspoonfuls; eggs, 10.

COTTAGE SOUP.—Fill an earthen pot with six quarts of water, add one pound of bacon, with carrots, turnips, cabbages, leeks, and onions; season with pepper and salt, and boil gently for five or six hours. This will make an excellent and economical repast for ten persons.

COTTON.—A vegetable down contained in the seed of the cotton plant, which is cultivated in America, the East and West Indies, and Egypt. After going through various cleansing processes it is woven into various fibres used for clothing and furniture. From its comparative cheapness, lightness, and the facility with which it can be cleaned, cotton forms a valuable staple article of dress, and is especially advantageous as an article of underclothing; being warmer than linen in low temperatures, and cooler in higher temperatures; and when changes of the atmosphere take place, the amount of heat abstracted from the body is regulated accordingly, and a steady equilibrium is thus preserved.

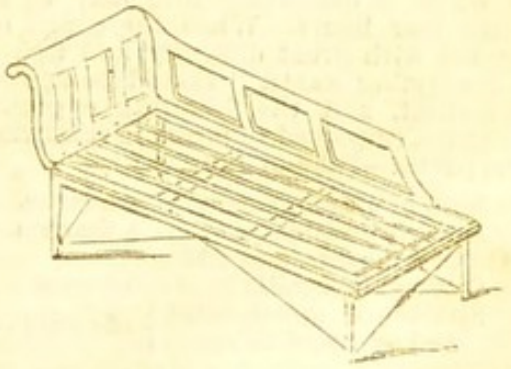
COTTON ARTICLES, TO CLEAN.—These may be cleaned by the ordinary washing process, or as follows:—Wash and brush some potatoes until they are thoroughly clean, then rasp them through a sieve into a pan containing a small quantity of water, let the mixture settle, and pour the water off; with the fecula that remains, and the water poured off, rub the articles, stretched on a clean board or table, frequently with a sponge on both sides, and rinse in clean water.

COUCH.—An article of domestic furniture which admits of the body reposing at full length. They are considered preferable to sofas, and especially in small apartments, as being less cumbersome and difficult of removal, and occupying a more limited space. Couches may be fashioned of any material, but when covered they should match with the other furniture of the room. They are made in every gradation of dimensions, and at prices varying from £1 to £20. A very convenient form of couch is that shown in the engraving, which is capable of



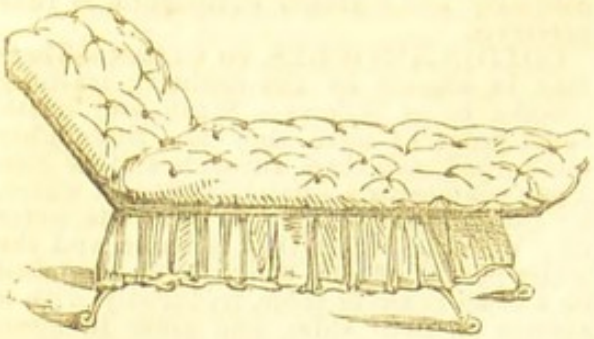
being converted into a settee, a couch, a bed, and finally folded up, into a compact and portable form.

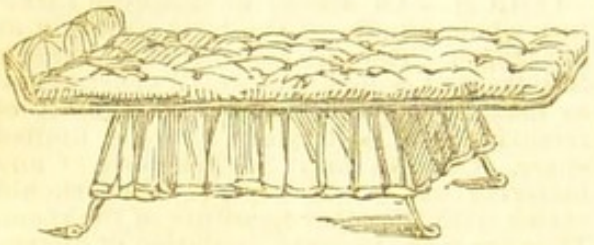
A *couch for invalids* has also been invented



which is contrived to raise the back to any angle, and to conform to the position of the legs, by elevating part of the frame, through the medium of a winch, acting on levers by hands. *Swinging couches* for use in ships and carriages have also been introduced, to

counteract the effects of the uneasy motion. In these an elasticity is produced by the aid of swinging frames, and metal spiral springs.





COUGH.—A cough is an effort of nature to relieve the lungs and air passages from any obstruction of mucus, phlegm, pus, or other sources of irritation in the parts. There are, consequently, many varieties of cough, according to the nature and situation of the disease or affection that excites it: as the cough in consumption, that from bronchitis, the stomach cough of children, whooping cough, &c., beside which there is the common cough of an ordinary cold, which this article especially refers to. The ordinary cough is, in the first instance, generally hard and dry, becoming, after a day or two, more relaxed, and attended with free expectoration, which, after passing through some changes of character, as regards quantity, colour, and substance, usually cures itself. When the febrile symptoms that attend a cold and cough are too slight to demand treatment, the best cough-mixture that can be taken is one composed of equal parts of the syrup of squills, syrup of tolu, paregoric, and ipecacuanha wine, of which a dessertspoonful may be given every four hours. When the cough is attended with great difficulty and tightness, a "warming plaster" should be applied to the chest, and the following expectorant mixture, employed to promote relaxation of the parts:—Take of the

Milk of ammoniacum .	6 ounces.
Dover's powder . . .	½ drachm.
Mix in a mortar, and add	
Oxymel of squills . .	1 ounce.
Spirits of sweet nitre and syrup of tolu,	of each ½ ounce.

Mix. One tablespoonful to be given three times a day, and two on going to bed.

COUGH ELECTUARY.—Oil of almonds, half an ounce; spermaceti in powder, two drachms; conserve of hops, one ounce; powder of ipecacuanha, ten grains; orris root in powder, one drachm; syrup of mulberries, one ounce; acid of vitriol (diluted), thirty drops; mix. A teaspoonful to be taken whenever the cough is troublesome.

COUGH MARMALADE. — Stone six ounces of the best Malaga raisins, and beat them to a fine paste with the same quantity of sugar candy; an ounce of conserve of roses, twenty-five drops of oil of vitriol, and twenty drops of oil of sulphur. Mix the whole well together and take two teaspoonfuls night and morning. For *children*, one teaspoonful is a sufficient quantity.

COUGH PILLS. — Mix one drachm of compound powder of ipecacuanha with one scruple of gum ammoniacum, and dried squill bulb; make it into a mass with mucilage, and divide into twenty pills. One to be taken three times a day.

COUGH SYRUP.—Boil one ounce of linseed in a quart of water till reduced to a pint; add six ounces of moist sugar, two ounces of sugar-candy, half an ounce of Spanish liquorice, and the juice of a large lemon. Simmer slowly together till of a syrupy consistence, and when cold put in two tablespoonfuls of the best old rum. Take a tablespoonful of this as occasion requires.

COULIS, A MADE GRAVY. — Put into a stew-pan two pounds of veal and a small slice of bacon cut in pieces; add two carrots, two onions, and two cloves. Place the stew-pan, closely covered, over a slow fire. When the veal is sufficiently stewed, and of a good colour, mix with it a quart of broth and a piece of butter rolled in flour. Then let it stew for six hours slowly; strain the liquor and reduce it if too thin.

COUNTRY DANCE. — First lady and bottom gentleman advance to centre, salute, and retire; first gentleman and bottom lady the same. Ladies promenade, turning off to the right down the room, and back to places, while gentlemen do the same turning to the left; top couple remain at bottom; repeat to the end of dance.

COUNTY COURTS are courts of record having jurisdiction for the recovery of debts not exceeding £50, and may order payment by instalments. They have also jurisdiction in suits for replevying a distress; for the recovery of the possession of land or tenements where the annual rental does not exceed £50; for the discharge of insolvent debtors from prison, and in petitions for protection from arrest; to commit to prison a judgment debtor of any court where the judgment is for a debt under £20; to settle disputes between members of a friendly society, at the option of either party; to summon and examine witnesses, and enforce the production of documents under the Joint Stock Companies Winding-up Acts; to arrest an absconding debtor; and to perform such duties relating to suits depending in the Court of Chancery as the Lord Chancellor may direct; and they also have jurisdiction in actions of debt above £50; or in which the title to land is in question, if the parties choose to submit thereto in writing. A demand exceeding £50 and reduced by a set-off below £50 is not within their jurisdiction. Where a demand is above £50, and

the plaintiff, for the purpose of suing in the county court is willing to abandon the excess above that sum, he must state so in writing upon the particulars of his demand at the time of his application for a summons.

In cases of debt above £5 either party may have a jury of five persons of the same standing as jurymen of the courts of Westminster Hall; or may remove the cause into a superior court; or, if dissatisfied with the judgment in the county court, may appeal to any of the courts of common law at Westminster—two of the judges of which may decide the point.

In actions above £20 and under £50 the county courts and the courts of Westminster Hall have concurrent jurisdiction; but if a plaintiff sues in a superior court for a debt under, or obtains a verdict for a less sum than £20, he does so at the risk of having to pay his own costs unless the defendant dwells twenty miles from his, the plaintiff's, residence; or where the cause of action did not arise within the jurisdiction of the court within which the defendant dwells. All the metropolitan county courts are, for this last-mentioned purpose, as one district.

In a case of debt or money demand, a party complainant must go into court prepared to prove either an admission by the defendant of, or a promise to pay, the amount sought to be recovered. If that is not possible, then, in case of the sale of goods, it is necessary to prove three things: first, that the order for them was given by the defendant; secondly, that the price charged for them was the agreed price at the time of the sale, or that it is the fair market value of them; and thirdly, the delivery of them to the defendant, or to his order; where the summons is for work and labour done and performed by the complainant for the defendant, that the work was done at the request of the defendant, and that the amount charged is a reasonable remuneration for such work.

Where a party sues for the delivery up of a particular article, he must be prepared to prove a demand for it previously to taking out the summons, and the value of it.

Where there are any letters or writings between the parties, it is always desirable to be prepared to produce them.

Where the plaintiff recovers less than the amount he has claimed, so as to reduce the scale of costs, he will have to pay the difference in the fees.

County courts have no jurisdiction in actions for malicious prosecution, libel, slander, seduction, breach of promise of marriage, or where the title to lands, or the claims under a will or settlement, are brought into question.

A county court must sit at least once in every calendar month in each district, and by the first day of every month must put up in the court house the appointments of the sittings to the extent of the third month following.

If any bailiff or officer of a county court is assaulted while executing his duty, the offender is liable to a penalty of £5, and the bailiff may take him into custody; and any officer misconducting himself, upon complaint proved will be fined by the judge; and if he exact any reward beyond the fees allowed, he is for ever incapable of serving under the Act.

An attorney's fees in actions of covenant, debt, detinue, and assumpsit, are as follows:

	£	s.	d.
Under £2	Nil.		
Above £2 and not exceeding £5 .	0	10	0
„ £5 „ „ £20 .	0	15	0
„ £20 „ „ £35 .	1	10	0
„ £35 „ „ £50 .	2	0	0

COURT PLASTER.—Take half an ounce of benzoin, and six ounces of rectified spirit, dissolve and strain; then take one ounce of isinglass, and half a pint of hot water; dissolve and strain separately from the former. Mix the two, and set them aside to cool, when a jelly will be formed; warm this and brush it ten or twelve times over a piece of black silk, stretched smooth. When dry, brush it with a solution made from four ounces of Chian turpentine and six ounces of tincture of benzoin.

COW, MANAGEMENT OF.—A good cow is a source of constant profit, provided it be properly managed. Cows intended for the dairy should be particularly well housed and fed; for this purpose a clean and warm cow-house is of the utmost importance, and also a sweet pasture. If cows be kept at grass, it is a good plan to allow them constant access to a little hay, which prevents scouring, especially at an early season; or, if they be kept within doors and fed on succulent artificial grasses, a little hay may be occasionally necessary, to prevent the purgative effects of green food. Cows kept at pasture will require from one to two acres of land each, to keep them during the summer; but if housed, the produce of half or three-quarters of an acre will be sufficient. The *best mode of feeding* is as follows:—From the first of May to the first of November, cows should be fed upon various successions of green food, and the more varied the better. When the various grasses have been mown for the last time and consumed, the fresh leaves of cattle-beet and cabbage (the latter in small quantities, lest they should flavour the milk) will supply them with food until the roots of mangold-wurtzel, &c., are ready for use. These roots are given with most advantage either steamed or boiled, or at least scalded with hot water, and chopped up and mixed with chaff, bran, &c., with a sprinkling of salt added to promote digestion. The quantity of roots given daily to a cow producing milk, from November to May, may be stated at forty-two pounds of mangold-wurtzel, sixty pounds of Swedish turnips, or twenty-eight pounds of potatoes. When roots are given to a cow in their raw state, they should be cut into small pieces, to prevent choking. Before clover, lucern, and similar food is given to a cow, it should be cut some hours previously, to allow the fixed air to escape; and it should also be given in small quantities at a time, for if these precautions are not observed the animal is likely to over-gorge

itself, and sometimes even burst. Turnips and carrots form excellent articles of food, and cannot be too strongly recommended, especially for winter sustenance. Of all vegetable productions, however, the *cabbage* is perhaps the most exuberant, particularly the drum-headed species, which will be found to afford a supply of milk superior to any other vegetable. Any disagreeable flavour which the cabbage is sometimes liable to impart, may be removed by dissolving an ounce of saltpetre in a quart of spring water, and mixing about a quarter of a pint of it with ten or twelve gallons of the milk as it comes from the cow. A cow kept in confinement requires much hand-rubbing, to keep her skin in a healthy state, and prevent the irritation which is always the consequence of high feeding and want of air and exercise; she should therefore be regularly curried and brushed. The labour thus bestowed assists in circulating the blood, and to exterminate the old hair in favour of the new. *The hours of milking* should be regular, and generally once in twelve hours, this being necessary for the due secretion of milk; some cows, however, have such a flow of milk for the first three months after calving, especially in the months of May, June, and July, as to require to be milked three times a day. When *a cow has been milked for several years, and begins to grow old*, the most advantageous treatment is to make her dry. To effect this, bruise six ounces of white rosin, and dissolve it in a quart of water. The cow having been housed, should then be bled, and afterwards milked; the above mixture should then be administered, and the animal finally turned into good grass. She is then no longer to be milked; but to be fattened on rich vegetables. *Cows intended for breeding*, should be carefully selected from those which give plenty of milk. During three months previously to calving, if in the spring, they should be turned into sweet grass; or if it happen in the winter, they ought to be well fed with the best hay. The day and night after they have calved, they should be kept in the house, and their drink confined to lukewarm water only. They may be turned out the next day, if the weather be warm, but regularly taken in for three or four successive nights; or if the weather be damp and cold, it is better to girt their bodies round with sacking, or to keep them wholly within. Cows thus housed, should be kept in every night, till the morning cold is dissipated, and a draught of warm water should be given them previously to their going to the field. If the udder of a milking cow becomes hard and painful, it should be fomented with warm water, and rubbed gently with the hand. Or if the teats are sore, they should be soaked in warm water twice a day; and either be dressed with soft ointment, or washed with spirits and water. When any such complaints exist, the milk had best be given to the pigs. To prevent cows from sucking their own milk, as some of them are apt to do, rub the teats frequently with strong rancid cheese, which will prove an effectual remedy.—See CALF and CATTLE.

COWHAGE.—The stiff hairs on the pods of the *dolichos pruriens*. Its chief employment is to expel the round worm peculiar to children. For this purpose the pods are dipped in simple syrup or molasses, and the whole scraped off with a knife until a confection is formed. A teaspoonful or two of this taken for three or four mornings successively will generally produce the desired effect.

COWHEEL BOILED.—Scrape and clean it well, and boil it gently for five or six hours with two quarts of water and a quart of milk; together with four or five large onions and a sprinkling of salt. Serve with the onions and liquor.

COWHEEL FRIED. — Cut them into small bits; dip them into the beaten yolk of an egg; roll them in bread crumbs, seasoned with pepper, salt, and minced parsley; fry them in butter. Cut into thin slices a good dish of onions, fry them in butter and serve them hot, with the fried heel laid upon them.

COWHEEL POTTED. — Boil them in fresh water till the bones can be easily removed; cut them into small pieces, and add just a sufficient portion of liquor to moisten it; mix with it a tablespoonful of vinegar, with a seasoning of pepper, salt, and mace; put it into a mould and turn it out when cold. It is usually eaten with vinegar and mustard.

COWHEEL SOUP.—Boil two cowheels; cut off the meat into moderately small pieces, and set them by separately in a plate; put the trimmings and bones into a stew-pan with three quarts of water, together with an unboiled cowheel cut into quarters; add to this, two onions and two turnips pared and sliced, the red part of two large carrots, two shalots cut in half, a bunch of lemon-thyme, and two bunches of parsley; set this by the side of a slow steady fire, keep it closely covered, and let it simmer gently for six or seven hours; during which, take care to remove the fat and scum, that will rise from time to time to the surface. When done, strain the liquor through a sieve, and put two ounces of butter into a clean stew-pan; when it is melted, stir into it as much flour as will make a stiff paste, add to it by degrees the soup liquor, give it a boil up, strain it through a sieve, and put in the thinly pared peel of a lemon, a couple of bay leaves, and the meat of the boiled heels. Let it simmer for half an hour longer; add the juice of a lemon, a gill of wine, and a teaspoonful of mushroom ketchup, and serve in a tureen.

COW-POX.—The slight febrile symptoms that follow vaccination, and which seldom if ever amount to what may be called a fever, constitute what is popularly known as cow-pox. It is nothing more than the artificial disease established in the infant's body by vaccination. Cow-pox usually takes from seventeen to twenty days to run its course, though at the end of the eighth day the disease, so far as the pustule on the arm is concerned, is at its maturity, and the lymph then taken from the pock is in a condition to propagate the disease in others. In general,

the system is so little disturbed as not to call for any medical treatment, and the most that is ever required is a little aperient powder before and after the vaccination; and when the inflammation in the arm is severe, a small poultice when the pustule has been opened.—See VACCINATION.

COWSLIP.—There are several varieties of this flower, varying in colour from almost white to a very deep yellow; some are single and others double. For the mode of cultivation, see AURICULA.

COWSLIP WINE.—To every gallon of water put three pounds of loaf sugar: boil the quantity half an hour, taking off the scum as it rises. When cool, put to it a crust of toasted bread dipped in thick yeast, let the liquor ferment in a tub for thirty-six hours; then put into the cask, for every gallon, the peels of two lemons and the rind of one, together with the peel and rind of a Seville orange, and one gallon of cowslip pips. Pour the liquor on these, stir every day, carefully, for a week; then to every three gallons put a pint of brandy. Stop the cask close, and leave it undisturbed for six weeks, at the end of which time the wine may be bottled off.

CRAB CURRY.—Remove the flesh from a good-sized crab in as large pieces as possible; put into a stew-pan two onions sliced, with an ounce of butter, fry them of a light yellow colour, then mix in a tablespoonful of mild curry paste; add a pint of good broth, and boil over the fire until it becomes somewhat thick. Put in the crab, stir the whole round, and cover the stew-pan closely; then set it in a moderate oven for twenty minutes, by which time the curry will be of a proper consistence, and the crab delicately tender; add the juice of half a lemon, and serve rice with it in a separate dish.

CRAB DRESSED.—After the crabs are boiled, break the claws, and extract all the meat carefully from them, and also from the breast; taking the red part along with a portion of the inside. Keep the shell whole; mince the meat, season it with grated nutmeg, pepper, salt, a little white wine, and vinegar; mix in a few bread crumbs and about two ounces of butter; put it into a saucepan to heat, stirring all the time; when thoroughly heated fill the shells, previously washed clean, with or without puff paste round the edge. Brown them in an oven, and serve.

CRAB MINCED.—Extract the meat from the shell, mince small, and place it in a saucepan with a gill of white wine, pepper, salt, nutmeg, cayenne pepper, and two tablespoonfuls of vinegar. Stew it for ten minutes, melt two ounces of butter with an anchovy and the yolks of two eggs; mix the whole well together, and thicken with stale bread crumbs. Garnish with strips of thin toast and sprigs of parsley.

CRAB POTTED.—Cut the meat of a crab, parboiled, into small pieces; put a layer of these into a potting can, or any deep tin dish; sprinkle salt, pepper, cayenne, and pounded mace over; add a layer of the spawn and coral, then a layer of the cut meat, and so on, till all is used. Press it down, pour melted butter over it, and let it stand for half an hour in a slow oven. Take it out, leave it to cool, and then remove the butter, and turn the meat into small pots; pour clarified butter over them, and set by for use.

CRAB SAUCE.—Pick the meat from the large and small claws, and with a little of soft inside, when not watery, stir into melted butter; season with pepper, salt, and cayenne; and add a tablespoonful of ketchup or anchovy.

CRAB, TO CHOOSE.—When stale, a crab will be of a dusky red colour; the joints of the claws limber, and being loose may be turned any way with the finger; from under the throat also an unpleasant smell will issue. When fresh they are quite the reverse.

CRABS, SIBERIAN, STEWED.—Make a rich syrup with sugar, the juice and rind of lemons, a little brandy, and cloves. When this boils throw in the fruit, which should be perfectly ripe. Let it simmer for a few minutes, then remove from the fire; and leave it to cool. Boil again, and continue doing so until the crabs become quite soft. Serve cool in the syrup.

CRABS, SIBERIAN, PICKLED.—Gather the apples while they are still very hard. Remove the eyes, peel them, and put them into a brine of salt and water that will float an egg. Let them stand for six days, then change them into another brine, in which they must stand for six days more. Put them into a jar with a little mace. Boil some double distilled vinegar with sliced horseradish, a sliced nutmeg, some allspice, and a few cloves, and pour it boiling hot upon the apples. When quite cold put a cork into the jar. Boil the vinegar again every alternate day for ten days, and pour it each time boiling hot over the apples. When cold, cork the jar, and tie it down with bladder. The pickle will not attain perfection till it has lain by for three months.

CRACKNELS.—Mix with a quart of flour half a nutmeg grated, the beaten yolks of four eggs, and four teaspoonfuls of rose water, convert these into a stiff paste with cold water; then roll in one pound of butter, and cut the paste into cracknel shapes; put them into a kettle of boiling water, and boil them till they swim; then take them out and put them into cold water; when hardened lay them out to dry, and bake them on tin plates.

CRADLE.—A well known receptacle for infants during the day-time. They are usually made of wicker-work and are sometimes provided with rockers. The practice of rocking, however, owing to adverse medical opinions, has of late fallen a good deal into disuse. For, independently of its accustoming children to a bad habit, it is frequently an expedient resorted to by nurses to get infants off to sleep when they ought to be carried about in the open air. Cradles should not be placed in a confined position nor overladen with clothes. When children are placed in them, they should be laid on their side, and directly they begin to cry they should be taken up.

CRADLE SPIT.—A culinary utensil used in roasting, which has the advantage of enclosing any delicate matter to be dressed, without piercing the flesh.

CRAMPS.—Are an irregular spasmodic contraction of one or more muscles, in which the fibres are forcibly drawn into knots and constrictions, rendering the muscle or part affected incapable of use, while the pain that attends this unnatural state is acute and almost intolerable. Cramps are not confined to any one part, but may occur over the whole body; though the thighs, feet, and abdomen are the situations most frequently affected. The cause of cramps, is either the sudden application of cold to the heated body, wet clothes, damp feet, the consequence of some mineral poison, such as lead; or a continued source of irritation in the alimentary canal; from affections of the nervous system, or from wounds. The *treatment* of cramp consists in overcoming the contractions into which the muscles have been drawn, by constant friction with the hand or flesh-brush, rubbed in the direction of the muscular fibres; or in severer cases by using with the friction brandy, turpentine, or dry mustard, though, when procurable, the most immediate benefit will always be derived from the hot bath. To those subject to cramps in the leg, an embrocation composed of an ounce of camphorated oil, half an ounce of laudanum, and two drachms of sal volatile, well rubbed along the limb, will afford immediate relief. The cramps consequent on diarrhœa and cholera, must be treated by a dose of opium, either as a suppositary; or a draught, with forty or fifty drops of laudanum, according to the urgency of the pains. For the cramps induced by bathing, the hot bath or hot bricks to the spine are indispensable, while for those that arise from stagnation of blood or other causes during sleep, extension of the leg while the foot rests on the cold hearthstone, and enveloping the limb in a wet towel, will be generally found to yield immediate benefit.

CRANBERRIES, TO PRESERVE.—Gather the fruit in clusters before it is quite ripe. Pick away any dead leaves and injured berries, and keep the clusters in strong salt and water in jars well covered. Look to them occasionally, and when the pickle begins to ferment, change it. Cranberries thus preserved will retain their flavour and quality for many months.

CRANBERRY, CULTURE OF.—A plant bearing a small berry, requiring a moist soil for favourable cultivation. The most suitable situation for this plant is the margin of a pond. All that is necessary is, to drive in a few stakes two or three feet within the margin, and to place some old boards within these, so as to prevent the soil of the cranberry bed from falling into the water; then to lay a heap of small stones or rubbish at the bottom, and over it peat or bog earth, to the depth of about three inches above and seven inches below the usual surface of the water. In such a situation the plants grow readily, and if a few be put in, they entirely cover the bed in the course of a year or two, by means of thin long runners, which take root at several points. From a very small space a very large quantity of cranberries may be gathered, and they prove a remarkably regular crop, without being subject to atmospheric influences, or the attacks of insects.

CRANBERRY JELLY.—To one quart of cranberries add one pound of sugar and half a pint of water; simmer them together for half an hour. Strain through a sieve, and when cool put by in pots.

☞ Cranberries, 1 quart; sugar, 1lb.; water, ½ pint.

CRANBERRY SAUCE.—Pick and wash one quart of cranberries, put them into a stew-pan with three gills of water; cover the pan, and when they have become tender stir in three-quarters of a pound of sugar; mix all well together till the sugar is dissolved; then take the sauce from the fire, dish it, and serve.

CRANBERRY TART.—Place the fruit, picked and washed, into a shallow pie-dish, raising it high in the middle by inserting a teacup or small gallipot. Put in a sufficient quantity of sugar, cover with a rich short paste, and bake of a light brown colour.

CRANBERRY WATER.—Pour boiling water upon bruised cranberries, let them stand for a few hours; strain off the liquor, and sweeten to taste. This forms an agreeable and refreshing beverage for invalids.

CRAPE, BLACK, TO RESTORE.—Make scalding hot, skim-milk and water, with a small piece of glue in it. Immerse faded and rusty black crape in this for a few minutes; then take it out, clap it in the hands, and pull it dry, and it will look equal to new.

CRAPE, CHINA, TO WASH.—If the fabric be good, this material may be washed as often as required, and no diminution of the texture or colour will be perceptible. The method is as follows:—Make a strong lather of boiling water, suffer it to cool; when cold, or nearly so, wash the crape quickly and thoroughly, dip it immediately into cold water, in which a little salt has been thrown; rinse, squeeze, and hang it out to dry in the open air; pin it by its extreme edge to the line, so that it may not in any part be folded together; the more rapidly it dries, the clearer it will be.

CRAY FISH.—A shell-fish resembling the lobster in appearance and flavour, but coarser; the shell is more irregular, with projecting points, and the flesh is harder. For modes of dressing, see CRAB and LOBSTER.

CRAYON DRAWINGS, TO FIX.—Prepare the paper by washing it with a strong solution of isinglass; when quite dry, the drawing may be made upon it, after which it should be inverted, and held horizontally over steam. The steam melts the size, which absorbs the charcoal or crayon, and the drawing thus becomes fixed. This process may be repeated several times during the progress of a drawing, the effect being increased each time.

CRAYONS FOR DRAWING.—To a pint of boiling water put three ounces of spermaceti, one pound of fine ground long ash

with the colouring matter, a sufficient quantity; roll out the paste, and when half dry, cut it into pipes.

CREAM, ARTIFICIAL.—Boil down a quart of milk to a pint, then rub a dessertspoonful of the finest rice-flour completely down in a little milk; strain, add by degrees a few spoonfuls of the milk to it, and put it into a saucepan, with two or three lumps of sugar. Continue boiling till the flour is thoroughly done, and has attained the required consistence; the taste will regulate the quantity of sugar and flour. This cream will answer for the table as well as for tea and coffee. A small quantity of yolk of egg may be added, when it is partially cool, to impart a colour. Stir it till quite cold, to prevent its skimming.

CREAM, BURNT.—Boil a pint of cream with the peel of a lemon; sweeten it with pounded loaf sugar, beat the yolks of six eggs, and the whites of four, with one tablespoonful of flour, and the same quantity of orange-flower water and of ratafia; strain the cream, and when nearly cold, mix it with the eggs and other ingredients: stir it over the fire till it attains the consistence of a custard; turn it into a dish, strew sifted loaf sugar over it, and brown it with a salamander; serve it cold.

☞ Cream, 1 pint; lemon-peel, 1; sugar, 1lb.; eggs, 6 yolks and 4 whites; flour, 1 tablespoonful; orange-flower water, 1 tablespoonful.

CREAM CAKE.—Rub down five ounces of fresh butter into a pound of fine flour; then mix thoroughly with them half a pound of sifted sugar, a few grains of salt, and two ounces of candied orange-peel sliced thin; add half a pint of thick and rather sour cream mixed with two eggs well whisked; beat thoroughly with it half a teaspoonful of carbonate of soda, which has been perfectly blended with twice the quantity of sugar and flour, and reduced to the smoothness of powder in a mortar. Butter the inside of the moulds thoroughly, and fill them only two-thirds full. Bake it for three-quarters of an hour in a moderate oven. Turn it from the mould, and lay it on its side upon a sieve reversed, to cool.

☞ Butter, 5ozs.; flour, 1lb.; sugar, ½lb.; salt, a few grains; candied orange-peel, 2ozs.; cream, ½ pint; eggs, 2; carbonate of soda, ½ of 1 teaspoonful; sugar, 1 teaspoonful; flour, 1 teaspoonful.

CREAM CHEESE.—Put five quarts of the last of the milk into a pan with a tablespoonful of rennet. When the curd is come, strike it down two or three times with the cream-skimmer, just to break it. Let it stand two hours, then spread a cheese-cloth on a sieve, put the curd on it, and let the whey drain; break the curd a little with the hand, and put it into a vat with a two-pound weight upon it. Let it stand for twelve hours, take it out, and bind it round with a fillet. Turn it every day from one board to another till dry; cover with nettles or clean dock leaves, and place it between two pewter plates to ripen. If the weather be warm, it will be ready in three weeks.

CREAM, CLOUTED.—Season a quarter of a pint of new milk with two blades of mace, and add to it two tablespoonfuls of rose-water; strain, and add to this the beaten yolks of two eggs. Stir the mixture into a quart of rich cream, and let it scald, stirring all the while.

☞ Milk, ¼ pint; mace, 2 blades; rose-water, 2 tablespoonfuls; eggs, 2 yolks; cream, 1 quart.

CREAM JAR.—A vessel of stone-ware in which cream is kept until it is churned. It is about eighteen inches in height and ten inches in diameter, provided with a moveable top, having an opening in its centre, covered with muslin, to keep out impurities and admit air.

CREAM, NATURE AND PROPERTIES OF.—An oily substance of a yellowish colour, which separates from the milk, and floats on the top. The consistence of cream increases by exposure to air. In three or four days it becomes so thick that the vessel which contains it may be inverted without spilling the contents; and in eight or ten days it becomes a soft solid, and partakes of the properties of cheese. In order that cream may form in the most expeditious manner, and afford the largest quantity possible, the milk is put into shallow vessels, in which it does not stand above three or four inches deep, and the throwing up of the cream proceeds with the greatest regularity when the temperature of the dairy is from fifty to fifty-five degrees. To prevent acidity it is essential that the milk should be kept cool in warm weather; excessive cold, however, is unfavourable; and when the temperature is so low as forty degrees, the cream forms with difficulty. Cream, although exceedingly nourishing, is too rich in oily matter to be used to any extent as an article of food. With persons of delicate stomachs especially, it is extremely difficult of digestion; it may, however, be taken in small quantities mixed with other articles of diet, such as arrowroot, coffee, tea, &c.; all of which are rendered far more palatable than by an admixture of milk.

CREAM PANCAKES.—Mix two eggs, well beaten, with a pint of cream, two ounces of sifted sugar, six ounces of flour, a teaspoonful mixed of cinnamon, nutmeg, and mace. Fry the pancakes thin with a piece of butter.

☞ Eggs, 2; cream, 1 pint; sugar, 2ozs.; flour, 6ozs.; cinnamon, nutmeg, and mace, mixed, 1 teaspoonful.

CREAM PUDDING.—Mix together two tablespoonfuls of flour, and one ounce of sugar; add to them a pint of cream, and eight yolks of eggs; boil the whole in a basin, tied over with a cloth, for three-quarters of an hour.

☞ Flour, 2 tablespoonfuls; sugar, 1oz.; cream, 1 pint; eggs, 8 yolks.

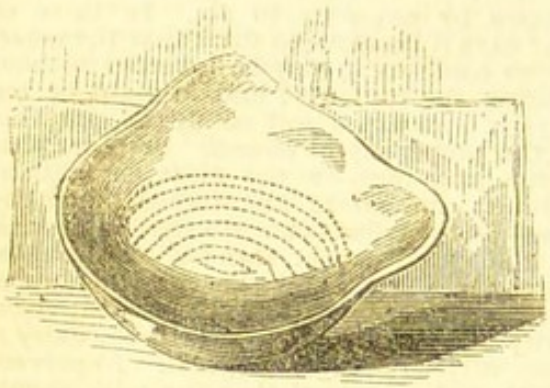
CREAM RATAFIA.—In a teacupful of thin cream boil two or three laurel or young peach leaves; after boiling three or four minutes, strain, and mix with it a pint of thick cream, add three whites of eggs, well beaten, and sweeten it with pounded loaf sugar. Put the whole into a saucepan,

and stir it gently in one direction over a slow fire till it be thick. Turn it into a dish, and when quite cold, serve with sweetmeats and comfits strewn over the top.

☞ Cream, 1 teacupful and 1 pint; laurel or peach leaves, 2 or 3; eggs, 3 whites; sugar, to sweeten.

CREAM SAUCE.—Put into a stew-pan a dozen white mushrooms, two or three sprigs of parsley, a bit of butter, and a little salt; stir them over a moderate fire, and when the butter begins to fry and to look clear, dredge in a little flour, add some good consommé, and a sufficient quantity of cream; stir altogether, and pass it through a hair sieve.

CREAM SKIMMER.—A dish made of stone-ware, for taking the cream off the milk. It is thin, circular, broad, and shallow, having on the near side a smooth edge



to pass easily between the cream and the milk, and at the upper side an indentation for the thumb of the right hand to rest in, and a mouth on the right side to pour out the cream from into any other vessel. At the bottom are a number of small holes, to allow the milk to pass through, and leave the cream pure and thick in the skimmer.

CREAM SNOW.—Mix a pint of cream with three ounces of pounded loaf sugar, the whites of two eggs, and a tablespoonful of orange-flower water; whip the mixture, and as the snow or froth rises, taste it with a spoon, and place it into a cullender, that the liquid may run off. This is chiefly used to put on cakes, pastry, &c.

☞ Cream, 1 pint; sugar, 3ozs.; eggs, 2 whites; orange-flower water, 1 tablespoonful.

CREAM TOAST.—Cut French rolls into slices of about a quarter of an inch thick, lay them in a dish, and pour a mixture of equal parts of milk and cream over them; strew them with sifted sugar and pounded cinnamon; turn them often till they are soaked through, and remove them with a slice or skimmer. Have three or four eggs ready beaten, put the slices into this, and then fry them in clarified butter till they are of a good brown colour. Drain the butter thoroughly from them, strew sugar on them, and serve.

CREAM, TO PRESERVE.—Boil the cream for two or three minutes, add half its weight of powdered loaf sugar; stir the whole well together, and put by in bottles closely corked. It will thus continue good for many weeks.

CREAM TRIFLE.—Put into a shallow dish half a pint of white wine, the peel of a lemon rubbed in sugar and scraped, a pint and a half of cream, and a quarter of a pound of powdered loaf sugar; whisk the whole together in a dish, and take off the froth as it rises. Have ready a glass dish, in which are six sponge biscuits, twelve ratafias, and six macaroons steeped in wine. Pour a boiled custard over the biscuits, then cover the whole with the whisked cream.

☞ White wine, ½ pint; lemon-peel, 1; cream, 1½ pint; sugar, ¼lb.; sponge biscuits, 6; ratafias, 12; macaroons, 6; custard, sufficient.

CREAM, WHIPPED.—Sweeten with powdered loaf sugar a quart of cream, and add to it a lump of sugar which has been rubbed upon the peels of two lemons, or flavour it with orange-flower water, or any other agreeable essence. Whisk the cream thoroughly in a large pan, and as the froth rises, take it off, lay it upon a sieve placed over another pan, and return the cream which drains from the froth, till all is whisked; then heap it upon a dish, or put it into glasses. Garnish with thinly pared citron, cut into any fanciful shape, and serve.

CREAM OF TARTAR.—A compound of potash with tartaric acid. In its impure state, in which it forms a gray or brown concretion, it is known by the name of argol or winestone, and is formed inside of the casks in which new wine is kept. The coloured, impure, crude tartar is purified and dissolved, and the solution gradually evaporated; in this process crusts form on the surface of the solution, which are successively skimmed off; hence the name of "cream of tartar."

CREAM OF TARTAR WATER.—Put a tablespoonful of the powder into a quart jug, with some thinly pared lemon-peel, and an ounce of gum arabic; pour boiling water upon it; let it stand for some hours, and sweeten to taste. Draughts of this beverage, taken two or three times a day, are found very beneficial in cases of dropsy.

CREAMS, VARIOUS.—See ALMOND, APRICOT, BARBERRY, CALEDONIAN, CHOCOLATE, COCOA, COFFEE, CURRANT, DAMSON, GINGER, ITALIAN, LEMON, ORANGE, PINEAPPLE, RASPBERRY, RICE, STRAWBERRY, TEA.

CREDIT.—The term used to express the trust or confidence placed by one individual in another, when he assigns him money, or other property, in loan, or without stipulating for its immediate payment. The party who lends it is said to give credit, and the party who borrows to obtain credit. The most usual way of obtaining credit is by purchasing commodities on the condition that they shall be paid for at some future time. When the produce is purchased it is usual for the buyers to give their "acceptance" to the sellers for the amount, payable at the period when the credit is to expire. This bill or acceptance is paid away by the receiver, or converted into cash by being discounted; by this means both parties have transacted a certain amount of business upon trust with the same facility as if it had been through

the medium of cash. Credit is one of the necessities of commerce, for if all trade were transacted for ready money only, the commercial operations of the country would be confined to the narrowest limits. On the other hand the facility with which credit may be obtained leads to many evils. Improvident and reckless persons frequently avail themselves of the privilege only to abuse it, and to enter into pecuniary obligations without the slightest intention of meeting them. In the ordinary course of commercial transactions, it is always possible for a person taking credit to make provision for payment at a stipulated time. And in order to effect this the more certainly he should regulate his payments in such a manner that they do not fall too heavily at one and the same time. Thus, for instance, if there be a bill falling due on the 4th of January for a large amount, no other bill should be made due upon that day, but a few days' interval allowed before the following payment falls due, to allow for any contingency, and to give breathing time, as it were, between one payment and the other. On the whole, credit is a material assistance to persons in business, especially young beginners; and a person who is in good credit is regarded in as favourable a light as though he actually possessed so much cash. But when from irregular payments or an uncertain mode of conducting business, further credit is denied to a trader, from any one quarter, the circumstance soon becomes generally known, and causes other creditors to withhold the same privilege, thereby fettering the operations of the trader and compelling him at last to relinquish his business altogether. Credit in connection with personal and household expenses will be found to be treated of under the head of CASH.

CREOSOTE.—A peculiar liquid, manufactured from wood tar. It is a colourless and transparent fluid, heavier than water, of an unpleasant odour, and a very pungent and caustic taste. It is employed as a medicine in several diseases of the organs of digestion and respiration, and in many other complaints, but with no very satisfactory results. Externally, it is applied in various chronic diseases of the skin, sores of different kinds, scalds, burns, and wounds. Dissolved in rectified spirit, it forms a useful and popular remedy for toothache ensuing from decay. It is also an antiseptic. A few drops in a saucer, or on a piece of spongy paper, if placed in a larder, will effectually drive away insects, and preserve the meat several days longer than it would otherwise keep. A small quantity added to brine or vinegar is commonly employed to impart a smoky flavour to meat and fish.

CRESS, CULTURE OF.—This plant which is known both as American and French Cress, is a small plant growing in almost every part of Great Britain. It is aromatic and pungent, but rather bitter, and is usually cultivated for winter and early spring salad. A small quantity of cress eaten with oil before dinner, is said to be an excellent digestive.—See AMERICAN CRESS and WATER CRESS.

CRESS VINEGAR.—Dry and pound half an ounce of the seed of cress, pour upon it a quart of the best vinegar, and let it steep for ten days, shaking it up every day. It will be found suitable for salads and cold meats.

CREST.—In heraldry, the highest part of the ornaments of a coat of arms. Crests were formerly considered great marks of honour, because they were only worn by heroes of known valour, or by such as were advanced to some superior military command, in order that they might be the better distinguished in an engagement. The crest formerly was placed upon the helmet *within* the wreath, not *upon* the wreath, as described in modern times; or might be issuant from a ducal or other coronet, or placed on a chapeau; and, although governed by the same laws as paternal arms with respect to hereditary masculine descent, it does not necessarily have any allusion to, or derivation from the bearings upon the shield. The crest represented without the armorial shield is usually placed on a wreath, or from a coronet, as the case may be, without the helmet or lambrequin. In social practice, certain crests are significant of lineage, and are inseparably annexed to individual families, but, generally speaking, although they are hereditary, a greater latitude is allowed respecting them than any of the essential parts of armoury. They are looked upon somewhat in the nature of devices, and accordingly are varied by the caprice of individuals; so that the sons of the same family often wear different crests.—See ARMS, COAT OF; HERALDRY; MOTTO, &c.

CRIBBAGE.—A game with cards which is not only amusing, but also reckoned useful to young people, in advancing the science of calculation. It is played with the whole pack of cards, generally by two persons, and sometimes by four. The number of cards forming a hand for this game varies, but is usually either five or six.

METHOD OF PLAYING:—The progress of the game is marked by a board having sixty-one holes, he who can first succeed in counting these being the victor. The cards are cut for deal, the lowest dealing. Five cards are dealt to each player, out of which two are to be thrown by each player, to form the "crib," which always belongs to the dealer; next, the adversary is to cut the remainder of the pack, and the dealer to turn up and lay upon the crib the uppermost card, for which, if a knave, he is to mark two points. The eldest hand then plays a card, which the other should endeavour to pair, or find one the pips of which reckoned with the first will make *fifteen*; then the non-dealer must play another card and try to make a pair or fifteen, provided the cards already played have not exceeded that number; and if so he should then endeavour to make *thirty-one*, or the nearest possible number under that.

When the party, whose turn it may be to play, cannot produce a card that will make thirty-one, or come under that number, he is then to say "go" to his antagonist, who, thereupon will be entitled to score one, or to play any card or cards he may have in his hand that will make thirty-one or under; if he can make thirty-one he scores two points, but if any number under, only one point. Such cards as remain after this are not to be played, but each party, having during the play scored his points gained, they must proceed to count their hands, the non-dealer first, and the dealer afterwards, who also reckons the crib, and both parties include the turned-up card. The points are counted as follows:—

For every fifteen	2	points.
Pair, or two of a sort . .	2	,,
Pair-royal or three of a sort	6	,,
Double pair-royal or four of a sort	12	,,
Knave of the turned-up suit	1	,,

Flush the same number of points as there are cards.

RULE 1. The opposing parties cut the cards, to determine who shall be the dealer; the lowest card secures it. The ace is the lowest. 2. In dealing, the dealer may discover his own cards, but not those of his adversary—who may mark two, and call a fresh deal. 3. Should too many cards be dealt to either, the non-dealer may score two, and demand another deal, if the error be detected previously to taking up the cards. If he do not wish a new deal, the extra cards must be drawn away. When any player has more than the proper number of cards in hand, the opponent may score four, and call a new deal. 4. If any player meddle with the pack after dealing, at the period of cutting it for the turn-up card, then his opponent may score two points. 5. If any player take more than he is entitled to, the other party should not only put him back as many points as are overscored, but likewise take the same extra number for his own game. 6. If any player neglect to count what he is entitled to, the adversary may take the points so omitted. 7. The non-dealer in five-card cribbage, scores three points as an equivalent. 8. Flushes and sequences reckon according to the number of cards forming them.

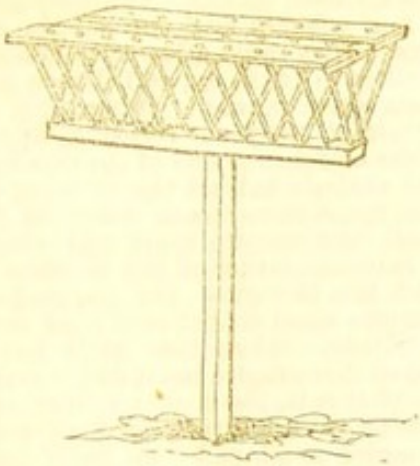
Maxims for laying out the crib-cards.—In laying out cards for the crib, it is requisite that every player should consider not only his own game, but also that of his adversary, and he should therefore throw out such cards as will leave him a good hand, and embarrass his opponent. When any player possesses a pair-royal, such as three twos, three threes, &c, it is generally advisable to lay out the other cards for crib, unless it belongs to the adversary. A player should generally lay out close cards for his own crib, with the hope of making a sequence, *i.e.* cards that follow each other consecutively, as one, two, three, four, five, &c. He may also throw out two of a suit, in expectation of a flush; or any that of themselves amount to fifteen, or such as combined with others will make that number, except when the antagonist be nearly home, when it is expedient to keep such cards as will prevent him from gaining at play. A method directly opposed to this, should be pursued in respect to the adversary's crib, which each player should endeavour to baulk, by laying out those cards that are likely to prove to advantage, unless such a stage of the game has arrived, when it is of more consequence to keep in hand cards likely to tell in play, or when the non-dealer would be either out by his hand, or his reason for judging the crib of little moment. *A king is the best card to baulk a crib*, as none can form a sequence beyond it. Low cards are generally the most likely to gain at play; the flushes and sequences, particularly if the latter be flushes as well, are generally eligible hands, as thereby the player will often be enabled either to assist his own crib or to baulk his opponents.

Terms used in Cribbage.—Crib: The cards thrown out by each player, which belong to the dealer. *Pairs:* Two similar cards, as two aces, or two kings. *Pairs-royal:* Three similar cards, as three tens, or three knaves. *Double pairs-royal:* Four similar cards, as four fives or four sixes. *Fifteens* are reckoned in a variety of ways and from any number of cards; thus nine and six,; four, three, and eight; one, five, seven, and two, or any other combination by which fifteen can possibly be made. *Two for his heels:* Is when the knave of any suit is turned up by the dealer, who thereupon scores two points. *One for his nob*: Is when a hand possesses a a knave of the same suit as the turned-up card, and for which one point is scored by the person who holds it.

CRIBBING MUZZLE. — Many horses, from a deranged state of the stomach or other causes, contract a bad habit of biting and chafing at the crib. This species of disease not only destroys the horse's teeth but interferes with his system generally, and renders his disposition restless and fretful. Many methods are adopted for restraining this injurious propensity, but the most efficient is the cribbing muzzle. It consists of a kind of rack, with two iron spurs joined at each extremity, and curved to receive the muzzle. The spurs are about three-fourths of an inch broad, the space between them is wide enough to receive the lips, and let them seize the corn and hay, but so narrow that it will not admit the teeth. The horse can eat well enough; he can reach his food with his lips, but cannot waste it with his fore-teeth. This muzzle is better than a strap, which disposes the horse to swelling of the head, and shortens the animal's wind.

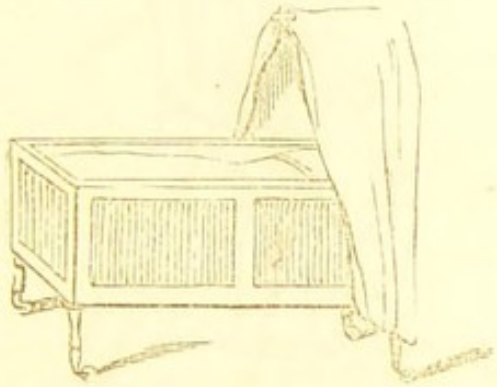
CRIB FOR CATTLE.—A receptacle for fodder, of the form represented in the engraving. Cattle cribs are mounted on posts, which turn round on a pin, so that when the cattle have well trodden the litter on the two opposite sides, in standing to eat from the crib it is turned half round, for them to tread

and manure the ground in an opposite direction; so that by this simple contrivance not



only are the cattle fed but the earth enriched and renovated at the same time.

CRIB FOR CHILDREN.—A kind of bedstead almost universally used in the present day for children. Cribs are usually supported on feet of such length that the height of the crib may be the same as the mother's bed, close to which it is placed in the night; one side being made to slide out



in a groove in the uprights. The sides are frequently filled in with cane-work, or small balustrades; but care should be taken to have the crib also lined inside, to prevent the child's fingers from being hurt by fixing them in the crevices. They are put on castors, to render them easily moveable from place to place, and may be made to take to pieces, so as to pack up easily for travelling.

CRICKET.—A well-known out-of-door amusement, of great antiquity, and essentially Anglo-Saxon in its origin. The object of the game is to gain the greatest number of runs, and this is done by the strikers. Each side having been once in, and once out, the first innings are calculated; but in most matches other innings are played. The scorers keep the account of runs to each striker, separately for each inning. The side that succeeds in obtaining the greatest number of runs wins the game. The players consist of the "in" party and the "out" party. When the preliminaries have been settled the in party sends the batsmen to the wicket, and the out party takes the field with the bowler to give the balls. When, from the ball being caught, or from the wicket being struck down, or from any other cause, according to the rules of the game, batsmen are in succession thrown out, those of the opposite side take their places in exactly the same manner. When each side has had two innings, the runs are counted, and the party having the greatest number is declared the victor.

Cricket is played in two distinct forms; one is called single wicket and the other double wicket. *Single wicket* is played by any number of persons, but generally five are on each party or side. Three straight rods or *stumps*, twenty-seven inches high, are stuck in a row in the ground; on the top of the stumps are laid two pieces of wood called the *bail*, and so placed that they will readily fall off, if the stumps be hit by the ball. This apparatus is called the *wicket*. At the distance of four feet four inches in front of the wicket is a mark on the ground called the *popping crease*. In a straight line with the wicket is a mark on the ground called the *bowling crease*. A person is selected from the party as a bowler, and must now begin to play. The "striker," with his bat, is the protector of the wicket; the opposing party stand in the field to stop or catch the ball, and the bowler, who is one of them, takes his place by the side of a small baton or stump, set up for that purpose twenty-two yards from the wicket, and thence delivers the ball, with the intention of beating the wicket down. If the ball is struck by the bat, and down into the field beyond the reach of those who stand out to stop it, the striker runs to the stump at the bowler's station, which he strikes with his bat so as to throw off the bail, and then returns to his wicket. It is in these particulars that single wicket forms a distinct mode of playing. *Double wicket* is the more general and popular form of playing this game, as it admits of a larger number of persons partaking of the sport, and excites a more lively and interesting contest. At this game the number of players should be twenty-two, eleven on each side. The two parties toss up for first innings, and two players of the winning party go in, one at each wicket. The out party disperse in various directions about the field, to catch or stop the ball when struck by the batsman. One of the bowlers commences bowling either four or six balls (as may previously have been determined), his object being to bowl down the wicket; if he succeeds in this, the batsman retires from the game, and another of his party takes his place. If, however, the batsman strikes the ball, he and his partner commence running to each others' wicket and back again, until the opposite party gets possession of the ball, and one run is scored towards the game every time they change wickets. The field is in charge of the party to whom the bowlers belong, and their duties are to catch the ball when either struck or missed by the batsman, and to recover it when struck, as quickly as possible, and throw it in. If the ball be missed by the batsman, he remains at his wicket and the ball is returned to the bowler. If the ball be struck, and to such a

distance that the batsman thinks he could run to the bowling crease, touching it with his bat, and return to the popping crease before the ball can touch the wicket, he does so, and this is called a *run*, and counts one towards the game, and for each run that is made one is counted.

The following are the chief *laws of the game*:—If the bowler in delivering the ball raise his hand above his shoulder, the umpire must call "no ball," and this is not reckoned accordingly. If he toss the ball over the head of the striker, or so wide that it cannot be played at, the umpire shall allow one run to the in-party, and it shall be put down to the score of wide balls. When the umpire cries "wide ball," one run only is reckoned, and the ball is considered dead. If the bowler deliver a "no ball," the striker may play at it, and get as many runs as he can, and shall not be put out except by running out; if no run be obtained by any other means, then one run must be scored; in the event of a change of bowlers, two balls only can be allowed for practice. If a bowler bowl one ball, he shall be compelled to bowl four. The batsman is out if the bail be bowled off; or if a stump be bowled out of the ground; or if, when striking, or at any time when the ball is in play, both his feet be over the popping crease, and his wicket put down, except his bat be grounded within it; or if, when striking, he hit down his wicket; or if, under pretence of running, or otherwise, either of the strikers prevents a ball being caught, the striker of such ball is out; or if any part of the striker's dress knock down the wicket; or if he touch or take up the ball while in play, unless at the request of the opposite party; or if, with any part of his person, he stop a ball which, in the opinion of the umpire at the bowling wicket, would have gone straight to the striker's wicket and hit it. If the players have crossed each other, he that runs for the wicket which is put down is out. When a ball is caught, no run is reckoned. When a "lost ball" is called, the striker is allowed six runs; but if he can run more than that number before "lost ball" is called, he may count all that have been run. After the ball is in the wicket-keeper's or bowler's hand, it shall be reckoned dead; if, when the bowler be about to deliver the ball, the striker at his wicket goes outside the popping crease, the bowler may put him out. If the striker be hurt, he may retire from his wicket, and return at any time during that inning; or some other person may stand out for him, but not go in. No substitute is permitted to bowl, keep wicket, stand at, or cover the point, or stop behind in any case. If a fieldsman stop a ball with his hat, it shall be reckoned dead, and the opposite party may add five to their score. When the ball has been hit, the striker may guard his wicket with his bat, or any part of his body except his hand. The wicket-keeper must not take the ball for the purpose of stumping out, until it has passed the wicket; if any part of his person be over or before the wicket, should the ball hit it, the striker shall not be out. The umpires must stand at six yards from the wickets; all disputes are settled by them, each at his own wicket. The umpires shall pitch fair wickets, and the parties toss for innings. They must allow two minutes for the striker to come in, and fifteen minutes between each inning. When the umpire calls "play," the party refusing to respond loses the match. If one of the bowler's feet be not entirely behind the bowling-crease, within the return-crease when he delivers the ball, the umpire must call "no ball." If, in running, either of the strikers fail to ground his bat over the popping-crease, the umpire shall deduct two runs for every such failure. When four balls have been delivered, the umpire must call "over," but not until it is in the wicket-keeper or bowler's hand; it shall then be considered dead. The umpire must call "no ball" instantly upon delivery; "wide ball" as soon as it passes the striker. In playing the game of cricket, each person engaged has his especial duty to perform. The *batsman* should stand as close to the block-hole as possible, and as

near the popping-crease as he can, so as to be on his ground. When the word "play" is called, he should take up a firm position on his right foot, with his left shoulder for-

ward, and the left elbow well up. He should endeavour to hit any ball that comes within his range, noticing particularly how the ball pitches, so that he may guess how far it is

likely to rise, and judge whether it is worth while to hit it hard, and so get a run, or to block it. When blocking, never allow the tip of the bat to come before the handle, as in that case the ball will rise in the air, and probably cause the bowler to catch it. One of the most effective defences of the wicket is called the draw, which is adopted when a ball pitched some feet short in length comes within the line of the leg stump. In this the bat is drawn up with its point to the ground in a perpendicular line, and the top of the ball caught a little above its centre. In striking generally, keep the bat as nearly perpendicular as possible, by doing which more of the wicket is covered than when bearing either to the right or the left. In forward play, it is not safe to play

the bat above four feet from the pitch of the ball. Concurrently with observing these precautions, the general aim of the batsman is to strike the ball in such a manner as to send it to a distance in the field.

The *bowler* should have a quick eye, a strong arm, and a dexterous hand. The ball should be delivered with a run, with one foot in; and should be held with the seam across, so that the ends of the fingers touch it. The object of the bowler being to get out the striker by sending the ball through the wicket, he should from time to time change his style of bowling, now swift and now slow, according as his judgment dictates. It is best to bowl slowly at first, then twisting, then straight, then quick, then quick and twisting, then quick and straight, and so on. In slow bowling, the ball should be pitched about three yards and a half from the wicket; in quick bowling, about five yards. The *wicket-keeper* is placed about a yard and a half behind the wicket, and stands with his left foot forward, and with his eyes and hands ever ready for action. It is the wicket-keeper's office to see that all the fieldsmen are at their proper posts, and also to direct their motions, so as to guard against the peculiar play of each batsman. Should the batsman leave his wicket unguarded, in running, it is the especial duty of the wicket-keeper, having the ball returned to catch it, and knock down his wicket. *Short-slip* stands within three yards of the wicket-keeper on the right side. His duty is to secure the ball when it passes on one side of the wicket-keeper, and to take his place when he runs after the ball. *Long-slip* stands about twelve yards from the wicket, and a little behind it, and covers both slip and point. He must be extremely apt at catching the ball; for, if it passes him, there may be a run for it, and many runs gained. *Long-field on*, and *long-field off*. These stand opposite to each other on different sides of the field, and sometimes vary their places. They must be able to throw the ball up quickly and straight to the wicket-keeper. *Mid-wicket* should stand about ten yards from the bowler's wicket off-side, but a little in advance. This is the most important post in the field, and ought to be well kept; he takes the bowler's place if necessary. *Cover-point* should stand between point and mid-wicket off-side, a little removed backwards, so as to cover point. *Point* is placed about seven yards from the striker, in a line a little in advance on the off-side. He should be very nimble and active; able to catch well, and not backward in jumping a few feet into the air to catch the ball. *Long-stop* stands twelve yards behind the wicket, to throw up the ball when it has passed the wicket-keeper. He should be active and able to throw the ball a long distance. *Leg* stands a little beyond the wicket, and about fifteen yards from it. It is his duty to back up balls from the off-side, from whatever direction they may be thrown.

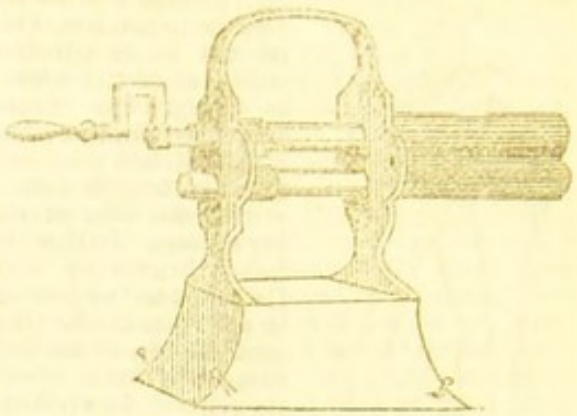
Attention to the following hints in connection with the principal operations of the game will be found advantageous:—*Hitting.*—In striking the ball, the hands should be pretty close together, and yet free from each other; the ball should be struck about six inches from the end of the bat, and sent backward over the field, if possible beyond mid-wicket, long-field off, or long-field on. Practise well the method of hitting upright, and keep the handle of the bat well inclined towards the bowler. When balls come five or six inches wide, cross your left leg over without moving your right, and you may hit all such balls. Never step on to strike it you can possibly avoid it. The best balls to meet are those that come fast within the popping-crease; these should be struck promptly and with vigour, and sent in the right direction. *Bowling.*—The bowler should endeavour to discover the weak stump of the batsman, and play against it. He should give fair balls; a contrary practice being considered ungentlemanly play. *Running.*—When the ball has been struck in such a direction as to appear probable to the striker that a run can be made, he should be ready to run immediately—his partner watching his eye and intention at the same instant,

and with the same purpose. Both should then start off with the bats kept outside of the opposite partner. Look towards the wicket it is your intention to save from the returned ball, and ground your bat by a long reach as soon as you can. Run rapidly the first time, and try to get a second, but in this be extremely cautious, and do not act precipitately, for it is better to sacrifice a run than endanger the wicket. Do not be in too great a hurry to run as soon as you take your inning, but play a little first, and wait till a favourable opportunity occurs. *Catching or stopping.*—Step well to the ball in catching, and receive it easily, by yielding to rather than opposing it. Stop the ball, by meeting it full; if it be coming swiftly put down the hands quickly; if with a bound, wait, step in, or draw back, as may be necessary. Throw up the ball to that wicket from which the striker is farthest, at about the height of the bail, so that the wicket-keeper may catch it easily. It is a great loss of time to run with the ball in the hand. The *dress* to be worn when playing cricket is a matter of some importance, both as regards personal comfort and appropriateness for the sport. A light cap with a peak which shades the eyes, without intercepting the sight, is the best for the head. A Guernsey jacket may be worn when playing, and a flannel one provided to slip over that when the game is finished, to prevent taking cold. A pair of woollen trousers, made moderately tight but free for running, and kept up by a belt at the waist. The feet should be encased in worsted socks, and the shoes have hard soles, with a few spikes let in, to prevent the feet from slipping. Books:—*Lillywhite's Guide*, 1*s.* 6*d.*; *Wykhamists' Practical Hints*, 1*s.* 6*d.*; *Tyas's Handbook*, 1*s.*; *Denison's Companion*, 2*s.* 6*d.*; *Nyren's Guide*, 1*s.* 6*d.*

CRICKETS.—For destroying these well-known and noisy visitants of the household, there are several methods. If dishes or saucers with the grounds of tea or beer in them are dispersed about the floor where they usually appear, large numbers will be found dead the following morning. Scotch snuff dusted upon the holes and cracks whence they come out, will also have the effect of driving them away.

CRIMPING FISH.—This process is performed as follows:—When the fish is alive or newly caught, and before the muscles are stiffened by the rigid contractions of death, cut as many transverse sections across the body as are desirable, and throw it into cold and hard water. The contraction commences in about five minutes, but if the fish is large it will take half an hour to complete. If the fish is newly caught and very lively, it should be stunned by a blow on the head. Gashes across the cheek are frequently made in crimping, which improves the appearance of the fish when served up, and facilitates the carving. The object of crimping is to retard the stiffening of the muscles, and then, by the immersion, to excite it to the greatest possible degree; by which means the fish becomes firmer, and keeps longer.

CRIMPING MACHINE.—An implement employed in the laundry in the getting up of delicate and fragile textures, which require plaiting or fluting. This simple operation consists of placing the articles between



the grooved rollers seen in the illustration, when by turning the handle, the desired effect is produced with great rapidity and regularity.

CRINGLES.—Rub a quarter of a pound of butter in one pound of flour, and two ounces of sugar; set sponge with half the flour, two spoonfuls of yeast, and a quarter of a pint of milk; when risen, add the other to it, with two eggs and a second quarter of a pint of milk, to bring it to a light dough; roll it out the thickness of your finger, make in the shape of the figure 8, let it rise on the tins before baking; when baked, moisten them over with milk and sugar mixed.

☞ Butter, ¼lb.; flour, 1lb.; sugar, 2ozs.; yeast, 2 tablespoonfuls; milk, ½ pint; eggs, 2.

CRINOLINE.—A species of stiff petticoat recently adopted by females, for the purpose of amplifying the skirts of their dress. The practice of wearing crinoline has been greatly ridiculed in many quarters, as being inconvenient and extravagant, and failing to add a single grace to the person. It is certain that this style of costume does not become all figures; short stout females, especially, appearing very ungraceful in it. Several diseases are also laid to its charge, such as rheumatism, paralysis, cramp, &c., induced by the warmth being kept away from the lower part of the person, and the cold draughts of air admitted. Several accidents have also originated with its use, and many ladies while passing the fire, have set their dresses alight and been dreadfully burned. With regard to the latter, however, the discovery has just been made that the mixing of a little alum with the starch or other material used for stiffening the crinoline, will prevent its ignition.

CROCHET-WORK.—Books: *Mee's Crochet Explained*, 1*s.* 6*d.*; *Lambert's Crochet Sampler*, 4*s.*; *Ronaldson's Crochet Work*, 2*s.*; *New Crochet D'Oyley Book*, 1*s.*; *Designs for Crochet Work*, 5*s.*; *New and Elegant Crochet by a Lady*, 2*s.* 6*d.*; *Riego's Crochet Book*, 1*s.*; *Warren's Instructions*, 1*s.* 6*d.*; *Ladies' Book of Crochet*, 2*s.* 6*d.*; *Cooper's Crochet*, 1*s.*; *Branchardieres's Crochet Book*, 1*s.*

CROCUS. — A dwarf hardy bulb, with grassy leaves and showy flowers. The crocus is popularly known as a spring flower, peeping up almost from amongst the snow. The spring crocuses come into bloom some time in February, and continue more or less in bloom until the beginning of April; this succession of bloom being obtained by earlier and later planting, and placing them in different positions and aspects. No flowers are more easily cultivated; they grow in any ordinary garden soil, and multiply abundantly by off-sets. The bulbs should be planted in October or

November, about two inches below the surface, in rows or patches. They are suitable as edgings for flower-borders, or they may form beds by themselves; in either case, the bulbs should not be inserted singly, but are far more effective if put in groups of six, twelve, or even more, the groups being proportionally distant. There is another species of crocus, the "autumn-bloomers," comprising some very beautiful kinds. They bloom at the end of October and through November, and are equally useful as ornaments with the spring crocuses, in consequence of their blooming when other flowers are closed. They should be planted in June and July, and in other respects require a similar treatment to the ordinary crocus.

CROTON OIL. — The expressed oil of the seeds of the *croton tiglium*, a plant growing from fifteen to twenty feet high, and common to most parts of India and the East. The oil is of a yellow amber colour, of a dull, rank, and heavy smell, and an acrid burning taste, which clings to the tongue and gullet for many hours after. In small doses, croton oil is a powerful drastic purgative; and in larger ones, an irritant poison, producing severe vomiting and inflammation of the coats of the stomach and bowels. When applied to the skin, beside its purgative action which it produces by absorption, it excites irritation, pustules, and even blisters. The full dose of croton oil is from one to two drops, and it is considered a highly valuable drug in all cases requiring an immediate action on the bowels. Its antidotes are, emollient drinks, opium, ammonia, and the hot bath.

CROUP, or inflammation of the lining membrane of the trachea or windpipe, is, both from the rapidity with which the disease runs its course, its situation, and from the singular characteristic developed in its career, one of the *most* fatal of all the maladies to which childhood is subject. Croup, though occasionally attacking adults, may in general be considered as a disease almost peculiar to early youth, and more especially to children between the ages of three and ten years, though not unfrequently it attacks infants at the breast. Those most subject to croup are children of a fat, dull, and sluggish temperament; and those most exempt from the disease, the thin, spare, and vivacious.

Symptoms. — Croup generally commences with a hoarse wheezing noise in the throat, at first heard during sleep, and followed soon by restlessness and a short dry cough, with tightness about the throat, indicated by the child's involuntarily placing its hands there. As the difficulty of breathing increases, the face becomes flushed and anxious, and the veins of the throat stand out, knotted and large; the voice grows shrill, and has a peculiar metallic sound, and ultimately assumes that *crowing* noise that has given the name to this disease. The cough, at first dry, is after a time attended with a tough ropy expectoration that hangs to the fauces, and causes great inconvenience and pain to expel; with these symptoms there is great heat, thirst, and considerable fever; the disease almost always proving fatal — when unrelieved — within three days. The peculiarity of croup over every other disease, is the formation in the windpipe of a "false membrane" of coagulable lymph, which gradually closing up, prevents all passage of air, and the child dies from suffocation; the false membrane hanging in the trachea like the finger of a glove.

Treatment. — The symptoms being so urgent and the disease so rapid, the treatment must consequently be immediate and energetic; this consists in the first place of the hot bath, which is to be repeated several times during the rest of the treatment, followed, in the first instance, by an emetic of equal parts of antimonial and ipecacuanha wines, and a hot poultice of a mixture of flour and mustard, applied for about five minutes to the throat. One of the following powders is next to be given every hour; the mustard removed and a blister placed on the spot; and three or four leeches, according to the age of the child, applied along the windpipe, and below the blister. Take of

Lump sugar .	1 scruple—powder.
Calomel . .	12 grains.
Tartar emetic	4 grains.

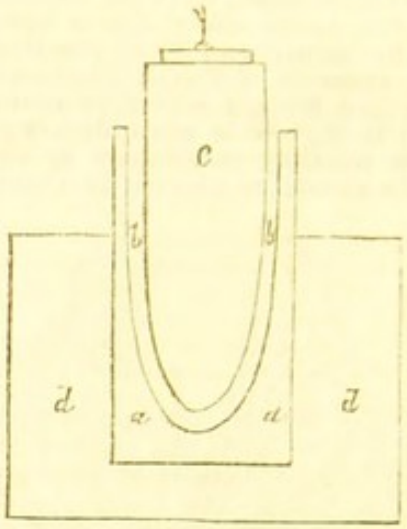
Mix thoroughly, and divide into twelve powders, one to be placed on the child's tongue as directed. Every five or six hours the bowels are to be acted on by a dose of senna-

tea sweetened, and when the blister rises, it is to be kept open by a dressing of savine, or issue ointment. Where the symptoms are severe, it may be necessary to repeat the emetic every hour, for two or even three times, before resorting to the powders, and even to repeat the bleeding, which is occasionally done by opening the jugular vein. In extreme cases, and when medical aid is powerless to arrest the disease, the only means that offers a chance of saving the child's life, is by opening the windpipe and inserting a tube, through which the patient can breathe, till nature has an opportunity to excite absorption, and the medicines time to work a beneficial action on the system.

CROWDED ASSEMBLIES.—The foundation of many painful and fatal maladies, date their origin from attendance at some crowded assembly. This is particularly the case with balls, which are attended by ladies thinly clad, and who, after overheating themselves by dancing, recklessly expose themselves to draughts, or go out into the open air without any other covering than that worn in the assembly. The shock which the system receives under these circumstances, is frequently productive of those violent colds which are in every case difficult of remedy, and which in some instances lay the foundation of consumption and other incurable complaints. These evil consequences may be avoided by a little care and attention. When persons become heated in crowded assemblies, they should never go near open windows and doors to cool themselves, but gently promenade up and down the room, until the blood has been restored to its equable temperature. And on no account should ladies, barely clad as they are, walk even from the door of the assembly to their carriage, without enveloping their shoulders in a warm shawl or mantle, covering their heads, and holding a pocket-handkerchief to their mouths. These simple precautions will, under ordinary circumstances, prevent the ill effects alluded to.

CROWDS, TO PREVENT ACCIDENTS IN.—The greatest danger to be feared in a crowd, is from the excessive pressure on the chest, which stops the action of the lungs and viscera, and produces what is known as suffocation. To avoid this danger, therefore, persons should keep their arms straight down, and present the *sides of their bodies* towards that quarter whence the pressure comes from, and by this means the chest will be effectively protected. It is especially necessary for persons to preserve their presence of mind, and also their tempers; and instead of struggling with the crowd and vainly attempting to ward off the pressure, it is much better to go with the throng, and thus as it were to be carried involuntarily onwards. All persons who have a weakness of the chest, or who are timid in any way, should never mingle with a crowd under any circumstances.

CRUCIBLE.—A conical-shaped vessel made of clay, employed to hold substances while they are submitted to a strong heat. There are two ways of making crucibles; one method is by forcibly shaping the ingredients in a double mould, as seen in the engraving: *a a*, is the external steel mould, *b b*, clay or composition for forming the crucible; *c*, internal steel mould; *d d*, wooden stand; *e*, cord or chain to withdraw the internal mould or plug. Another crucible is made



by pouring the "*slip*," of the consistence of cream, into porous moulds made of a species of stucco. As soon as the crucibles, formed by either of these methods, have become perfectly dry, they are ready for baking in a potter's kiln. For the manufacture of crucibles, a clay should be chosen which is free, or nearly so, from lime.

CRUET STAND.—A receptacle for the usual condiments of the dinner table, which is a more convenient form of placing them on the table, and prevents the cruets from being upset and broken. They are made in every variety, from the simplest to the most costly. When they are plated or made of silver, they may be cleaned with a little damp whiting, a brush, and a leather.

CRUMB CAKES.—Keep a bowl or pitcher with some milk in it, and from time to time throw in the crumbs of bread which break off when it is sliced, and also the dry pieces left on the table. When a sufficient quantity have been collected, break the mixture into a mass, add an egg, a little salt and soda, and a few tablespoonfuls of flour; form into cakes, and bake till brown.

CRUMB CLOTH.—A covering put over carpets to preserve them and to prevent any dirty or greasy particles from penetrating and soiling the fabric. Although a crumb cloth does partially fulfil the purposes for which it is adopted, its employment is somewhat anomalous, as it is senseless to buy a handsome carpet first, and then cover it over afterwards so that it should not be seen; it also imparts a sensation of coldness and discomfort, bordering on inhospitality, which few visitors like to encounter.

CRUMB PUDDING.—Save all the crumbs left upon the table during the week, and add to these any waste pieces of bread. Put them into a basin with two ounces of treacle mixed up with them. Soak them in enough water to make them swell. Then tie them in a cloth and boil for half an hour.

CRUMBS FRIED.—Put into a frying-pan or saucepan a piece of butter; oil and skim it, pour it from the sediment, return it to the pan, throw in two or three tablespoonfuls of grated bread, keep stirring them constantly till of a clear yellow, and drain them before the fire.

CRUMPETS TO MAKE.—To a pound and a half of flour, add three pints of milk, two tablespoonfuls of yeast, and two eggs; mix the milk lukewarm with it, beat it into a batter, and let it stand till it rises in bladders on the top, then bake them on a polished iron with tin rims.

CRUMPETS, TO TOAST.—Warm both sides first, then toast them to a light brown colour on each side; lay them in a plate, and spread butter over them lightly on each side. When they are served, too many should not lie on each other, as it causes the undermost ones to eat like dough, and renders them more difficult of digestion.

CRUST FOR PIES, TARTS, &c.—The paste with which pies, tarts, &c., are made or covered. 1. (*Fine.*) From flour, 1lb.; sugar, ¼lb.; melted butter, ¼lb.; eggs, 3; milk sufficient. 2. (*Raised crusts for meat pies, &c.*) Flour, 1lb.; sugar, ¼lb.; lard, 6ozs.; eggs, 2. 3. (*Short.*) Flour, 1lb.; butter, 2ozs.; sugar, 2ozs.; eggs, 2, made into a stiff paste. If there is not a very cool larder where crust can be made, particularly in summer, the cellar, or some place of equal temperature, should be chosen; for while coolness is absolutely necessary, extreme cold is equally hurtful. Therefore, when the weather is hot, let every ingredient of which the crust is to be made be carried the night before into the place assigned for the operation. A feather brush ought to be used in making every description of crust, as it is impossible to spread flour over paste, either with the sifter or with the hand, as delicately as it ought to be done. When the flour is sifted, dust it slightly and nicely off with the brush; and if still too much, pass a wet feather over it, as nothing destroys the look or deadens the crust more than an unequal and heavy flouring. The state of the oven should be particularly attended to. Almost every oven has a temperature of its own. This should be ascertained, and bakings regulated accordingly, as too low or too high a temperature is almost sure to spoil even the best made crust.—See MACARONI PASTE, POTATO PASTE, PUFF PASTE, RICE PASTE, SUET PASTE, VENISON PASTY, PASTE, &c.

CRUSTS, TO GRILL.—*For cheese.*—Pull rough pieces from a new loaf, and brown them in the oven or before the fire. *For soup.*—Put the cut crusts upon a small wire gridiron over hot cinders, to crisp. When done, wet the inside with top-fat, and sprinkle a little salt over them. They may be served separately or added to the soup.

CRYPTOGRAPHY.—A Greek word signifying *secret writing*. Cryptographs are used by persons wishing to correspond with each other in a language that none but themselves can understand. For this purpose a form of *cipher* is devised by the aid of the alphabet and of figures, and arranged according to the preconcerted method of the parties concerned. One of these methods may be easily illustrated, thus:—Supposing the English alphabet, omitting the letter *j*, to consist of twenty-five letters; let them be arranged in a square thus:—

1	2	3	4	5	
a	f	l	q	v	1
b	g	m	r	w	2
c	h	n	s	x	3
d	i	o	t	y	4
e	k	p	u	z	5

Place figures over and at the right hand; represent every letter by two figures, by the intersection of a vertical with a horizontal row; and thus we find that 11 represents *a*; 34, *o*; 52, *w*; 14, *d*; and so on. Another method consists in writing a sentence in good English, but with an intention that only a few of the words shall convey the desired message, thus:—"I shall feel obliged to you, as reading alone engages my attention at present, if you will send me any one of the ten numbers of the *Dictionary of Daily Wants.*" The recipient, by the aid of some sort of key or clue previously agreed upon, selects the words, "I shall be . . . . alone . . . . at . . . . ten," as conveying the meaning, rejecting the rest. This is considered an excellent method, because, if the sentence constructed be really a sensible remark in good English, there may be no suspicion that any secret is involved. Another, of somewhat similar character, consists in writing a letter or paragraph, conveying the secret information, in a narrow column of several lines, and then increasing the column to double the width by adding to each line additional words which, though destroying the original sense, shall impart a new one. The following has been given as the postcript to a letter written on this principle:—

"Pray throw off those vain fears; expose not yourself to scorn, when there is no imminent danger."

Taking the left-hand part of this only, there is the warning,—"Pray expose not yourself to imminent danger." An infinite number of ciphers, in which figures, letters, and words are employed and transposed, may be devised. But it should be known that however ingenious the plan may be, a practised cryptographer can solve these mysteries by certain rules which he has laid down for his guidance; or, in other words, it is impossible for human ingenuity to invent a secret which shall not be discovered by another, who possesses the same kind of talent in a greater degree.

CRYSTAL PALACE.—This truly national exhibition is erected at Sydenham, in the county of Surrey. It may be approached either by the road or by the rail, the former occupying about an hour and a half from London, the latter from twenty minutes to half an hour. The building is divided into the lower story, the level of the floor of the main building, and the galleries. In the lower story are to be met specimens

of machinery in connection with the arts, manufactures, agriculture, &c. Ascending a flight of steps from these, the visitor finds himself in the main building. Here are to be seen numberless objects of interest and curiosity, sculptures, trees, flowers, and birds. In the centre is the great transept, where the interest of the building is chiefly concentrated; on one side of this is the large organ, and on the other the orchestra. Some thousands of seats are provided at this point, so that the visitor may admire at leisure the beauty of the building, and at the same time enjoy the music. On either side of the nave are situated the various courts. Amongst these are the Egyptian Court, containing the remains of Egyptian architecture, and many interesting selections associated with sacred history. The Greek Court, containing many beautiful specimens of Grecian art, and constituting in itself a school where the fundamental principles of architecture and every line of grace and beauty may be studied. The Roman Court, presenting a view at once instructive and interesting, of the domestic conveniences, costume, arms, &c., of the Roman people. The Alhambra Court succeeds to this; it is supposed to represent the interior of a Moorish palace, and is one of the most gorgeous and enchanting specimens of interior decoration which it is possible for the imagination to conceive. On every side exquisitely wrought and enriched surfaces meet the eye; the walls and ceiling are covered from end to end with rich arabesque work, the floor is adorned with mosaic pavements, and in the centre marble fountains are playing, surrounded by the most beautiful flowers. The Assyrian Court next claims attention, and is chiefly interesting as a collection of architectural and decorative specimens which have been recently dug out of the earth, where they have lain buried for many centuries. The visitor next proceeds to the Byzantine Court, in which are to be seen specimens of architecture extending from the fourth to the fifteenth century. The German Mediæval Court is devoted to examples of Gothic art and architecture in Germany during the Middle Ages. The English Mediæval Court, and the French and Italian Mediæval Courts have a similar object in view. The Renaissance Court affords many charming specimens of architecture and ornamentation, and represents the revival of the antique in Italy at the commencement of the fifteenth century. The Elizabethan Court presents us with examples of architectural beauties of the era indicated, and includes many monuments and effigies of an historical interest. The Italian Court affords an insight into the architectural specimens of a comparatively recent period. The Pompeian Court represents the interior of a villa in detail, giving a representation of the various apartments then in vogue. Each of the courts enumerated are arranged with an amount of care and accuracy, and at the same time on so simple a plan, that the meanest capacity cannot fail to comprehend the scope and intention of the various scenes represented. Having gone through these various courts, two flights of stairs take the visitor into the gallery assigned to paintings and photographs. Many pictures of excellence are displayed along the walls, while the gallery of photographs representing with remarkable fidelity scenes and faces more or less known and interesting to the spectators, becomes an especial point of attraction. Many other attractions, such as groups of figures, and exquisite specimens of sculpture, are scattered about the building. The park and gardens, increasing in verdure and beauty year by year, will alone repay the visit. The tower, from which the country for many miles round may be distinctly seen, is also a favourite resort for the young and active. Many amusements and pastimes are from time to time devised, in which the visitors have the privilege of taking a part. Concerts are also given, in which some of our most celebrated vocalists and instrumentalists perform; while as a staple attraction the fountains, designed on a magnificent and picturesque scale, send forth their streams whenever circumstances permit. The ordinary charge of admission is one shilling, but by an arrangement with the Railway Company, the public may enter the palace and travel there and back for the sum of eighteenpence. Season tickets are also issued at moderate charges, admitting the holders to all the privileges of the establishment. Refreshments of every kind and description are furnished to meet the requirements of the visitors, of such a quality and at such prices, as to leave no room for dissatisfaction. In a word, the liberality of the arrangements, combined with the attractions afforded, fairly entitle this place of universal resort to the appellation it is popularly known by, "The People's Palace."

CUCUMBER, CULTURE OF.—This, like other plants, will grow in any soil, though not with the same degree of vigour as when the culture depends on artificial heat and protection from the atmosphere. For this esculent it is usual therefore to prepare a compost made of one-third of rich earth, one-half of vegetable mould, and one-sixth of decomposed horse dung, mixed with a small quantity of sand. The end of January or the commencement of February is a good time for *commencing to force the earliest crop.* In the subsequent months both main and secondary crops may be started as required; and will come forward more freely. The *seed-bed* should be made up three and a half feet high at the back, and from two feet and a half to three feet high in the front, and on a dry bottom. The frame should be put on as soon as the bed is formed, and the seed should not be sown until the heat of the bed is sweet and healthy, to which state it may be hastened by its surface being stirred once or twice daily, together with plentiful watering and the admission of air. The *seeds may be sown* either in small pots or in pans, and the seedlings to be moved, from one to three plants in a pot. If sown in the pots so as not to need shifting, the pots may be crocked and about three parts filled

with earth, with three seeds in each covered half an inch deep. When the plants come up, they may be thinned either to one or two in each pot, and as the plants advance in height, so the pots may be filled up with rich light earth, which should be kept in the frame for the purpose; a small pot of water should also be kept in the frame for moistening the earth, or sprinkling the plants when required. The plants should be kept within three or four inches of the glass. In the winter months the seed beds should be protected from the winds by thatched hurdles on the north, west, and east sides. When the plants have been raised about five weeks, *transpose them to a larger hot-bed.* For this, the dung after being well worked is made up into a bed about four or five feet high, and the frames and lights set upon it. It is afterwards suffered to stand a few days to settle, and until its violent heat becomes somewhat abated. When in a fit state for the plants to grow in, the surface is made level and a hill of mould laid in, just under the middle of each light, and when the mould gets warm the plants are "ridged out" in it. After this, if the bed has become perfectly sweet, and there be heat enough in it, and the weather prove fine, the plants will soon arrive at perfection. Cucumbers are cut and gathered when they are from four to twelve inches long, according to their kinds.

Cucumbers may also be *propagated by cuttings*, which should be five or six inches in length, taken from the tops of bearing branches of vigorous plants, about the end of September or early in October, planted in pots of rich mould and plunged in a hot bed; these, if regularly watered, will take root in less than a fortnight, and may then be planted in a hot bed for fruiting, which they will do as soon as the roots can support them, perfecting the fruit before Christmas.

Cucumbers may also be *grown under hand-glasses* as follows: Sow the seed about the middle of April in a cucumber or melon bed, and when the plants come up, pot them out into small pots, two or three in a pot, keep them properly watered, and stop them at the first or second point. About the middle of May dig a trench where the situation is warm and the mould rich, of about two feet deep and three feet broad, with the length proportioned to the number of lights about to be used. Fill this trench with good warm dung, which when arrived to its full heat, cover with rich mould from eight to twelve inches deep. Then set the glasses about three feet distant from each other, and when the mould gets warm under them, turn the plants out of the pots with their bulbs whole; plunge them into the mould under the glasses, give them a little water, settle the mould about their roots, and draw the glasses over them. On fine days, after they have begun to grow, raise the glasses a little on one side to admit the fresh air, and as the weather increases in warmth, admit the air more freely to harden the plants, so that they may be able to bear the open air and run from under the glasses. When the plants begin to fill the glasses, train them out horizontally, and raise the glasses upon bricks to remove them from the plants. After this, the plants require no further attention but to be supplied with water when the weather is dry, to stop them when they run too thin of branches, and to thin them of leaves or branches when they threaten to become overcrowded. In warm summers and favourable situations the plants will, by this mode of culture, leave plentifully for about two months. For the *production of seed*, some fruit must be left of the earliest forced sorts. The fruit selected for this purpose, should grow near the root and upon the main stem, not more than one being on a plant. They must remain as long as the seed can obtain any nourishment from the plant, which it continues to do whilst the footstalk remains green. When this withers, and the rind of the cucumber has attained its full yellow hue, they may be gathered and reared in the sun until they begin to decay. The seed being then scraped out into a vessel, allowed to remain for eight or ten days, and frequently stirred until the pulp attached to it is decayed, may be cleansed by frequent agitation in water; the refuse rises to the top and passes away with the liquid. Being thoroughly dried by exposure to the air for three or four days, it is then fit for stirring. Seed three or four years old is found to be best for use, producing less luxuriant but more fruitful plants.

There are *various sorts* of cucumbers. The *early short prickly* is often preferred for the first crop, as being a very plentiful bearer, quick in coming to production, and the hardiest of all the varieties. *The early long prickly* is a hardy, abundantly bearing variety, but tardy in coming into production. *The late long prickly* is a hardy good bearer. *The early green cluster* is a hardy good bearer, and characterized by the fruit growing in clusters. *The white Dutch prickly* has an agreeable and peculiar flavour, and comes quickly into bearing. *The Nepaul* is one of the largest kinds, often weighing twelve pounds, and having a diameter of eight inches. There are other varieties of local reputation, but those just enumerated are best calculated for general culture.

CUCUMBER FRIED. — Pare and slice young cucumbers and dredge them lightly with pepper and flour; put them into a pan ready heated with butter or clarified dripping, sprinkle salt over them when nearly done, and so on as they are quite tender; lift them out with a slice, drain them well, and place them lightly over any hashed or minced meat.

CUCUMBER KETCHUP. — Pare some large old cucumbers, cut them in slices, and mash them; add some salt, and let them stand until the next day. Drain off the liquor, boil it with lemon-peel, mace, cloves, horseradish, shalots, white pepper, and ginger. Strain it, and when cold put it into bottles, with the mace, cloves, and peppercorns. A little of this ketchup will impart an agreeable flavour to almost any kind of gravy and sauce.

CUCUMBER, PICKLED.—Lay twenty-four firm, young, and very small cucumbers on flat dishes, having first rubbed them with salt; keep them covered for eight or ten days, turning them occasionally; then carefully drain them, put them into a jar in which vine leaves or cabbage leaves are laid, and pour scalding vinegar over them; add more leaves, and keep them covered by the fire. On the following day strain off the vinegar, boil it up, and pour it hot over the cucumbers, again putting fresh leaves to them above and below. When the colour becomes tolerably good, boil up the vinegar once more with a quarter an ounce of white pepper, the same of sliced ginger, one drachm of cloves, and half of a bruised nutmeg. Let these boil for a few minutes, and when cold, pour it over the cucumbers, which have been previously put into bottles or jars. Tie the bottles down, and put them by in a dry place.

CUCUMBER, PROPERTIES OF.—This esculent is chiefly characterized by its cooling and aperient qualities. For persons with strong stomachs they are not unwholesome; but where the organs of digestion are at all impaired, they are most injurious, as they lie cold and heavy on the stomach, and cause frequent and violent eructations and flatulency. In any case they should never be eaten without plenty of pepper, and an admixture of vinegar and oil. When cooked and stewed with gravy, they are much more wholesome than in their raw state.

CUCUMBER SALAD.—Pare the cucumbers, and cut them in long thin slices, shred these slices again into shreds, pour vinegar over them, and let them lie for an hour; then add oil, pepper, and salt.

CUCUMBER SAUCE.—Pare a small fresh cucumber, cut it in neat pieces, and put it in a stew-pan, with a little sugar, and half an ounce of butter; set it on a slow fire, stirring occasionally; add twelve tablespoonfuls of brown sauce, and eight of broth; let it simmer till tender, skim the butter off, remove the cucumber, and serve the sauce in a boat.

CUCUMBER, TO DRESS.—Pare cucumbers, and slice them into a dish as thinly as possible; this is best performed by passing the surface dexterously over the edge of a sharp knife. Sprinkle cayenne and salt over them, and leave them to drain for a quarter of an hour, then pour off the water that is thus drawn from them, and dress them with vinegar, oil, and pepper. Onions shred finely may be added or not, at pleasure.

CUCUMBERS, TO PRESERVE.—Take large and fresh gathered cucumbers, split them in two, and take out all the seeds; lay them for three days in a brine of salt and water that will float an egg. Set them over a fire in cold water, with a small piece of alum in it; boil them till tender, drain them, and pour over them a thin syrup. Let them lie two days, boil the syrup again, and put it over the cucumbers; repeat this twice more, then add to it some clarified sugar, which has been boiled till little bladders have appeared, put it in the cucumbers, and simmer it for five minutes. Set it by till next day, boil the syrup and cucumbers again, and put them by in jars for use.

CUCUMBER VINEGAR.—Pare and slice fifteen large cucumbers, and put them into a stone jar, with three pints of vinegar, four large onions sliced, two or three shalots, a little garlic, a tablespoonful of salt, three teaspoonfuls of pepper, and half a teaspoonful of cayenne. After letting it stand for four days, give the whole a boil; when cold, strain and filter the liquor through blotting paper. Put it by in small bottles, and use it for salad, or with cold meat.

CULLENDER.—A vessel used in culinary operations, having the bottom pierced full of holes, for straining or separating the more liquid from the solid part of the sub-

stances. Cullenders should be washed each time after they are used, so that the subsequent contents may not be disagreeably flavoured with the preceding contents.

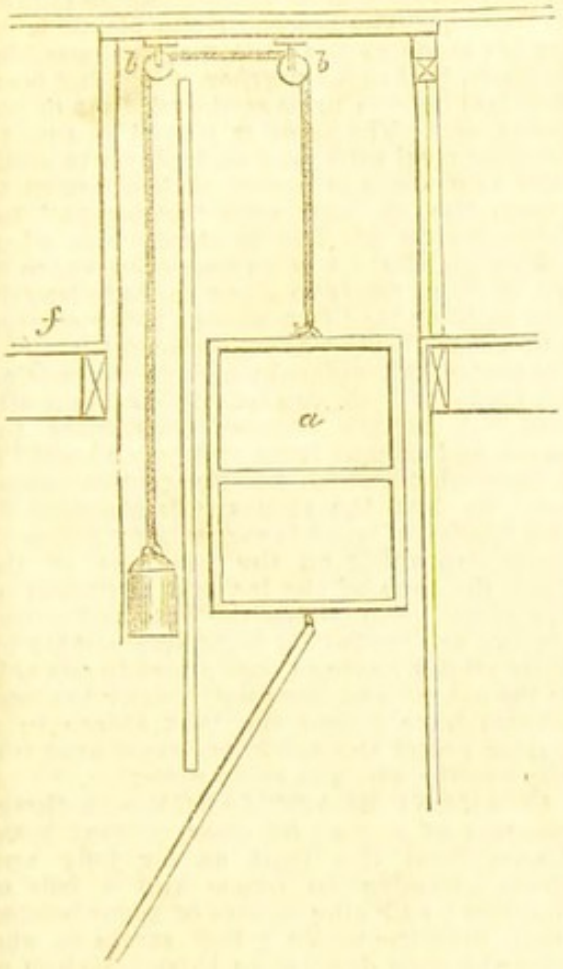
CULLIS.—In cookery a gravy made as follows:—Lay over the bottom of a stew-pan as much lean veal as will cover it an inch thick, cover the veal with thin slices of gammon of bacon, add two or three onions, bay leaves, sweet herbs, two blades of mace, and a few cloves; cover the stew-pan, and set it over a slow fire: when the meat is of a fine brown, fill the pan with good beef broth, boil and skim it, then simmer for an hour; add a little water, mixed with as much flour as will bring it to a proper consistence; boil it for half an hour, and strain it. It will keep for a week.

CUMBERLAND PUDDING.—Mix six ounces of grated bread with the same quantity of currants well cleaned and picked, the same of beef-suet finely shred, the same of apples chopped small, and the same of loaf sugar; add six eggs, half of a nutmeg grated, a little salt, the rind of a lemon grated, and a tablespoonful each of candied citron, orange, and lemon-peel cut thin. Mix them thoroughly together, put the whole into a basin, cover it closely with a floured cloth, and boil it for three hours. Serve it with sweet sauce.

☞ Grated bread, 6ozs.; currants, 6ozs.; beef-suet, 6ozs.; apples, 6ozs.; sugar, 6 ozs.; eggs, 6; nutmeg, ½ of 1; salt, a few grains; lemon-peel, 1; candied citron, orange, and lemon peel, 1 tablespoonful each.

CUPBOARD.—An essential in kitchens store-rooms, and various other offices. Cupboards should be kept scrupulously clean, and with the contents orderly arranged, so as to prevent accidents and loss of time in looking for articles. In store-cupboards it is a good plan to have a sheet of writing paper fastened upon the inside of the door,

upon which to enter the articles as they are stored and taken away, with their quantities, date, &c. The cupboard represented in the engraving is a contrivance made to rise by



means of pulleys from the kitchen to the diningroom. By this means the viands are kept quite hot, and the dinner is served with greater comfort and ease.

CUP CAKES.—Mix together five cupfuls of flour, three of sugar, one of butter, one of milk, three eggs well beaten, one wineglassful of wine, one of brandy, and a stick of cinnamon. Bake in well buttered cups.

☞ Flour, 5 cupfuls; sugar, 3 cupfuls; butter, 1 cupful; milk, 1 cupful; eggs, 3; wine, 1 wineglassful; brandy, 1 wineglassful; cinnamon, 1 stick.

CUPPING.—A surgical process by which blood is extracted from the skin by means of an exhausted receiver, and may be employed in any case where local blood-letting is indicated. The cupping apparatus consist of a scarificator—a small square box armed with from seven to eighteen lancets, which, upon touching a spring, when the instrument is placed on the part, leap up, and passing rapidly over the skin, inflict a corresponding number of surface cuts on the cuticle; a few round or leech-shaped glasses to receive the blood, and a small spirit lamp. The mode of procedure is first to exhaust the air from one of the glasses, by inserting under it the flame from the spirit lamp, and immediately applying it to the body; when the skin is partly drawn into the exhausted receiver, and the vessel, from the atmospheric pressure, is firmly fixed. After remaining on for a few minutes the glass is removed, by inserting the nail under the rim, and permitting the air to enter, when it instantly drops off. The scarificator is then laid on the same part, and the punctures having been made, the air is again exhausted from the glass, which is placed immediately over the spot; the blood, from the power of suction exerted by the vacuum, and from the external pressure of the air, instantly bursts from every cut, at first in drops, and finally in a languid stream, and trickles down into the glass. As soon as the glass is half full it is removed, the part carefully bathed with hot water, and a fresh glass applied, and so continued till the amount of blood ordered to be withdrawn has been obtained, when the cuts are well washed, and a pledget of wet lint applied as a dressing. Some cuppers are in the habit of attracting blood to the surface by previously bathing or fomenting the skin with hot water, but this is not always needed; the great art in cupping well is, to know how to graduate the depth of the incisions made by the scarificator. In other respects the process is extremely simple and easy of performance.

CURACOA.—Boil a quart of water in a very clean stew-pan; add to it, bit by bit, a pound of dark brown sugar-candy. When the whole is dissolved, boil up the syrup, then pour it into a deep dish to cool. Into a quart of spirits of wine drop a hundred and twenty drops of oil of bitter orange; when this latter is dissolved, mix it with the syrup before mentioned, but not until it is cool; then filter and bottle the liqueur, and put it by for use.

☞ Water, 1 quart; sugar-candy, 1lb.: spirits of wine, 1 quart; oil of bitter orange, 120 drops.

CURATE PUDDING.—To one pound of mashed potatoes, when hot, add four ounces of suet and two ounces of flour, a little salt, and as much milk as will give it the consistence of common suet puddings. Put it into a dish, or roll it into dumplings, and bake them a fine brown.

CURD.—One of the component proximate ingredients of milk. When milk, either deprived or not of its cream, is mixed with certain substances, or allowed to stand till it becomes sour, it undergoes a change called "coagulation," dividing itself into a solid substance called curd. This change in milk may be produced by several agents, such as alcohol, gelatine, and all astringent vegetables; by acids and many neutral salts, as cream of tartar; by gum, sugar, and more particularly by the gastric juice, or a piece of rennet, or calf's stomach; the introduction of a piece of this latter, of the size of a half-crown, will coagulate a quantity of milk sufficient for making sixty pounds of cheese.

CURD CAKES.—Mix well together a quart of curds, the yolks of eight eggs and the whites of four, a little sugar and nutmeg, and sufficient flour to produce a proper con-

sistence; heat butter in a frying-pan, form the paste into cakes, and fry them brown.

☞ Curds, 1 quart; eggs, 8 yolks, 4 whites; sugar and nutmeg, a little; flour, sufficient.

CURD CHEESECAKES.—Boil in two quarts of cream the beaten yolks of four eggs and the whites of five; drain off the whey gently, and mix with the curd a teaspoonful mixed of grated nutmeg and pounded cinnamon, three tablespoonfuls of rose-water, a wineglassful of white wine, four ounces each of pounded loaf sugar, butter beaten to a cream, and pounded biscuit. Mix all these ingredients well together, and stir in a quarter of a pound of currants. Bake it in a large tin, or in patty-pans lined with paste; or it may be baked in a dish previously buttered.

☞ Cream, 2 quarts; eggs, 4 yolks, 5 whites; nutmeg and cinnamon mixed, 1 teaspoonful; rose-water, 3 tablespoonfuls; white wine, 1 wineglassful; sugar, 4ozs.; butter, 4ozs.; biscuit pounded, 4ozs.; currants, 4ozs.

CURD PUDDING.—Rub the curd of two gallons of milk, well drained, through a sieve, add to it six eggs, a quarter of a pint of cream, two tablespoonfuls of orange-flower water, three tablespoonfuls of bread crumbs, half a pound of currants, and half a pound of raisins. Let it boil for one hour in a thick cloth well floured.

☞ Curd, produce of 2 gallons of milk; eggs, 6; cream, ½ pint; orange-flower water, 2 tablespoonfuls; bread crumbs, 3 tablespoonfuls; currants, ½lb.; raisins, ½lb.

CURD PUFFS.—Drain dry the curd of two quarts of new milk, add to it the yolks of seven eggs and the whites of two; four ounces of sugar, two tablespoonfuls of rose water, a quarter of a nutmeg grated, and bread crumbs sufficient to bring the whole to a proper consistence; make it into a paste, shape it into any forms desired, fry them in boiling lard, and serve them with a sauce made of butter, sugar, and white wine.

☞ Curd, produce of 2 quarts of milk; eggs, 7 yolks, 2 whites; sugar, 4ozs.; rose water, 2 tablespoonfuls; nutmeg, ¼ of 1; bread crumbs, sufficient.

CURDS AND CREAM.—Turn two quarts of milk fresh from the cow, with half a tablespoonful of rennet; drain off the whey, and fill a mould with the curd; after it has stood an hour or two turn it out. Strew coloured comfits over it, sweeten some cream, mix grated nutmeg with it, and pour it round the curd.

CURDS AND WHEY.—Soak a small piece of rennet in half a teacupful of warm water, and let it remain for an hour or two. Then pour into a quart of warm new milk a dessertspoonful of the rennet liquor, and keep it in a warm place until the whey appears separated from the curd and looks clear.

CURLING FLUID, FOR THE HAIR.—Melt a piece of white beeswax about the size of a filbert in an ounce of olive oil, and add one or two drops of otto of roses.

CURLING.—A sport played on the ice, consisting of sliding from one mark to another massive stones of forty to seventy pounds weight, of an irregular hemispherical form, with an iron or wooden handle affixed to the top. The object of the player is to lay his stone as near the mark as possible, to guard that of his partner, which has been well laid before; or to strike off that of his antagonist. The game is played by a party forming rival sides, and each player in addition to a stone is armed with a broom to sweep the ice, and with "trampets" for fastening on his feet to steady him when taking his aim. A large long open space of ice, of from thirty to forty yards in length, and eight or nine feet across, being cleared and a mark being made at each end to play to, the contest takes place by each person causing his stone to slide towards the end opposite him. A certain number constitutes the game, and all play from end to end until it is ascertained which has the greatest number. To hurl the stones with precision in this species of sport is exceedingly difficult; much depending on the keenness of the frost, the tone of the ice, and the truth of the stone. Sometimes the best and oldest players are baffled by beginners, simply by their stones having taken a bias to one side or the other; and, frequently, after the best players have placed the best stones in a cluster round the mark, one rapid shot will disperse the whole in every direction.

CURRANT BLANCMANGE.—In three-quarters of a pint of clear currant juice, drawn from the fruit as for jelly and strain, dissolve an ounce and a half of isinglass; add nine ounces of sugar broken small, give the whole a boil, strain it, and stir it by slow degrees to three-quarters of a pint of thick cold cream; when it is less than milk warm pour into the moulds.

☞ Currant juice, ¾ pint; isinglass, 1½oz.; sugar, 9ozs.; cream, ¾ pint.

CURRANT CAKE.—Beat a pound of butter to a cream, sift in a pound of sugar, beat eight eggs thoroughly, yolks and whites separately; add them, and continue beating with the hand till smooth; sift in a pound of flour, half a pound of currants, a grated nutmeg, mace, and cinnamon; mix all thoroughly and put it into small buttered moulds; sift sugar over and bake them in a quick oven.

☞ Butter, 1lb.; sugar, 1lb.; eggs, 8; flour, 1lb.; currants, ½lb.; nutmeg, mace, and cinnamon to flavour.

CURRANT CAKE WITH YEAST.—To three-quarters of a pound of flour, add two ounces of powdered sugar and a quarter of an ounce of cloves, cinnamon, and nutmeg mixed; add the yolks of ten eggs and the whites of five; beat the yolks and whites separately, and then mix both with a gill of orange flower water, and a teacupful of cream. In the cream must be melted half a pound of butter made rather more than blood warm. Mix the whole together and add to it a gill of yeast. Set it in a warm place to ferment, and when it has properly risen mix it in a pound and a half of currants and a quarter of a pound of candied

citron, orange, and lemon-peel together, sliced thinly. Bake it in a tolerably quick oven.

☞ Flour, ¾lb.; sugar, 2ozs.; cloves, cinnamon, nutmeg, mixed, ¼oz.; eggs, 10 yolks, 5 whites; orange flower water, 1 gill; cream, 1 teacupful; butter, ½lb.; yeast, 1 gill.

CURRANT COMPOTE.—Make a strong syrup, and have a pound of currants washed and drained; let them boil up two or three times in the syrup; take them off the fire, let them cool a little, and then put them in jars with the syrup over them.

CURRANT CREAM.—Squeeze three-quarters of a pint of juice from ripe red currants, and let it stand in a pan of cold water; boil it for two hours, strain the juice through a sieve, and sweeten it well with pounded loaf sugar. When cold, add a quart of cream to a pint of juice, and beat it with a whisk till thick. Serve in a deep glass dish.

☞ Currant-juice, ¾ pint; sugar, sufficient; cream, 1 quart.

CURRANT CUSTARD.—Boil in a pint of clear currant-juice ten ounces of sugar for three minutes, take off the scum, and pour the boiling juice on eight well-beaten eggs; thicken the custard in a jug, set into a pan of water, pour it out, stir it till nearly cold, then add to it, carefully, and by degrees, half a pint of rich cream, and last of all two tablespoonfuls of strained lemon-juice.

☞ Currant-juice, 1 pint; sugar, 10 ozs.; eggs, 8; cream, ½ pint; lemon-juice, 2 tablespoonfuls.

CURRANT DROPS.—Mash half a pint of currants with a tablespoonful of water; boil, and strain through a flannel bag; wet half a pound of sifted sugar with the juice, together with twenty drops of the spirit of vitriol; make it hot over the fire, but do not let it boil, and in this state drop it from the point of the knife, on to paper.

☞ Currants, ½ pint; water, 1 tablespoonful; sugar, ½lb.; spirit of vitriol, 20 drops.

CURRANT DUMPLINGS.—For each dumpling take three tablespoonfuls of flour, two of finely minced suet, and three of currants; a slight pinch of salt, and as much milk or water as will make a very thick batter of the ingredients. Tie the dumplings in well-floured cloths, and boil them for an hour. They may be served plain or with sweet sauce.

CURRANT FRITTERS.—Thicken half a pint of good milk with flour, to the consistence of a stiff batter, add sugar and currants. Beat it up quickly, heat some lard in a fryingpan, and put in a large spoonful at a time, which when done, remove and put in another spoonful, and so on till the whole are dressed.

CURRANT ICE.—Pick two pounds of currants, and a pound of raspberries, and set them over the fire in half a pint of water; when boiled, strain through a hair sieve; add a pound of sugar, and proceed to ice it.

☞ Currants, 2lbs.; raspberries, 1lb.; water, ½ pint; sugar, 1lb.

CURRANT JAM.—Pick two pounds of currants, and put them into a preserving pan with a pound and a half of sugar; add the sugar after the fruit has boiled up a few minutes, boil all together, mashing the fruit with a wooden spoon, boil gently for half an hour, stirring and skimming continually the whole of the time; then pour into jars, tie them over with bladders, and set them by in a dry place.

CURRANT JELLY.—Pick ripe currants freed from the stalks and other impurities, and bruised with a wooden spoon into a preserving pan, and make them scalding hot, stirring them in the meantime to prevent their burning; press out all the juice gently and pass it through a flannel bag. To every pint of this juice add fourteen ounces of good sugar; boil it and skim it well, and reduce it to a proper consistence, which may be known by setting a little of it in a cold place, or in a saucer placed in cold water.

CURRANT MARMALADE.—To the juice of ripe red currants, add juice of raspberries, then put to this whole currants, boil them gently, and when they begin to break put in an equal weight of sugar boiled to candy height; boil them together, mashing them in the meantime; skim them, add a little rose-water, and when the mass becomes as thick as marmalade, put it into pots.

CURRANT PIE.—Wash and pick ripe currants, dredge them with flour, and put them into a pie dish lined with paste; spread over them four tablespoonfuls of powdered loaf sugar, dredge with flour, cover with paste, wet and pinch together the edges of the paste, cut a slit in the centre of the top through which the vapour may escape, and bake for forty minutes.

CURRANT PUDDING.—Roll out a thin suet crust, line evenly with it a quart, or any other sized basin, and raise the crust from an inch and a half to two inches above the edge; fill the basin with fruit piled up, cover it over with paste, moisten the edges of the two pastes, press them together firmly, and fold them over. Tie it up in a cloth, and drop it into plenty of fast boiling water; when it is done lift it out by the aid of a fork, cut a small hole in the centre of the top, and serve it immediately.

CURRANT RATAFIA.—Put in a jar two quarts of brandy, with two pints of currant juice, two pounds of sugar, a stick of cinnamon, and six cloves; shake all together occasionally; at the end of a month strain and bottle it for use.

☞ Brandy, 2 quarts; currant juice, 2 pints; sugar, 2lbs.; cinnamon, 1 stick; cloves, 6.

CURRANT SAUCE.—Boil an ounce of dried currants in half a pint of water for a few minutes, then add a teacupful of bread crumbs, six cloves, a glass of port wine, and half an ounce of butter. Stir the whole till quite smooth, and serve in a sauce boat.

☞ Currants, 1oz.; water, ½ pint; bread crumbs, 1 teacupful; butter, ½oz.; port wine, 1 wineglassful.

CURRANT SHRUB.—Strip some white currants, and prepare them in a jar as for jelly. Strain the juice, and to two quarts of it add one gallon of rum, and two pounds of

lump sugar. Strain the whole through a jelly bag; and when perfectly clear, bottle for use.

CURRANT SYRUP.—Put into a sieve six pounds of red currants, two pounds of white currants, and two pottles of strawberries; crush them, and press the juice into a pan, and leave it to ferment for a week. Then pass the juice through a straining bag, on to four pounds of clarified sugar, boil the whole together, skim it, and take it from the fire. Set it by to cool, and tie down in bottles or jars.

☞ Red currants, 6lbs.; white currants, 2lbs.; strawberries, 2 pottles; sugar 4lbs.

CURRANT TART.—To a quart of red currants add a pint of raspberries, strawberries, or cherries; sweeten them well with brown sugar; line the sides of a dish with light paste, place in the centre a small teacup, put in the fruit, and cover it with paste.

CURRANT VINEGAR.—Take any quantity of ripe fruit and bruise it to a mash, mix thoroughly with water which has been boiled and suffered to cool, in the proportion of three gallons of water to one of the mash; let it stand for twenty-four hours, then strain it through a cloth and add brown sugar in the proportion of one pound to each gallon of the strained liquor; mix well and put it into a cask. It will not be fit to bottle in less than nine months.

CURRANT WATER.—Squeeze a pound of currants into a quart of water; put in four or five ounces of pounded sugar. Mix well, strain, and let it stand till cool. This beverage, when iced and served up in glasses, affords a delicious summer drink.

CURRANT WINE.—To every two gallons of water put five quarts of currants and a pint of raspberries. Let them soak for twelve hours, then squeeze and mash them thoroughly. On the following day rub them well on a fine wire sieve till all the juice is expressed, and wash the skins again with some of the liquor. To every gallon of juice put four pounds of Lisbon sugar, tun it immediately, lay the bung lightly on, and leave the liquor to ferment. In two or three days, add brandy, in the proportion of a quart to every four gallons; then bung it close, but leave the vent peg out for a few days. Keep it in the cask for six months, and then bottle off.

CURRANTS, CULTURE OF.—The usual method of propagation for this fruit is by cuttings. For this purpose young shoots of the straightest and most vigorous wood are to be preferred. Shoots of this description should be preserved at the early autumn pruning, and all the immature portion at the point being pruned away, the best of the remainder must form the cutting, the length of which should be from twelve to fourteen inches. Blind all the eyes or buds below the surface of the ground, to prevent suckers springing up. Plant the cuttings in a somewhat shady situation, and fasten them tolerably firm in the soil. They should be planted in rows which are eighteen inches asunder, and the cuttings about eight inches apart in the rows. During the first summer they will produce two or three shoots; these should be pruned in the autumn back to about from four to five eyes or buds on each, from which a selection must be made for the cuttings, the future form of the tree depending much upon this. Those buds should only be preserved which are well placed, both as regards their form and their distance apart. In forming the bush let there be no central shoot left, but let the whole, if possible, form either a triangle, if three, a square if four, or a bowl-like character, if more than four. When this end is attained, the trees will be ready to remove to their final destination, or they may be allowed to remain for another year. For *summer culture* the first step is to prepare a proper soil, which should be free from drought, and have a top-dressing of decayed manure, or other refuse, spread three inches thick over the roots of the tree. The next point is to remove all the watery wood, as well as to remove all shoots growing into the interior of the bush, to the exclusion of light and air; these may be cut back when about nine inches long, far enough to render the centre of the bush completely open. This should be performed about the middle of June. In about another fortnight the watery or wild-looking breast spray all round the exterior may be pruned back to within four inches of their base, leaving a tuft of foliage all around to shade the ripening fruit. *Winter culture* must be commenced by pruning immediately after the leaves are fallen. All the side shoots must be pruned back to within an inch or two of the main stem. An exception, however, must be occasionally taken, when gaps or blanks occur, taking care that the shoots left to fill their spaces are well placed, and low down. Every terminal point should then be shortened, in order to encourage a liberal production of side shoots in the ensuing summer. All dead or decaying wood must be cut away, and if there is a preponderance of this, the bush had better be totally destroyed and another planted in its stead. *Propagation by seed* is resorted to for the purpose of raising new varieties; to accomplish this successfully, sow the seeds in pots as soon as ripe, and in the following spring transplant them into a hotbed, and subject them to the artificial heat of a forcing house. By these means, together with subsequent attention, the plants will fruit as early as two or three years old. *The gathering of the crop* commences, under ordinary circumstances, at the end of June; the fruit advances to maturity in July, and continues in perfection till the end of August, but the fruit may be preserved and continue good till September or October. To effect this, the trees are enclosed with mats when the fruit is rather more than three parts ripe. These mats must be taken off at least once a week, on dry days, to dispel the damp. All decaying leaves and berries should at such times be also carefully removed. The ripening of the fruit is also materially retarded by training the trees against north walls, protecting them at the same time with nets. The fruit should always be gathered when dry, as in rainy weather they lose their flavour.

CURRANTS, TO CLEAN.—Currants, before being used, should be washed two or three times in a cullender, then wiped with a cloth, and set before the fire to dry. If used in a damp state, they will make cakes or puddings heavy, and just before they are used it is an excellent plan to dust dry flour among them.

CURRANTS, TO PRESERVE.—Gather currants, either white or red, in a perfectly dry state. To effect the object properly, hold wide-necked bottles under the bunch of fruit selected, cut each currant from the large stem, leaving only a small piece of stalk remaining, and let it drop gently into the bottle, so that the fruit is not in any way bruised; proceed thus till the bottles are filled, stop them with corks which fit tightly, and resin them down. If the fruit be bought, and not gathered for the purpose, all unsound currants must be rejected, and no moist or bruised ones be put into the bottle. When the bottles are filled and closed properly, dig a trench in the garden, or remove a brick or two in the cellar, and make a hole, in which place the bottles with their necks downwards, and cover them over with earth a foot and a half in depth. When the weather is severe, lay a little long litter over the part, or ashes about a foot deep. The spot may be marked with a stick, &c.

CURRANTS, USES AND PROPERTIES OF.—This fruit is gently acidulous, cooling, and generally wholesome; it may be also employed to stimulate the biliary secretions, and as an antiseptic. The jam and jelly are both used as a vehicle for medicine, and the jelly especially is eaten with venison, hare, &c., to counteract the putrescent tendencies of the meat. Dried currants are extremely unwholesome, and should never be partaken of by persons with weak digestions and disordered stomachs.

CURRY.—A form of cookery introduced into this country from India. The most important point in making this dish is to procure good "curry powder." There are a great many receipts for making this, a selection from the best of which will be given hereafter. The rice also forms a very important part of a curry, and great care is required in boiling it. The "Patna" rice is the best for this purpose. Curries may be made from every conceivable kind of fish, flesh, fowl, vegetables, &c. The general *directions for preparing a curry* are as follows:—Take fresh meat, free it entirely from bone, and cut it into moderately small pieces. To each pound of meat add a tablespoonful of curry powder, about half the quantity of flour, and a little salt; mix these together, and rub a portion of it on the meat. Fry the meat in a little butter. Fry onions a light brown; drain the fat from both the meat and onions; put them into a stew-pan, and cover them with boiling water; stew for twenty minutes, then rub the remainder of the powder smooth with a little cold water, add it, and let it stew for an hour, or according to the time necessary for the meat to be well done. If no other acid is used, stir in a little lemon-juice just before serving; place it in the centre of the dish, and arrange boiled rice around it. See also CHICKEN, CRAB, HARE, LAMB, LOBSTER, MUTTON, OYSTER, PORK, RABBIT, SALMON, TRIPE, TURBOT, VEAL, &c.

CURRY BALLS.—These are used for soups, made dishes, poultry, veal, &c., and are made as follows: Boil four eggs for ten minutes, and lay them in cold water; put the boiled yolks into a mortar, with the raw yolk of one egg; add a teaspoonful of flour, a little chopped suet, and a seasoning of curry-powder; mix all well together, and make it into small balls.

CURRY POWDERS.—*Bengal.* Coriander seed, 4ozs.; cayenne pepper, 2ozs.; turmeric, 2ozs.; black pepper, 1oz.; to be well dried, pounded, and sifted. Lemon juice to be used with this powder when used. *Delhi.*—Turmeric, 20 teaspoonfuls; cayenne pepper, 8 teaspoonfuls; cumin seed, 12 teaspoonfuls; coriander seed, 12 teaspoonfuls; dried cassia leaves, 12 teaspoonfuls. *Madras.*—Turmeric, ¾lb.; cumin seed, 2ozs.; coriander seed, 2ozs.; caraway seed, ¾oz.; cardamom seed, ¾oz.; black pepper, ½oz.; cayenne pepper, ½oz.; fenugreek seed, ½oz.; cloves, ½oz.; cinnamon, ½oz.; mace, ½oz. The whole of the ingredients to be pounded separately, then thoroughly incorporated and to be kept dry. *Sir H. Pottinger's.*—Turmeric powder, 2ozs.; ginger powder, 1½oz.; white pepper, 1oz.; cardamom seed, ½oz.; coriander seed, 1½oz.; cumin seed, 1oz.; fenugreek, 2 drachms; cayenne pepper, ½oz. Mix well together and set by in a dry place. *Dr. Hunter's.*—Mustard seed, 1½oz.; coriander, 4ozs.; turmeric root, 4½ozs.; black pepper, 3ozs.; cayenne pepper, 1½oz.; cardamom seed, 1oz.; Jamaica ginger, ½oz.; cinnamon, cloves, and mace, ½oz. each. Powder finely, mix thoroughly, and put by in closed stopped bottles.

CURRY SAUCE.—Put into a pan four good sized onions, sliced, and two peeled apples, with a quarter of a pound of butter, the same of lean ham, a blade of mace, four peppercorns, two bay-leaves, and two sprigs of thyme. Stir them over a moderate fire until the onions become brown and tender, then add two tablespoonfuls of curry-powder, one of vinegar, two of flour, a teaspoonful of salt, and one of sugar; moisten it with a quart of broth, or even water, with the addition of a little glaze; boil it till it becomes a pulp and adheres rather thickly to the back of the spoon; pass all through a fine sieve, give it another boil for a few minutes, put it in a jar, and use when required. Any kind of meat, poultry, fish, or game, are excellent warmed in this sauce and served with well-boiled and dry rice. It will keep in a cool place in the winter for a month, boiling it now and then.

☞ Onions, 4; apples, 2; butter, ¾lb.; ham, ¾lb.; mace, 1 blade; peppercorns, 4; bay-leaves, 2; thyme, 2 sprigs; curry-powder, 2 tablespoonfuls; vinegar, 1 tablespoonful; flour, 2 tablespoonfuls; salt, 1 teaspoonful; sugar, 1 teaspoonful; broth or water, 1 quart; glaze, sufficient.

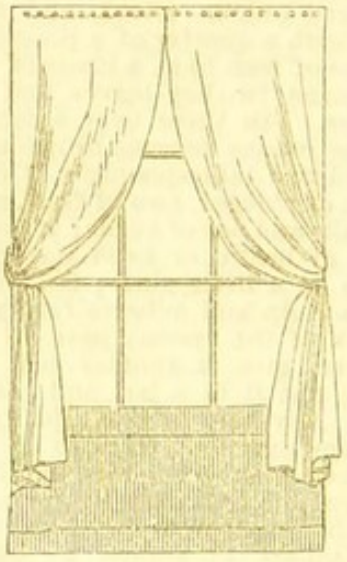
CURRY SOUP.—Cut four pounds of the breast of veal into small pieces; put the trimmings into a stew-pan with two quarts of water, twelve peppercorns, a stick of cinnamon, and two blades of mace; when it

boils, skim it clear, give it another boil for an hour and a half, and then strain it off. While it is boiling, fry the pieces of veal and the onions in butter till they are brown. When they are done, put the broth to them, and set the whole on the fire; when it boils, remove the scum, let it simmer for half an hour, then mix two tablespoonfuls of curry and the same of flour, with a little cold water and a teaspoonful of salt; add these to the soup, and simmer it gently till the veal becomes quite tender, when serve.

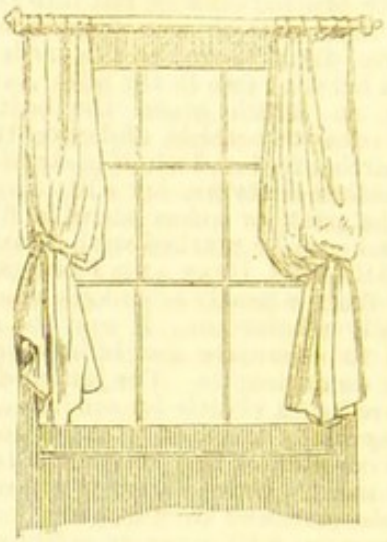
☞ Veal, 4lbs.; water, 2 quarts; peppercorns, 12; cinnamon, 1 stick; mace, 2 blades; curry-powder, 2 tablespoonfuls; flour, 2 tablespoonfuls; salt, 1 teaspoonful.

CURRYCOMB.—An implement used in grooming horses, to free them from the dirt adhering to the skin. A species of dandriff or scurf is being continually generated by the horse's skin; if this matter is suffered to accumulate, not only does it interfere with the general health of the horse, but also renders him restive and fretful, by the violent itching that it produces. The curry-comb is used as follows:—Begin at the neck of the horse, holding the left cheek of the headstall in the left hand, and curry him all along the neck to the shoulder, and so on downwards until the extremities are reached, then change hands and curry him on his breast; then join your right side to his left and curry him underneath; brushes and cloths are then called into operation, the brushes being freed from dust every now and then by rubbing them on the curry-comb.

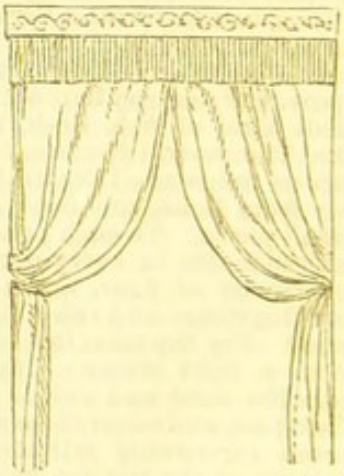
CURTAINS.—Window curtains add considerably to the comfort and elegance of apartments, and a certain amount of taste



and judgment is required to select the most agreeable forms and to adapt them to the several places for which they are destined. Window curtains are especially necessary in this country to exclude the cold air which presses in from without. Another reason why they are required is, that the warm air in the room, which always occupies the upper part next the ceiling, coming into contact with the glass, is cooled by it, and, immediately descending in consequence, diffuses itself through the lower part of the room; a cold current is therefore felt always coming from the windows, though none may have entered. Curtains check this, partly by preventing the warm air from reaching the glass, and partly by directing the current sideways. Curtains likewise hide the unsightly appearance of the shutters with their fastenings when closed. The simplest kind of window curtain for *bedrooms*, consists of two pieces of dimity, printed calico, muslin, or other material, of the proper length and width, nailed to the top of a piece of wood fastened up on purpose, as seen in the engraving, and kept back in the day by being looped up on each side by a cord fixed on the sides of the windows. This curtain may be quite plain, or have some kind of border or fringe at the top. Another simple mode is to have the curtain in one piece, to draw up by means of lines and pulleys. To effect

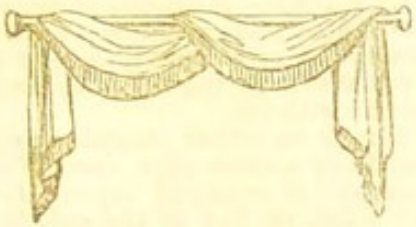


this, a pulley is fixed at each end of a fla piece of wood, as long as the window is wide and another pulley is let into the wood, so as to divide the lath into two equal parts. The curtain is nailed to this wood, and pieces of tape are then sewed down the curtains at



the two sides, and also just under the middle pulley, and there a number of rings are fixed; through these rings are passed three cords, which go over the cords and are then fastened together; by means of these cords the curtains may be lowered or raised at pleasure.

The general mode of hanging curtains in *sitting rooms, drawing rooms*, &c., is by having rings at the top of the curtains, passing over a rod or pole stretched across, by which each half of the curtain is drawn to either side of the window. The rod or pole on which the curtain slides, is generally connected by a portion of the curtain called a valance; this gives richness and finish to the window; but when the rooms are low, they should not be deep, as they then hide much of the light. Valances are constructed to hang in a variety of modes; sometimes



they are made to form festoons, as shown in the illustration; and are constructed with fringes, tassels, and cords, in various ways.

The Materials for window curtains form a consideration of much importance. In order to secure graceful folds, pliability of material is essential, and for this purpose silk and fine cloth are the best substances. The drawing rooms have, of course, the richest materials assigned them. For other apartments in common use, a material of more substance is required, and for these moreen is generally used. *Muslin curtains* have a very pleasing effect, and may be used not only in summer, but at other seasons, in addition to the usual thick curtains. Curtains made of open netting are also very durable.

CURTAINS, TO PRESERVE.—When curtains are taken down, they must be well shaken and then carefully dusted; if they are washing curtains they must, immediately after dusting, be put into cold water to soak for a day or two, rinsing them and changing the water occasionally. They must then be washed out and rough-dried, and be put away for re-washing in the spring, a short time before they are required to be hung up. If the curtains should be of chintz or printed calico, then as they are taken down shake off the loose dust, and slightly brush them with a clothes brush, particularly between the folds; then wipe the curtains with clean flannels, and rub them well along the plaits and folds with dry silver sand and dry flannel, or with dry bran, particularly at the top parts of the furniture, which are generally more soiled than the other parts; then well shake them and wipe them again with a clean piece of flannel. If these directions are carefully followed, the curtains will look almost as fresh as when they were new, and last for years without washing. If the curtains should be of moreen, then, after having been shaken and brushed, they must be rubbed on a large table, with dry silver sand and a piece of dry clean flannel or a coarse cloth, scrubbing them thoroughly with the silver sand all over, particularly those parts where the dust has settled, or where they are soiled or stained. Then shake them and brush them carefully with a clothes brush, and again rub them with a clean towel or napkin, so as to remove every particle of sand; then fold them carefully up and put them away enclosed in linen wrappers. Damask, silk, and satin curtains may be cleaned by rubbing the stale crumb of bread over them. For these latter long curtain bags are frequently made to enclose them, when the apartment is not in use.

CUSTARD.—This dish is usually partaken of cold, and is either poured over fruit tarts, confections, &c., or served separately in custard cups. The flavouring may be given according to taste.—See ALMOND, APPLE, BISCUIT, GOOSEBERRY, LEMON, ORANGE, RICE, &c.

CUSTARD, BAKED.—Mix a quart of new milk with eight eggs well beaten, strain the mixture through a fine sieve, and sweeten it with six ounces of sugar; add a quarter of a saltspoonful of salt, and pour the custard into a deep dish, with or without a lining or rim of paste; grate nutmeg and lemon-peel over the top, and bake it in a very slow oven from twenty to thirty minutes, or even longer, should it not be firm in the centre. A custard, if well made and properly baked, will appear quite smooth when cut, and there will be no whey in the dish.

☞ Milk, 1 quart; eggs, 8; sugar, 6ozs.; salt, ¼ saltspoonful; nutmeg and lemon-rind to flavour.

CUSTARD, BOILED.—Boil a pint of milk with lemon-peel and cinnamon, mix a pint of cream and the yolks of five eggs, or if cream be not used, more eggs must be added; strain the milk and sweeten it, and pour it on to the cream and eggs, stirring it well with a whisk, then simmer it off till of a proper consistence, *stirring it one way* all the time, to prevent its curdling. When the custard is removed from the fire, keep stirring it till cool, then put into glasses or cups. Rice flour, or arrowroot, rubbed to a smooth paste in a cup of cold milk, may be used for the thickening, if required.

☞ Milk, 1 pint, lemon-peel and cinnamon, to flavour; cream, 1 pint; eggs, 5 yolks; sugar, to sweeten.

CUSTARD CREAM.—Boil in half a pint of milk, a stick of cinnamon, the rind of a lemon pared thin, and two or three laurel leaves; strain, and add to it three pints of cream; stir into it the well-beaten yolks of eight eggs; sweeten with powdered loaf sugar, put it into a saucepan, and stir it constantly till it thickens; pour it into a deep dish, and stir it now and then till cold. Serve in glasses or cups.

☞ Milk, ½ pint; cinnamon, 1 stick; lemon-rind, 1; laurel leaves, 2 or 3; cream, 2 pints; eggs, 8 yolks; sugar, to sweeten.

CUSTARD PUDDING.—Mix by degrees a pint of milk with a tablespoonful of flour, the yolks of five eggs, a tablespoonful of orange-flower water, and half a stick of cinnamon bruised. Butter a basin just large enough to hold this batter, pour it in and tie a floured cloth over it. Put it in when the water boils, turn it about for a few minutes, to prevent the egg from settling on one side,

and boil it for half an hour. Serve it with currant jelly or sweet sauce.

☞ Milk, 1 pint; flour, 1 tablespoonful; eggs, 5 yolks; orange-flower water, 1 tablespoonful; cinnamon, ½ stick.

CUSTARD WITH APPLES.—Pare and core some apples, and bake or stew them in an earthen pan, with as little water as possible, and enough sugar to sweeten. When the apples are fallen, put them into a pie dish, and let them stand till cold, then pour over them an unboiled custard, and set the dish into an oven or before the fire, until the custard is fixed. This may be eaten either hot or cold.

CUSTARD WITH RICE.—Boil some rice in milk, till quite tender, with cinnamon and a very few bitter almonds; when cold, sweeten with powdered loaf sugar: form a species of wall round a glass dish, and pour a boiled custard in the centre.

CUSTARDS, TO ORNAMENT.—Whisk, for one hour, the whites of two eggs, together with two tablespoonfuls of raspberry or red currant jelly; lay it in any form upon a custard, to imitate rock, &c., and serve in a dish with cream round it.

CUSTOMS DUTIES.—A species of tax levied upon commodities exported or imported. The rate of duty varies with the particular commodity, and the mode of ascertaining the amount of duty to which it is subject may be by weight, measurement, tale, or per-centage on the declared value. The following articles are prohibited to be imported under pain of forfeiture, and to be destroyed or otherwise disposed of as the commissioners may direct:—

Books, wherein the copyright shall be first subsisting, first composed, written, or printed in the United Kingdom, and printed or reprinted in any other country, as to which the proprietor of such copyright or his agent shall have given notice in writing that such copyright subsists; such notice also stating when such copyright will expire. Extracts, essences, or other concentration of coffee, chicory, tea, or tobacco, or any admixture of the same. Snuff work, tobacco-stalks stripped from the leaf, whether manufactured or not, and tobacco-stalk flour. Persons may be searched, if officers have reason to suspect smuggled goods are concealed upon them. Obstructing officer, penalty £100. Persons denying having contraband goods about them, if such are afterwards found, are liable to forfeit treble their value. Persons concerned in importing prohibited or restricted goods, or harbouring or having such goods in custody, to forfeit treble the value or £100. Offering any bribe, reward, or recompense to an officer, penalty £200.

CUTLERY.—In order to preserve valuable articles of cutlery, they should be wrapped in zinc foil, or kept in boxes lined with zinc. They will thus remain spotless and perfect. —See KNIFE, RAZOR, SCISSORS, &c.

CUTLET.—See LAMB, MUTTON, PORK, SALMON, VEAL, &c.

CUTLETS, A LA MAINTENON.—Cut slices of meat about three quarters of an inch thick, beat them with a rolling pin, and wet them on both sides with egg; dip them in a seasoning of bread crumbs, parsley, thyme, knotted marjoram, pepper, salt, and a little grated nutmeg; then put them into papers folded over, and broil them. Serve them with melted butter mixed with ketchup.

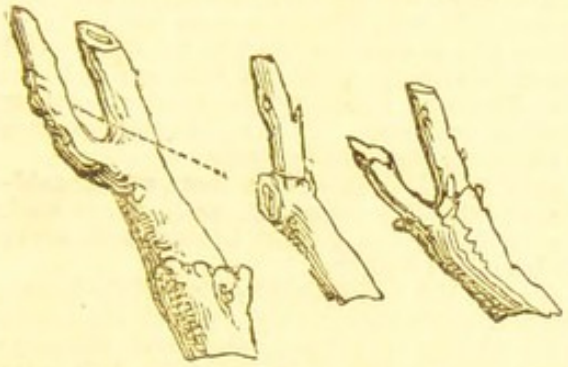
CUTLETS EN SURPRISE.—Take some paste, roll it out to a moderate thickness, and cut it into pieces of the form of hearts, lay some apricot marmalade on them, turn them over, press the edges together, place them on a tin and bake them. When the cutlets are done, sprinkle bruised mushrooms over them, and dish them in consommé.

CUTLET PAN.—A species of frying-pan made with deep and upright sides. It should be constructed of wrought iron, of a tolerable thickness at the bottom, and lined throughout with tin.

CUTS may be either jagged or even, as those made by a knife or a saw. For clean cuts nothing is required beyond bringing the two sides, or lips of the cut, in exact position, and retaining them in that state till the healing process is completed; for this purpose a strip or two of adhesive plaster, sufficiently long to bind the sides together, should be passed over the cut; a bit of lint laid on as a compress, and a narrow bandage passed round to retain both and protect the part from dirt or accident. When cuts are attended with much bleeding, and the closing of the wound, the compress, and bandage do not stop the discharge, a little "Friar's balsam" may be applied to the bleeding surface to check it, but in general such a means, as it gives much pain, is quite unnecessary, unless indeed some extensive vessel has been divided, when pressure must either be established on the main artery or the mouth of the vessel taken up, and tied; but for ordinary cuts, all that is necessary is to place the parts in close connection, and leave them in that position to heal. When a piece of flesh has been cut out, it should be as quickly as possible placed exactly in its place, strapped down, a pledget placed over it, and a warm bran poultice laid over all. In the same manner, fingers or toes cut off by accident, if applied to the bleeding stump and retained in their natural position, by a splint and bandage, with a moist warm poultice enveloping the whole, so great is the reproductive power of nature, that a perfect reunion will be established within a longer or shorter length of time.

CUTTINGS, CULTURE FROM.—Propagation by cuttings is a mode of culture requiring some delicacy and discrimination. It may be considered, as to the choice of cuttings, their preparation, their insertion in the soil, and their future management. The *choice of cuttings* should be directed first towards those branches of trees and shrubs which are thrown out nearest the ground, and especially such as recline, or nearly so, on the earth's surface, as these have always the greatest tendency to produce roots. The *proper time* for taking cuttings from the mother plant is when the sap is in full motion, in order that in returning by the bark it may form a callus or protuding ring of granular substance, between the bark and

wood, whence the roots proceed. As this callus, or ring of spongy matter, is generally best formed in ripened wood, the cutting, when taken from the mother plant, should contain a part of the former year; or, in plants which grow twice a year, of the wood of the former growth; or in the case of plants which are continually growing, such wood as has begun to ripen or assume a brownish colour. The *preparation of the cutting* depends on, or is guided by, this principle—that the power of protruding buds or roots resides chiefly, and in most cases entirely, at what are called joints, or at those parts where leaves or buds already exist. Hence it is, that cuttings ought always to be cut across with the smoothest and



soundest section possible at an eye or joint. It is a common practice to cut off the whole or a part of the leaves of cuttings; but the former is always attended with bad effects, as the leaves may be said to supply nourishment to the cutting till it can sustain itself. The *insertion of cuttings* may seem an easy matter, and none but a practical cultivator would imagine that there could be any difference in the growth between cuttings inserted in the middle of a pot, and those inserted at its sides; yet some sorts of plants if inserted in a mere mass of earth, will hardly, if at all, throw out roots; while, if they are inserted in sand, or in each of the sides of the pots, so as to touch the pot in their whole length, they seldom fail of becoming rooted plants. The art is to place them so as to touch the bottom of the pot, and afterwards plunging them in a bark or hotbed, and keeping them moist. The *management* of cuttings requires that they should not be planted too deep, though such as are large ought to be planted deeper than such as are small. Too much light, air, water, heat, or cold, are alike injurious. To guard against these extremes in tender sorts, they should be nurtured beneath a hand or bell-glass. Immersing the pot in earth (if the cuttings are in pots), has a tendency to preserve a steady uniform degree of moisture at the roots; and shading or planting the cuttings, if in the open air, in a steady situation, prevents the bad effects of excess of light. The only method of regulating the heat is double or single coverings of glass or mats, or both. A hand-glass placed over a bell-glass will preserve, in a shady situation, a very constant degree of heat. *Piping is a mode of propagation by cuttings.* This is effected by separating a shoot from a part of the stem, where it is nearly or somewhat ripened. The root end of the plant must be held between the finger and thumb of one hand, below a pair of leaves, and with the other pulling the top part above the pair of leaves, so as to separate it from the root part of the stem. These pipings, or separated parts, are inserted without any further preparation in finely sifted earth to the depth of the first joint or pipe, gently firmed with a small dibber; then watered, a hand-glass put over them, and their future management similar to that of cuttings.

CUTTLE-FISH.—The bone of the cuttle-fish is used to erase ink-marks from paper and parchment. Reduced to powder it forms a valuable dentifrice and polishing powder, and is used for forming the moulds for small silver castings.

CYCLAMEN.—A family of plants sometimes called sowbread, adapted for window culture, particularly one sort known as the Persian cyclamen. Of this there are four or five varieties, all of them gay and delicate flowers, and distinguished by various shades and marks. No plants are easier to manage, and none more free from insects; and out of half-a-dozen plants, one might always be retained in bloom from October to May, simply by bringing them in one at a time into a warm room. The form of the cyclamen is that of a solid bulb, much like a young turnip in shape, with the leaves and flowers growing together immediately from the crown of the bulb, without any branches. The size of the bulbs varies in the different kinds from that of a nutmeg to a large apple. To grow these plants so as to render them attractive ornaments for the window, it is only necessary to pot them in upright or bulb pots, using good rich soil. Any good garden mould will answer, if a little leaf mould, or rather dung in a dry state, be mixed with it. The pots must be very well drained; first with an oyster-shell, or hollow piece of potsherd, over the hole, and then an inch deep of small crocks over that;—potsherds, or crocks, are pieces of flower-pots broken small with a hammer. The bulb should not be entirely buried in the soil, like most bulbs, but only half its depth. The reason for leaving the crown of the bulb out of the soil, is that the leaves and flowers grow immediately from that part, and if it was buried, their foot-stalks would be in the soil, and get often injured by frequent waterings. Cyclamens do not require much water, but they should not be suffered to become too dry. They continue in bloom for two months—a fresh number of flowers rising up all the time, to succeed those that fade. As each flower drops off, the flower-stalk will begin to twist like a screw, holding the seed-pod in the middle, and by the time the seeds are ripe, the screw is hidden down among the leaves. Keep the soil moist as long as the leaves are green; when they fade, plunge the pot in a border in front of the house, so as to be an inch below the surface; and, if the soil of the border is heavy, put three or four little stones under the pot, which will assist the drainage in showery

weather. Thus the bulb will be kept in a uniform state during its resting time—neither too wet nor too dry. In September, as soon as the new leaves appear above ground, raise the pot till the surface of it is level with the top of the border, then water it, and leave it out as long as the weather is favourable. They must also be fresh potted, and the sooner this is done in the autumn the better. The Persian cyclamen, which is chiefly referred to here, may be purchased at any seed-shop for the ordinary price of a shilling.

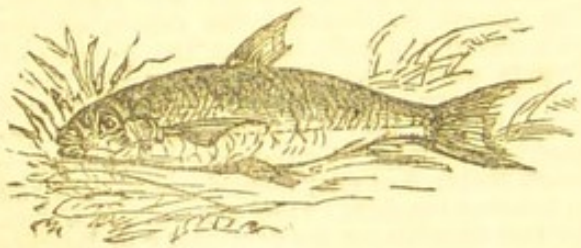
CYPRUS WINE, IMITATIVE.—To four gallons of water put one gallon of the juice of white elderberries, pressed gently from the fruit and passed through a sieve, without bruising the kernels of the berries. Then add twenty pounds of loaf sugar, three-quarters of an ounce of sliced ginger, and half an ounce of cloves. Let the whole boil together for half an hour, taking off the scum as it rises; pour it into a pan or tub to cool, and ferment it with ale yeast on a toast for three days; afterwards put it into a cask which will just hold the quantity, and add to it one pound of raisins, stoned; and when the fermentation has ceased, add five pints of French brandy. In three or four months it will be fit to bottle.

☞ Water, 4 gallons; white elderberry juice, 1 gallon; sugar, 20lbs.; ginger, ¾oz.; cloves, ½oz.; raisins, 1lb.; brandy, 5 pints.

D

DAB.—A fish somewhat similar to the flounder. It is in season in the latter part of the autumn. It may be dressed either by frying plain, or stewing. It requires no sauce, and is best eaten simply with a squeeze of lemon.

DACE or DARE, called *cyprinus alburnus* from the silvery brightness of its scales, is an active, little fish, affording much



pleasing sport to the angler. It may be fished for at the bottom with paste, gentles, worms, the caddis bait, wasp grubs, malt, wheat, and various other baits, and at the top with all kinds of natural flies, grasshoppers, and winged insects, and also with the artificial fly; indeed, whipping for dace with the natural or artificial fly may not inaptly be termed the training school for the tyro in fly fishing. The dace spawns towards the end of March in gentle streams with sandy bottoms, and although it quickly recovers itself, should not be sought by the angler until April is far advanced, when it may be found in sharp streams with gravelly bottoms, to which it has betaken to scour and cleanse itself. The rod for dace fishing should be very light and twelve feet in length; the line fine twisted silk, the bottom part of one or two yards of fine round gut; the hook No. 8, and the float a swan quill, or of thin tapered cork, that will carry from four to six BB shot, according to the depth of water and the strength of the stream. The angler, whilst fishing for dace, either at bottom or top, must hold himself in readiness to apply his art to the capture of much larger and more highly prized fish: for the carp, the chub, and the barbel both take the baits used for, and frequent the places resorted to by dace, and the chub and the trout will frequently rise at the fly more specially destined for their smaller compeer. Books: *Blaine; Captain Williamson; Ephemera; Bailey.*

DACE FRIED.—Open them up the middle, cut the fins close off, scale them well, dry in flour, fry a light brown, and serve with melted butter.

DACE MARINADED.—Cut off the heads, clean the fish thoroughly, and rub the inside with plenty of pepper, salt, and allspice; place them in layers in a baking dish, with bay leaves between the layers, and add three parts vinegar and one of water, sufficient to fill the dish; add a little whole pepper, and a blade or two of mace. Bake slowly for about five hours. When cold, shift the fish, and marinade into another dish.

DAFFEY'S ELIXIR.—A specific for colic and spasmodic affections, which, as sold in the shops in the present day, consists chiefly of an infusion of aniseeds, liquorice, and jalap, in the coarsest and most fiery malt spirit, lowered with common water. If the Daffey's Elixir were mixed according to the following formula, it would be found efficacious as a remedy for the complaints alluded to. Mix five ounces of aniseeds, three ounces of fennel seeds, four ounces of parsley seeds, six ounces of Spanish liquorice, five ounces of senna, one ounce of Turkey rhubarb, sliced, three ounces of elecampane-root, sliced, seven ounces of jalap, sliced, twenty-one drachms of saffron, six ounces of manna, two pounds of raisins, stoned, and a quarter of an ounce of cochineal. Mix these ingredients well together in a stone jar, and pour upon them two gallons of the best Cognac brandy. Stir the whole well together, then close the jar, so that it shall remain air-tight, and let the elixir infuse during a fortnight. At the expiration of this time, strain it through linen, squeezing carefully out all the liquor which constitutes the elixir, which may then be put into half-pint bottles.

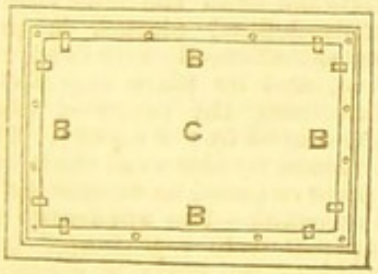
Aniseeds, 5ozs.; fennel seeds, 3ozs.; parsley seeds, 4ozs.; Spanish liquorice, 6ozs.; senna, 5ozs.; rhubarb, 1oz.; elecampane root, 3ozs.; jalap, 7ozs.; saffron, 21 drachms; manna, 6ozs.; raisins, 2lb.; cochineal, ½oz.; brandy, 2 gallons.

DAFFODIL.—See NARCISSUS.

DAGUERREOTYPE.—The name given to a process introduced by Daguerre, a French artist, by which the images from the lens of a camera obscura are fixed on metal plates. The process is divided into five operations. The first consists in cleaning and polishing the plate, to fit it for receiving the sensitive coating on which light forms the picture. The second is the formation of the sensitive ioduret of silver over the face of the tablet. The third is the adjusting of the plate in the camera obscura, for the purpose of receiving the impression. The fourth is the bringing out of the impression, which is invisible when the plate is taken from the camera. The fifth and last operation is to remove the sensitive coating, and thus prevent that susceptibility of change under luminous influence, which would otherwise exist, and quickly destroy the picture.

First operation.—A small phial of olive-oil —some finely carded cotton—a muslin bag of finely levigated pumice—a phial of nitric acid, diluted in the proportion of one part of acid to sixteen parts of water, are required for this operation. The operator must also provide himself with a small spirit-lamp, and an iron wire frame, upon which the plate is to be placed while being heated over the lamp. The plate being first powdered with pumice, by shaking the bag, a piece of cotton dipped into the olive-oil is then carefully rubbed over it with a continuous circular motion, commencing from the centre. When the plate is well polished, it must be cleaned by powdering it all over with pumice, and then rubbing it with dry cotton. After this the surface of the plate is rubbed over with a pledget of cotton, slightly wetted with the diluted nitric acid. Frequently change the cotton, and keep rubbing briskly, that the acid may be equally diffused over the silver, as, if it is permitted to run into drops, it stains the table. It will be seen when the acid has been properly diffused, from the appearance of a thin film equally spread over the surface. It is then to be cleaned off with a little pumice and dry cotton. The plate is now placed on the wire frame, the silver upwards, and the spirit lamp held in the hand, and moved about below it, so that the flame plays upon the copper. This is continued for five minutes, when a white coating is formed all

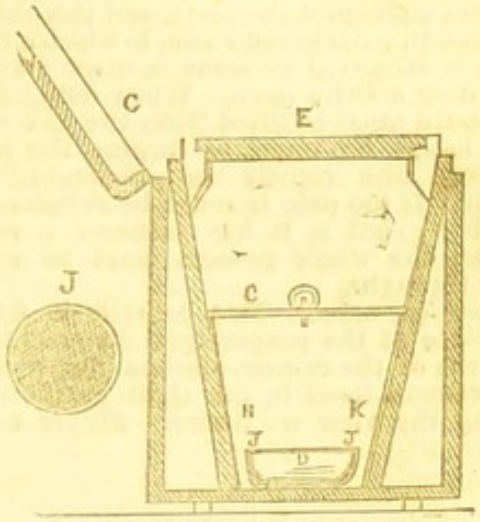
Fig. 1.



over the surface of the silver; the lamp is then withdrawn. The plate is now cooled *suddenly* by placing it on a mass of metal, or a stone floor. When perfectly cold, it is again polished with dry cotton and pumice. Care must be taken not to breathe upon the plate, or touch it with the fingers, for the slightest stain upon the surface will be a defect in the drawing. After the first polishing, the plate C is fixed on a board by means of four fillets B B B B, of plated copper. To each of these are soldered two small projecting pieces, which hold the tablet near the corners, and the whole is retained in a proper position by means of screws.

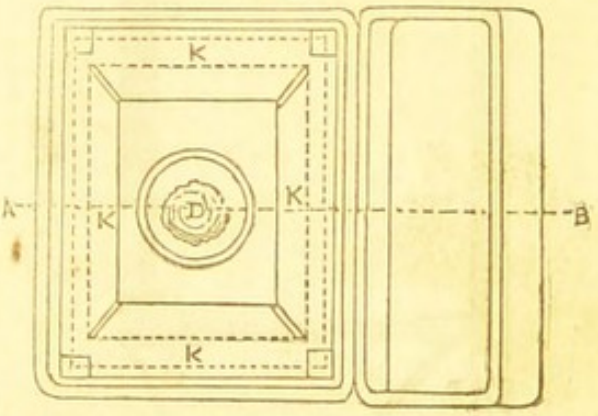
Second operation. — This operation is the most important of all, and requires a box to be provided similar to figs. 2 and 3. Figure 2 represents a section, supposed to pass

Fig. 2.



down the middle of the apparatus by the line A B in fig. 3, which represents the box as seen from above. C is a small lid which accurately fits the interior, and divides

Fig. 3.



the boxes into two chambers. It is kept constantly in its place when the box is not in use; its purpose being to concentrate the vapour of the iodine, that it may act more readily upon the plate when it is exposed to it. D is the little capsule in which the iodine is placed, which is covered with the ring J, upon which is stretched a piece of fine gauze, by which the particles of iodine are prevented from rising and staining the plate, while the vapour passes through it. E is the board with the plate attached, which rests on the four smaller projecting pieces. G is the open lid of the box, which is kept closed, except when the plate is removed or inserted. H represents the

supports for the cover C. K, tapering sides all round, forming a funnel-shaped box within. To prepare the plate:—The cover C being taken out, the cup D is charged with a sufficient quantity of iodine, broken into small pieces and covered with the gauze J. The board E is now, with the plate attached, placed face downwards in its proper position, and the box carefully closed. In this position the plate remains until the vapour of the iodine has produced a definite golden yellow colour, nothing more or less. The time for this cannot be fixed, as it depends entirely on the temperature of the surrounding air. It is necessary, from time to time, to inspect the plate, and this should be done in a darkened room, to which a faint light is admitted in some indirect way, as by a door a little open. When doing this, the board must be lifted from the box with both hands, the operator turning the plate towards him rapidly and observing the colour. If too pale it must be returned to the box; but if it has assumed a violet colour, the whole process must be again gone through.

Third operation.—This consists in fixing the plate at the proper focal distance from the lens of the camera obscura, and placing the camera itself in the right position for taking the view we desire. Figure 4 is a

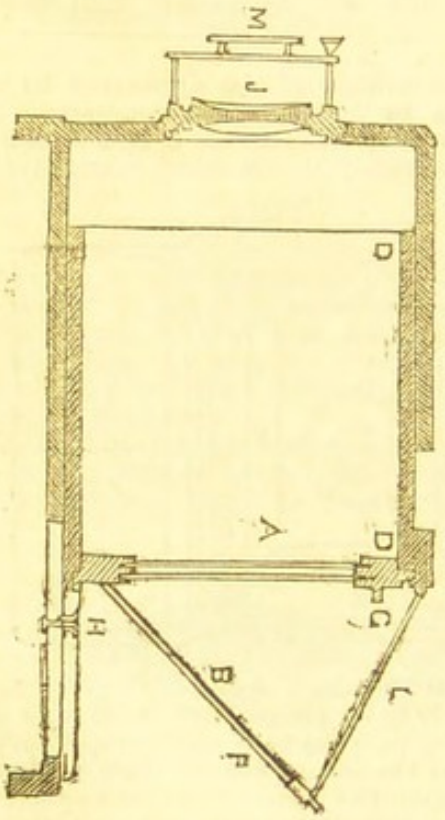
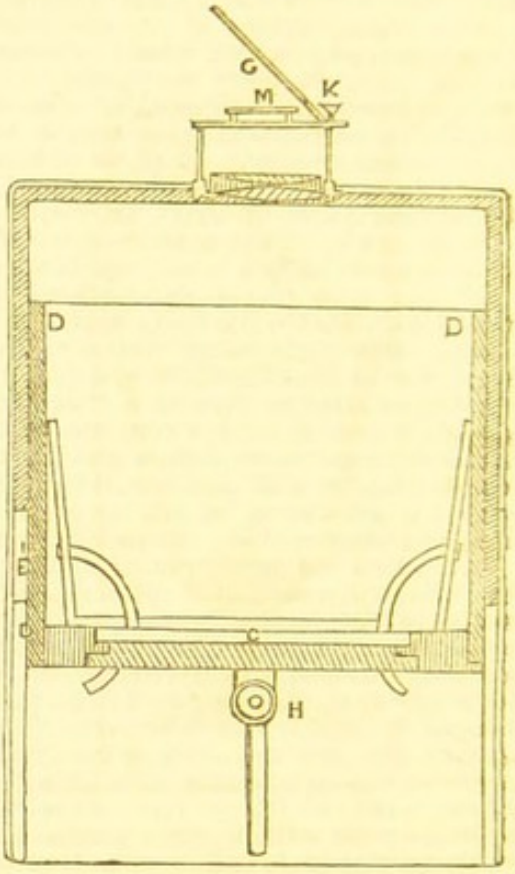


Fig. 4.

perpendicular section of the camera. A is a ground glass by which the focus is adjusted; it is then removed and the plate substituted as in C, fig. 5. B is a mirror for observing the effects of objects, and selecting the best points of view. It is inclined at an angle of 45°, by means of the support L. To adjust the focus the mirror is lowered, and the piece of ground glass A used. The focus is easily adjusted by sliding the box D out or in, as represented in the engraving. When the focus is adjusted it is retained in its place by means of the screw H. J is the object glass; its diameter is about one inch, and its focal distance about fourteen inches. M is a stop a short distance from the lens, the office of which is to cut off all those rays of light which do not come directly to the object to which the camera is directed. This instrument reverses the objects, that which is to the right in nature being to the left in the impression. This can be remedied by using a mirror outside, as K J in fig. 5. This

Fig. 5.

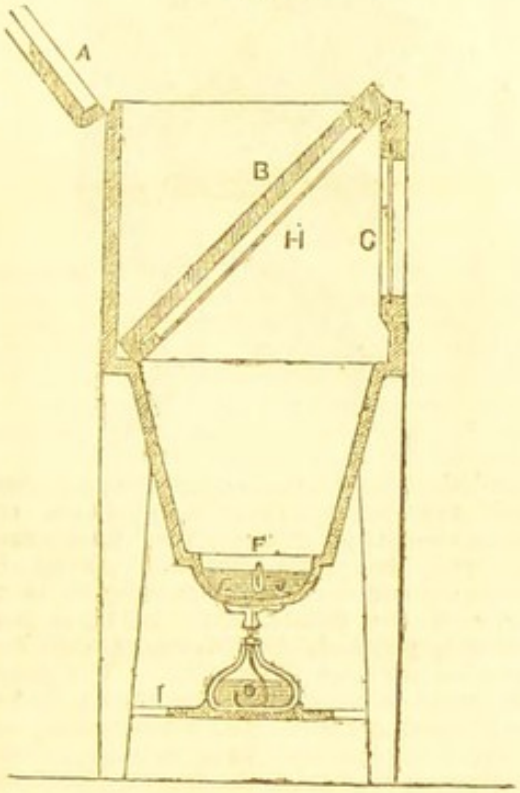


arrangement, however, reduces the quantity of light, and increases the time of the operation one-third. After having placed the camera in front of the landscape or whatever object we desire to represent, our first attention must be to adjust the plate at such a distance from the lens that a neat and sharply-defined picture is produced. This being satisfactorily arranged, the glass is removed, and its place supplied by the frame containing the prepared plate, and the whole secured by the screws. The doors are now opened by means of the half circles, and the plate exposed to receive the picture.

Fourth operation.—The apparatus required in this operation is represented by fig. 6. A is the lid of the box; B, a black board with grooves to receive the plate; C, cup containing a little mercury; D, spirit-lamp; F, thermometer; G, glass through which to inspect the operation; H, tablet as removed from the camera; I, stand for the spirit-lamp. All the interior of this apparatus

should be covered with hard black varnish. The board and the fixed plate being withdrawn from the camera, are placed at an angle of about 45° within this box—the tablet with the picture downwards, so that it may be seen through the glass G. The box being carefully closed, the spirit-lamp is to be lighted and placed under the cup containing the mercury. Heat is to be applied until the thermometer, the bulb of which is covered with the mercury, indicates a temperature of 60° Centigrade (140° Fahrenheit). The lamp is then withdrawn, and if the thermometer has risen rapidly, it will

Fig. 6.



continue to rise without the aid of the lamp; but the elevation ought not to be allowed to exceed 75° Cent. (167° Fahrenheit). After a few minutes, the impression begins to appear; the operator assures himself of the progress of this development by examining the picture through the glass G, by a taper, taking care that the rays do not fall too strongly on the plate, and injure the embryo images. The operation is continued till the thermometer sinks to 45° Cent. (113° Fahrenheit). After each operation the apparatus is carefully cleaned, the strips of metal which hold the plate rubbed with pumice and water; and the plate deposited in a box extended from the light until the last fixing operation is performed.

Fifth operation.—This process has for its object the removal of the iodine from the plate of silver, which prevents the further action of light. For this purpose, a saturated solution of common salt may be used, or a weak solution of the hyposulphite of soda. In the first place the plate is to be placed in a trough of water, plunging and withdrawing it immediately; it is then to be plunged into one of the above solutions. To assist the effect of the saline washes, the plate must be moved to and fro, which is best done by passing a wire beneath the plate. When the yellow colour has quite disappeared, the plate is lifted out, great care being taken that the impression is not touched, and it is again plunged into water. A vessel of warm distilled water, or very pure rain water boiled and cooled being provided, the plate is fixed on an inclined plane, and the water is poured in a continuous stream over the picture. The drops of water which may remain upon the plate, must be removed by forcibly blowing upon it, for otherwise in drying, they would leave stains in the drawings. This finishes the drawing, and it only remains to preserve the silver from tarnishing and from dust. The sketches will not bear the slightest rubbing, and must be preserved in cases of pasteboard, with a glass over them, and then framed in wood. The same plate may be employed for many successive trials, provided the silver be not polished through to the copper. It is very important, after each trial, that the mercury be removed immediately by polishing with pumice-powder and oil. If this be neglected, the mercury finally adheres to the silver, and good drawings cannot in consequence be obtained. Many improvements upon this discovery have been introduced from time to time.—See PHOTOGRAPH, STEREOSCOPE, TALBOTYPE, &c.

Books: *Daguerre's History and Practice of Photogenic Drawing*, 2*s.* 6*d.*; *Hunt's Photographic Manual*, 6*s.*; *the Daguerrian Journal*, 30*s.*; *Dictionary of Useful Knowledge, article Daguerreotype.*

DAHLIA.—This much-esteemed flower is propagated by cuttings, by grafting, and by seed. The period for *stocking the cuttings* extends from February to August. The young shoots that spring from the bulbs make the best cuttings, and are the most sure to grow; but the young tops taken off at a joint will strike root and form small bulbs even so late as August, and often are more sure to grow in the spring following, if kept in small pots, than roots that have been planted out late. If the shoots on the old bulbs are numerous, or there appear to be many buds ready to start, the shoots that have grown three inches long may be slipped off with the finger close to the bulb; but, if the shoots are few, or there is only one, they must be cut off so as to leave two buds at the base of the shoot to grow again. The cuttings or slips must be put in pots filled with light earth, with a layer of pure white sand on the surface, and placed in a gentle hotbed. If the pot of cuttings can be plunged in coal-ashes or other material, the cuttings will strike the sooner; water very moderately and carefully, and shade from bright sun. They will strike root in a fortnight or three weeks, and should be immediately potted in three-and-a-half-inch pots and kept close for some days, until they make a few more roots. They may then be placed in a cold frame, shaded from the sun, and protected from frost and wet. Pot them again into four-and-a-half-inch pots, before the roots become matted, then begin to give air daily, and

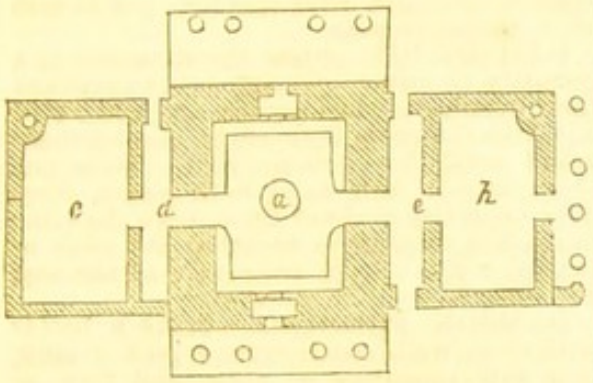
keep them well watered. In *propagating by grafting*, the cutting intended for the graft should be strong and short-jointed, having on it two or more joints or buds; it must be also procured as soon in the season as possible: when obtained, select a good tuber of a single sort, taking especial care that it has no eyes; cut off a slice from the upper part of the root, constituting the bottom of the part so cut a ledge whereon to rest the graft. It is of advantage, though not absolutely necessary, that a joint should be at the end of the scion, for the scion will occasionally put forth new roots from the lower joint; the stem is pruned from the upper joint. After the joint has been tied, a piece of fine clay, such as is used for common grafting, must be placed round it, then pot the root in fine mould, in a pot of such dimensions as will bury the graft half way in the mould; place the pot in a little heat in the front of a cucumber or melon frame, if you chance to have one in work at the time. In about three weeks the root should be shifted into a larger pot, if it be too soon to plant it in the border, which will probably be the case. For *propagation by seed*, collect the seeds in September from the dwarf plants, where no preference exists on other accounts, and from semi-double flowers when double varieties are chiefly desired. Sow in March, or earlier, in a heat of fifty-five or sixty-five degrees; the young plants to be pricked out, if necessary, in pots, and kept in a temperature of fifty or fifty-five degrees till the end of April. Now plant out where they are to remain, covering each plant at night with an empty pot for some weeks, to prevent injury from spring frosts. If in a compartment by themselves, plant in rows three feet wide, and at two feet distance in the row: if in the flower border, plant in the back rows. In either case, they require to be staked. Seedlings thus treated will produce flowers in July, and continue in perfection till the autumn. The flowers may be preserved nearly all the winter, by planting the tubers in large pots and removing them early in the autumn to the greenhouse. The *best soil* for dahlias is a rich deep loam, with a good coating of well-decomposed dung. The *situation* should be a clear open one, neither sheltered by trees nor walls. *Tying* is a very important operation. As soon as the plants are high enough, they should be tied to the stakes with some rather broad shreds of soft bast matting; and the side shoots must also be secured by longer pieces of matting, to prevent the winds and heavy rains from breaking them off. It may sometimes be necessary to place three or four additional stakes at a certain distance from the central one, to tie the side branches to. The best kind of stakes are the thinnings of larch plantations. They should be stout, and six or seven feet long at least. No particular care is required after the plants have been tied, till they have been attacked by the frost; they should then be cut down, and in a very dry soil, the tubers may be covered with haum, old tan, or leaves. If this is done, they will blow full and early the next season. The most general and the safest way, however, with the valuable sorts, is to dig up the tubers with a portion of the stem attached, and to plant or bed them in pots or boxes among sand or dry mould, and keep them under the stage of a greenhouse, or in some dry airy place, free from the drip of water, or the access of frost till the spring. The *characteristics of a good dahlia* are, that the flowers should be fully double, always filling the centre; the florets should be entire or nearly so, pointed or

rounded, reflexed, and so forming a globular kind, regular in their disposition, each series overlapping the other backwards; they may be either plain or quilled, but never distorted. Any irregularity in the shape of the petals, such as their being notched, pointed, &c., detracts both from their beauty and their value. The peduncles ought to be sufficiently strong to keep the blossoms erect, and consequently well exposed to view, and long enough to show the flowers free from the leaves. The plant ought to flower early and abundantly, and retain its character until the end of the season. Bright and deep velvety colours are most admired.

DAIRY.—The proper construction and management of this department in domestic and rural economy, forms a matter of great importance. The dairy should, if possible, face the north. The window and door should be opposite each other, in order to have a current of air through the apartment. The flooring should be either brick, stone, or slate. The shelf also in which the pans are placed, should be made of slate or stone. Wood, by so quickly absorbing liquid is very objectionable for shelves or flooring; but should it form part of a dairy, plenty of soda must be dissolved in the water with which it is washed, or it will always retain a disagreeable smell. Tin trays and pans are also preferable to wooden ones.

A dairy for a private family may be constructed according to the plan seen in the engraving: *a*, is the milk-room; *b* the dairy-scullery with a copper fixed in the corner, and a pump communicating with a well, or having a cistern for water; the outer door opens into a covered place to hold the ves-

sels that are drying. c is the room for churning butter, and also for making cheese, having its copper, cheese press, various shelves, &c. These two rooms are separated by passages from the milk-room, *d e*, which is thus kept more cool and quiet, the entrance being into one of the passages, without going into either of these rooms. Space may be found in the ends of these passages for keeping butter, which will be then

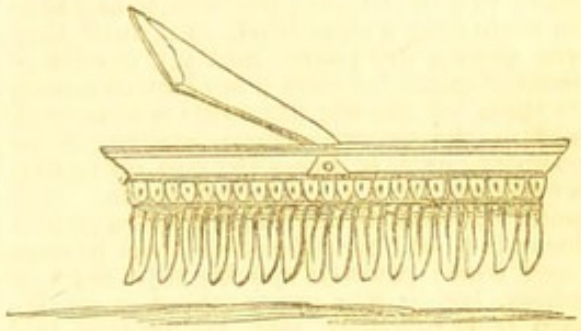


accessible without going into any of the rooms; and a room for keeping cheese at a distance from the butter may be placed over that for making it. Before and behind the milk-room may be verandas effectually to screen the walls from the sun, as well as for ornament. One great consideration in connection with the dairy and its appurtenances is cleanliness—the dairy itself and every utensil used should be kept in a state of continued and unsullied sweetness; for without this, the milk will become sour, and the operations of the dairy be materially interfered with.

DAIRYMAID.—The duties of the dairymaid are well defined. She is a domestic servant, domiciliated in the farmhouse. Her principal duty is, as her name implies, to milk the cows, to manage the milk in all its stages, bring up the calves, and make into butter and cheese the milk obtained from the cows after the weaning of the calves. Should any lambs lose their mothers, the dairymaid has to bring them up with cows' milk until the time of weaning, when they are returned to the flock. The dairymaid also milks the ewes after the weaning of the lambs, and makes cheese of the ewe-milk. She attends to the poultry, feeds them, sets the brooders, gathers the eggs daily, takes charge of the broods until able to provide for themselves, and sees them safely lodged in their respective apartments, every evening, and sets them abroad every morning. It is generally the dairymaid, when no housekeeper is kept, who gives out the food for the reapers, and takes charge of their articles of bedding. The dairymaid should therefore be an active, attentive, intelligent, and skilful person. Finally, the dairymaid should be scrupulously clean in her person and dress, and especially when about to perform any of the operations of the dairy, on which occasions her hands and arms should be thoroughly washed before they are allowed to come in contact with the milk, butter, cheese, &c.

DAISY.—A well-known hardy perennial, of which there are many varieties; some white, others crimson, and many variegated. A more curious variety is the proliferous or hen and chicken daisy. They will all flourish in any moist soil, and in almost any situation. They bloom from April to June. Propagated by divisions; the smallest fragment of root almost enables them to grow. To keep them double and fine, they require moving occasionally. Planted as an edging round ranunculus and other beds, their roots tempt the wire-worm from those of the choicer flower.

DAISY RAKE.—A horticultural implement, having teeth sharpened on both edges like lancets; it is used for raking the grass,



in order to tear off the flower heads or buds of daisies, and other plants in grass lawns.

DALBY'S CARMINATIVE.—A medicine frequently administered to children, with a view of soothing and tranquillizing them. It has an opium basis; and it contains besides, tincture of opium, tincture of assafœtida, tincture of castor, oil of caraways, oil of peppermint, magnesia, and syrup. However efficacious this medicine may be in accomplishing the desired object, its effects on the system generally are injurious, and it should therefore never be resorted to.

DAMASK.—A fabric chiefly employed in furniture for hangings, chair and sofa coverings, &c. Linen damask is a twilled fabric of a similar structure to the silk fabric of that name. It is very generally used for tablecloths and napkins. Cotton damasks are made in imitation of linen damasks; though they answer the purpose pretty well, and are economical, they are not so durable as linen, nor do they preserve their whiteness unless they are frequently bleached.

DAMP, under any form, should be avoided. A humid atmosphere or situation is one of the commonest causes of agues, asthmas, rheumatism, and numerous other diseases. *Damp linen* is very injurious, and should be especially guarded against. When it is impossible to prevent the use of damp linen as articles of dress, the best way to obviate any ill effects is to keep constantly in motion, and avoid remaining near the fire, or in a warm apartment, or in a draught of cold air, until sufficient time has elapsed to allow of the escape of moisture. The effect of evaporation is the reduction of the temperature of the body, hence the depressing action of damp linen. *Damp walls* are also a cause of much discomfort and ill health. One of the best re-

medies for counteracting the injurious effects thus occasioned, is to get some lead rolled very thin, and nail it over the damp wall, using small copper nails, as iron would corrode, and then cover with the paper; by this means, the damp will be effectually prevented from injuring the paper. It is said that ivy planted against the soddened wall of the house will exclude dampness. If a wall is already damp, ivy planted against it will, when grown up, cause it to become dry, provided the brickwork is sound, and the dampness does not arise from moisture attracted upwards from the foundation.

DAMSON CHEESE.—Bake or stew the fruit till tender, drain off the juice, skin and stone the damsons, pour back to them from a third to half of their juice, weigh, and then boil them over a clear brisk fire, until they form quite a dry paste; add six ounces of pounded sugar for each pound of damsons, stir them off the fire until this is dissolved, and boil the preserve again, stirring it incessantly, until it leaves the pan quite dry, and adheres in a mass to the spoon. If it should not stick to the fingers when lightly touched, it will be sufficiently done to keep a long time; press it quickly into pans or moulds, lay on it a paper dipped in spirit; when it is perfectly cold, tie another fold over it, and store it in a dry place.

DAMSON COMPOTE.—To one pound of damsons, put four ounces of sugar and half a pint of water, and simmer them gently for ten or twelve minutes.

DAMSON, CULTURE OF.—This fruit is not difficult of culture. It is propagated by grafting, the muscle stock being the most suitable, and will succeed better than any other. If budded nine inches from the ground, upon vigorous stocks, they will grow five or six feet high the first year, and make fine standards the year following. The damson tree is peculiarly liable to attacks from the red spider; to get rid of this destructive insect, dust the trees with flower of sulphur, so shaking it beneath the leaves that it may ascend in a fine cloud, and lodge principally in the back of the leaves. Or make a solution of soft soap, three ounces to the gallon, and add four handfuls of sulphur to each gallon, then sponge the trees all over, especially the under side of the leaves. Under either of these modes of treatment, the spider will be exterminated.

DAMSON JAM.—Gather the fruit when it is quite ripe; split, stone, weigh, and boil it for forty minutes, then stir in half its weight of good sugar, roughly powdered, and when it is dissolved, give the mixture fifteen minutes' additional boiling, keeping it stirred, and thoroughly skimmed.

DAMSON JELLY.—To four pounds of damsons, put four pounds of fine sugar, and half a pint of water, boil them for half an hour over a gentle fire, till the skins break, then take them off, and set them by for an hour; place them over the fire again for half an hour more; then set them by for the same time; repeat for the third time: while they stand by the fire, put a weight upon them to keep down the syrup. The last boiling must be continued till they appear of a very high colour in the part where the skin is broken; then take them off, set them by to cool, and when they are cold, drain off the syrup, and proceed to make the jelly in the following manner:—Boil a good quantity of green apples, green gooseberries, and quince cores to a mash, and strain them through a hair sieve. Take an equal quantity of this jelly and the former syrup, and boil them over a gentle fire together, till they jelly; skim it well, and while it is hot, put it into skim glasses or pots.

DAMSON PIE.—Stew the damsons in a quantity of water just sufficient to prevent their burning; when tender, and while still hot, sweeten them with sugar, and let them stand until they become cold. Then put them into a dish lined with paste, drop flour upon them, cover them with the same paste, wet and pinch together the edge of pastes, cut a slit in the centre of the top, and bake for twenty minutes.

DAMSON PUDDING.—Make a batter with three well-beaten eggs, a pint of milk, four tablespoonfuls of flour, and four of brown sugar, stone a pint of damsons, and mix them with the batter; boil it in a buttered basin for an hour and a half.

DAMSON WATER ICE.—Boil the damsons whole, and when they have all burst open, put them into a linen bag; squeeze it well, mixing the juice with an equal quantity of syrup previously prepared, then ice it.

DAMSON WINE.—To every gallon of water put two pounds and a half of sugar, which boil for three-quarters of an hour, and skim. To every gallon of this mixture put five pints of damsons stoned; let the liquor boil till it is of a fine colour, then strain through a hair sieve; work it in an open vessel for three or four days; pour it off from the lees into a cask and allow it to work as long as it will; then stop it close and leave it undisturbed for six or eight months, when it may be bottled. In a year or a year and a half it will be in excellent condition for drinking.

DAMSONS BOTTLED.—Gather them on a dry day before they are ripe, when they have just turned their colour. Put them in wide-mouthed bottles, cork them close and let them stand for a fortnight; then carefully examine them, and if any of them are mildewed or spotted, take them out of the bottles and cork the rest close. Put the bottles in sand, and they will keep good till the spring.

DAMSONS DRIED.—Drain from preserved damsons all their syrup, cover the bottoms of sieves with them, and place them in a hot oven, change the sieves every day till they are dry, and while doing so, turn the damsons; when they are not sticky or likely to yield, take them out, paper a box and put them in, introducing a paper between each layer of fruit.

DAMSONS PRESERVED.—To every pound of damsons allow three-quarters of a pound of powdered loaf sugar; place in jars alternately a layer of damsons, and one of sugar; tie them over with bladder or strong paper, and put them into a moderately hot oven, letting them remain until the oven be-

comes cool. On the following day strain off the syrup, and boil it till it becomes thick. When cold, put the damsons one by one into small jars, and pour over them sufficient syrup to cover them. Tie them over with wet bladder.

DANCING, ETIQUETTE OF.—See BALL-ROOM.

DANCING, HEALTHFUL EFFECTS OF.—The exercise of dancing is exhilarating and healthful, when indulged in to a reasonable extent and with certain precautions. Its immediate effects are to cause the blood to circulate more freely, and to promote the action of the various organs of the body. The evil concomitants of dancing as practised in the present day, are unreasonable hours, and exposure to variable temperature through an insufficiency of clothing, both of which may be avoided by the simplest exercise of moral courage and common sense.

DANDELION. — A common and well-known plant which is employed for various uses. The root is washed and mixed with coffee and chocolate; a mixture which some persons prefer to the unsophisticated article.

The leaves, especially when they have undergone the process of bleaching, are used in salads, in the place of lettuce. As a medicine, dandelion acts both as a tonic and a diuretic; and in the form of extract and decoction, is frequently administered successfully in cases of dropsy.

DANDRIFF.—Scurf or dandriff, as it is indifferently called, is the result of a diseased action in the cuticle of the scalp, by which the epidermis or scarf-skin is thrown off in the form of fine scales, which accumulating about the roots of the hair, and preventing the natural perspiration from the scalp, causes partial baldness, or a general falling off of the hair. This cuticular affection is most common in persons of a scrofulous habit, and may be induced by inattention to cleanliness, wearing the hair too long or thick, or by any cause that permanently checks the insensible perspiration of the scalp. *Treatment.*—The hair should be at once cut and thinned, the head well combed and slightly stimulated by means of a brush; the roots of the hair are then to be washed twice a day, with a sponge, and a lotion made by dissolving one drachm of carbonate of ammonia—volatile salts—in a pint of cold water; or using a wash composed of two drachms of sal ammoniac in a pint of cold water, and by once a week washing the head with soap and water, and removing with a comb and brush all the dead cuticle that may adhere to the hair, before resuming the wash. Should these means, however, fail, a little creosote ointment must be rubbed into the roots of the hair at bed-time, and well washed off in the morning; at the same time a hot bath, by exercising a beneficial action on the entire cuticle, will be found efficacious on this affection of the scalp.

DARNING.—A method of mending socks and stockings which should be practised as follows:—Turn the stocking on the *right* side outwards; thread a small sewing needle with very fine cotton; pass the *fingers only* down the stocking, keeping the thumb outside, in order to preserve the edges of the hole in their places. "Fasten on" by darning backwards and forwards a few times at the end of the hole farthest from you; then, take on the needle two loops, both on one side, and draw the thread through; then take two on the other side of the hole, and draw them close; afterwards put the needle back into the last of the two loops or meshes, and take one additional loop, so that there are always to be two consecutive loops on the needle, yet only one of them is to be a fresh one; pass over to the opposite side and again put the needle back into the loop from which the thread issues, and take another (the next loop) on to it; thus continue drawing the edges close; and if this be done skilfully, which five minutes' practice will effect, the hole will be imperceptible. This is a case of simple dropping of stitches; a gigantic gap, however, is considerably contracted in its dimensions, and at least one-half of the consequent trouble of darning spared, by drawing the edges together, or so near as will allow the stock to be flat and unpuckered, with very fine cotton. In this case the hole will be made considerably smaller, and the regular darning afterwards, will entirely hide the original thread that has held the gaping edges in their places. When stitches drop in a stocking, the fabric will generally be found very weak; and by the plan of "taking up the stitches," instead of an unsightly darn appearing, and a large portion of time being wasted, nothing will be requisite but to thicken the fragile part on the wrong side, in the usual manner.

DATE.—A fruit imported into Britain in a dried state from Barbary and Egypt, and when in good condition they are much esteemed. An inferior kind has lately become common, which are dried hard, and

have little or no flavour. They should be chosen large, soft'ish, not much wrinkled, of a reddish yellow colour on the outside, with a whitish membrane between the fruit and the stone.

DAUGHTERS, EDUCATION OF.—There are few subjects so intimately connected with individual happiness and national prosperity as the education of daughters. The system of female education in England is, with a few exceptions, unsatisfactory and defective. One branch of study, and that the most important of all, is almost universally neglected, namely, *domestic education*. By domestic education is not meant the sending daughters into the kitchen some half-dozen times, to weary the patience of the cook, and to boast of it the next day in the parlour, but two or three years spent with a mother assisting her in her duties, instructing brothers and sisters, and taking care of their own clothes. This will make them happy wives and good ones; for, an early acquaintance with the duties of life makes them sit lightly and gracefully upon those who afterwards practise them. But in the modern system of female education, no time or opportunity is allowed for the formation of quiet, domestic habits. Girls are sent to school until they are sixteen or seventeen, and this precious interval is, in the majority of cases, spent in acquiring the *elements* of numerous sciences, without being thoroughly acquainted with any; a smattering of French and Italian, a superficial knowledge of drawing, and the playing of half a dozen "show pieces" on the piano, form the sum total of instruction. As soon as they leave school they begin a round of balls and parties, and a series of visits to gay young friends; and in the midst of this whirl of excitement, all nobler and higher attainments are lost sight of, and nothing regarded as of consequence but parade and attraction. Thus three great evils are engendered, vanity, extravagance, and idleness; dispositions naturally good and affectionate, trained into heartlessness, and the whole course of life degraded and embittered. All this is mainly attributable to the neglect and mismanagement of the mother, who deems it the best policy to let her daughter "*enjoy herself all she can while she is single;*" and who, instead of representing domestic life as the gathering place of the deepest and purest affections—as the sphere of woman's enjoyments as well as of her duties—teaches her to regard matrimony as desirable because a "good match" is a triumph of vanity, and it is deemed respectable to be "well settled in the world." Marrying with these feelings a woman considers herself as a sacrifice made at the altar of freedom and gaiety, and thus the word *home*, instead of being associated with all that is happy and enjoyable, means to her a species of thraldom, in which she is doomed to hide herself away from the *world*. The course thus pursued is senseless and cruel from beginning to end. Every woman expects in the natural course of events to become a wife and a mother. And if her happiness or misery in this state, wholly depends—as in truth it does—upon her fitness for the duties she is called upon to perform, she surely ought to be instructed in those duties, by her seniors, who cannot fail to be impressed with their importance, nay, their absolute necessity. Every mother who thus neglects her daughter's education, is guilty of a great social crime, the consequences of which will not only fall upon her own immediate offspring, but may be entailed upon generations to come. Let daughters, therefore, receive as many attainments and accomplishments as their capacities will admit of. Let them have a reasonable amount of enjoyment, and intercourse with society, but do not allow these or any other considerations to interfere with domestic education; or prevent her from fulfilling woman's noblest and most sacred mission, that of becoming a good wife and a discreet mother.

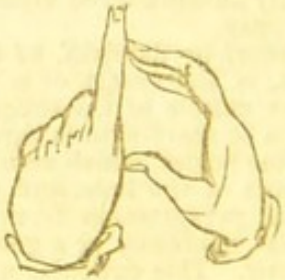
DAY BOOK.—See BOOK-KEEPING.

DEAF AND DUMB ALPHABET.—An invention by which deaf and dumb people are enabled to understand and communicate language, with almost the same facility as spoken words. The alphabet is expressed by the aid of the hands and fingers, each letter being formed as follows:—

A is expressed by touching the top of the thumb of the left hand with the forefinger of the right.

B. Join the forefinger and thumb of each hand, and place the back of the forefinger nails together.

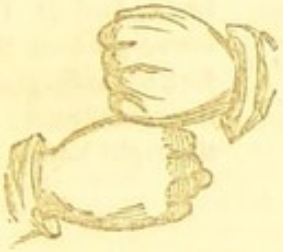
C. Bend the fingers and thumb of the left hand, so as to form two points of a circle.



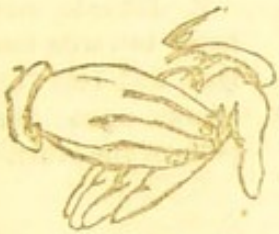
D. Bend the fingers and thumb of the right hand into a semi-circle, and then join them to the forefinger of the left, which keep in a straight line.

E. Touch the top of the forefinger of the left hand with the forefinger of the right.

F. Place the forefinger of the right hand across the backs of the first and second fingers of the left.

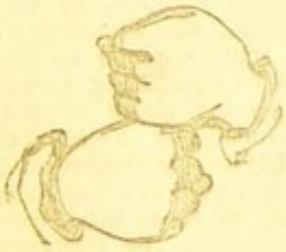


G. Clench both hands, and put one fist upon the other.

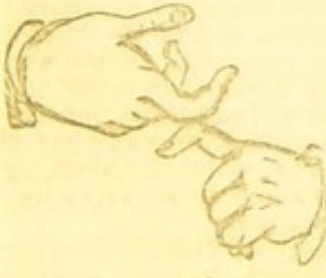


H. Pass the palm of the right hand across that of the left, sweeping it along to the tips of the fingers, as if brushing something off.

I. Touch the top of the second finger of the left hand with the forefinger of the right.



J. Clench the hands together, as directed for the letter G.



K. Form a semicircle with the thumb and forefinger of the right hand, and join it to the forefinger of the left, which must then be kept straight out; both forefingers must meet at the second joints.

L. Place the forefinger of the right hand across the centre of the palm of the left, so that the top of the finger may be exactly in the middle of the palm.

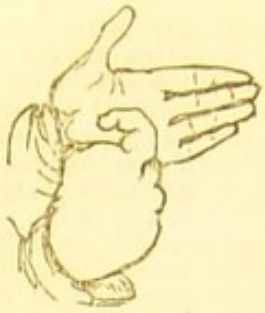
M. Place three fingers of the right hand flat upon the palm of the left.

N. Place two fingers of the right hand flat upon the palm of the left.

O. Touch the top of the third finger of the left hand with the forefinger of the right.

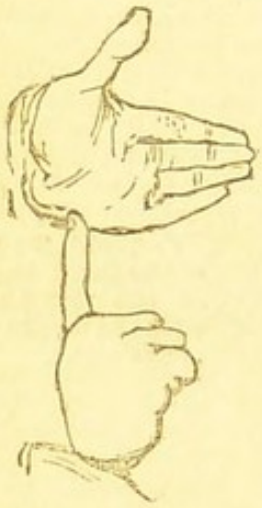
P. Place the tops of the forefinger and thumb of the left hand in a semicircular form against the first and second joints of the forefinger of the right, which should be kept straight.

Q. Form a circle with the forefinger and thumb of the left hand, and then curve the forefinger of the right into the shape of a hook, and place it exactly where the other fingers join.

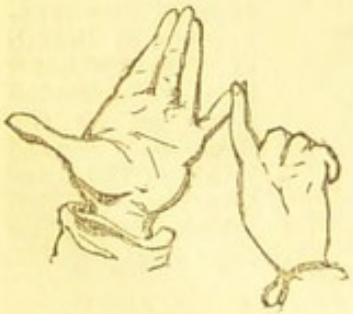


R. Bend the forefinger of the right hand, and rest it on the palm of the left.

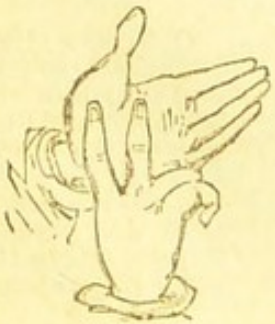
S. Bend the little finger of each hand, and lock them together.



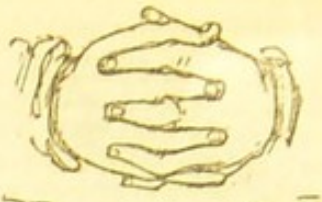
T. Fix the tip of the forefinger of the right hand against the middle of the lower edge of the left.



U. Touch the top of the little finger of the left hand with the forefinger of the right.

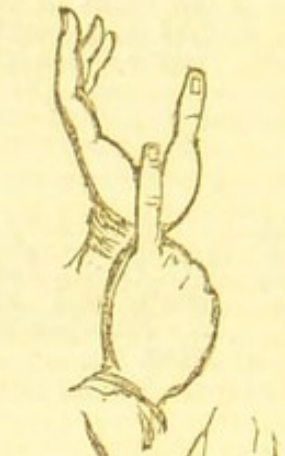


V. Place the first and second fingers of the right hand apart, upon the palm of the left.



W. Lock the fingers of one hand between those of the other.

X. Cross the forefingers at the second joints.



Y. Extend the thumb and forefinger of the left hand, and at the lower part of the fork so made, place the forefinger of the right hand.

Z. Elevate one hand towards the face, and rest the elbow upon the palm of the other.

The end of every sentence is indicated by snapping the second finger and the thumb of the right hand. This is requisite to avoid the confusion which might result from running the sentences into each other. *Numbers* are denoted by holding up one finger to represent 1, two fingers for 2, the open hand for 5, both hands for 10, and so on.

DEAFNESS—May proceed from many causes, such as a common cold; or as a consequence of fever; from mumps, or enlarged glands; sore throat, and swelling of the tonsils, and also from disease of the brain, or inflammation of the lining membrane of the ear. Besides these causes, deafness may be produced by accidental means, such as severe blows, or sudden and long continued noise; but as a general rule, deafness is symptomatic of some other disease, and usually subsides on the recovery of the patient from the illness that produced it. In fevers, deafness is always considered as a favourable symptom, and rarely fails of being a prognostic of recovery. Sometimes, without pain, or any assignable cause, the membrane of the ear will exude an unusual quantity of wax, or secrete a large amount of thin, discoloured matter, which, by blocking up the passage to the auditory nerve, causes partial or complete deafness.

Treatment.—All cases of difficult hearing proceeding from general or local disease

must be treated according to the seat and nature of the affection that induces it. When, however, it results from masses of indurated wax, the passage should first be expanded by means of a hot poultice placed for a few hours over the ear; after which it is to be syringed freely with warm soap and water, till the small collections of wax are washed out, which in some cases will not be effected till the operation has been repeated several times. For this purpose a good sized syringe should be used, and the jets propelled quickly. After each use of the syringe, which should not be used oftener than three times a day, a little wool, soaked in almond oil, with a drop of Friar's balsam, is to be placed in the ear, but neither tightly nor pushed in too far. When deafness is attended with a thin fœtid discharge, a small blister should be placed behind the ear, and kept open for some time by means of issue ointment, and the ears syringed twice a day with warm water; a little alterative medicine of blue pill and rhubarb is to be given once a day, and a saline draught twice a week. When deafness is attended with pains in the head and jaw, two or three leeches must be applied behind the ear, and a small blister placed on the temple. For the difficulty of hearing that follows chronic disease, or the absence of the natural secretion of the ear, deafness is often relieved by a small quantity of fine wool being placed lightly and carefully in the passage, which, by collecting the sound in its interstices, acts as an acoustic apparatus between the external ear and the brain. The deafness that proceeds from cold should be treated with the hot bath, and ten grains of Dover's powder in a little gruel at bed-time; and when from sore throat, by means of a gargle of sage tea and vinegar, or infusion of rose-leaves with alum.

DEATH—Is that condition of the animal body when all the functions which in operation constitute life have ceased to act, or when respiration, circulation, sensation, and those vital operations that make up the phenomenon of existence are permanently at rest. In man, the causes that lead to the cessation of life are extremely complex and numerous, and though in a state of nature it is probable mankind would die free from all disease, expiring only from the gradual attrition of the organs and the decadence of vital energy, yet from the state of polity in which all aboriginal races are found, such a condition, as a rule, is nowhere to be met with; and though the savage may occasionally live longer than his civilized brother, the same causes are in operation, and pestilence, famine, and war are, with him, equally destructive of life, and death, the result of the decay of nature, is equally as exceptional and unfamiliar in whatever state of man or condition of society we investigate the subject. Death is characterized by the universal coldness of the body, by a partially open mouth, closed eyelids, and sunken eyes, by an extreme pallor of the face, sometimes assuming a greenish yellow tone; with lividity of the orbits and great flaccidity of all the joints; this condition, however, only endures for a short time, as in a few hours after death, the *rigor mortis*, as it is termed, sets in, and the muscular relaxation is changed for that rigidity of the entire body so characteristic of the corpse of all animals, and which continues till decomposition once more relaxes the muscular tension.

DEATH, REGISTRATION OF.—A registrar or deputy registrar of deaths is required to dwell within the district of which he is such officer, and to put upon the outside of his dwellinghouse his name, with the addition of registrar or deputy registrar, as the case may be. He is bound to inform himself of every death in his district, and to register, as soon after the event as conveniently may be, the date of the death, with the name, surname, sex, age, rank, or profession of the deceased, with the cause of the death; and some person present at the death or in attendance during the last illness, or in default of such persons the occupier of the house in which such death has happened (or if the occupier be the person dead, then some inmate), shall give the above particulars to the registrar within eight days after the death, upon being requested so to do, and sign the same in the registrar's book. In case of an inquest, such information is to be conveyed to the registrar by the coroner. Any person causing a false entry to be made in a register of deaths is guilty of felony. An error in the entry may be corrected within one month after the discovery of the error, in the presence of two persons who were present at the death of the person registered. Searches for deaths may be made upon payment of 1s. for the first year and 1s. 6d. for every year after the first. For a single certificate the fee is 2s. 6d.

DEBILITY.—By this term is understood that state of the system which results from a loss of nervous energy and a consequent diminution in the force of the circulation, for though debility may be accompanied by an accelerated action of the heart, that accession is obtained at the sacrifice of vital tone. Debility may be either general or local; that is, the whole system may be in a state of greater or less prostration, or the weakness may appertain only to particular parts or organs, as illustrated by the constitutional debility that results from long illness or fever or the loss of power in the functions of the stomach, liver, kidneys, &c., and though in all cases the constitution must, to a certain degree, participate with the local debility, the loss of functional power is much more considerable than the bodily diminution of energy. Beside these conditions of local and general weakness, there is that state which may be called "chronic," the debility of age, or the consequence of a permanent malformation, or accident, where the general atony rises from the decadence of functional action.

Treatment.—When debility is the consequence of loss of nervous stamina, unconnected with organic disease, the principle of treatment lies in the adoption of such a system of therapeutic agents as will, by restoring the circulation to a healthy standard,

impart vigour to the brain, and give tone to the nerves of the entire body. This, in many instances, may be effected without the intervention of any medicine, and by a mere regimen of diet and exercise, and such accessories as prudence may dictate. In the first place the diet should be nutritious without being rich, the stomach never being left longer than four hours without food, during the day, and that food should in all cases be as solid as possible, and never permitted to pass into the stomach till well masticated. Whatever beverage is taken with luncheon or dinner, should be unadulterated by water, and when malt liquor is preferred, it should be the best of its sort, either stout or ale, but neither porter nor bitter beer. The exercise should be brisk walking; not a listless saunter, but an energetic walk with a predetermined purpose, varied, when obtainable, by horse riding in the afternoon, care being always taken to avoid any exertion till after digestion has taken place. The best accessories are going to rest and rising early, a bath once a week, and the daily use of the flesh brush over the whole body. To those whose debilitated constitutions require in addition some medicinal auxiliary to excite the torpid functions, one of the following mixtures may be taken in doses of two tablespoonfuls three times a day; the first being the most mild and the last the most stimulating; the patient selecting that one which the degree of his debility appears to demand.

No. 1. Dried hops . . . 2 drachms.
Bruised canella alba . 2 drachms.
Infuse in a pint of boiling water for 6 hours, strain.

No. 2. Gentian root . . 1 drachm.
Ginger (bruised) . 2 drachms.
Cardamoms (do.) . 2 drachms.
Valerian root . . 1 drachm.
Carbonate of soda . 1 drachm.
Infuse in a pint of boiling water for 6 hours, strain.

No. 3. Tincture of bark, compound 1 ounce.
Aromatic tincture . . ½ ounce.
Tincture of gentian . . ½ ounce.
Mix it in
Peppermint water . . 6 ounces.

No. 4. Aromatic confection . 3 drachms.
rub down in a mortar with
Mint water . . . . 8 ounces,
and add
Compound tincture of cardamoms . . . . 1 ounce.
Compound tincture of bark . 1 ounce.
Aromatic tincture . . . ½ ounce.
Spirits of sal volatile . . 2 drachms.
Mix. Where much acidity exists in the system, and digestion is attended with flatulence, one of the following pills should be taken an hour before each meal. Take of the best
Barbadoes aloes . . . 12 grains.
Mastich . . . . 12 grains.
Dried subcarbonate of soda ½ drachm.
Mix, and add enough extract of gentian to make a mass, which is to be divided into 12 pills. In cases where the debility is the result of a long organic disease, or a fever of a typhoid type, recourse must be had to mineral tonics; in which case any of the subjoined forms of mixture may be taken with advantage.

No. 1. Distilled water . . 1 pint
Muriatic acid . . . 30 drops.
Nitric acid. . . . 30 drops.
Mix, and take, through a quill, 2 tablespoonfuls three times a day.

No. 2. Hops . . . . 2 drachms.
Orange peel . . . ½ ounce.
Infuse in a pint of boiling water for 6 hours, strain, and add, when cold,
Nitric acid . . . . ½ drachm.
Mix; take one tablespoonful every four or six hours.

No. 3. Tincture of colombo . ½ ounce.
Tincture of orange . . ½ ounce.
Peppermint water . . 7 ounces.
Sulphate of zinc . . 4 grains.
Mix; a tablespoonful to be taken every three hours.

No. 4. Barley water . . . 1 pint
made thick, add
Syrup of ginger . . . 1 ounce.
Muriated tincture of iron 3 drachms.
Mix, and take one tablespoonful three or four times a day.

N.B.—In all cases where the pint or quart measure is prescribed, it is the imperial measure of 20 ounces to the pint that is signified.

DEBT is to be considered under two distinct forms, business debts, and domestic debts. *Business debts* are those which are incurred in obtaining possession of articles of which a profit is to be made. The articles may vary greatly in themselves; they may be ready-made goods; they may be materials to be used in any manufacture; tools which are requisite for the performance of work; or cash, as the general tool or instrument in the trade of buying and selling. They may, indeed, be anything, the use of which shall pay the expense of the credit given, and afford besides a fair reward for the labour undergone, and an adequate compensation for the risk and anxiety incurred. Business debts, therefore, are justifiable, not only on general principle, but as the grand stimuli to industry and energy. *Domestic debts* are distinguished from business ones by being incurred only for commodities that are to be consumed, without yielding any profit in return. Articles obtained in this way are therefore purchased upon disadvantageous terms, and in many instances, such as when a person buys goods just previous to taking some appointment or situation, he mortgages as it were a portion of his future earnings at a heavy rate of interest; and, generally speaking, feels the effects of it for many years afterwards. In as far as the revenue, which goes to the personal and domestic support of the man of business, is part of the profits of his capital and industry, it cannot be separated from these in the receiving. But it follows the general law in the expenditure; and therefore,

though such a person may, for the sake of more concentrated management, and sometimes in the case of a tradesman, for the reciprocating of business, mix up his domestic debts with his trade ones, yet he should never allow them to take the lead. If he does, he is apt to expose himself to greater danger than the man who has no business, and consequently no business debts, because under cover of his business credit he is enabled to carry them to much more ruinous lengths; and, as in his case, the ruin, if it come, falls on the business as well as on the man, it falls doubly, and upon a greater number; and if the failure is large, gives a check to the general confidence, the effects of which are often very extensive, and hurt many who are not immediately connected. When an individual not connected with business gets into personal debt, the question is between him and his creditors only; but a business-failure has always some pernicious effect upon the public.—See CASH, CREDIT, ECONOMY, &c.

DEBTOR AND CREDITOR are two persons between whom a contract has been entered into, whereby the right to a sum of money has been mutually lost and acquired. It is the duty of the debtor to tender payment at the proper time, that is, generally speaking, before demand made, or action brought against him. The duty of the creditor is, to receive the payment, if tendered at the proper time, and give a proper acquittance for it. A debtor is empowered to tender a blank receipt stamp at the time of payment, which a creditor is bound to fill up, and pay the amount of the stamp, under a penalty of ten pounds. Where a creditor has pointed out the mode of payment, it will be sufficient to follow his directions; thus, where he desires that a bill or note may be remitted by the post, if it be lost the loss will fall upon him. Payment of a debt is often made by bill or note, the taking of which amounts to an agreement to give a debtor credit for the time it has to run, and suspend a creditor's remedy in the meanwhile. It is, however, in general, no satisfaction of any debt or demand for which it is given, but only *primâ facie* evidence of payment, rendering it necessary that the creditor should account for it before he can be entitled to recover the amount for which it was given; but it will operate as satisfaction if the debtor's liability upon it be discharged by its loss. But if a creditor negotiate a bill or note, so as to render himself personally liable upon it, in that case it will not operate as payment, if dishonoured. A debtor may not pay a creditor of his creditor's except in a case of rent due to his superior landlord, if threatened with distress by him, or in case money is attached by process of law while in his hands. A debtor indebted in several ways to a creditor, may *at the time of payment* direct to which of the debts it shall be applied in reduction; but if he neglect to do so, the creditor may apply it to which debt he pleases; thus a creditor has a right to appropriate a payment made generally to a debt barred by the Statute of Limitations. Where there is an account current between parties, in the absence of an express agreement, the law presumes they both intended to apply the first item on the credit side to the first item on the debit side, and so on.—See INTEREST; PAYMENT; TENDER.

DECANTERS, TO CLEAN.—Place a funnel in the decanter, and pour in it some raw unpared potato, cut into little square bits, or some pounded egg-shells or some fine shot, the first named of these being preferable. Have ready in a small tub some strong suds of white soap and cold water, with a little pearlash dissolved in it, or a few drops of muriatic acid mixed with the water will greatly improve the polish of the glass. Take out some of the suds, pour it into the decanter through the funnel, and shake it about with the cut potato or other cleansing agent, till all the impurities disappear from the inside of the glass. Then empty it out, put in some more suds, and wash round the inside with a bit of sponge tied on the end of a stick. After having thus washed the decanters, rinse them out twice with clean cold water. Next put them into the tub of clean soap-suds, and wash them well on the outside with a glass brush, afterwards rinsing the inside clean with cold water. Dry the inside with a piece of clean linen rag fixed to the end of a stick, and wipe the outside with a soft towel, finishing with a silk handkerchief or a chamois leather.

DECANTING LIQUIDS.—The pouring off clear fluid from the sediment without disturbing it, often requires great care and delicate treatment. It is commonly performed by gently inclining the vessel, and holding it in the same position with a steady hand until all the clear liquid has run out. Advantage may be taken of the adhesion of liquids to solids, and by it the former may be led into the required direction. For instance, if a teaspoon be dipped into wine, so as to become wetted with it, and then held perpendicularly with the bowl downwards, and the point over, but not touching the entrance into the decanter, and the edge of the glass be made to touch the back of the spoon, it will be found, on inclining the former, that the wine, having a perpendicular solid body to adhere to and run down, will do so in preference to trickling along the oblique or outer surface of the glass; and by this means a liquid may be poured steadily out of any similar vessel, with so little disturbance as not to agitate any sediment that may exist in it.—See SYPHON.

DECEMBER, GARDENING FOR.—The following are the operations for the *kitchen garden*. *Artichokes*, dress beds; plant to force; attend that in forcing. *Beans*, plant. *Beets*, (red) dig up and store. *Borecole*, earth up. *Brocoli*, lay in with their heads to the north. *Cabbages*, plant; earth up. *Carrots*, dig up and store. *Cauliflowers*, in frame, &c., attend to. *Celery*, earth up and protect when necessary. *Coleworts*, plant. *Composts*, prepare and turn over. *Dung*, prepare for hotbeds. *Earthing-up*, attend to. *Endive*, blanch. *Hotbeds*, attend to. *Kidney-beans*, force.

Leaves, fallen, remove. *Lettuces*, plant in hotbeds; attend to those advancing. *Mint*, force. *Mushroom-beds*, make; attend to those in production. *Parsnips*, dig up and store. *Peas*, sow, both in open ground and in hotbeds; attend to those advancing; protect them from frost, slugs, mice, and birds. *Plants*, to produce seed, attend to. *Potatoes*, plant in hotbeds. *Radishes* and *small salading*, sow in frames. *Spinach*, clean of weeds. *Tansy*, force. *Trench*, drain, &c. *Weeding*, attend to.

General Remarks.—In bad weather in-door work should be attended to. In dry mild weather, alterations, planting, and various pruning work should be done, and the cuttings gathered up and stacked for fuel, or burned, to put the ashes on the ground. Manures and soils should be collected, and the heaps turned over, to mix well. No weeds should be allowed to grow among the compost. The principal soils, so to collect, are road-scrapings, loam, cow-dung, horse-droppings, sand, turves, leaves of trees, &c.

Flower garden.—Anemones, defend in bad weather; plant if mild. *Auriculas*, defend in inclement weather. *Bulbs*, omitted, may be planted if the weather be mild. *Carnations*, defend in inclement weather. *Composts*, prepare. *Dig* borders, and dress all quarters generally. *Edgings*, plant. *Grass*, mow and roll occasionally, if the winter be mild. *Gravel*, roll and keep orderly. *Hedges*, plant and plash. *Hyacinths*, defend in inclement weather. *Leaves*, collect for composts. *Ranunculuses*, defend in bad weather, seedlings of all kinds, protect. *Stake* shrubs newly planted, and any others requiring support. *Tulips*, defend in bad weather. *Turf*, lay, if the weather be open.

DECEMBER.—THINGS IN SEASON.—*Fish.*—Carp, cod, crabs, gudgeon, gurnet, eels, halibut, John Dory, lobsters, oysters, pike, skate, smelts, soles, turbot.

Fruit.—Apples, dried figs, foreign grapes, medlars, nuts, oranges, pears.

Meat.—Beef, house lamb, mutton, pork, veal, venison.

Poultry and Game.—Capons, chickens, geese, grouse, Guinea fowl, hares, partridges, pheasants, pigeons, pullets, rabbits, snipe, widgeon, wild duck, woodcock.

Vegetables.—Artichokes, asparagus, beet, borecole, brocoli, cabbage, cardoons, carrots, celery, dried herbs, leeks, onions, savoys, shalots, spinach, truffles, turnips.

DECIMALS are fractions which have for their denominator 10, or some power of 10; as 100, 1000, &c.; the number of ciphers in the denominator being always equal to the number of figures in the numerator. Thus ·2, ·25, ·125 respectively represent $\frac{2}{10}$, $\frac{25}{100}$, $\frac{125}{1000}$. The denominator of decimals is never written, the dot placed before the first figure of the numerator expressing its value. Ciphers placed on the right hand of a decimal fraction do not alter its value; for ·5, ·50, ·500, are each equal to $\frac{1}{2}$; but ciphers placed on the left hand of a decimal diminish its value in a tenfold proportion; thus, ·3, ·03, ·003, respectively answer to the common fractions, $\frac{3}{10}$, $\frac{3}{100}$, and $\frac{3}{1000}$. Every figure on the left hand side of the dot or decimal sign is a whole number. *Addition* and *subtraction of decimals* are performed in the same manner as with common numbers, care being taken to place the numbers under each other according to their separate values; as, tens, under tens, hundreds under hundreds, &c. *Multiplication of decimals* is performed in precisely the same manner as with whole numbers, merely pointing off as many figures in the product as there are decimals in the multiplier and multiplicand put together. *Division of decimals* is performed as the preceding, but pointing off as many figures in the quotient as the decimal places in the dividend exceed those of the divisor. If there are not figures enough in the quotient the deficiency must be supplied by prefixing left-hand ciphers. Ciphers are also added to the right hand of the dividend, or to a remainder, when there are more figures in the divisor than in the dividend, by which the quotient may be carried on to any extent. *A vulgar fraction* is reduced to a decimal, by dividing the numerator by the denominator; thus, $\frac{1}{2}$ = ·5, $\frac{1}{8}$ = ·125, &c. The *value of a decimal* of any denomination is found by multiplying it by the number of parts in the next less denomination, and cutting off as many places to the right hand as there are decimals, and so on until the terms are exhausted. Thus, ·634 oz. =

·634
8

5·072 drachms,
60

4·320 grains,

or, 5 dr., 4⅓ gr. (nearly).

DECLINE.—A slow wasting of the body, which gradually undermining the health, prematurely cuts short life by a total prostration of the physical powers. This state is always the result of organic disease, superinducing hectic fever, and proves fatal through the injury inflicted on a vital organ, or the arrest of a function necessary to the due performance of life. Decline, properly speaking, means that pulmonary disease called consumption, or some other form of open or disguised scrofula, though next to pulmonary consumption. The most important disease coming under the appellation of decline, is that scrofulous condition of the glands of the bowels, called "mesenteric;" which from their enlargement, prevents the flow of chyle—or the nutritious part of the food—to the heart; while the blood, thus robbed of its renovation, reacts on the body, which gradually becomes emaciated, and life succumbs, from the loss of all aliment. The treatment of decline must depend entirely upon the organs diseased, the strength of the patient, and the character of the prominent symptoms.—See CONSUMPTION; SCROFULA, &c.

DECOCTION, or boiling, is employed to extract the mucilaginous or gummy parts of substances, their bitter, astringent, or other qualities, and is nothing more than boiling

the ingredients in a saucepan with the lid slightly raised. Be sure never to use an iron saucepan for astringent decoctions, such as oak-bark, galls, &c. The enamelled saucepans are very useful for decoctions, but an excellent plan is to put the ingredients into a jar, and set the jar into a pan of boiling water; thus preparing the decoction by what is technically termed a water bath.

DEED.—A contract or agreement in writing between two or more persons, acknowledged by their severally affixing their seals thereto. To constitute a deed, there must be persons able to contract, a subject-matter to be contracted for, and a contract reduced into writing and *sealed* by the parties to be bound thereby: thus in the lease of a house—a lessor or owner of a house, a lessee intending to become the tenant and the house itself. A deed must be written upon paper or parchment, for if it be written on stone, board, linen, leather, or the like, it is no deed. It must be between persons able to contract; thus it cannot be made by infants, married women, persons of unsound mind, and some others. No interest in land can be created, or pass, but by deed.

DEER-HUNTING.—The species of this animal generally hunted in this country, is the red deer. Hounds are now seldom employed in the chase—the hunter depending on his gun and his skill in approaching the animal noiselessly. This, which is called *deer-stalking*, is a sport requiring a vast deal of tact, knowledge of the animal's habits, and patience, as whole days are occasionally taken up in stealthily watching an opportunity for a shot. Such is their power of sight, scent, and hearing, that to approach unperceived on a plain is impossible. They must be approached down the wind, and behind hillocks and thickets. A telescope is required in these difficult manœuvres. When it is impracticable to reach them in this manner, attendants drive them into gorges among the mountains, and the sportsman singles out an object for his gun as it passes his concealed station.

DEFAMATION is an injury to a person's reputation, by scandalous and malicious words or actions; as where a man utters or implies anything of another which may either endanger him in law, may exclude him from society, or which may impair or hurt his trade or livelihood, an action may be maintained without proving any particular damage to have happened, but merely upon the probability that it might happen. Where the words upon the face of them do not import such defamation as will necessarily be an injury, the plaintiff must prove some particular damage to have happened to him; as if a man says of another "he is an unprincipled man and borrows money without intending to repay it," this is not actionable unless there be special damage; but if he say so to a person who is going to lend money to him or to deal with him, and he forbear to do so in consequence, he will render himself liable to an action for damages.

DEL CREDERE is an Italian mercantile phrase, signifying warranty or guarantee: thus, a factor or other person who sells goods by commission in the ordinary course of business, does not warrant the solvency of the purchaser to his principal; but sometimes he acts under a *del credere* commission, in which case, for an additional premium beyond the usual commission, he undertakes for the persons to whom he sells the goods consigned to him by his principal; thus, an insurance broker, for an additional premium, guarantees his principal against the failure of the underwriter. But a person selling under a *del credere* commission, is only a surety and not a principal debtor; therefore before he can be made to pay, it must be shown that the amount cannot be recovered from the principal debtor.—See AGENT; COMMISSION.

DELIRIUM.—A symptom of some form of disease, as of madness, inflammation of the substance of the brain, or of its coats, of fevers, erysipelas, disease of the bladder; or it may supervene after concussion or compression of the brain, injuries of the head, the result of surgical operations, or from many vegetable poisons. Delirium, though often the result of an excess of blood in the head, is by no means invariably so, as delirium frequently attends as a reactionary symptom after exhaustion; and from nervous irritation. There are many varieties of this distressing symptom, as the low muttering delirium of typhus fever, and the quick rambling chattering of other forms of cerebral disturbance. Delirium is generally attended with a quick jerking pulse, the face is flushed, the eyes red or bloodshot, with pain in the head, ringing in the ears, great antipathies to places, persons, or things, muscular exertions of the arms, or picking at the bedclothes, constant and incoherent talk, or low indistinct muttering. The body is often hot and dry, and the feet cold; and in cases of vegetable poisoning, the pupils are generally excessively dilated.

Treatment.—When delirium is attended with a full quick pulse and pains in the head, it will be necessary to bleed from the arm, apply four or six leeches to each temple, to place a blister on the nape of the neck, and a bag of ice on the head, or else cloths constantly wetted in an evaporating lotion; at the same time mustard poultices should be applied to the legs and feet, one drop of croton oil put on the tongue, followed in an hour by a black draught. The room is to be darkened, and the patient kept perfectly quiet. When delirium proceeds from low fever, and is attended with a small wiry pulse, the case must be met by palliatives, anodynes, and tonics. The feet are to be kept warm, the hair cut, and the head cool, the cupping glasses applied to the nape of the neck, the mental irritation soothed by an opiate, and the system roused by the careful employment of wine and arrowroot, and such other remedies as the concurrent symptoms at the time, and the original character of the disease, may seem to render expedient.

There is one precaution that should be observed in all cases of delirium, especially in the more violent kinds, and that is by moral suasion to obtain a mastery over the patient: this is to be effected by blending firmness with kindness, as nothing can be more injurious than intimidation or the threat of coercion, unless, indeed, that monstrous abuse, the strait waistcoat, an instrument of torment scarcely, if ever, called for.

DELIRIUM TREMENS. — Trembling delirium, or the drunkard's palsy, is a disease in which the mucous membrane of the stomach and bowels, as well as the lining membranes of the brain, are in a state of chronic inflammation, resulting almost always from intemperate habits and excessive indulgence in ardent spirits. This disease is manifested by a total want of sleep, and a quivering of the lips, hands, and muscles generally; every attempt at speech or motion increasing the tremor, rambling, and constant chattering; the skin is cold and moist, the pulse small and quick, and the tongue furred in its centre, with red edges, the countenance is anxious, the patient full of suspicion, and oppressed with dreams and frightful images.

Treatment.—The first step to be taken is to tranquillize the system, which may be effected by giving one grain of opium as a pill every four hours, with two tablespoonfuls of the following mixture every one or two hours.

Camphor water . . .	5½ ounces.
Brandy	2 ounces.
Ether	1 drachm.
Spirits of sal volatile .	1½ drachm.

Mix. In addition to the mixture and pills, it is sometimes necessary to give brandy and water, wine, or pure spirit. When the trembling is subdued, and the system tranquillized, the following mixture is to be given in the same dose and quantity as the former, but discontinuing the pills.

Infusion of rose leaves .	8 ounces.
Epsom salts . . .	½ ounce.
Syrup of red poppy . .	2 drachms.
Diluted sulphuric acid .	20 drops.
Tincture of opium . .	1½ drachms.

Mix.—When there is much congestion of the head, it will be necessary to apply a few leeches to the temples, but as a general rule, all depletion is injurious. During the whole attack, the patient is to be steadily watched, kept quiet, and as far as possible, amused and interested.

DENIZATION differs from *naturalization* only in degree; the latter conferring a few additional privileges. A denizen is a kind of middle state between an alien and a natural-born subject. He may take lands by purchase or devise, which an alien may not; but he cannot take by inheritance, for his parent, through whom he must claim, being an alien, had no heritable blood, and, therefore, could convey none to the son; and upon a like defect of blood, his issue born previously to his denization cannot inherit, but his issue born after may. A denizen is not excused from paying the aliens' duty, and some other mercantile burdens. No denizen can be of the privy council, or sit in either house of parliament, or hold any office of trust, civil or military, or receive any grant of lands, &c., from the crown.—See ALIEN and NATURALIZATION.

DENTRIFICES.—See TOOTH-POWDER.

DEPILATORY.—Any application for removing hair from the human skin, without injuring its texture. Depilatories act either mechanically or chemically. The former are commonly mere plasters of pitch or resin, which, by their adhesive property, bring away the hair from the surface to which they have been applied. The true depilatories act by penetrating the pores of the skin, and destroying the bulbous roots of the hairs. Of these there are several kinds; but the one known to be the most efficacious is as follows:—Mix two ounces of quicklime with half an ounce of orpiment or realgar (sulphuret of arsenic), boil the mixture in a pound of strong alkaline lye, then try its strength by dipping a feather into it, and when the flue falls off, the preparation is quite strong enough. It is *applied to the skin* by a momentary friction, followed by washing with warm water. Such a caustic liquid should be used with the greatest circumspection, beginning with it somewhat diluted. A *soap* is sometimes made, with lard, of the above ingredients, or soft soap is combined with them, to make a depilatory pomade. The causticity of this mixture may be tempered by the addition of one-eighth of starch or rye flour, which being laid upon the hairy spot for a few minutes, usually carries away the hairs with it. Depilatories should never be applied but to a small surface at the time, for, independently of the risk of corroding the skin, dangerous consequences might ensue from absorption of the arsenic. For ordinary purposes, however, a pair of tweezers is a safe and efficacious remover of superfluous hair.

DEPORTMENT.—The carriage of the body; the propriety and gracefulness of which is worthy of being sedulously studied by both sexes. An awkward carriage invariably gives a person a clownish appearance, and an ill-bred air; whether it be a stooping of the shoulders, a hanging of the head, a rocking of the body, a dragging of the legs, swinging of the arms, or shuffling of the feet. *In walking*, a person should hold the head and body erect, with the shoulders well thrown back, and the chest forward. The arms should hang easily by the side, accompanying the movements of the body by an appropriate action; the hand should be partially closed, neither clenched nor stuck out straight. The legs should be moved at a regular pace, and with a moderate stride, the feet lifted well off the ground, and the toes pointed outwards. In *sitting*, the body should be held erect, without having too constrained an appearance; and instead of leaning against the backs of chairs or other supports, it should be suffered to depend upon itself. Bashful persons, and others of a nervous disposition, are frequently betrayed into several awkward and ungainly tricks with their hands, such as continually twirling their hat about, twisting and untwisting their pocket-handkerchief, tapping

on tables and chairs with their fingers, rubbing their hands together, passing them over their face, &c.; then again, they are shaking their legs and feet, crossing and recrossing them every minute, turning uneasily in their seat, suddenly rushing from one spot to another; with numerous other antics, all of which are the more inexcusable and ridiculous, because they admit of being so easily cured. A person seeing these faults in others is soon made aware of the bad impression they give, and should therefore endeavour to avoid the like error himself. There are also affected gestures which persons adopt, with the idea that it gives them an air of importance and consideration, such as sitting with the arms folded across the breast, or placed what is called akimbo, that is to say, the knuckles resting on the hips, and the elbows forming an angle; or perhaps they are thrust under the coat-tails; or elevated by means of the thumbs being hooked into the armholes of the waistcoat; all of which are impertinences which degrade a man in the eyes of others, instead of exalting him. Females, generally speaking, seldom commit faults of this kind, their nature, habits, and education impressing them from their earliest years with the necessity of attention to this department of etiquette.—See Bow, Calisthenics, &c.

DERBYSHIRE PUDDING.—Mix two tablespoonfuls of flour with a pint of milk, by degrees, boil it till it becomes thick, and set it by till cold; then put to it three ounces of butter, melted, a quarter of a pound of loaf-sugar, two ounces of suet, half an ounce of lemon-peel, the yolks of seven eggs, and the whites of three; when thoroughly mixed, pour into a dish, put a paste round the dish and bake it; lay currant jelly on the top, and serve either hot or cold.

☞ Flour, 2 tablespoonfuls; milk, 1 pint; melted butter, 3ozs.; sugar, ¼lb.; suet, 2ozs.; lemon-peel, ½oz.; eggs, 7 yolks, 3 whites; currant jelly, sufficient.

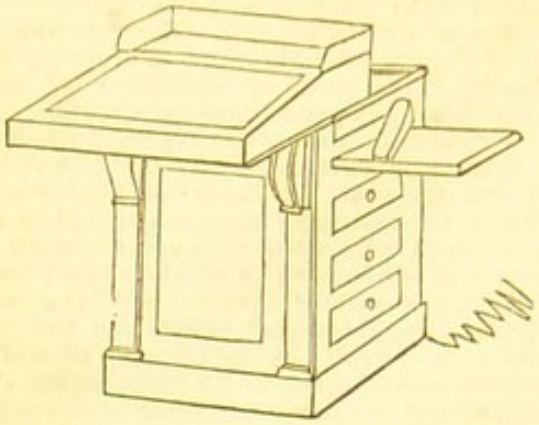
DESIGNS, in manufactures, being new and original, may be registered, and a grant of copyright obtained for periods of nine, twelve, and thirty-six months During the existence of such copyright, no person may apply the design or a fraudulent imitation thereof to the ornamenting of any article of manufacture, or any substance artificial or natural, being for sale, or publish, sell, or expose for sale any article of manufacture, or any substance to which such design or fraudulent imitation thereof shall have been so applied, after having received notice from the proprietor that his consent has not been given to such application, under a penalty to forfeit to the proprietor for every offence, a sum not less than £5 and not more than £30, and is further liable to an action by the proprietor for any damage he may have sustained by the piracy.

DESSERT.—The materials for this repast depend upon the season; they should be selected with taste and delicacy, and more choice than plentiful. Apples, pears, oranges, grapes, almonds and raisins, figs and filberts, generally compose the chief part of the dessert, and to these may be added light biscuits and cakes, and sweetmeats, according to taste. The wines should be of the choicest kind and of the very best quality. The *mode of arranging the dishes* must wholly depend upon the number. The principal dishes must always be at the head, middle, and bottom of the table, and the others disposed in order on either side. When the company consists of ladies and gentlemen, the wine decanters should be placed at the lower end of the table; but if it be composed of ladies only, the wine should first be placed before the lady who sits at the head. A tablespoon should be placed on each dish, and a knife on the dish containing the cake. At some tables a dessert plate, knife and fork, and wineglass, are placed to each person; at others, besides these, there are also a dessert spoon, an additional wineglass and a d'oyley, to each person. This, of course, may be regulated according to taste and fancy.

The *etiquette in connexion with dessert*, is for each gentleman to assist first the lady sitting next him, with wine, then himself, and finally to pass the decanter on; the gentleman should also consult the lady's choice as to what fruit she would like to take, and secure a supply for her plate. After drinking two or three glasses of wine, the ladies severally retire; this is done by the lady of the house rising, which is a signal to the other ladies; the ladies then pass out, the gentleman nearest the door holding it open and bowing to the fair guests as they retire, the rest of the gentlemen standing until all have quitted the room. The length of time that gentlemen usually remain over their dessert until they join the ladies in the drawing-room, varies according to the tastes and feelings of the master of the house and the assembled guests. Formerly, the interval was a lengthened one; but now it is considerably shortened, and in some establishments, the ladies and gentlemen retire from the table together. The signal for retiring devolves upon the host, who asks his guests whether it would be agreeable to join the ladies, which being answered in the affirmative, the whole company thereupon rise and proceed to the drawingroom, Should any gentleman however become tired of protracted sitting, and consider that it would be both more prudent and agreeable to retire, he may at any time steal out of the room unobserved, and join the ladies, without committing any breach of etiquette.

DEVONPORT.—An article of furniture, taking its name from the inventor, and which consists of a desk placed upon a pedestal filled with drawers. The desk is of the same width and depth as the pedestal, but is made to slide forward, when to be written upon, to give room for the knees, in the manner shown in the engraving. A sliding shelf may draw out at the side, to hold papers or other things; and over that is an inkstand that turns out and shuts in by a hinge at one end. The desk is covered with leather, and has a fence round the top; the drawers are placed at the end

instead of at the front, to render them more accessible when engaged in writing.



DIAMOND.—A crystalline mineral of unsurpassed lustre and hardness, and the most highly prized of precious stones. When perfectly pure, it is as transparent as a drop of the purest water, in which state it is known as "a diamond of the first water;" and in proportion as it falls short of this perfection it is said to be of the second, third, or fourth water, till it becomes a coloured one. Coloured diamonds are generally yellow, blue, green, and red or rose colour; of these the rose is esteemed the most valuable, and the yellow, the least so.

DIAMOND CEMENT.—See CEMENT.

DIAMOND, FACTITIOUS.—A material is made in imitation of diamonds as follows:—Manganese, one part; rock-crystal, two thousand eight hundred parts; borax, one thousand nine hundred parts; white lead, five thousand seven hundred parts. Mix in fine powder, then fuse in a clean crucible; pour it into water, dry, powder, and repeat the process two or three times.

DIARRHŒA.—A relaxation or looseness of the bowels, consequent upon a certain condition of the mucous membrane of the alimentary canal; that is, either a state of congestion, or stagnant state of the blood in the membrane; or else from an inflammatory condition of the same tissue; or it may proceed from ulceration of the bowels, the presence of indigestible food, or acrid substances in the stomach; it may also occur as a crisis of fever, and without any direct cause of irritation. The causes that produce diarrhœa are very numerous, and often of the most opposite nature; though the chief are, sudden cold applied to the body, checked perspiration, powerful stimulants, the inhalation of noxious gases, &c.

Symptoms.—Nausea, sickness, and vomiting, thirst, dry state of the mouth, dry skin, frequent and copious evacuations, and a furred or red condition of the tongue.

Treatment.—The first step in the treatment of diarrhœa is to check the vomiting; to effect this, the feet are to be plunged into hot water and kept constantly warm, and a small blister or one or two leeches applied to the pit of the stomach. The state of the tongue must decide the nature of the subsequent treatment. When this organ is coated either with a white or brownish fur, it indicates a congested state of the membrane of the stomach, and must be treated by the exhibition of an emulsive mixture of chalk, and when the symptoms are attended with pain, by an opiate pill, as in the following prescription.

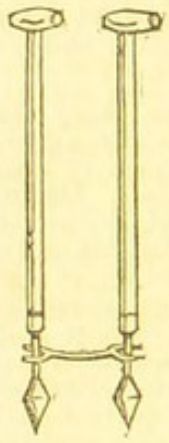
Prepared chalk . . .	1 ounce.
Honey	½ ounce.
Peppermint water . . .	6 ounces.

Mix into a smooth mass, of which give a tablespoonful every hour, and a one-grain powdered opium pill every four or six hours, till the pain is subdued. When, however, the tongue is red both on its surface and sides, it indicates inflammatory action, and must be treated by an opposite mode of practice and the following mixture administered; the opium, however, being employed when pain is present, in the same form and frequency as in the former state of the bowels.

Infusion of rose leaves . .	8 ounces.
Epsom salts	½ ounce.

Dissolve, and add diluted sulphuric acid, half a drachm; mix, and take a tablespoonful every hour. In all forms of diarrhœa, the feet should be kept warm, and a hot bath, if procurable, will, in every instance, be found beneficial. The diet should always be soft and nutritious, but not liquid; the best dietary consists of thick arrowroot, made with milk, blancmange, tapioca, sago, and semolina puddings, made with eggs, and eaten moderately cool; and when animal food is given, it should consist in the first instance of boiled meats, and the stomach very cautiously brought back to digest roast or hard substances.

DIBBLING.—A mode of sowing corn, much practised in some parts of England. It is found to answer best on the clover leys of the lighter description of land, and in rich loamy soils during showery weather. The process is performed by a man walking backwards with an iron dibble in each hand, with which he makes the holes on the furrow slice, into which the seeds are dropped—two seeds into each hole—by a person who follows him. An improvement on the common dibber is known as *Coggin's dibbling machine*, and consists of a box fixed on wheels, to which are attached two conical dibbling irons, as seen in the engraving; and the whole is to be moved forward by the foot of the operator, by which means much labour and time are saved. There are also the common garden dibber, the potato-dibber, and the forester's or planter's dibber. The last of these has a wedge-shaped blade, forked at the extremity, for the purpose of carrying down with it the top-roots of seedling trees.



DIET.—The substances that contribute to the support of life are remarkably numerous, and there are few articles, either in the animal or vegetable kingdom, which, if properly prepared and judiciously cooked, but may be made to minister, alone, or in combination, to the healthy preservation of life

The ordinary articles of dietary may be briefly stated to comprise all animal meats, vegetable substances, farinaceous preparations, fruits, saccharine compounds, and alcoholic, vinous, and acetous fermented beverages. The healthy state of the mind and body depends mainly on the nature and mode of preparing the various foods on which we live; and a proper knowledge of these facts constitute that branch of therapeutics called dietary. All articles of diet are divided into the nutritive and the digestible; by the first is understood those foods that yield the largest proportion of the elements of chyme, and by the other the degree of facility in which they are acted on by the digestive power of the stomach: hence the necessity of a combination of articles of food at each meal, as many aliments which yield the largest amount of nourishment are, unaided by other substances, the most difficult of digestion, while those most easy of digestion frequently afford the smallest percentage of chyme. The great secret of a healthy dietary is a knowledge how to combine the food taken so as to produce a perfect digestion, and a proper supply of nutriment or chyme from every meal; and this can only be effected by a due mixture of rich and poor aliment. The most nutritious of all foods, or those which contain in greatest abundance the elements of chyme, if long persisted in, will act as a poison on the body, and reduce it to a condition of atrophy, unless occasionally combined with some less nutritive aliment. When due attention has been paid to the nature and preparation of the food, the wholesomeness of the meal will be evidenced by the state of the tongue, which will then present a clean and healthy appearance, whereas, if the meal has consisted of improper or ill-cooked dishes, an excess of acidity will be generated in the stomach, and the tongue assume a more or less furred or coated character.

The most wholesome mode of dressing animal foods, so as to ensure easy and perfect digestion with the elimination of all its nutritious properties, is either by roasting, boiling, or baking: broiling is probably equal to the latter; and the most hurtful of all forms of cookery is that by frying, for by this process the surface of the meat is rendered hard and leathery, and extremely difficult of digestion—a fact that will be better understood by observing that the digestibility of all animal substances stands to each other in the following order:—First, muscular fibre or flesh; secondly, skin; thirdly, cartilage; fourthly, tendon or sinew; and lastly, bone; and that the facility in which animal food is digested, is shown by the sequence of the following articles:—Pork, mutton, veal (boiled and roasted), game, fish, cheese, and beef. There are several substances which, though they contain no nutritive properties, exert a powerful action on the stomach in promoting digestion and tending to the health of the system; and though not properly aliments, yet are absolute necessaries in all systems of dietary; these are called condiments, and consist principally of salt, vinegar, and spices. The mode of preparing, or, in other words, cooking the diet, has a greater effect on the vigour of the body and in preserving its stamina than is generally supposed; roast and baked meats being the most stimulating and supporting, and boiled and stewed the least exciting and less durable in their effects. The man who lives most frequently on roasted and baked meats requires no stimulating beverage to keep up the strength of his frame; while he who diets often on the same meats boiled or stewed, needs as a necessary, the occasional use of stimulating drinks to keep intact the vigour of the constitution. Variety of food with our meals, is as requisite to the perfect health and strength of the body as variety of occupation is to the intellectual vigour and integrity of the mind; consequently all sorts of vegetables and fruits should form a due proportion of the dietary, and if not equally partaken of at each meal, should be largely consumed in the course of each day; and in all cases of healthy digestion, vegetables should constitute not less than two-thirds of the entire bulk of the dinner, while of the fruits that follow, as much should be eaten as is consistent with appetite and prudence; any moderate excess being qualified by the beneficial effect of the acid, in promoting digestion. Though partaking at one meal of many artificial dishes is unquestionably injurious, a moderate combination of roast and boiled meats, fish, game, vegetables, bread, cheese, and fruits may *occasionally* be indulged in by robust constitutions without much injury. The vegetables containing the largest amount of *farina* and in themselves most strengthening, and the best correctives to the richness of the animal food, may be placed in the following order:—Bread, beans, cauliflowers, pease, potatoes, brocoli, greens, carrots, turnips, &c. It should be remembered in connexion with this subject, that vegetables have no effect in exciting the circulation, but, on the contrary, animal food acts as a stimulant to the heart; that warm drinks also accelerate the motion of the blood, while cold ones produce directly sedative effects on the system. Of the farinaceous articles appertaining to the subject of dietary, the number is large, and their usefulness as mild and wholesome aliments can hardly be over-estimated, especially as they admit of so many modes of agreeable preparation, as puddings, pies, and custards, while some of them simply boiled can be used as vegetables with the meat; the most important of the list are, rice (whole and ground), sago, tapioca, arrowroot, semolina, pease (split and ground), barley, prepared groats, oatmeal, biscuit powder, rusks, and baked flour. Among the beverages which form in the present state of society so large a part of every system of dietary, the most important in a therapeutic sense are undoubtedly the fermented liquors obtained from malt, such as ale, stout, and porter; and for the great bulk of the people, except in sickness or on special occasions, are the only stimulating compounds either required or necessary to the due preserva-

tion of the health of the body. It must be understood that these remarks, and what is advanced in this article as fact, have reference only to this country, as climate and soil materially modify or increase the effect of food on the human constitution. Malt liquor is both a stimulant and a tonic, and should be taken in the form most suited to produce the effect desired. When required as a simple beverage, porter is the preparation that should be employed; when tonic properties are needed, stout is the article best suited for the purpose; and when a stimulating effect is sought, it can be obtained either from ale or an equal mixture of ale and stout. When circumstances demand a lighter potation, cold rum or brandy and water without sugar will afford all the advantages required. Wine is unquestionably often highly beneficial to the system, but as a general rule, not being native to the climate, it is unnecessary as an article of diet to an English constitution. Of the thinner beverages that refinement and custom has now rendered so needful to our comfort, such as tea, coffee, cocoa, and chocolate, there can be no doubt that in themselves they are perfectly innocuous, and unless taken in extremely strong preparations, incapable of affecting the system injuriously; and that what stimulating and nutritious properties they possess are derived in a great degree from the cream and sugar usually taken with them, and from the heat imparted to the body by the temperature at which they are imbibed. It would be difficult to find out of the dietary list of the world, either ancient or modern, a set of articles possessing such negative nutritive properties, whose action is so beneficial on the system, or which, while affording so large an amount of comfort, have produced at the same time so moral or social a blessing on the people as the lighter beverages appertaining to tea and breakfast.

DIET OF CHILDREN.—One of the greatest mistakes committed by parents, is the idea that children require a large amount of animal food to enable the system to build up the growing frame. This is a serious fallacy, and not only tends to make the child gross, but to impair the healthy functions of the body; a child requires quantity rather than quality, and so the food is light and wholesome, and, according to the age and activity of the child, abundant, it matters very little of what it is composed; as from their quicker circulation, elasticity of mind and incessant motion, their digestion is not only rapid, but perfect. It is impossible to separate the healthy dietary of childhood from air and exercise, as these are nearly as necessary to their growth and well-being, as the abundance and wholesomeness of their food; indeed, so large a proportion of oxygen do all children consume in the development of their frame, that without much extravagance, they may be said in a great measure to live on air. Children should have three full meals a day, and the stomach should never be allowed to remain longer than four hours at a time without a supply of food. The breakfast should consist of bread and milk, or sop, the dinner of a large proportion of vegetables and bread, with a moderate proportion of meat, with an adequate quantity of fat; for, as this substance yields more nitrogen than the fleshy part, it is a great mistake to prohibit the child's eating so necessary a part of the aliment. But the main portion, not the whole of a child's dinner, should consist of farinaceous pies or puddings, apple dumplings, or plain suet dumplings. The tea should be a repetition of the breakfast, or bread and butter, with milk and water. The only restriction that need be placed on a child's appetite, is the avoidance of unripe fruit and the obnoxious trash sold as sweetmeats. Sugar is highly necessary, and twice a day should form a part of each meal; while, as a wholesome variety, some plain boiled rice with sugar may be substituted for pudding at dinner, and treacle or golden syrup spread on the bread instead of butter, at tea time. Children require no stimulants, and should neither be given wine nor malt liquor; cold tea, milk and water, or barley water, is the only beverage that children either require or, unless coerced, desire or care for.

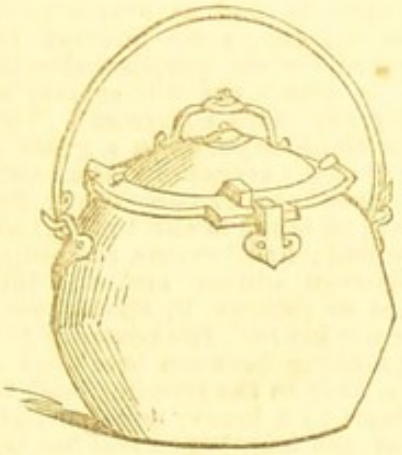
DIET OF INVALIDS.—The food of the sick and convalescent must, in a great measure, depend upon the age of the patient, and the nature and seat of the disease under which he labours, or from which he has recovered; and also whether the disease was acute or chronic. A difference is also necessary when the cause of illness has lain in the digestive organs, or when these are only symptomatically affected. In all cases, however, one general rule is to be observed, that nothing is to be put into the stomach that by its hardness or indigestibility can cause pain or inconvenience to the organ. All foods should be as light and easy of digestion as possible, consisting, for the most part, of farinaceous articles, jellies, custards; and when the stomach has been gradually restored to tone, animal foods are to be carefully and sparingly administered, selecting those substances most easy of digestion; such as a piece of lean pork and boiled mutton, rabbit, &c., and so on till the power of digesting more nutritive articles is restored. Care must be taken to avoid all vegetable substances, particularly those of a flatulent nature, bread or biscuit being employed as a corrective with the animal food taken; at the same time, all sloppy drinks should be strictly avoided, as weakening and injurious to the stomach, which should be supplied with food every three or four hours, and the meals given when the patient can eat them, not at conventional hours. The beverage of an invalid must depend upon his circumstances, and the disease also; sherry and water is in general the best drink of this character, or if unprocurable, a tablespoonful of brandy in half a tumbler of water must be substituted. Tea, cocoa, or bread and milk, should constitute the tea and breakfast, with cold buttered toast, or dry toast, if the butter is objectionable. But as so much depends on the state of the patient, and the amount

of debility, it is impossible to lay down stringent general rules for the dietary of invalids.

DIET-BREAD CAKE.—Put half a pint of water into a stew-pan, with one pound of sugar, stir it till it comes to a boil, then remove it from the fire, and stir in briskly the well-beaten yolks of twelve eggs, and the well-beaten whites of six eggs, with half a teaspoonful of salt; then stir in lightly one pound of sifted flour, pour the mixture into buttered tins, and bake for twenty minutes.

☞ Water, ½ pint; sugar, 1lb.; eggs, 12 yolks, 6 whites; salt, ½ teaspoonful; flour, 1lb.

DIGESTER.—A term applied to strong iron boilers used for making soups, &c. They have a lid that screws down tightly, so as to confine all the steam; and by this means the water may be heated several



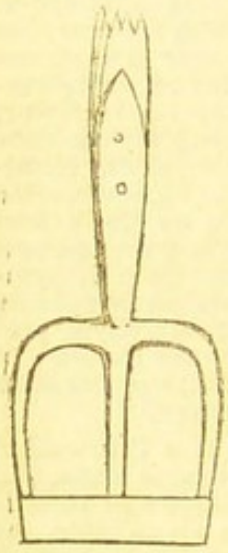
degrees above the boiling point; in order to prevent the vessels bursting, which they otherwise might do, a safety valve is placed in the lid, by which the heat of the steam can be regulated. Meat may be thus entirely dissolved, and bones reduced to jelly.

DIGESTION.—By this term is understood that process by which the food taken into the stomach is converted into nutriment, and, finally, into blood, to maintain the circulation and supply the wear and tear of the body. The internal coat of the stomach is dotted with numerous small glands, which secrete a very sour acrid fluid, called the gastric juice, which, as soon as food reaches the stomach, is poured out in great quantity. This gastric juice—which is composed of water, common salt, phosphate of soda, potash, and muriatic acid—immediately surrounds the mass of pulpy food, and the acid of the secretion acting on the alkaline ingredients of the saliva in the food, commences a gentle chemical action, from which a small amount of gas is liberated as the gastric juice gradually works its decomposing way into the mass, converting it layer by layer into a soft thick creamy substance. When a sufficient quantity of this has been collected, it finds its way to the lower mouth or door of the stomach, where its weight acting as a stimulant on the outlet or valve, the passage opens, and the first gush of digested food passes into the duodenum, followed, at short intervals, by further quantities, till the entire mass, that entered the upper end of the stomach as crushed and moistened food, quits the lower extremity in the form of a creamy nutriment, and takes up its place in the small intestines as chyme. The refuse blood, in its passage through the liver back to the heart, secretes, as it diffuses itself over the lobes of the liver, a bitter, acrid, heavy-smelling greenish yellow fluid called the bile, which, as secreted, is conveyed to the gall bladder; at the neck or duct of which, as it opens into the duodenum, it receives a salivary contribution from the pancreas, the object of which is to correct or modify the acridity of the bile. Upon the acidulated chyme in the small intestines, the combined alkaline secretions of the liver and pancreas is poured; the effect of which is directly to change and separate the chyme into two parts, one a thin rich white fluid, the concentrated essence of all the nutriment, called chyle, and the other, the gross solid impurities of the food from which all nutrition has been extracted. The chyle is then absorbed by the mouths of innumerable vessels, and carried to one centre or reservoir, from which a vessel or long hollow tube ascends, named the thoracic duct, terminating in the junction of the left subclavian and internal jugular veins, as the united branch enters the heart; along this narrow channel, collecting nutriment from the lymphatics in its course, this vital and vitalizing principle, this white blood, the chyle, proceeds from its reservoir in the glands and lymphatics of the bowels, till it empties itself into the heart.—See DYSPEPSIA.

DIGGING.—The spade is a thin wedge, with a lever attached in the same plane, and the operation of digging consists in thrusting in the wedge by the momentum (or weight and motion) of the operator, which effects fracture, a movement of the lever or handle next effects separation, whilst the operator, by stooping and rising again, lifts up the spitful, or section of earth, on the blade or wedge of the spade, which, when so raised, is dropped in a reversed position, and at a short distance from the unbroken ground. The separation between the dug and undug ground is called the trench or furrow; and when a piece of ground is to be dug, a furrow is first opened at that end of it where the work is to commence, and the earth carried to that end where it is to terminate, where it serves to close the furrow. In digging, regard must be had to retain a uniform depth throughout; to reverse the position of each spitful, so that what was before surface may now be buried; to break and comminute every part, where pulverization is the leading object; to preserve each spitful as entire as possible, and place it, separated or isolated as much as can be effected, where aeration is the object; to mix in manures regularly, when they are added; to bury weeds not likely to rise again, and to remove others, and all extraneous matters, as stones, &c., in every case. For all other purposes, a deep open trench is requisite; and, that this may not be diminished in width and depth in the course of the operation, it must never be increased in length.

If allowed to become crooked by irregular advances in the digging, it is thus increased in length, and necessarily diminished in capacity, unless, indeed, the dug ground is allowed to assume an uneven surface, which is an equally great fault. Digging for pulverization, and mixing in manures, is best performed in dry weather; but for the purposes of aeration, a degree of moisture and tenacity in the soil is more favourable for laying it up in lumps or entire pieces. The usual length of the blade of the spade is from ten inches to a foot; but, as it is always inserted somewhat obliquely, the depth of pulverization obtained by simple digging never exceeds nine inches, and in breaking-up firm ground it is seldom so much.

DIGGING IMPLEMENT.—Digging up or forking up is occasionally resorted to for taking crops of roots, as potatoes, carrots, &c. In performing this operation, the principal thing is to avoid cutting or bruising the roots with the spade or fork, and to separate the roots from the soil by first lifting up the spitful and then throwing it down in such a way as to break and scatter it, and to bring to light the roots or tubers. The digging implement seen in the engraving accomplishes these objects with greater ease and certainty than the ordinary spade or fork; the prongs of the fork are guarded so that they cannot injure the roots; whilst the spaces between the prongs arrest the separation of the roots from the earth.



DILL.—A plant strongly resembling fennel in many of its properties. It is an aromatic, stimulant, and carminative. Distilled dill water is chiefly employed to relieve the flatulence and griping in infants.

DINNER.—This is the principal meal of the day, and with some persons the only one when food in anything like quantity is partaken of. The food and drink indulged in at this meal, vary materially according to a person's means and the obligations of society; as a rule, however, it is better not to introduce too great a variety of things into the stomach at one and the same repast, as the different properties of the ingredients cause them to disagree, and to give too great an amount of labour to the digestive organs. If a person wishes to rise from the dinner table with pleasurable and gratified sensations, he should partake of one, or two dishes at the most, especially avoiding pastry, sweetmeats, highly seasoned dishes, &c. The same rule holds good with regard to drink, and the beverage first chosen should be continued throughout the repast. Although animal food may, generally speaking, form the chief part of the dinner, it may be omitted occasionally with benefit, and poultry or fish alone form the meal. Vegetables should be freely partaken of, as they assist in the assimilation and digestion of stronger foods, and are of a pleasant and cooling nature. While dinner is being eaten, the mind should be at ease, otherwise the digestive process will be materially interfered with, and the body will experience little or no nourishment from the food it receives. Persons engaged in business and professional pursuits are in the habit of snatching a brief interval from their avocations, despatching their dinner hurriedly, and resuming their occupation the instant it is eaten; a custom at once reprehensible and highly injurious. However much a person may be absorbed in his business or profession, he should consider that in order to attend to his duties properly, and carry out his views successfully, it is necessary that the body should receive nourishment sufficient to meet the demands made upon it, and as dinner is the chief meal of the day, some interval, the most convenient for the purpose, should be set apart, in which the dinner may be eaten leisurely and with enjoyment. The *proper hour for dinner* depends in a great measure upon a person's avocations; the most natural time is about one or two o'clock, but where it cannot be taken at this time, a light lunch may be had; at all events, the proper interval between dinner and the meal that precedes or follows it, should not exceed four or five hours. The contrary practice of eating nothing between breakfast and five or six o'clock in the evening, and then sitting down to a hearty meal, is highly injurious, as the lengthened fast has tended to enervate the powers of the stomach, and the excessive quantity of food introduced lies in an undigested mass for some hours; this unwholesome practice, repeated daily, soon tells upon the digestive organs, and at length occasions permanent disease. The rational summary, therefore, in connection with this subject is, that if two hours' relaxation from business can be obtained about five or six hours after breakfast, the best plan, unquestionably, is to dine then. But if this be impossible, and active exertion of mind or body must be continued for several hours longer, it will be far better to eat some light refreshment in the forenoon, and to postpone dinner not only till business is over, but till half an hour or an hour's repose have allowed its attendant excitement or fatigue to subside. By this means the stomach will enter upon its duties with vigour, and the dinner be digested with greater comfort and despatch, than when sitting down to table the moment work is finished. Another assistance to the moral enjoyment and physical benefit to be derived from dinner, consists of partaking of it under cheerful aspects. It would be as well, therefore, to eat this meal in the midst of pleasant and social companionship, instead of, as is too frequently the case, making it a solitary repast with the newspaper or a book for a companion.

DINNER, ARRANGEMENT OF. — Soups should be placed at the head of the table; if there are two, top and bottom; if four,

top and bottom and both sides. Fish should be placed at the head of the table; if there are two sorts, have fried at the bottom, and boiled at the top; if four, arrange the same as soup. In many families, however, the fish is served at the same time as the soup, in order that those persons who do not like soup may not be kept waiting. This is entitled the *first course*. The *second course*, when there are three, consists of roasts and stews for the top and bottom; turkey or fowls, ham, tongue, &c., together with small made dishes for corners, as curries, ragoûts, fricassees, and stews. The *third course* consists of game, confectionery, puddings, creams, jellies, &c. After the third course has been removed, cheese, salads, celery, radishes, &c., are introduced. *Waiting at table* also forms an important feature in a dinner, and applies more immediately to the attendants than to the master and mistress. When grace has been said, remove the dish covers, carefully turning them up so that no moisture can drop from them, and take your station at the carver's left hand, to serve the plates as they are filled. The lady at your mistress's right hand should be served first, then the lady opposite, and so in succession from right to left, till the ladies are all served; when the gentlemen should be waited upon in like manner. If there is time between the serving of the plates to supply the vegetables and sauces, do so, but take care not to keep the carver waiting. Bread, beer, vegetables, and sauces, when served, should always be held in the left hand, and taken to the left side of the person to whom they are offered. When the plate of any one of the company is empty, take it away immediately, with the knife and fork which has been used, and lay a clean knife and fork and another plate in its place; put the used knives at once into the tray brought in for the purpose, and the plates that have been eaten from into the plate basket, if there be one, but if there is not, put them in piles, passing the bones and fragments (without noise) all into one plate as you do so. When a person declines taking any more meat, place a small plate, small knife and fork, and dessertspoon for pie or pudding, if either are to be taken. When pudding or pie has been served, or else declined, place the cheese on the table, and put a small knife and small fork, with a cheese plate, before each person, whether there is a salad on the table or not. In serving this last course, the housemaid must take the plate with the pieces of cheese on, which have just been scraped off by the gentleman at the head of the table in her left hand, and the butter plate with the silver butter knife on it in her right, and pass first the cheese and then the butter to each person, who will take either or both, or decline them as they please, but serve both to the left hand of the company. As you change the things at dinner, put very gently all the knives that have been used into one tray, and the spoons and silver forks that have been used into another; and as the cheese is done with, clear away the remainder of the plates, and knives and forks, and collect all the pieces of bread into the bread basket. By this time you should have all the clean spoons and forks, the salt cellars and cruet stand, removed to the sideboard, ready for future use. Then sweep the crumbs from off the table with a brush into a plate. Take the cloth away carefully so as not to crease it, that it may be folded and put into the press for using the next day. Some families leave the tablecover on, but, generally speaking, it should be taken off, as well as the tablecloth.

DINNER, ETIQUETTE OF.—When it is determined to give a dinner party, such persons should only be invited as may prove agreeable to one another; and invitations, specifying the exact dinner-hour, should be sent several days previously. When the hour arrives, the lady of the house should be in the drawing-room, ready to receive her guests. The number of the guests should be regulated according to the capacities of the household, without occasioning any overcrowding or discomfort. If possible, an equal number of ladies and gentlemen should be invited, but if the numbers are not equal, two persons of the same profession should not be placed together, as the general interest of the conversation might suffer. At large dinner parties it is usual for the master and mistress of the house to sit at the top and the bottom of the table. On the right-hand side of the hostess, the gentleman of the highest rank is placed; the gentleman next in rank will occupy the left. The two most distinguished ladies, in like manner, sit on either side of the master of the house, who, of course takes the bottom of the table. When the guests are seated, the lady begins to help the soup, which she sends round, commencing with her guests on the right and the left, and continuing in the same order. No one should ask for fish or soup twice, because by so doing, part of the company are kept waiting for the second course. Neither ask anybody to take wine until the fish or soup is finished. Wine should never be pressed upon those known to be averse to it, nor should comments be offered upon any established rules adopted by individuals with reference to meats or drinks. It is generally considered a mark of good breeding to take the same wine as that selected by the person who pays you the compliment, the choice, of course, pertaining to the highest in rank or age; should, however, the wine he is drinking be unpalatable to you, you are at liberty to select your own by courteously saying, "Will you permit me to take claret, or sherry?" &c.

Avoid all ungraceful habits, such as using a knife in eating, making a noise with the lips and mouth, bringing the face close down to the plate, making a rattling with the knife and fork, &c. Eat peas with a fork, and do not scrape up all the syrup or gravy on a plate, as though it were so precious that you could not possibly leave a drop of it. Do not pour sauce, melted butter, &c., over meat or vegetables, but put it on one side of the plate. If helping soup, one ladleful in each plate is sufficient. Fish should always be eaten with a fork aided by a piece of bread.

On no account pick your teeth after dinner; it is a most unseemly habit. Be careful not to sit so far from the table as to permit the crumbs to fall upon the carpet. Be attentive to those guests who sit near you, and anticipate their little wants, without appearing obsequious or obtrusive. Neither be wholly silent at the dinner table, nor too loquacious; during the first portion of the dinner, however, the conversation should be limited to an occasional remark, but towards the latter end, freer scope may be given for the discussion of topics of a light and pleasant nature. After you have assisted yourself to condiments, do not keep them opposite you, but pass them to your next neighbours, by doing this to spare persons the awkwardness of continually asking you to pass this or that. When you are asked by the carver which part you would like of any particular dish, name at once some part, without appearing selfish or too dainty. If the host or hostess pass a plate expressly for you, do not offer it to another person, as by doing so you will be questioning the host or hostess's good taste. Whenever you receive an invitation to dinner, answer it immediately, or at any rate within the next twenty-four hours. Arrive at the house within five or ten minutes after the hour named: the absurd fashion of being half an hour or an hour behindhand is fast wearing away. The most becoming costume for dinner-parties is, a black dress coat, black trousers, white or black waistcoat, and a white cravat; patent leather boots are also worn.

DINNER WAGGON. — A convenient article of dining-room furniture, for the reception of dishes, usually made of mahogany, and running upon castors. By this means, joints of meat and other large dishes may be easily transported from one part of the room to the other, and may, in the meantime, be kept hot over hot-water wells.

DINNERS, Bills of Fare for.—These may be composed in endless variety, according to the taste and means of the host. The following selection, however, will be found to conform with the various seasons of the year, and if acted upon will furnish excellent dinners, without entailing any very extravagant outlay:—

Bill of Fare for January.

First course.

Small ham.	White soup.	Haricot
Mashed	Soles.	mutton.
potatoes.	Calf's head.	Brocoli.
	Roast beef.	
Turkey.	Turbot or	Tongue or
	cod's head.	chine.
	Mock turtle.	

Second course.

Roast partridges.

Blancmange. Larks.

Fancy pastry garnished with conserves.

Roast rabbits. Sweetbread.

Capon garnished with cresses.

Mince pies.

Poached eggs on spinach. Jellies.

Fritter of oysters.

Removes.

Sweetbreads. Sausages.

Lemon pudding.

Tarts of preserved fruits.

Bill of Fare for March.

First course.

Gravy soup.

Joint of house lamb. Tongue.

Capon.

Chickens. Calf's head.

Oyster patties.

Haricot mutton. Beef olives.

Rice soup.

Entrées.

Artichokes.

Cranberry tarts.

Cucumbers.

Fricaseed fowls.

Lettuces. Spinach.

Second course.

Turkey.

Mushrooms, boiled. Mince pies.

Marrow pudding.

Fricaseed rabbits. Pigeons.

Prawns.

Almond tarts. Strawberries in cream.

Ducklings.

Bill of Fare for June.

First course.

Turtle or green pea soup.

Jack or pike. Fried soles.

Larded fowls.

Slices of salmon. Carp.

Stewed giblets.

Removes.

Quarter of lamb. Loin of veal.

Haunch of venison with red wine and currant jelly.

Entrées.

Sweetbreads, browned.

Stewed peas.

Lamb cutlets with spinach.

Second course.

Roast ducks.

Partridges. Mushrooms.

Cabinet pudding.

Green peas. French beans.

Savoy cake.

Macaroni. Artichoke bottoms.

Neck of house lamb.

Bill of Fare for October.

First course.

White soup.

Salmon, trout. Fried soles.

Saddle of mutton.

Cauliflowers. Stewed spinach.
Two chickens, boiled and served with tongue.
Palates of sweetbread. Oyster patties.
Trout.

Second course.

Roast grouse.
Pheasants. Partridges.
Prawns.
Fruit tart, decorated. French beans in poulette sauce.
Custards.
Preserved ginger soufflée. Marrow pudding.
Roast rabbits.

DISCOUNT.—A sum of money deducted from a debt in consideration of its being paid before the usual or stipulated time. The circumstance on which its fairness is founded is, that the creditor, by receiving his money before it becomes due, has the interest of the money during the interval. Consequently, he should only receive so much as, put out to interest during the period in question, will realize the amount of his debt at the time when it would have become due. In commercial transactions it is customary to give bills for acceptance and promissory notes in consideration of certain debts contracted. These are converted into cash through the medium of bankers and others, who deduct a certain rate of discount according to the current value of money; handing over the difference to the person when he parts with the bill, and keeping the same until it arrives at maturity. Discounting bills is a great convenience in commerce, as it puts a person in the possession of immediate funds, and yields a profit rather than a loss as compared with cash payments.

DISGORGER.—An instrument used by anglers to disengage the hook from the mouth or throat of a fish; it is generally made of a strip of ivory or bone of from six to eight inches in length, and forked at the end. The forked end is pressed down upon the bend of the hook until the point is removed from its hold; the gut, gimp, or other substance to which the hook is tied is then tightened, still pressing the instrument on the bend of the hook, which brings the point of the hook against the stem of the disgorger, and allows the two to be withdrawn together without the hook again taking hold of the throat or mouth of the fish.

DISH-COVERS, TO CLEAN. — Having washed the block-tin articles quite clean in warm water, rub the inside with soft rags moistened with fine wet whiting; then rub the outside over with a soft linen cloth dipped in sweet oil. Next rub it all over with fine whiting, powdered and sifted, and put on dry; afterwards finish with a clean dry cloth. Dish covers cleaned in this way will preserve their polish, and continue to look new, provided they are always wiped dry as soon as they are brought from the table.

DISINFECTION. — Disinfection, in its limited signification, must depend upon the character of the noxious gases that have to be removed, and as these vary in their gravity and power of expansion, the means to remedy the one would be inoperative in the other. Nature has supplied us with two of the best disinfectants that we possess, air and water, though in certain conditions of the former, when too moist or too dry, it is defective; for then it carries the poisonous elements more quickly into the system, and renders it more susceptible of absorbing the deleterious particles. If the cause of foul air and noxious gases proceeds from faulty drains, disinfectants can only palliate the evil till the construction of the drain is altered; the best artificial means to neutralize and destroy the effluvium for the time being is the chloride of lime or the chloride of tin, which, dissolved in water, and poured down the sinks and drains, will, by decomposing the gases, at once arrest the offensive smell. But for the apartments into which the foul odours have entered, ventilation, by lighting a fire in the grate and opening the window, so as to produce a rapid and sweeping current of air, will be found the most effectual course. For the infection of fever, or the close air of a sick room, chloride of lime scattered occasionally over the floor, or the fumes of aromatic vinegar, obtained by pouring a few drops in a heated shovel; by burning the dried sprigs of lavender, or igniting a piece of camphor, are all useful and very effectual means. Tobacco smoke and the fumes of gunpowder are equally efficacious as disinfectant agents; among precautionary measures the carpets should be removed from the room of fever patients, and the boards kept constantly dry; the bedclothes, and everything that comes from the patient immediately placed in tubs of water containing chloride of lime, and the nurse and attendants should always stand in such a position that the breath and exhalation from the patient shall blow from and not to the nurse.

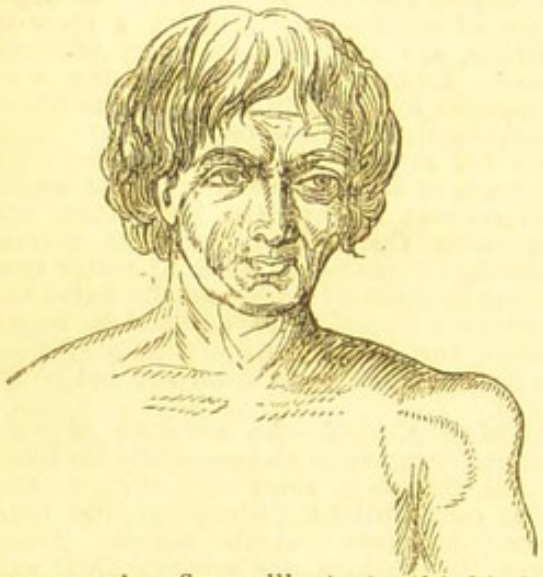
DISLOCATION.—An accident of very frequent occurrence, and generally the result of falls, though in some very weak and relaxed constitutions, dislocation often takes place from mere muscular action. Sometimes dislocations are accompanied with fracture, in which case, when the limb is broken near the head of the bone, it is impossible to reduce the dislocation till the fracture has been reunited, thus materially complicating the danger and the suffering. The joints most liable to dislocation are those which have the greatest play, as the shoulder, wrist, ankle, hip or thigh, fingers, and jaw.

Symptoms.—All dislocations are attended with disfigurement, and more or less of laceration of the subjacent parts, pain, immobility of the part, shortening of the member, and swelling; besides these, particular dislocations have special appearances, as the turning *in* or *out* of the foot in luxation of the thigh, and the position of the forearm in that of the shoulder. In all accidents of this nature, the bone should be reduced, or replaced in its natural state, as early as possible, for the longer it remains unrestored

the more difficult the process becomes, and the more unfavourable the result. A bone that has once been dislocated is very apt, from a trifling accident, to be again displaced.

The general mode of *treatment* may be expressed in a few words, though special dislocations demand more complicated management. In the first place, the body or the main member is to be made the resisting medium, and being held firmly as a counterpoise, the dislocated part is to be slowly and steadily extended or drawn out till the head of the bone reaches the outer rim of its cavity, over which it is to be assisted by the fingers of the surgeon or assistant, when, the extension being relaxed, the head glides into its place with a snap.

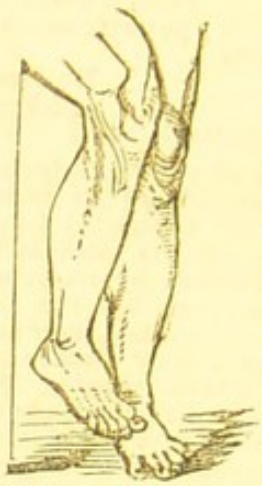
DISLOCATION OF THE SHOULDER.—This joint may be dislocated in almost all directions, except upwards, though probably the most frequent positions are forward and downward, the head of the bone resting in the armpit. In all dislocations of this bone there is an evident depression at the outer end of the collar bone, which stands out bold and sharp, great pain, and almost immovable state of the arm, the elbow turned from the body; the patient leans towards the affected side, and rests the forearm on his lap, or supports it in his other hand. The



accompanying figure illustrates this kind of dislocation, in which the want of roundness in the shoulder and the sharp end of the collar bone is clearly defined.

Treatment.—The reduction of this bone can be effected by seating the patient on the ground, fastening a jack-towel above the elbow, and throwing the fold over his neck; the surgeon places the heel of his foot in the patient's armpit, makes the extension by means of the pull over his neck, and the counteraction of his heel and leg, till, having drawn out the limb till the head is brought in front of the cavity, he allows the bone to sink back into its place. Or it may be effected by placing the patient in a chair, and having passed a jack-towel obliquely over the chest, and fastened the opposite end to a door or some fixed point, while one person slowly extends the arm, the surgeon standing behind and keeping the blade bone fixed, with his finger directs the moving head of the bone into its cavity. When the dislocation has been reduced, the forearm is to be bent on the chest and kept in a sling, and the limb preserved in perfect rest for several days. Should the shoulder remain weak it must be rubbed with some stimulating embrocation.

DISLOCATION OF THE THIGH.—This is probably the most serious of all luxations of the joints, and, from the careful manner in which nature has protected it from injury, it requires considerable force to displace the bone from its socket, such accidents being generally the result of heavy falls with the legs apart, or falling from a height upon the feet or side. When the dislocation is upwards, the limb is from one to two inches shorter than the other, the thigh bent, the knee overlapping the opposite leg, and the foot and toes pointed inwards, and resting on the instep of the sound limb.



Treatment.—A sheet is first folded lengthways, and passed between the legs, and over the opposite limb, the patient lying on the sound side, the ends are then made fast to the bedpost, or to some firm point; the strap of a pulley is fixed to the thigh just above the knee, extension is then to be made in an oblique inward direction by means of the pulley till the head is drawn on a level with the socket, when the surgeon, by dexterously turning the limb outwards, and by judicious pressure, is enabled to push the head into its socket. When the patient is young and muscular, or the dislocation has been some time unreduced, it is necessary, to overcome the strength of the muscles, to bleed, or give antimony and opium to cause relaxation of the parts.

DISSOLUTION OF PARTNERSHIP.—Where no term of continuance has been agreed upon, a partnership may be dissolved at any time by either party or by mutual consent. A dissolution may be effected by the aid of the Court of Chancery, in case of the partnership undertaking turning out impracticable, or one of the partners becoming an incurable lunatic, or being guilty of gross misconduct, such as refusing to account for his receipts, or to submit his dealings to the examination of his partners. A partnership is dissolved by operation of law by the bankruptcy, outlawry, conviction for felony, or death of any one of the partners, or marriage of a female partner. In all cases of dissolution of partnership, the entire firm is dissolved; the remaining partners, if any continue to carry on the business, form a new partnership. A dissolution of a partnership should invariably be published in the *London Gazette*, and notice of the dissolution should be given by circular to *every* person who has had dealings with the firm.

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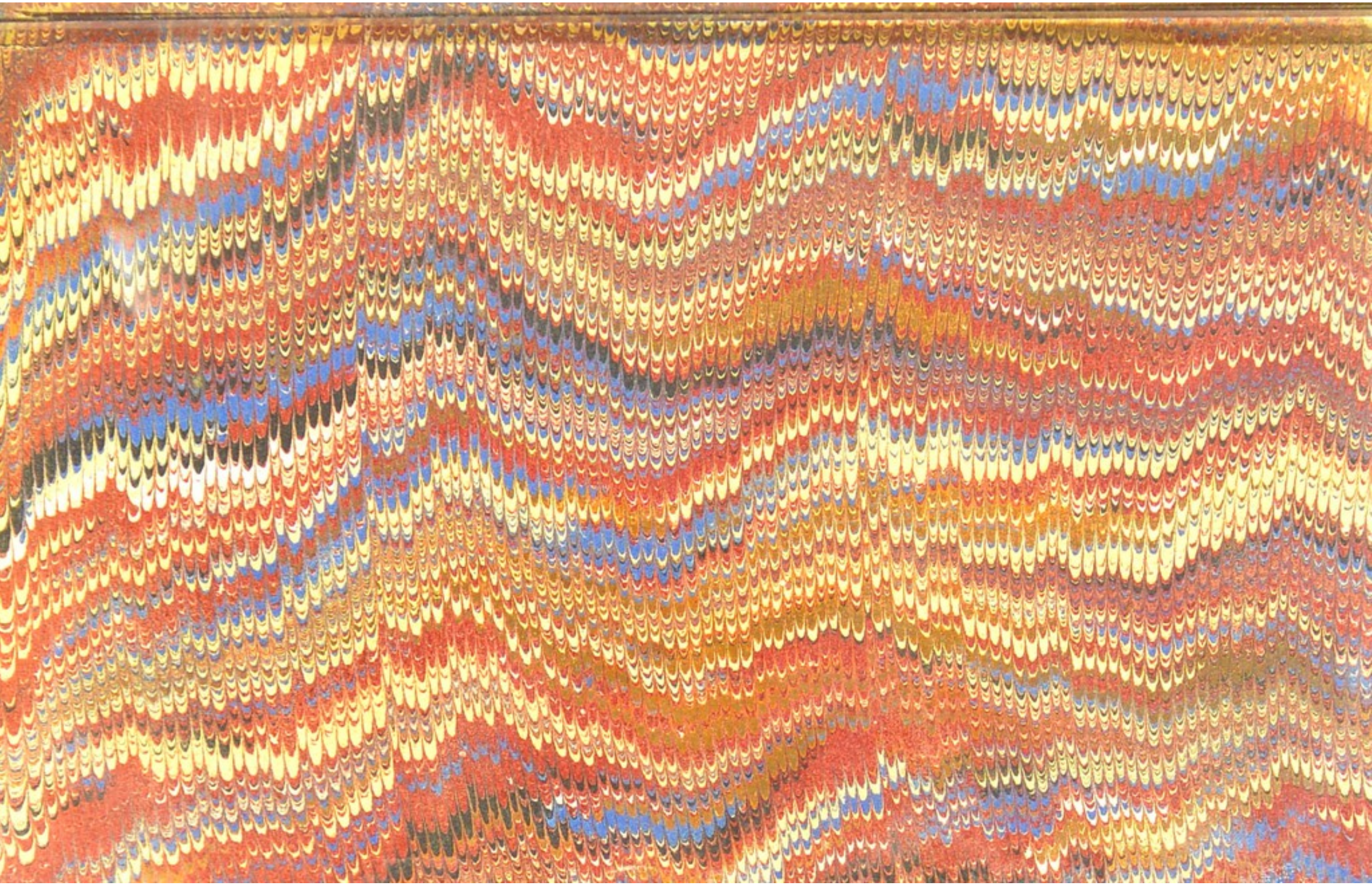

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