

**The domestic medical and surgical guide, for the nursery, the cottage, and the bush : giving the best advice, in the absence of a physician or surgeon in cases of accident or sudden illness useful to families, emigrants, travellers, missionaries, village clergymen, and sea captains the government medical chest explained ... / written at the request of Mrs. Caroline Chisholm, by Jabez Hogg ... ; to which is appended advice on the preservation of health at sea.**

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THE DOMESTIC  
*Medical & Surgical Guide;*

FOR

FAMILIES, EMIGRANTS, TRAVELLERS, MISSIONARIES,  
VILLAGE CLERGYMEN AND SEA CAPTAINS.

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Written at the Request of Mrs. Caroline Chisholm.

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BY JABEZ HOGG,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, FELLOW OF THE  
MEDICAL SOCIETY OF LONDON, ETC. ETC.



LONDON: INGRAM, COOKE, AND CO.

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MEDICAL AND SURGICAL GUIDE,  
FOR  
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GIVING THE BEST ADVICE, IN THE ABSENCE OF A PHYSICIAN OR SURGEON,  
IN CASES OF  
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USEFUL TO  
FAMILIES, EMIGRANTS, TRAVELLERS, MISSIONARIES,  
VILLAGE CLERGYMEN, AND SEA CAPTAINS.

THE GOVERNMENT MEDICAL CHEST EXPLAINED,  
AS TO THE PROPERTIES OF THE MEDICINES AND THE QUANTITY TO BE TAKEN.

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WRITTEN AT THE REQUEST OF MRS. CAROLINE CHISHOLM,

BY JABEZ HOGG,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, FELLOW OF THE MEDICAL  
SOCIETY OF LONDON, MEM. PATH. SOC. LOND., ETC.

TO WHICH IS APPENDED

ADVICE ON THE PRESERVATION OF HEALTH AT SEA,  
WITH THE ORDERS OF THE GOVERNMENT RELATING THERETO.

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TO

CAROLINE CHISHOLM,

WHO HAS REFORMED THE SYSTEM OF COLONIAL EMIGRATION,

ELEVATED THE MORAL TONE OF A RISING COUNTRY,

AND INDELIBLY WRITTEN HER NAME ON THE EARLY HISTORIC PAGE OF  
AUSTRALIA,

THIS WORK,

UNDERTAKEN AT HER REQUEST,

TO SUPPLY A WANT OFTEN FOUND AT SEA, AND IN THE FAR-OFF FARMING

STATIONS, AND THINLY-POPULATED DISTRICTS OF THE COLONY,

IS

RESPECTFULLY DEDICATED,

IN THE FERVENT HOPE OF ITS ANSWERING THE PURPOSE INTENDED,

BY HER HUMBLE AND OBEDIENT SERVANT,

JABEZ HOGG.

DECLARATION OF INDEPENDENCE

When in the course of the human events, it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of the earth, the separate and equal station to which the laws of Nature and of Nature's God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation.

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.

That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, — That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.

1776

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## PREFACE.

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THE intention of the following pages is to afford those persons who reside at a distance from medical men the best advice in cases of sudden illness or accidents, that such misfortunes may be alleviated, perhaps cured, but at any rate not rendered worse in the absence of professional aid.

A careful selection of cases applicable to females is inserted, not only in regard to their own persons but that of their offspring, in the performance of those important duties that devolve upon them as mothers.

The lonely emigrant in the distant bush, the inquisitive traveller in illiterate countries, the enthusiastic missionary in his apostolic wanderings, and the village pastor in his parental guardianship, will find the homely instructions given in this little work meet a vast amount of the ills that "flesh is heir to." At the same time, in the moment of alarm from an accident in the domestic circle, the anxious parent or attendant may learn the most judicious mode of treatment until the arrival of medical assistance.

The person who purchases a stock of medicines and instructs himself to mix and make up drugs, must avoid giving way to a desire to practise his skill on every trivial occasion. He should only administer when the advice of a medical man is unattainable, and the case is imperative. Medicine is an evil to be shunned whenever possible; and many derangements of the system may be rectified, advantageously

to the patient, by such simple methods as diet, ablutions, abstinence, air, clothing, and exercise.

The medical man's study is to discriminate by appearances the nature of the disease which exists; this is a wide field, and calls into exercise all the talent he possesses, gained by a long and diligent course of observation and practice. To attempt to define these appearances would occupy a large number of pages, and, even if comprehensible, would only be confusing to the mind of the non-professional reader.

Much valuable information has been extracted from the Government instructions to surgeons of emigrant ships, as well as to the emigrant himself, which deserves to be better known, as it may prove of much service to both; with this view it has been thought advisable to append the most essential portion of it, as well as thereby making this little book as complete as possible, some practical information gleaned from those who have experienced the trials of a long voyage.

It has been the earnest endeavour of the author to give plain and simple directions; and it is his fervent hope that this little work will be found invaluable in the hour of need.

6, Gower Street, Bedford Square.

# THE DOMESTIC MEDICAL AND SURGICAL GUIDE.

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## INTRODUCTORY CHAPTER.

### ON ADMINISTERING MEDICINES.

IN prescribing or administering medicines, the following circumstances are always kept in view by medical men, and are of the utmost importance, viz., Age, Sex, Temperament, Habit, Climate, and Condition of the Stomach.

*Age.*—See the table of proportionate doses given at page 23 of this little work; remembering that all medicines containing opium affect children more powerfully than adults.

*Sex.*—Women require smaller doses than men; and are also more quickly affected by purgatives.

*Temperament.*—Stimulants and purgatives more readily affect the florid or sanguine than the pale or phlegmatic, consequently, the former require smaller doses.

*Habits.*—Persons in the habitual use of stimulants and narcotics, require larger doses of such remedies to affect them when labouring under disease, than others not so accustomed; or those who have habituated themselves to the use of saline purgatives, such as Epsom Salts, are more easily affected by such remedies.

*Climate.*—Medicines act differently on the same person in summer and winter, and in different climates. Narcotics act more powerfully in hot than in cold climates, hence smaller doses must be given in the former; but the reverse is the case with respect to calomel, consequently larger doses are required in hot climates.

*Condition of the Stomach.*—The least active remedies operate violently on some persons, owing to a peculiarity of stomach or disposition of body unconnected with temperament. In giving medicines, the medical man always so regulates the intervals between doses, that the following dose may be taken before the effect produced by the former is altogether effaced. By not attending to this rule, the cure is always commencing, but never rapidly proceeding—it may, indeed, have no effect at all. It is to be borne in mind, at the same time, that some medicines, such as mercury, &c., are apt to accumulate in the system, and danger may thence arise if the doses are repeated too frequently. Aloes and castor oil acquire

greater activity by use, so that the dose requires to be diminished. With due caution, and a proper attention to the doses ordered, no untoward circumstances need arise.

*Emotions and Passions of the Mind* have a most powerful influence upon the disorders of the body. *Hope* is a mildly stimulating or tonic feeling, which is most beneficial in all cases. The influence of the *imagination* on diseases has long been known, and the extraordinary cures we constantly hear of as effected by such absurd means as homœopathy, mesmerism, &c., are, in fact, all referable to the influence of the imagination over a diseased body, or disordered mind.

#### LIGHT AND AIR.

*Light* acts as a vital stimulus to living beings: on man it promotes the development and nutrition of the body. Privation of light disposes to inactivity and melancholy; on the contrary, exposure to strong sunlight occasionally results in blindness and inflammation of the brain. In maladies indicating imperfect nutrition and sanguification, as scrofula, rickets, and wasting of the body in weakly subjects, with swelling of the limbs, &c., free exposure to sunlight is attended usually with very happy effects. Open and elevated situations probably owe part of their healthy qualities to their position with regard to sunlight, as much as to the cheerful feeling induced, and the banishment of lowness of spirits and despondency. On the other hand, in many cases, light acts injuriously on the patient; it therefore becomes necessary to exclude nearly all daylight in diseases of the eye, attended with fulness of the vessels or nervous excitement, inflammation of the brain, fever, mental irritation, severe wounds, or surgical operations, and, indeed, in all inflammatory conditions. Darkness is also necessary to produce sleep.

A constant and good supply of fresh air admitted into our apartments, is a matter next in importance to daily exercise in the open air. The amount of air required to maintain the body in health is, in some measure, regulated by the employment in which the person is engaged, as well as other circumstances. The mature and robust require more than the weak, the infant, or the aged; and man more than woman. We also need more in the day than at night—in health than in sickness—in a high temperature than in a low one—during muscular exertion than when at rest—after a meal than when hungry—and on the attention being directed to the function of respiration than when it is unconsciously performed.

The want of a good supply of fresh air is generally followed by listlessness, languor, and irritability. Irritability of the nervous system, as well as dulness of the intellect, is unquestionably the direct result of a want of pure air; thus it becomes a question of some moment to prevent this irritability proceeding to irritation and ill health; and also how far, as a preventive, pure air might be substituted or used in the place of medicine.

Impure air is, indeed, one of the scourges of mankind, no age or sex is exempted from its influences; but especially are they, who have adopted many foolish ideas on civilisation and complied with pernicious fashions, liable to its evils; this prime and ever-operating cause of disease, depopulation, and premature mortality, has existed in its various modifications,

and produced its deleterious effects in a greater or less degree at all times, and in all polished societies in every climate.

Ships have always been miserably circumstanced from want of proper ventilation; their peculiar structure in some measure preventing the adoption of efficient means. On the principle of economising space, emigrant ships are very badly attended to in this respect; yet the fatal effects of imperfect ventilation have often forced themselves upon the attention of governments. Many persons must still recollect how those engaged in the slave-trade crammed between decks, without regard to ventilation, as many of their miserable captives as could sit or lie. From the natural activity of their exhalent system, especially the copious secretion of the skin, a miasma was soon generated, and very frequently one half, and sometimes nearly all, fell a prey to typhus fever.

It is a matter of much gratification to see that the careful and philanthropic *Mrs. Chisholm* has fully provided for the wants of all ships sailing under her direction, in this important particular. In her ship, "Athenian," Mr. Bowie, the surgeon, who sailed in it, had fitted up, for the purpose of well-ventilating the between-decks of the vessel, two perforated zinc tubes extending from the stem to the stern, and continued at one end on to the deck, one tube was placed along the roof of the cabins, the other on the floor; the first carried off the foul air, the latter brought in fresh, and such was the excellence of the plan that all the effluvium from the close congregation of so many people, and from the large amount of cooked victuals, was completely carried away as it arose; while between decks, the temperature was two degrees less than under the poop.

We would strongly urge upon those who are campelled to crowd themselves into narrow domiciles, the true relation of the atmosphere to their happiness and health, and always to hold it as a golden maxim—*that a pure atmosphere is the first requisite for healthy bodies and sound minds.*

For children, free respiration and an abundance of pure air are especially necessary for their growth. Singing, by the regularity with which it brings the muscles of respiration into exercise, causes a greater development of the chest and lungs. It is important, then, that the young be trained to this exercise early; and under all the circumstances of life, whether sitting, standing, or lying, asleep or awake, care should be taken by those who have guardianship over them, that no impediment, by position or other circumstances, be in the way of the expansion of their lungs to the fullest extent, and the inhalation of the purest atmosphere.

Professor Alison, in writing upon the great evils resulting from a want of pure air, remarks, "that it is hardly possible to observe separately the effect on the animal frame of a deficiency of exercise, and a deficiency of fresh air; these two causes being very generally applied together, and often in connection with imperfect nourishment. But it is perfectly ascertained, on an extensive scale, in regard to the inhabitants of large and crowded cities, as compared with the country population of the same climate—first, that their mortality is very much greater, especially in early life, and the probability of life much less; and, secondly, that of this great early mortality, in large towns, a very large proportion is caused by scrofulous disease. Again, it has been repeatedly shown, by all writers upon the subject, that the form of disease known as scrofula among human beings,

and even the lower animals, is the direct result of the respiration of too little or too impure an atmosphere. Animal blood contains a considerable portion of albumen, derived, doubtless, from food consumed. A chemical combination of this fluid with the oxygen of the air, is necessary to fit it to nourish the body properly, and to *prevent the deposition of this albumen in its nearly pure form*. If it does not combine with the oxygen of the air in sufficient quantity to change its character, it will be deposited in the form of tubercle, which is certain to be followed by *scrofula and consumption*.

"Scrofulous tubercles are generally found first attacking the glands and lungs, the cause of which is, the glands of the body are the principal organs of secretion, that is, the organs which separate from the blood the different materials of which the body is composed; and the lungs are the organs in which the blood is brought into direct contact with the air, and where the action of the oxygen of the air on the albumen, mixed in the blood by particles, is first exerted. The glands and lungs then are the chief organs, constantly, day and night, at work effecting an alteration of the blood, and are, therefore, the points at which an imperfect separation would begin, and be first noticed; and where, indeed, scrofulous tubercle is most abundant.

"There can be no doubt that the respiratory function is also important in purifying the blood from various deleterious matters, either introduced from without, such as narcotic poisons, or generated within the body, such as the poison of fever. Dr. Carpenter believes that a small amount of poisonous matter introduced from without in the form of contagion, or miasma, may lead, by a process resembling the fermentation of beer, to the production of a large quantity of noxious substances in the animal fluids. Thus it may be seen and easily understood how a copious supply of pure air will very often, of itself, carry morbid matter through the lungs, which, if allowed to remain, would have introduced disease and fatal results. Mr. Toynbee, in his valuable evidence given before the Sanitary Commissioners, states that he found the atmospheric impurity, arising from overcrowding and defective ventilation, attended by *scrofula* in all its varieties; he constantly met with scrofulous affection of the eyes, called sore or inflamed eyes; scrofulous affections of the joints, called by the people themselves abscesses—the abscess being in the neighbourhood of the joint, and they have no idea that it communicates with the *joint itself*; the disease frequently attacking the hip joint. Defective ventilation may be considered one great cause of all the diseases of the joints, as well as diseases of the eye and the skin; shingles, an assemblage of numerous little ulcers, creeping about the skin in clusters, and itching very much, difficult to heal, and ending in branny scales, ringworm, leprosy, and other diseases; ophthalmia is also very prevalent from the same cause; water in the brain is also associated with symptoms of *scrofula*, and arises in abundance in close rooms. Among other forms of disease, ascribable to the influence of bad air, is a large amount of deafness. In fact, Mr. Toynbee's opinion has been found, by general experience, to be correct, when he states that *scrofula*, with its host of attendant diseases, may be produced by the breathing of bad air alone, without any taint in the constitution transmitted by the parents, or any other cause being necessarily present."

We may remark, also, that dysentery has been often produced by the depressing and poisonous agency of bad air. In epidemic dysentery a

peculiar disposition of the air is the reputed cause; but this, of course, can be aided by unwholesome food, drink, and habitations, as with emigrants in crowded tents, &c.

#### CLOTHING.

In climates where there are any great variations of temperature, such as we are liable to in England, flannel should form a part of our under-clothing: it is a bad conductor of heat, prevents sudden changes from producing any ill effects upon the body, and thus is a great preventive to coughs, colds, &c.

Shoes should be thick and water-proof: this can be done cheaply by the aid of *gutta percha*; stockings for winter should either be lamb's wool or worsted, and in summer cotton.

In the report of the Registrar General, he states, "that the higher mortality of English women by consumption may be principally ascribed to the in-door life which they lead, and to the compression produced by wearing *stays*, preventing the expansion of the chest. In both ways they are deprived of free draughts of vital air, and the altered blood deposits tuberculous matter with such fatal and unnatural facility that on an average *thirty thousand females die annually of consumption.*"

Will not this impressive fact induce our country-women to abandon this vile article of dress, that *disfigures* the body, contracts the chest, produces nervous or other disorders, and has an unquestionable tendency to implant an hereditary hectic malady in the human frame: and can it be said, if a moment's consideration be bestowed upon the question, that girls have more need of artificial bone and bandages than boys? Let the thousands of deformed women, and the numberless victims who have been sacrificed to this *fashionable article* of dress, furnish the answer.

#### EXTERIOR APPLICATIONS.

*Heat.*—A certain degree of external heat is necessary to promote the vital manifestations of all warm blooded animals. It is frequently employed as a remedial agent externally. The *Hot Air Bath*, at a temperature of from 100° to 130° Fahr., is a powerful stimulant, and principally valuable when the blood has receded from the superficial parts of the body, and the internal organs congested; as in some cases of fever, in spasmodic cholera, in drowning, in chronic rheumatism, and stiffness of the joints.

*Bottles*, filled with hot water, are applied to the feet, to excite the circulation and augment the animal heat in diseases attended with cold

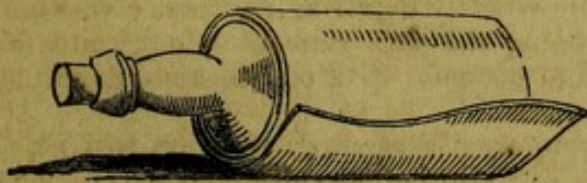


Fig. 1.

extremities, for which purpose nothing is better than common wine bottles, filled with boiling water and wrapped round several times with flannel, to prevent them from burning the patient.

(Fig. 1). Hot bricks may be used

in a similar manner. The same are applied to the stomach to relieve spasmodic pain. Hot sand, enclosed in a bag, may be employed for similar purposes.

The *Vapour Bath* is employed in the same way as hot air, but it is more soothing and sudorific. It softens and relaxes the skin, producing

copious perspiration. It may likewise be employed during the cold stage of intermittent fever, cholera, dropsy in old debilitated persons, liver complaints, rheumatism, gout, slight colds from checked perspiration, and in chronic skin diseases accompanied with a dry state of the cutaneous surface. It is of great value in producing a relaxed state of the skin, and profuse perspiration.

The *Inhalation of the Vapour of Hot Water* proves highly serviceable as a soothing remedy in irritation or inflammation of the membrane lining the throat, or bronchial tubes and tonsils.

The *Tepid Bath* should have a temperature of from 85° to 92° Fahr. It cleanses the skin, promotes perspiration, and allays thirst.

The *Warm Bath* has a temperature of from 92° to 100° Fahr., about the heat of the body. In general it increases the fulness of the pulse, accelerates respiration, and produces perspiration. It is of great use in inflammation of the stomach, bowels, or bladder, and is employed to relax the muscles, and thereby assist in the reduction of dislocation and rupture.

*Warm Fomentations and Poultices* are employed to relieve inflammation, pain, tension, and spasms.

*Warm Water* has been highly extolled as an application to burns and scalds, especially those on young children. The water must be applied with flannels, repeatedly changed, but at the same time preventing as much as possible exposure of the burnt surface to the air. In every case it soothes and mitigates the pain, and lessens the inflammation and constitutional disturbance that usually follow injuries of this kind.

*Tepid or Warm Water*, taken largely into the stomach in cases of poisoning, dilutes the contents of the stomach, and excites vomiting. Used as an injection, it is almost certain to promote the monthly discharge when suppressed.

*Cold.*—The effect of cold on living bodies is a diminution of vital activity, which terminates, if the cold be intense and long continued, in death; but if moderate and temporary, in increased activity of the vital powers. The sensation of cold is soon followed by a reduction of temperature, and a shrinking of the part. The skin becomes dry and shrivelled, while the bulbs of the hair become elevated, constituting the state called *goose skin*. The blood vessels suffer contraction, the quantity of blood circulating is thereby lessened, and its motion retarded. The secretions and exhalations are checked or stopped, and if the cold be prolonged or excessive, the part, after suffering more or less pain, loses its sensibility. This state of benumbing, when fully established, is called *frost bitten*, and, unless speedily relieved, may be followed by death of the part; which is known by the entire cessation of pain; the part remaining cold and insensible, the skin changes colour, and becomes livid or blackish, denoting the commencement of mortification.

When, however, cold is only temporarily applied, reaction will commence, succeeded by an agreeable sensation of warmth, and a return of the natural temperature. When the cold to which the part has been exposed is excessive, and the heat subsequently employed to excite reaction be too suddenly applied, inflammation and mortification may ensue.

*Chilblains* are the effect of an inflammation after long continued cold to a part. The true method of recovering frost-bitten parts consists in very gradually restoring their natural temperature, first by the use of

snow or ice frictions, then of cold water, and subsequently of lukewarm water.

Many diseases are produced by cold. Affections of the lungs are induced by it. *Scrofula* is a disease of cold and moist climates, as already stated. *Rheumatism* is another disease brought on by cold and moisture combined. *Paralysis* in the aged, and many others, is more or less aggravated by cold.

Cold is frequently used as a remedial agent. *Cold air* in fevers, is both grateful and efficacious. In the admission of fresh and cold air to patients affected by febrile disorders, consists one of the most important features of the improved methods of treating fevers.

The *Cold Bath* is employed with the view of obtaining the plunge or shock, and the reaction or glow after it. In general the immersion being only temporary, reaction quickly takes place, and a sensation of warmth is soon felt: the circulation of the skin is speedily re-established, a glow ensues, perspiration comes on, and the body is invigorated.

In weakly persons, however, this reaction may not follow, or only imperfectly, and on such the cold bath will be found to act injuriously. As a general rule, it should only be used when there is a sufficient degree of tone and vigour in the system to cause a *reaction*. Even with the strong, long immersion renders the pulse small, and ultimately imperceptible, the respiration difficult and irregular, a feeling of languor succeeds, the joints become rigid and inflexible, pain in the head, drowsiness, and cramps are experienced, the temperature of the body falls rapidly, and faintness, followed by death, may ensue. This is similar to death by drowning.

*Cold Affusion* is often recommended for use, when it is desirable to make a powerful and sudden impression on the system. In inflammatory affections of the brain (even of young children), in violent delirium, in poisoning by opium or prussic acid, or in torpor from the fumes of burning charcoal, it may be used most advantageously. In hysteria, epilepsy, or lock-jaw, it is often serviceable, in diminishing the duration of the fit, and in relieving the deadly sleep that follows. The mode in which cold affusion is effected, is as follows:—Water is poured on the head (inclined over a pan or tub), from a pitcher held a height of two or three feet. If the person be in bed, the head should be placed over the side of it. In children, it is sufficient to squeeze a large sponge, filled with cold water, at some height from the head. The time that it should be continued varies from one to two or three minutes, afterwards the body should be carefully wiped dry, wrapped up warm, and placed in bed.

*Tepid Affusion* is frequently employed, and by some regarded as a safer, though less powerful means than cold. Sponging the body with tepid water in scarlet fever is very beneficial; in continued fever, it diminishes the frequency of the pulse and of respiration, and causes a tendency to sleep.

The *Shower Bath* is very similar in its effects. In insanity it is used with the greatest benefit, to allay mental excitement. When the patient appears overcome it should be discontinued, and renewed when the violent symptoms recur. After four or five applications of this kind, the patient becomes entirely subdued, when he should be taken out of the bath, rapidly dried, warmly covered up, and put into bed. Calmness and sleep generally follow, with many days of tranquillity and ease.

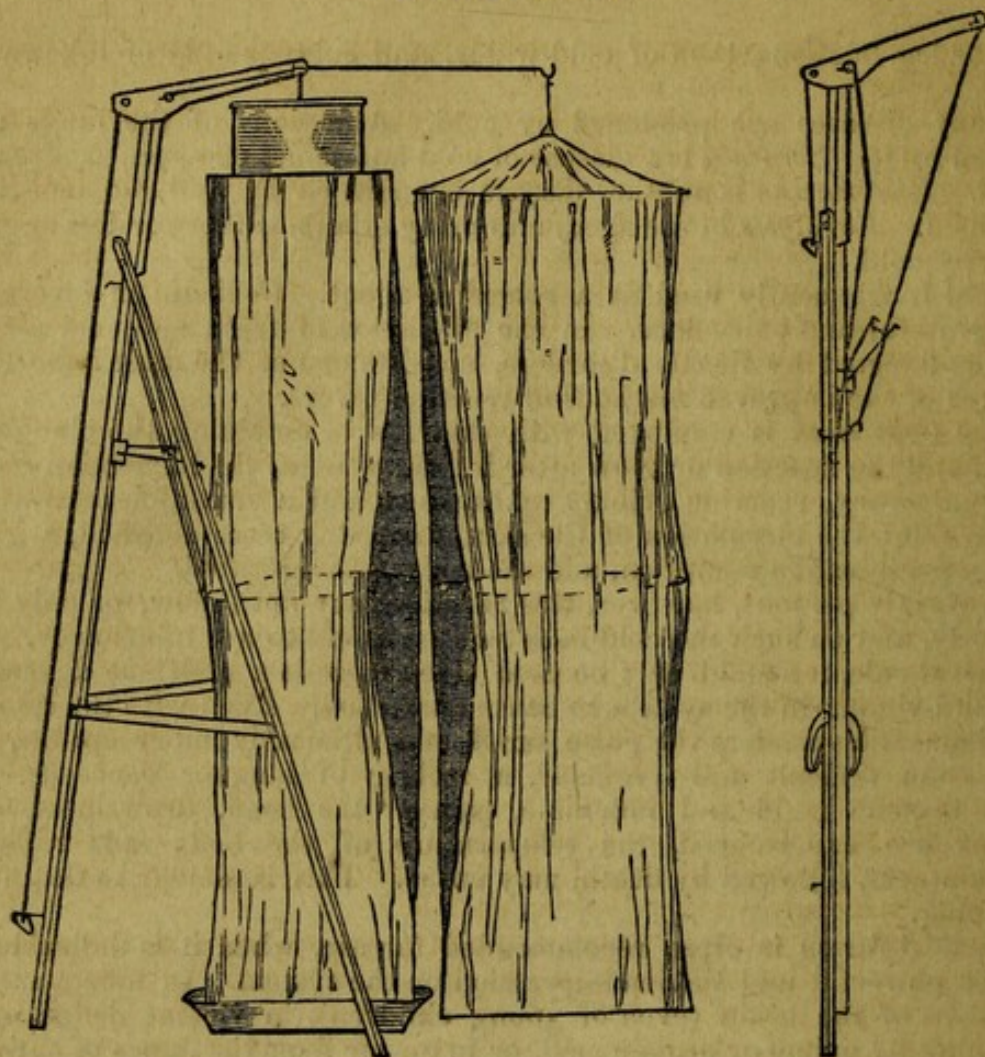


Fig. 2 represents a cheap and economical way of making a shower bath, by suspending an old saucepan with a hole previously cut in the bottom, and a wood-plug inserted with a piece of string tied to it, to enable the person to withdraw it when ready.

*Cold Lotions.*—Water and spirit lotions are employed to generate cold by evaporation, and thereby to relieve local irritation and inflammation. They should be applied by a single layer of thin linen, and not made to confine the part. Cold lotions are applied to the head in brain fever, in severe bruises, fractures, dislocations, and erysipelalous inflammation.

Ice is sometimes employed to stop long continued bleedings from the nose and other parts. In cases of madness, inflammation of the brain, and in fever, where there is great excitement of the brain, with a hot dry skin, it is often used with the greatest benefit. Ice is also taken internally in the latter stages of typhus.

#### DIET—SOLID AND LIQUID.

In the treatment of many diseases, attention to diet is of the utmost importance. It is very necessary in disorders of the digestive and urinary functions, in chronic or long-continued diseases of the assimilating or converting organs in which the appetite is impaired, or even increased. The patient should be very particular in the employment of a diet neither

improper from the quantity or quality, as this would retard the best-directed efforts of medical aid.

Several kinds of diet are usually recommended in the various forms of disease, the most important being:—

*Animal Diet.*—This term is applied to a diet composed principally of animal food; but, in speaking of a diet of this kind, it is usual to permit the use of eggs, cheese, new milk, beef tea, mutton broth, and such like articles to be taken with a proportionate amount of animal food. There are but few diseases requiring a diet exclusively of this kind; the most important are—diabetes, scrofula, and those cases wherein it is desirable to combine a highly stimulating and nutritious diet.

*Vegetable Diet* is termed spare diet. This is used to indicate the employment of vegetable substances principally, not exclusively. It in general includes the use of fish, with a small quantity of poultry and butter. In full habits this diet is ordered, if apoplexy or gout is threatened; and by its adoption we diminish the quantity of nutritive matter supplied to the system, while we keep the digestive organs actively employed.

*Milk Diet.*—Besides cow's milk, this diet includes the use of farinaceous substances, such as arrow-root, sago, tapioca, rice puddings, and bread. Milk diet is ordered when it is necessary to support the system with the least possible stimulus or excitement. It is well adapted for inflammatory diseases of the chest, of the stomach, bowels, and bladder. After bleeding from any internal part, when the powers of life have been gradually exhausted, a light diet is very beneficial; it is also considered a preventive and curative of gout. In the diseases of children, especially those of a scrofulous nature, it is highly recommended.

*Low Diet.*—In acute inflammation, in fever after serious accidents, operations, and after childbirth, a low diet is absolutely necessary, consisting principally of slops, such as tea, weak broth, barley-water, and toast-water. Small quantities of milk and farinaceous matters, in the shape of gruel and arrow-root, are sometimes added.

*Full, or Common Diet.*—On many occasions, where it is desirous to restore or support the powers of the system, patients are permitted to satisfy their appetites with plain vegetable and animal food. In many indolent diseases, in some affections of the nervous system, as epilepsy, &c., and in convalescence after illness, this kind of diet is frequently of much service.

A writer observes:—"Many of our customs, manners, and habits are prejudicial to health. Some of them are physical, while others are moral in their effects. Nothing more plainly betrays our ignorance of even the principles of health, and at the same time our slavish submission to selfish indulgence, than the custom of *eating suppers*—by which we do not mean the mere eating a slice of bread and cheese, but of making a meal at that time. Instead of allowing the body, with its multifarious powers, to be refreshed by 'Nature's best restorer, balmy sleep,' and the mind to be relieved from care and thought, irritation and excitement, the stomach is loaded with (probably) a heterogeneous mass of food, and the whole machinery of the inward man is forced into sluggish operation when the vital powers are at the lowest ebb; the brain, feverish and disturbed, sends forth startling visions and horrifying dreams until morning dawns, when the haunted imagination recovers itself, and is conscious of the mental and bodily vigour being rather exhausted than refreshed by the night's turmoil. We would not have touched upon this subject, but we are aware

that—notwithstanding all the evils which are known to follow in its train—the practice of nightly repletion is still too common.”

It now becomes our duty to inquire into the properties, and effects on the stomach, of the articles of food employed to supply the waste of our bodies, and maintain us in health. The suitability of particular kinds of food, to the varied constitutions of man, is not made that study and science its importance deserves.

*Milk.*—This causes wind and acidity in some stomachs, which effect can be remedied by mixing about half an ounce of lime water to each pint. Milk, when it agrees with a person, is useful in scrofulous affections, and where debility and morbid sensitiveness exist, in early stages of consumption of the body, in cases of enlarged glands, diseased affection of the joints, and in continued rheumatism of the joints. A milk diet is not sufficient for any one having continued and active exertion, but it is for those who are invalids. Asses' milk is not so nourishing, but more easily digested than that of the cow. Goats' milk contains matter of a peculiar taste and odour, which requires an invalid to have good, pure air, and some exercise to easily digest

*Raw Milk* is not commonly used abroad, and we may observe that when boiled it proves more agreeable to the stomach. If, after boiling, it be put into bottles, and well corked, or in tins soldered up, it will keep during many months. Milk may also be purchased in small cases prepared for long voyages. This is made by gently simmering the milk until nearly all the water is evaporated; it is then cooled and kept carefully from the action of the air, remaining in a solid state ready for use; when required, a piece is put into the cup of tea or coffee. The most certain method for voyagers is to take with them a supply of patent concentrated milk or cream, which prevents disappointment at a time when it is impossible to procure so useful an article in illness, &c. Or an excellent substitute may be secured by laying in a supply of cocoa and chocolate, having the milk and sugar ready combined with them.

*Skimmed Milk* is more easily digested, and not much less nutritive, than that in the state as fresh drawn from the cow.

The article called *Sugar of Milk* may be purchased at any druggist's shop, and is occasionally used instead of milk.

*Butter* always irritates the digestive organs of those suffering from indigestion, and especially when on toast, or in a melted state. Butter is best when fresh, well made, and from a cow fed on grass. Salt butter is never so good as fresh, and yet a little salt on fresh butter facilitates its digestion. The utility of butter to the invalid, can only consist in having a solvent effect on the bowels. It is generally thought better to prevent children indulging in this oleaginous matter, by placing before them plain palatable food, for which they have some liking, as milk and bread, oatmeal porridge, etc.

*Cheese*, when toasted, is more easily digested than when not so; the richer it is the better, and also the more mature. Decayed cheese, in some cases, stimulates and assists a weak stomach in the digestion of food; it is nevertheless more advisable for those afflicted with indigestion to seek other methods of aiding their enfeebled organs. *Cream Cheese*, when fresh and untainted, is as digestive as ordinary ripe cheese.

*Whey* is an excellent drink in all febrile disorders, at the same time it is nutritive and dilutent to the body. *Wine Whey*, taken warm, promotes

the action of the skin, and is a valuable domestic remedy in *colds*, and *influenza*. *Tamarind Whey* is preferred by some people; it is prepared by boiling two ounces of tamarinds in two pints of milk, and then straining it through a sieve. Cream of Tartar also makes an excellent whey.

*Eggs*.—The yolk is best suited to a very delicate stomach when lightly boiled, but the white, even in a pudding, may prove unpleasant to it. The entire of a raw egg is one of the most easily digested articles of diet known. Eggs lightly poached are preferable to boiled ones, while those hard boiled are the worst to digest; still, to persons undergoing great exertion in the open air, a few hard-boiled eggs prove an excellent substitute in the absence of a regular meal; adding a little salt assists digestion. Eggs ought to be used very fresh, as they speedily, from their nature, undergo decomposition. Immersed in vinegar and water or quick lime they will keep for some time. The eggs of the duck and goose are less digestible than those of the hen and wild birds.

*Fat* is not so digestive as lean, nor does it possess nutritive properties; it is called a calorifiant, that is, maintains the animal heat; thus we find the inhabitants of cold climates indulge most enormously in it, while in warm climates it is neither relished nor does nature supply it. It is useful as a dilutent of the other portion of the food.

*Bread* baked in small loaves or toasted before a hot fire, and not eaten new, being freed from the effects of fermentation, is the most easily digested. Bread containing bran is occasionally useful for irritating the stomach and bowels, and thus preventing constipation; but, if continued, the coarse particles are apt to lodge in the intestines, which is followed by severe derangement, requiring medicine for their removal. To those much troubled with indigestion, fresh biscuits preserved from the air or damp are the most suitable, especially those made for use at sea.

*Toast*.—In the act of toasting bread we wish to get out the water, which makes the bread cold, waxy, and heavy of digestion. Perhaps we shall be best understood if we first explain what makes bad toast of a slice of bread, or rather what makes it no toast at all, but merely a piece of bread with two burnt surfaces, more wet and waxy in the heart than ever, and which not a particle of butter will enter, but only remain upon the surface, and if vexed with additional fire, turns to a rancid oil of the most unwholesome description. If the slice of bread is brought into close contact with a strong fire, the surface becomes covered with, or rather converted into charcoal before the heat produces any effect upon the interior of the slice. This being done, the other side is turned, and converted into charcoal in the same manner. Charcoal, as everybody knows, is one of the worst conductors of heat. It is of no consequence whether the said charcoal be formed from wood, flour, or any other substance, for its qualities are in every case the same. Now, when the surfaces of the slice of bread are charred over in this manner, there is an end of toasting, as no action of heat can be communicated to the interior, and not one drop of water can be evaporated. In this state the slice of bread may be wholly burned to charcoal; but until it is altogether so burned, the unburnt part will become always more wet and unwholesome. There is an illustration of this in putting a potatoe in the middle of a strong fire in order to be roasted. If the fire is but hot enough, a potatoe the size of one's fist may be burned down to a cone not bigger than a marble, and yet that cone will remain hard and scarcely warmed.

Chestnut-brown will be far too deep a colour for good toast; the nearer you can keep it to a straw-colour the more delicious to the taste, and the more wholesome it will be. If you would have a slice of bread so toasted as to be pleasant to the palate and wholesome to the stomach, never let one particle of the surface be charred. To effect this is very obvious. It consists in keeping the bread at the proper distance from the fire, and exposing it to a proper heat for a due length of time. By this means the whole of the water may be evaporated out of it, and it may be changed from dough—which has always a tendency to undergo acetous fermentation, whether in the stomach or out of it—to the pure farina of wheat, which is in itself one of the most wholesome species of food, not only for the strong and healthy, but for the delicate and diseased. As it is turned to farina, it is disintegrated, the tough and gluey nature is gone, every part can be penetrated, it is equally warm all over, and not so hot as to turn the butter into oil, which, even in the case of the best butter, is invariably turning a wholesome substance into a poison. The properly toasted slice of bread absorbs the butter, but does not convert it into oil; and both butter and farina are in a state of very minute division, the one serving to expose the other to the free action of the gastric fluid in the stomach; so that when a slice of toast is rightly prepared, there is not a lighter article in the whole vocabulary of cookery.

*Yeast Dumplings* are only good for those with strong digestion, and who have laborious out-of-door employment.

*Vermicelli* and *Maccaroni* are made from a hard, small-grained wheat; the flour is made into dough, and dried until hard; whether simply stewed, taken with the gravy of meat, or used as a vegetable, they seldom disagree even with a weak stomach. If boiled until soft, and eaten with French mustard or jam, it makes a soluble and wholesome dish, which may even be taken by invalids.

*Puddings* are usually better than *Pies* for those affected with indigestion, especially if made with milk and eggs, instead of butter, lard, suet, or treacle. Baked puddings are not so good as boiled, and those done under meat are objectionable for weak stomachs. The simplest form of constituting puddings is that of flour, eggs, and milk. Pancakes fried in fat are not good. Pastry ought to be light, well cooked, but not what is called rich or greasy. Hard dumplings lie like a stone on the stomach of most people. Beefsteak puddings and meat pies ought never to be taken by those having weak digestion.

Little fancy cakes eat much shorter if put while hot into a hot jar, instead of being allowed to cool according to the usual custom.

Cakes, puddings, &c., are much better if the currants, sugar, and flour used are made hot before being mixed together.

*Oatmeal*.—Oats are best when grown in a cold climate, and they seem to agree with the inhabitants as a substantial article of diet. Oatmeal is chiefly valuable in the form of gruel, as it soothes the stomach, is nutritive, and easy of digestion. A little oatmeal mixed with water is an excellent drink when abstemiousness is necessary. As a light supper, nothing is more fitting than gruel for the delicate. In inflammatory affections, when proper to change from toast and water, nearly half a cupful of gruel may be given every two or three hours. But there are some persons with whom oatmeal never agrees. Gruel for the sick ought always to be boiled one hour. When it will sit comfortably on the stomach of a child,

oatmeal gradually stirred into boiling water, and eaten with milk, forms an excellent breakfast, not so liable to produce costiveness as bread and milk.

*Barley*.—Bread made of the meal of barley is not easily digested, but, from its flavour, is liked by those accustomed to it. Pearl barley is a great addition in the concoction of broth; and as barley-water will often suit where oatmeal gruel disagrees, mixed with milk it is an excellent diet for the sick. It should always be made fresh, and boiled three hours.

*Rye Bread* acts as a laxative; but the disease to which this grain is subject, will sometimes render the whole population where it is used dangerously ill, and be productive of most afflicting diseases.

*Rice*, from its large proportion of starch, is most excellent for the sick and those with defective digestion; it forms an excellent substitute for vegetables, when found productive of flatulency; its tastelessness renders it easily flavoured and palatable. It ought to be well cooked, the grain much swelled but not broken; by not stirring it in the process of boiling it does not, what the cooks call, "set on." Ground rice is more readily cooked than when whole.

*Maize* requires a taste to be acquired for it, and then it is preferred to wheaten bread. Mixed with wheaten flour, or as puddings or porridge, it is, as regards digestion, about the same as ordinary flour.

*Pea Meal* is very nutritious, but often indigestible; from the flavour it gives to soup, it is highly relished, and especially used for that purpose on board ship; it is also said to act most beneficially with sailors as a preventative to scurvy. In the north it is often made into bread, although the bread made from it is heavy and not easily digested.

*Asparagus* is prescribed in Spain as a powerful diuretic. The less fibrous vegetables are, the more easily are they digested, yet they contain but a very slight proportion of nutritious principle; in this class there may be named artichoke, sea-kale, vegetable marrow, celery, the flower of the cauliflower, and young French or kidney beans. Vegetables ought to be thoroughly cooked, and the water in which they have been boiled well drained from them before use. French and kidney beans, when old, contain a great deal of nourishment, and are a good substitute for more flatulent vegetables. Sea-kale and asparagus were at one time insignificant marine plants. The wild briar is the parent of the rose; the sloe, of plums, peaches, apricots, and nectarines; the crab, of apples of all kinds; and corn, the improvement of grass.

*Potatoes*.—The best potatoes do not contain a fourth of the nutritive matter of wheaten flour. They are chiefly valuable to dilute food that contains a large proportion of albuminous matter. If man were to feed exclusively on animal food, a vast train of evils would arise; and therefore, by partaking of it moderately, while he supplies the stomach with a sufficiency for the exercise of its functions, by some such article of diet as potatoes, he keeps up a proper balance, tending to a healthy state of body. Potatoes ought always to be fully ripe and well cooked, and not eaten with a "hard heart." The manner of cookery, as to boiled, roasted, or baked, is of no importance. It is said, if boiled with their "jackets" on, they are more nourishing; but, if peeled before boiling, more easily digested.

*Spinach*, when tender and fresh, is easily digested. It acts as a

stimulant to the stomach and bowels, and is gently laxative in many instances.

*Turnips* ought to be young, otherwise they are apt to be slow of digestion, and annoy the digestive powers.

*Cabbages and Greens*, if young and quite fresh, are wholesome; but if even a day old they frequently ferment and produce wind and acidity during digestion, which occupies some time. The less fibrous they are the better.

*Carrots and Parsnips* are nutritious, but rather difficult of digestion with some persons.

*Green Peas* are best when young. When old they are highly nutritious, but do not agree with those who have bad digestion.

*Broad and Windsor Beans* ought only to be eaten by those who have out-door exercise.

*Dried Peas or Beans* are very nutritive, but slow of digestion.

*Watercress or Garden Mustard* stimulates the stomach and promotes appetite.

*Lettuce*, if found easy of digestion, with a little salt, is suitable to the stomach, and may be eaten, as in the north, with sugar and vinegar, or, as dressed on the continent, with vinegar, mustard, and oil. It is best when young and quickly grown, as its narcotic principle is not so great as when old, and its fibres being tender, digestion is more easy.

*Celery* ought to be eaten when young and tender, and is more easily digested when boiled.

*Radishes* are only good when young and scraped.

*Leeks and Onions* do not agree with weak stomachs: they are valuable in cold and humid atmospheres, and where the diet is meagre, as on the continent, and among labourers whose wages do not afford a nourishing diet. They are conducive to health. A little parsley takes off the disagreeable odour of the breath arising from their being eaten.

*Cucumbers*.—Persons having a bad digestion ought never to eat this watery and cooling vegetable. Vinegar and salt and pepper are condiments that should always be used with it.

The French convert vegetables of all kinds into wholesome and somewhat nutritious soups, which, by the addition of a little spice and flavouring, have become favourite dishes with all classes.

*Sugar* is highly nutritious, adding to the fatty tissue of the body, but is not easy of digestion.

*Honey* seldom disagrees with the stomach; it ought not to be quite freed from the wax of the comb, when used as an article of diet; it is greatly laxative.

*Treacle*, though like most highly saccharine bodies, irritating to the digestive system, is preferable to sugar, and at the same time has laxative properties.

*Olive Oil*, like butter, is slow of digestion; from continental nations eating less frequently than we do, and consequently there being many hours for the digestion of food, it may be found useful in giving employment to the stomach.

*Vinegar* is apt to derange the functions of digestion; yet, where the food is of an oily nature, or not fresh, it aids digestion, and prevents bad effects; this is especially the case on a voyage where salt meat is often eaten.

*Salt* is imperatively required with our food, but ought to be taken with due regard to moderation.

*Spices* are stimulants to digestion; but if used to excess, tend to weaken and impair the action of the stomach.

*Pickles* are often valuable as stimulants and preventives of putrefaction; but when indulged in as mere provocatives to the appetite, too often cause the passage of the food before digestion has been completed.

*Tea* exercises a peculiar influence over the nervous system, hence tea is employed as a drink by those who wish to remain watching or studying at night. Strong green tea, taken in large quantities, acts upon some as a narcotic; but weak tea rarely disagrees with the invalid, and is admissible and refreshing in a variety of diseases, especially those of a feverish or inflammatory tendency.

A grain or two of carbonate of soda put into the tea-pot with the tea, will greatly aid in extracting its strength and flavour. The water must boil before it is poured on to the tea, and only a small quantity should be poured on at first.

*Coffee* is a tonic and stimulating beverage of a wholesome character, but not so good for the invalid as tea; this is used as an anti-narcotic by those who study at night, and is given largely to patients after poisoning by opium and other powerful narcotics.

*Chocolate* is very nourishing, but, on account of the oil which enters into its composition, it is difficult of digestion, and apt to disagree with delicate persons.

*Cocoa* is less oily, and being a mild astringent, is adapted to persons with relaxed bowels.

*Fermented Liquors*, such as ale, porter, and beer, commonly known as fermented decoctions of malt and hops, deserve a slight notice. Beer differs from wine in containing less spirit and more nutritive matter; therefore, when used in moderation, may be considered wholesome, proving a refreshing drink, and an agreeable and valuable stimulus and support to those who have to undergo much bodily fatigue.

*Wine*.—It cannot be denied that more perfect health is maintained without than with the use of this liquid; nevertheless, a moderate enjoyment of wine is not injurious to those who take much open-air exercise.

*Ardent Spirits*.—The injurious effects of spirits we beg most emphatically to impress upon the reader, as in warm climates, and in most countries visited by a voyager or emigrant, he meets only with newly-manufactured spirits, which prove most baneful to the English constitution, producing a long train of diseases. The most immediate consequences are felt in the bowels, dysentery being prevalent, and often fatal to those who give way to the degrading bestiality of over-indulgence in Australia. The incautious use of ardent spirits may produce evil consequences to others, not habitual drunkards. Of the havoc created by the new rum of the United States, all have read, and lamented over the weakness and depravity of human nature. Insanity is another disease that those who indulge in spirituous liquors are liable to. Dram-drinkers suffer from liver complaint, loss of appetite, and fatal disease of the stomach; they become thin, wasted, and emaciated. Emigrants, by indulging in ardent

spirits, bring upon themselves ruin in body, mind, and fortune. Dr. Prout says that, "with regard to the use of *stimulating* fluids during meals, it may be laid down as a rule, that the stomach, requiring their aid to enable it to do its duty, is in a state of disease, or certainly not a *natural* state; for the moment such fluids enter a stomach only slightly debilitated, they act as ferments, and are not only converted into acids themselves, but dispose everything else to undergo similar changes," thus accounting for diarrhœa, dysentery, &c. The same eminent physician observes, with regard to the use of TOBACCO, that he considers it most deleterious in its effects upon the organs of digestion and nourishment. "Although well known to be one of the most virulent poisons in nature, yet such is the fascinating influence of this noxious weed, that mankind resort to it in every mode they can devise, to ensure its stupifying and pernicious agency. There can be no doubt some poisonous principle is generated in certain persons by its abuse, from their sallow looks, and the dark and greenish-yellow tints of their blood. The severe and peculiar derangement of the stomach produced by inveterate snuff-taking, is now well known; and I have more than once seen such cases terminate fatally in incurable disease of the stomach and liver. Great smokers also, especially those who employ dirty pipes, are liable to cancer of the lips: patients are frequently seen in our hospitals with this disease. But it happens with tobacco as with deleterious articles of food; the strong and healthy suffer comparatively little, while the weak and predisposed to disease fall victims to its poisonous operation. Surely if the dictates of reason were allowed to prevail, articles such as this, so injurious to health, and so offensive in all its forms and modes of employment, would speedily be banished from common use. The selfish vulgarity of puffing offensive odours in the faces of others, in public thoroughfares or conveyances, is never practised by the man of gentlemanly feelings and habits."

#### NUTRITION IN GRAIN AND FLESH.

Vegetables contain a large portion of starch or sugar, which substances do not add to the nourishment of the body, but are embraced in the purposes of respiration, and maintain the animal heat. They are very necessary to the body.

Chemists agree that the substances of vegetables add to the organism, and are converted into the tissues of the body; are possessed of azotised, nitrogenised or nutritious principles; these are fibrin, albumen, and casein, and are denominated protein compounds. If we take wheat flour and knead it under water, the starch separates from it, and the *gluten* remains in the hand, which is insoluble in water. *Albumen* is coagulable by heat, and is, by this means, readily separated from the juices of many vegetables; as cauliflower, asparagus, or turnips, and is likewise abundant in certain seeds, as nuts or almonds. *Casein* is soluble in water; it does not coagulate with heat, but curds with acids; it abounds in peas and beans. Vegetable fibrin and albumen are the same as animal, and although grain contains much starch, yet the large quantity of albuminous matter is what renders it nutritious. The following table is given by Dr. R. D. Thomson, in his "Experimental Researches on the food of Animals," &c.

	Albuminous, or Nutritive Matter, per Cent.
Bean meal . . . . .	25.36
Linseed meal . . . . .	23.66
Scotch oatmeal . . . . .	15.62
Semolina . . . . .	12.81
Canadian flour . . . . .	11.62
Barley . . . . .	11.31
Maize . . . . .	10.93
Essex flour . . . . .	10.55 to 11.80
East Lothian flour . . . . .	9.74 to 11.55
Hay . . . . .	9.71
Malt . . . . .	8.71
Rice (East India) . . . . .	8.37
Sago . . . . .	3.33
South Sea Arrow-root . . . . .	3.21
Tapioca . . . . .	3.13
Potatoes . . . . .	2.23
Swedish Turnips . . . . .	1.32

*Wheat.*—The flour of wheat grown in the south of Britain contains more albumen than that of the north. That from warm climates possesses a greater proportion of gluten. It is found in the flour of different grain that where one principle of nutrition is wanting others are increased or substituted.

Now, although the table already given may be strictly correct in a chemical point of view, there are other considerations that mankind must take into account before, in respect to themselves, being satisfied with the apparent result; and that is, as to the digestibility of the articles, and their assimilation and conversion into animal organism.

On the nutritive properties of animal food Professor Brande writes:—"When the muscular parts of animals are washed repeatedly in cold water, the fibrous matter which remains consists chiefly of albumen; and is, in its chemical properties, analogous to the clot of blood. Muscles also yield a portion of gelatine; and the flesh of beef and some other animals affords a peculiar substance, of an aromatic flavour, called by Thenard *osmazone*. Albumen and gelatine constitute the leading nutritive ingredients in the different kinds of flesh used as food, and it is curious that their relative proportions are not very dissimilar in quadrupeds, birds, and fishes, as shown in the following table. The water was determined by evaporation in vacuo, or at a temperature below 212°.

100 Parts of Muscle of	Water.	Albumen or Fibrin.	Gelatine.	Total of Nutri- tive Matter.
Mutton . . . . .	71	22	7	29
Chicken . . . . .	73	20	7	27
Beef . . . . .	74	20	6	26
Veal . . . . .	75	19	6	25
Pork . . . . .	76	19	5	24
Cod . . . . .	79	14	7	21
Sole . . . . .	79	15	6	21
Haddock. . . . .	82	13	5	18

On looking at this table, we see it stated that chicken contains more nutritive matter than beef, and veal more than pork; yet we know from experience such a result does not take place in our own persons. And, again, on comparing the former with the latter table, we are aware that we should derive more nourishment from veal or pork than linseed-meal; hence, as we before observed, much depends on the suitability to the digestive organs, and the facility with which it combines with the animal organization.

#### COOKERY.

From the vulgar practice, when conversing on the subject of food, of speaking only of that which gratifies the palate, the sensible portion of society have felt a reluctance to publicly discuss the subject. Yet propriety of diet, and its cookery, really is the basis of escape from many diseases; gives comfort to the body in the journey of life, and generally adds many years to the age of the individual. The science of cookery—not in an epicurean point of view, but as that most conducive to produce nutritive and healthy food—appears, except in that directed by the medical attendant, almost utterly neglected. The stomach is too often excited by condiments, and overloaded by the inducing nature of the dishes; indigestion succeeds, medicine is had recourse to, the functions become enfeebled, a long train of evils follow, and a miserable life is closed by a premature death.

Much depends upon properly-performed cookery, as the digestibility of animal food is facilitated or retarded according to the degree of heat to which it is exposed during the process. Roast meat, from having a greater degree of heat applied to it, is more easily digested than boiled meat; but yet, if it be roasted at what is called a *slow* fire, it is better than when prepared at a *hot* fire. A solid fibred flesh, as venison and beef, is more satisfactory to the digestive organs than that of veal and lamb. Meat gently boiled at about  $150^{\circ}$ , but never allowed to reach the boiling point,  $212^{\circ}$ , will be found improved in its state for the digestive powers. This should be remembered, that, both in animal and vegetable diet, boiling causes a portion of the nutritious matter to combine with the water. It will have been observed that, with animal food, there exists a large portion of water, and the great art in cookery consists in the removal of a portion; or, in many fruits, roots, and plants, adding water to them.

When meat is over-salted, there is no practical remedy. Soaking merely affects the outside, but does not penetrate within. If you cut it into slices and soak, you may then indeed get off the salt, but then only. Over-salting seems, therefore, to have no remedy. A perfect boil must be a slow boil. If you proceed hastily, the outside parts become tough, and conduct the heat badly; so that the central parts are probably raw, and the exterior overdone, sodden, and tasteless. In boiling, use much water, and fill it up as it evaporates. In soup, reverse the rule, and boil quickly. There are several reasons for this; but the all-decisive one is, that the flavouring matter, the osmazone, dissolves with facility; and whoever has passed a kitchen in full work, must have smelt the mischief that ignorance was working in this way for the benefit of the noses of the passers-by. To avoid this loss, cut the meat into pieces the size of hazelnuts, boil not more than half an hour, and, as the cookery book says,

"cover close." There is a widely-spread notion that the strength and nutritiousness of the soup depend upon its forming a jelly; this is a delusion. Boil parchment and leather long enough, and they form a very strong jelly; "yet no one imagines that such a jelly would form the basis of a good soup." Isinglass, certain sea-weeds, and Iceland moss will form a jelly; yet they only support life for a short time, compared with beef tea, which is so weak that, when cold, it remains as thin as water.

Four pounds of beef lose 1lb. by boiling, 1lb. 5oz. by roasting, and 1lb. 3oz. by baking; 4lbs. of mutton lose 14oz. by boiling, 1lb. 6oz. by roasting, and 1lb. 4oz. by baking.

#### THE PRESERVATION OF ANIMAL SUBSTANCES.

Various processes are employed for preserving animal substances from undergoing decomposition.

1. Drying in a stove or oven. This is effected by the application of a temperature sufficient to cause the evaporation of all the moisture, without burning any of the external parts, or causing the juices to run out.

2. The action of cold is applied, in the northern regions, for the preservation of reindeer tongues, fish, and other animal substances.

3. Brine, or a solution of common salt, is an efficient preservative agent. Dissolve one part of salt in two and a half parts, by weight, of water, and immerse the meat or other animal substance in this solution, by placing a board on the surface of the liquor, loaded with a lump of salt so as to ensure the entire submersion of the animal matter, and at the same time to keep up the strength of the brine by the solution of more salt, to compensate for the dilution caused by the animal juices. After the animal substance has remained in the brine for three or four days, it is to be taken out and dried by rubbing it with bran or pollard, or with dry salt; it may then be packed in barrels, with intermediate layers of large-grained salt, if intended for keeping, or it may be hung in a smoking room. The addition of an ounce of saltpetre to each pound of salt will tend to preserve the red colour of the meat; and the further addition of a little brown sugar is said to improve its flavour. The following pickle has been recommended for preserving meat, and to which it is said to give a mild and excellent flavour:—

Brown sugar . . .	2lb.	Bay salt . . .	2lb.
Common salt . . .	2lb.	Saltpetre . . .	$\frac{1}{2}$ lb.
Water, 2 gallons—mix.			

4. Packing in dry salt is a mode of preservation sometimes resorted to. For this purpose salting-tubs are used, having false bottoms perforated with holes. A layer of coarse-grained salt is first made, and then alternate layers of meat and salt. After a week or ten days the meat is taken out, and repacked with more dry salt. Sometimes the dry salt is merely rubbed into the meat.

5. Bucaning meat is a rude kind of smoking practised by hunters in the forest. Forked branches of trees are stuck in the ground, and by this means a grating of rods, two or three feet high, is made. The flesh to be preserved is cut into thick slices, and placed on this grating, while a fire is lighted underneath; so that the meat is rendered fit for keeping partly by drying, and partly by smoking it.

6. Jerking meat, or charqui, is a method sometimes resorted to in hot

climates. It is done by cutting the lean part of meat into thin slices, and exposing them to the full action of the sun, turning the pieces when necessary, until perfectly dried. The dried pieces are then pounded and put into pots.

7. Olive oil is sometimes used to preserve fish and other animal substances. Jars, in which the substances to be preserved are put, are filled with the oil, and are then well closed, and the covers cemented down.

*Fish.*—Of all the various substances used as aliments by man, fish are the most liable to run into a state of putrefaction, and should, therefore, be only eaten when perfectly fresh. Those that are whitest and most flaky when cooked, as whiting, cod, flounders, soles, haddock, turbot, &c., are the most easily digestible; and those abounding with oily matter, as salmon, eels, herrings, &c., are most nutritious, though more likely to offend the stomach. Salt water fish has been said to be more wholesome than river fish, but without sufficient reason. Salted fish is very hard of digestion unless well cooked. Acid sauces and pickles are the proper additions to fish, from their power of retarding the progress of putrefaction, and of correcting the tendency of large quantities of oil and butter.

#### ECONOMICAL AND USEFUL RECEIPTS.

*To clean Ovens.*—Put a handful of straw into the oven, and set fire to it; shut up the oven till it is burnt out. This will cleanse all stains, by enabling you to scrape away easily, with an old knife, all the fruit-droppings and grease.

*To clean Casks.*—Wash them well; then, for a pipe cask, add one pound of chloride of lime to fifteen quarts of water, and throw it into the cask; shake it or roll it well for a quarter of an hour, then empty it, and wash again in several waters. The smell of the chloride will soon be gone.

*Transparent Paper.*—Paper can be made as transparent as glass, and capable of being substituted for many purposes, by spreading over it with a feather a very thin layer of resin dissolved in spirits of wine or turpentine. Fine, thin post paper is best, and the mixture must be applied on both sides.

*Earthenware.*—Put new earthenware into cold water, to heat and boil gradually; then let it grow cold again. While the water is boiling, throw into it a handful of rye bran. This preserves the glazing, so that it will not be affected by salt or acid. The boiling of earthenware toughens it.

*A very Savoury and Strengthening Jelly.*—Take a leg of beef weighing fourteen pounds, and put it in a saucepan, with plenty of water to cover it; let it stew five hours; then remove the meat from the sinews, and put the sinews back again to the stock; add half an ounce of isinglass to clear it, and stew the whole two hours longer; then strain it off; let it stand till the next day; then remove the fat and sediment at the bottom; season it to your taste with salt and mace. If more than a quart of stock, stew it till portable soup.

*Portable Soup.*—Take of calves' feet two pounds; mutton, five pounds; pork, one pound; water, a sufficiency to cover them well. Boil these with a little salt, two carrots, two stems of celery, and one eschalotte or onion; the whole minced finely. Towards the end, suspend a clove-bag in the

liquor. Remove the meats, and express them through a sieve or cloth; evaporate the fluid, freed from water, in a water-bath, to the consistency of honey, and pour it upon a clean, smooth stone. Finally, cut it into pieces when cold, and dry it. Beef and veal, as an addition, or alone, may be treated in the same manner.

*Spruce Beer.*—Spruce is a powerful antiscorbutic, and should be used freely by persons who have a tendency to that affliction. It acts with some as a diuretic. We append a receipt for making it:—Provide sixteen gallons of water, boil half of it, and put the other half of it into a barrel; pour the boiling water to the cold in the barrel; then throw in six table spoonfuls of essence of spruce, and sixteen pounds of treacle; when sufficiently cold, add half a pint of yeast, and roll the cask about, or shake it well. Keep it in a warm place for two days, with the bung open; by this time the fermentation will have subsided sufficiently for bottling. Bottle it, or put it into stone jars well corked, and it will be fit for use in a week. *Another.*—Add eleven gallons of boiling to ten of cold water; to this put thirty pounds of molasses, and one ounce and a half of essence of spruce; work with yeast, and bottle as above. If you wish your spruce beer to be white, use refined sugar instead of molasses.

*Excellent Portable Lemonade.*—Rasp, with a quarter of a pound of sugar, the rind of a fine juicy lemon; reduce the sugar to a powder, and pour on it the strained juice of the fruit; press the mixture into a jar, and when wanted for use dissolve a table-spoonful in a glass of water; it will keep a considerable time. If too sweet for the taste of the drinker, a very small portion of citric acid may be added when it is taken.

*Lemon and Kali, or Sherbet of the Shops.*—Ground or finely powdered white sugar, half a pound; powdered tartaric acid and carbonate of soda, of each a quarter of a pound; essence of lemon, thirty to fifty drops; all the powders should be well dried; add the essence to the sugar, then add the other powders, and mix well. One tea spoonful in a tumbler of water. This preparation must be kept very dry in a tightly corked bottle.

*Ginger Beer, No. 1.*—*A very superior kind.*—White sugar, five pounds; lemon juice, one quarter of a pint; honey, one quarter of a pound; ginger bruised, five ounces; water, four gallons and a half. Boil the ginger in three quarts of the water for half an hour, then add the sugar, lemon juice, and honey, with the remainder of the water, and strain through a cloth; when cold, add the quarter of the white of an egg, and a small tea spoonful of essence of lemon; let the whole stand four days, and bottle. This will keep many months.

*Ginger Beer, No. 2.*—White sugar, three pounds; bruised ginger, three ounces; cream of tartar, one ounce; four lemons shred; boiling water, four gallons; allow the whole to soak for two hours, then strain; add eight ounces of yeast, and, after a few hours, put into tightly-corked bottles.

*Ginger Drops.*—These excellent stomachic drops may be thus prepared:—Cut into little bits an ounce of candied orange peel, and put it with the same quantity of sifted loaf sugar into a mortar. Beat and rub both together until they form a smooth paste, when you must add to them an ounce of pure pounded ginger, and half a pound more sugar. Work the whole together in the mortar, and add sufficient water to dissolve the sugar, rubbing the mixture well up together; then put it into a saucepan, boil it up to a caramel, and drop it in large drops upon clean writing paper.

*Yeast.*—Mix wheat flour into a thick paste with water; keep it slightly covered in a moderately warm place: in about three days it begins to emit a little gas, and to exhale a disagreeable sour odour; after two or three days more the smell changes, and is accompanied by a distinct vinous odour. It is now in a fit state for use to ferment your flour and water for bread, &c.

*Another.*—Take of honey, five ounces; cream of tartar, one ounce; malt, sixteen ounces; water, hot, at 122°, three pints. Stir well together, and allow the whole to rest for two or three hours, or until the temperature sinks to about 65° Fahr., at which it must be kept covered over until fermentation takes place, and yeast is formed.

*Ink Powder.*—Copperas, four ounces; nutgalls, powdered, six ounces; common salt, three quarters of an ounce; powdered gum arabic, one ounce and a half. Mix and keep dry. A small quantity of this powder, stirred up with a table-spoonful or two of hot water, will make good ink, ready for use in a few minutes, and will keep good for years in any climate.

*The Potato Disease.*—Mr. Herapath's attention has been given to the disease which has shown itself so extensively amongst the growing potatoes. In almost every instance the epidermis of the stalk below the surface of the ground, is more or less in a state of decay, often disintegrated, and completely rotten; the leaves and branches accord with the state of that part of the stalk below the ground. The tuber, beneath the outer skin, is first spotted brown (like a bruised apple): these spots extend and penetrate towards the centre, quite changing the nature of the potato. Those near the surface are most injured; in some cases the lowest on the root are not at all affected, while the upper ones are useless. I should therefore expect that the longer the crop remains in the land, the greater the injury will be. It seems, from the microscopic appearances, that the starch escapes injury for a long time after the skin and cellular parts are gone; and as the whole of the nutritive powers of the potato reside in the starch, I should recommend that wherever the disease has shown itself to any extent the crop should be dug whether ripe or not, and the starch extracted by the following simple process:—After washing the roots, let them be rasped fine and thrown into a large tub or other vessel; pour a considerable quantity of water, and well agitate and rub the pulp with the hands; all the starch or fecula will, from its great weight, fall to the bottom, while the skin and fibrous matter will be carried away by the water; wash the starch with one or two more waters, allowing it to fall after each washing; spread it upon cloths in a warm room to dry; in this way about twenty or twenty-one pounds will be obtained from every hundred pounds of potatoes, and it contains as much nourishment as the original roots; it will keep any length of time, and might be used with flour to make bread, pies, puddings, &c., as well as farinaceous spoon-meat. This is much better than throwing away the diseased roots, and will furnish food for tens of thousands who might otherwise want it.

*Potatoes.*—The mashed potatoes are simply prepared as follows:—Plain boil or steam six or eight large mealy potatoes; when well done, peel and put them into a stewpan with two ounces of butter, and a little salt; then with the prong of a fork whisk them till quite in a pulp; then add two table-spoonfuls of milk, work up with a small wooden spoon till forming a paste.

# THE DOMESTIC MEDICAL AND SURGICAL GUIDE.

## MEDICINE: ITS PROPERTIES AND DOSES.

### APOTHECARIES' WEIGHT.

20 grains ( <i>gr.</i> )	make 1 scruple	equal to	20 grains	℥
3 scruples	„ 1 drachm	„	60	„ ʒ
8 drachms	„ 1 ounce	„	480	„ ʒ
16 ounces	„ 1 pound	„	7680	„ lb

### APOTHECARIES' FLUID MEASURE.

60 minims, or drops,	a tea spoonful	=	1 fluid drachm.
Quarter ounce . . .	a dessert spoonful	=	2 „ „
Half ounce . . .	a table spoonful	=	4 „ „
One ounce . . .	2 „ „	=	8 „ „
Two ounces . . .	1 wine glassful	=	16 „ „

Twenty ounces, 1 pint.—Eight pints, 1 gallon.

As drops vary so much in size, according to the consistency of the fluid, a glass measure is now commonly used, which is properly graduated and marked. It may be bought at one shilling, or higher priced.

### MEASURES GENERALLY DISCRETIONARY IN QUANTITY.

When weighed:—

A table spoonful of syrup . . . . .	=	. . . 5 drachms.
„ of distilled water . . . . .	=	. . . 3 drachms and half.
A dessert spoonful of water . . . . .	=	. . . 1 drachm.
A tea spoonful of syrup . . . . .	=	. . . 1 to 2 drachms.
„ of light spirit, or tincture	=	. . . ½ to 1 scruple.
„ of light powder, as magnesia	=	. . . ditto.
„ of heavy powder, as sulphur	=	. . . 1 to 2 scruples.
„ of metallic oxide . . . . .	=	. . . 1 drachm to 4.
A tea cupful . . . . .	=	. . . 3 to 4 ounces.
A wine glassful . . . . .	=	. . . 1 ounce and half.

*Proportionate Doses.*—If a dose be, say, one drachm for a person twenty-one years of age, the proportionate doses according to age will be:—

Seven weeks . . . . .	1-15th, equal to 4 grains.
Seven months . . . . .	1-12th „ 5 grains.
Fourteen months . . . . .	1-8th „ 8 grains.

Twenty-eight months . . .	1-5th equal to	12 grains.
Three-and-half years . . .	1-4th „	15 grains.
Five years . . . . .	1-3rd „	1 scruple.
Seven years . . . . .	one half „	half a drachm.
Fourteen years . . . . .	2-3rds „	2 scruples.
Twenty-one years . . . . .	„	1 drachm.
Sixty-three . . . . .	11-12ths „	55 grains.
Seventy-seven . . . . .	5-6ths „	50 grains.

*The Medicine Chest.*—There is no positive necessity to have a little box, or chest as it is termed, to hold boxes and bottles of medicines; but there is this advantage, that they are kept together, they are arranged in order, and being locked up, there is less danger of ignorant people meddling with them, and perpetrating mischief. These boxes are made and fitted up by the generality of chemists, and according to their price is the extent of the assortment; the purchaser will be influenced by his means, or the circumstances for which he intends his supply, as to the size of his medicine chest. For a small family, who are likely to be employed in healthful out-door work, ten shillings worth of well-selected drugs will form an ample supply.

It is of great importance that the medicines be pure, and of the best quality; the respectability of the chemist is the best guarantee for his selling only good articles, therefore any well established house will be able to furnish an honestly fitted up chest.

As an instance of the value of a little chest of good medicine as a travelling companion, we may mention a circumstance that occurred to an intelligent gentleman of our acquaintance, whose avocations frequently require his presence in some of the rural districts of Spain, where medicine is as bad as the ignorance of its professors. At an inn he found a man suffering in the blue stage of cholera, the physician had resigned him to his fate, and the people of the house resolved, as quickly as possible, to get him to an hospital, that he might die there. The noble Englishman resisted this downright murder, as it would have been to have removed the sufferer in such a state; and after appeasing the landlord, by promising to relieve him of the expense of the man's burial, which would have come upon him if he had died in the inn, he applied remedies from his little store, and had the pleasing gratification of seeing the man depart on his journey, perfectly recovered, in a couple of days, instead of being carried to the churchyard; while the blessings poured on the Englishman were of the true hyperbolical Spanish character.

Government has paid great attention to the fitting up of medicine chests for emigrant vessels, taking the best advice on the subject, and, as wants have been discovered, supplying the deficiencies. When it is remembered that a voyage to Australia involves about a third of a year, that the constitution is tried by extremes of heat and cold, that almost every hereditary disease will exist among a number of emigrants, that all forms of fever visit ships as well as towns, that accidents are as common at sea as on land, we may fairly judge every provision is made to meet the requirements of such cases; therefore, in examining a government medicine chest, we have gotten all medicines that are necessary for every form of disease. For the purpose of ready reference, we shall number every article, and, for the sake of simplicity, put the doses in common characters.

# LIST OF MEDICINES, &c., REQUIRED TO BE PUT ON BOARD EMIGRANT SHIPS FOR EVERY ONE HUNDRED PERSONS.

All the volatile Medicines and Acids to be put in Stopper Bottles. The properties of these medicines are explained at page 28, &c.

No.	lb. oz.	LATIN NAME.	ENGLISH NAME.	DOSE FOR ADULTS.
1	0 1	Acetum colchici	Vinegar of meadow saffron	From one half to one drachm.
2	0 8	Acidum aceticum	Distilled vinegar	"
3	0 1	Acidum citricum	Citric acid. Crystals	10 grains to $\frac{1}{2}$ a drachm.
4	0 1	Acidum hydrocyanicum dil.	Hydrocyanic acid. Prussic acid	3 drops or minims.
		<i>Ph. Lond. Carefully marked "Poison."</i>		
5	0 2	Acidum hydro-chl. dil.	Muriatic acid dilute, or Spirits of salt	5 to 20 drops.
6	0 2	Acidum nitricum, dil.	Nitric acid dilute	10 to 30 drops.
7	0 6	Acidum sulphuric, dil.	Sulphuric acid dilute	10 to 40 drops.
8	0 12	Acidum tartaricum	Tartaric acid	10 to 30 drops.
9	0 2	Ammonii sesquicarbonas	Subcarbonate of ammonia	5 grains to 1 scruple.
10	1 0	Ammoniae murias	Muriate of ammonia Sal ammoniac	"
11	2 0	Amylum	Starch	"
12	0 0 $\frac{1}{2}$	Antimonii potassio tartras	Tartar emetic powder	Quarter to $\frac{1}{2}$ a grain.
13	0 0 $\frac{1}{2}$	Argenti nitras	Nitrated silver. Lunar caustic	"
14	0 8	Balsam copaibae	Copaiva balsam	10 to 30 drops.
15	1 0	Calx. recens, in stop. bottles	Quick lime	"
16	0 6	Camphora	Camphor	3 grains to 1 scruple.
17	2 0	Cerat cetacei	Spermaceti ointment	"
18	0 8	Cerat. calaminæ	Turner's cerate	"
19	0 8	Cerat. resinæ	Yellow basilicon	"
20	0 2	Confectio aromatica	Aromatic confection	1 scruple to 1 drachm.
21	1 0	Confectio sennæ	Confection of senna	1 to 3 drachms.
22	0 1	Caprl. sulphas	Sulphate of copper	"
23	0 12	Emplas. lyttæ	Blistering plaster	"
24	0 8	Emplas. plumbi	Diachylon plaster	"
25	0 4	Emplas. resinæ	Resin plaster	"
26	0 0 $\frac{1}{2}$	Extract, aloes purif.	Aloes, extract of	5 to 10 grains.
27	0 4	Extract, colocynth comp.	Colocynth, extract of	5 to 15 grains.
28	0 0 $\frac{1}{2}$	Extract, conli	Extract of hemlock	5 to 10 grains.
29	0 0 $\frac{1}{2}$	Extract, hyoscyam	Extract of henbane	5 to 10 grains.
30	0 1	Extract, opii purif.	Extract purified opium	1 to 5 grains.
31	0 2	Ferri. sulphas	Sulphate of iron	1 to 5 grains.
32	0 4	Gentian radix	Gentian root	10 grains to 1 drachm.
33	0 1	Hydrarg. c. creta	Mercury with chalk	5 to 15 grains.
34	0 1	Hydrarg. chlorid.	Chloride of mercury. Calomel	1 to 10 grains.
35	0 0 $\frac{1}{2}$	Iodidum potassii	Corrosive sublimate	1-sixteenth to $\frac{1}{4}$ of grain
36	0 1	Linimentum saponis	Iodide of potassium	3 to 6 grains.
37	0 8	Liquor ammoniæ	Soap liniment	"
38	0 8	Liquor potassæ arsenitis	Liquid ammonia	10 to 30 drops.
39	0 1	Liquor plumbi acetass	Liquid arsenite of potash	4 to 20 drops.
40	0 8	Magnesiæ sulphas	Sugar of lead solution	"
41	42 0	Magnesiæ carbonas	Sulphate of magnesia. Epsom salts	1 drachm to 1 $\frac{1}{2}$ ounce.
42	0 4		Carbonate of magnesia	1 scruple to 1 drachm.

## LIST OF MEDICINES, &amp;c.—Continued.

43	0	0 1/2	Morphiæ acetat	Acetate of morphia	From 1-eighth to gr. of grain.
44	0	8	Ol. lini. sem.	Linseed oil	"
45	0	0 1/2	Ol. menth. pip.	Oil of peppermint	1 to 3 drops.
46	2	0	Ol. olivæ	Olive oil	"
47	6	0	Ol. ricini opt.	Castor oil	Half an ounce to 1 1/2 ounce.
48	0	8	Ol. terebinth. pur.	Purified oil of turpentine	Half a drachm to 1 ounce.
49	0	0 1/4	Ol. tigllii croton	Croton oil	Half a drop to 2 drops.
50	0	6	Pil. hydrargyri vel mercuriales	Mercurial pill. Blue pill	5 to 10 grains.
51	0	1	Pil. hydrargyri chlor. comp.	Plummer's pill	5 to 10 grains.
52	0	4	Plumbi acetat	Sugar of lead	Half to 1 grain.
53	1	8	Pulv. acaciæ gummi	Gum arabic	"
54	0	8	Pulv. aluminis	Alum powder	"
55	0	0 1/2	Pulv. antimonii comp.	Antimonial powder. James's powder	5 to 10 grains.
56	0	0 1/2	Pulv. cinnamon comp.	Cinnamon powder	5 to 10 grains.
57	0	1	Pulv. cretæ comp.	Compound chalk powder	5 to 30 grains.
58	0	8	Pulv. cretæ, prepar.	Prepared chalk	"
59	0	4	Pulv. ipecacuanhæ	Powder of ipecacuanha	1 grain to 1 scruple.
60	0	2	Pulv. ipecacuanhæ comp.	Compound powder of ipecacuanha	5 grains to 1 scruple.
61	1	0	Pulv. jalapæ	Jalap powder	10 grains to 1 scruple.
62	0	1	Pulv. kino comp.	Compound powder of kino	5 grains to 1 scruple.
63	0	0 1/2	Pulv. opii	Opium in powder	"
64	0	4	Pulv. potassæ nitras	Nitrate of potass. Saltpetre	10 grains to half a drachm.
65	1	0	Pulv. potassæ tartas	Tartrate of potass. Soluble tartar	1 drachm to 1 ounce.
66	0	8	Pulv. rhei. Ind.	Powdered Indian rhubarb	5 to 30 grains.
67	0	0 3/4	Pulv. scammonii comp.	Scammony in powder	5 grains to 1 scruple.
68	0	1	Pulv. scillæ	Squill powder	1 to 4 grains.
69	0	1	Pulv. secalis cornuti, in stop. bottle	Ergot of rye	10 to 30 grains.
70	0	1	Pulv. quinae disulphas	Quinine	1 to 5 grains.
71	0	0 1/2	Saponis dur.	Hard soap	"
72	0	12	Sennæ fol.	Leaf senna	"
73	0	1	Sodæ biboras	Biborate of soda. Borax	10 grains to half a drachm.
74	1	0	Sodæ carbonas	Carbonate of Soda	10 grains to half a drachm.
75	0	8	Sodæ potassio tart.	Tart. of potass and soda. Roschel salts	2 drachms to 1 ounce.
76	0	4	Sp. æther sulphur comp	Compound spirit of sulphuric æther	Half a drachm to 2 drachms.
77	0	4	Spiritus ætheris nitrici.	Sweet spirit of nitre	10 to 40 drops.
78	0	4	Spiritus ammon. arom.	Aromatic spirit of ammonia	Half a drachm to 1 drachm.
79	0	8	Spiritus vini rect.	Rectified spirits of wine	"
80	3	0	Sulphur sublim.	Sublimed or powdered sulphur	1 to 2 drachms.
81	0	2	Tinctura digitalis	Tincture of foxglove	10 to 40 drops.
82	0	1	Tinctura ferri sesquichloridi	Tincture of iron	10 drops to 1 drachm.
83	0	4	Tinctura hyoscyami	Tincture of henbane	Half a drachm to 2 drachms.
84	0	4	Tinctura opii	Tincture of opium	10 drops to 1 drachm.
85	1	0	Tinctura rhei. comp.	Compound tincture of rhubarb	10 drops to 1 drachm.
86	1	0	Tinctura sennæ comp.	Compound tincture of senna	2 drachms to 1 ounce.
87	0	8	Unguent. hyd. fort.	Mercurial ointment (strong)	"
88	0	1	Unguent. hyd. nit.	Citron ointment	"
89	0	1	Unguent. sulphur.	Sulphur ointment	"
90	0	2	Vinum colchici	Wine of the bulb of meadow saffron	30 drops to 1 drachm.
91	0	2	Zinci sulphas, purif.	Purified sulphate of zinc	"

LIST OF MEDICINES, &c.—*Continued.*

92	1	lb.	Lard.
93	1	lbs.	Linseed meal.
94	2	„	Best lint.
95	3	„	Common tow.
96	3	„	Fine tow.
97	3	galls.	Disinfecting fluid.
98	$\frac{1}{2}$	cwt.	Chloride of lime.
99	$\frac{1}{2}$	cwt.	Collin's patent disinfecting powder.

## TWO SETS ONLY OF THESE ARTICLES FOR THE SHIP.

100	1 $\frac{1}{2}$	Yards	Emp. Resinæ.
101	2	Male	Syringes.
102	1	Female	Ditto.
103	1	2-oz.	graduated Glass Measure.
104	1	Minim	Glass.
105	1	Bolus	Knife.
106	3	Dozen	assorted Phials.
107	$\frac{1}{2}$	Gross	Phial Corks.
108	6	Yards	Flannel.
109	12	„	Calico.
110	6	Sponges.	
111	1	Bed	pan.
112	1	Paper	of Pins.
113	2	Pieces	of Filleting for Bandages (Bleeding.)
114	2	Trusses	of Hernia (right and left.)
115	1	Paper	of Pill Boxes.
116	6	Gallipots.	
117	2	Quires	of Paper for putting up Medicines.

## ONE SET ONLY OF THESE ARTICLES FOR THE SHIP.

118	1	Complete	Set of Cline's Splints.
119	1	Enema	Apparatus.
120	1	Bleeding	Porringer.
121	1	Set	Copper Scales and Weights, $\frac{1}{4}$ lb. to $\frac{1}{2}$ oz.
122	1	Box	of small Scales and Weights.
123	1	Wedgwood	Mortar and Pestle.
124	1	Ditto	Funnel.
125	1	Iron	Mortar and Pestle.
126	1	Plaster	Spatula.
127	1	Pair	of Scissors.
128	2	Skins	of Leather.
129	1	Pill	Tile.
130	1	Tin	Bath for Children.
131	4	Saucepans	of different sizes for the exclusive use of the Hospital.
132	50	Leeches.	

INSTRUMENTS WHICH THE SURGEON SUPERINTENDENT OF EMIGRANT SHIPS  
MUST POSSESS.

A pocket dressing case, containing scalpel, two bistouries (blunt-pointed and sharp), gum-lancet, tenaculum, forceps, spatula, scissors,

two probes, silver director, caustic-case, curved needles of different sizes.

Lancet-case with at least four lancets.

Case of tooth instruments.

Midwifery forceps and trachea tube.

Set of silver and gum-elastic catheters, including female catheter and some bougies.

One amputating knife and catlin, one amputating saw, one Hey's saw, tourniquet.

Cupping apparatus.

Silk of different sizes for ligatures and sutures.

#### DESIRABLE ADDITIONS.

Trocar and canular.

Trephine and elevator.

Craniotomy forceps, perforator and blunt hook.

#### PROPERTIES OF THE DRUGS CONTAINED IN THE MEDICINE CHEST ORDERED BY GOVERNMENT TO BE CARRIED BY EMIGRANT VESSELS.

No. 1. *Acetum Colchici*.—Vinegar of Meadow Saffron.—This is given in cases of dropsy, in asthma arising from exposure to damp air, in coughs of long continuance, in gout and rheumatism. Half a tea spoonful may be taken two or three times a day in water, or mixed in a draught as follows:

Take, Vinegar of Meadow Saffron, from 30 to 60 drops; Magnesia, 10 or 15 grains; Epsom Salts, 1 or 2 drachms; a small piece of sugar, and enough water to make a wine glassful. If not effectual in a few days, to be discontinued, as it is liable to produce severe derangement of the stomach.

No. 2. *Acidum Aceticum*.—Distilled Vinegar.—Used to restore strength, and applied to the nostrils in faintings, hysterics, and headaches.

In fevers, if taken well diluted with water, it proves refreshing, allays thirst, diminishes the heat of the body, and lowers the pulse. Used very moderately, it assists the digestive process and is therefore taken as a condiment. Every one knows that it is vulgarly reputed to produce leanness; this it will no doubt do in a measure, from the languor of the digestive process it occasions; but at the same time, if long persisted in, it will produce disease of the lungs and general wasting of the body, which may terminate fatally. In scurvy it is serviceable. In bleeding from the nose, stomach, lungs, &c., it is particularly beneficial by its refrigerant and astringent qualities, promoting contraction of the bleeding vessels. In ulceration of the throat and scarlatina, gargles containing vinegar have generally a good effect. Much diluted, it is a most excellent eye-wash for removing lime dust from the globe or lid of the eye. In fevers, spunging the face and head, trunk, or extremities, with cold or tepid vinegar and water is useful. Bruises and sprains are relieved by fomentations containing vinegar.

**ACIDUM ACETICUM FORTIUS**—The strongest acetic acid—is a most powerful stimulant, and is especially applied to the nose in fainting and severe headache. It is employed to burn off warts and corns. If meat be dipped into it for a few moments, it stops putrefaction, and preserves it for any length of time. **CAMPHORATED ACETIC ACID** consists of half an ounce of camphor mixed with six ounces of acetic acid. When applied to

the nostrils, it is the most powerful stimulant known; in fevers, a few drops on a linen rag is placed near the bed of the patient to remove disagreeable smells. It is so volatile, that it must be kept in ground stoppered glass bottles. *ACETUM VINI*—Acid of Wine; or Vinegar made by exposing Wine to the sun for some days.—When applied as a lotion, one ounce is mixed with half an ounce of proof spirit, and eight ounces of water. From one to four drachms is taken internally as a dose in feverish complaints, and for scurvy. When opium and other sleepy poisons have been taken, and ejected from the stomach, but not till then, it is administered to prevent drowsiness and delirium. In clysters, the quantity is from one to two ounces. The steam of vinegar is inhaled in cases of putrid sore throats.

No. 3. *Acidum Citricum*.—Citric Acid.—Crystals.—This is made from the juice of lemons, prepared chalk, and diluted sulphuric acid. Two ounces, or ten drachms, dissolved in a pint of water, are equal to a pint of lemon juice, but if kept many days decompose. Ten grains in 2 drachms of water is a dose. In feverish, inflammatory, and scorbutic diseases, it is used instead of fresh lemon juice. When taken as a substitute for lemon juice, one ounce is dissolved in a pint of water, and flavoured with a few drops of essence of lemons, on a lump of sugar. Lime juice so nearly resembles citric acid, that it forms an excellent substitute. Citric acid in water, as well as lemon juice, furnishes a most agreeable and refreshing beverage, and proves most useful in fevers and scurvy. Two lemons sliced, and two ounces of sugar added to two pints of boiling water, and allowed to stand until cold, forms an excellent drink. This may be made still more useful by adding a small quantity of carbonate of potash, to form an effervescing draught; it is then one of the best remedies we possess for allaying sickness and vomiting, especially sea sickness. In influenza, a draught composed of 24 grains of citric acid dissolved in a wine glassful of water, and 20 grains of carbonate of ammonia dissolved in the same quantity, poured together and drank off effervescing, is an excellent remedy; if accompanied with cough, a tea spoonful of paregoric elixir may be added.

No. 4. *Acidum Hydrocyanicum*.—Hydrocyanic Acid.—Prussic Acid.—This is the most deadly of poisons. It is administered in spasmodic coughs, asthma, hooping cough, hiccup, and when the stomach is irritated by indigestion. It is applied externally to allay the itching in eruptions of the skin. Medicinal prussic acid is pure acid with six times its bulk of distilled water added to it. A dose of this diluted acid is from two to ten drops, gradually increased to fifteen in a glassful of water. When an overdose has been taken, it is counteracted by ammonia and brandy. As a medicine to strengthen the stomach in indigestion, the *mixture* consists of:—Medicinal prussic acid, 1 drachm; distilled water, 1 lb.; refined sugar, 1 ounce. A dessert spoonful morning and night. This may be gradually increased to 6 or 8 spoonfuls in 24 hours; the mixture must always be well shaken before poured out.—*SYRUP OF HYDROCYANIC ACID*.—Medicinal hydrocyanic acid, 1 drachm; simple syrup, 1 lb: well mixed. In nervous cough, asthma, and consumption, the dose is from 1 to 2 tea spoonfuls, which may be added to common pectoral mixture, and be used as other syrups are.—For itching of the skin in cutaneous disease, and carbuncled face, a lotion is made of—Hydrocyanic acid, distilled from the leaves of the cherry laurel, 4 drachms; rectified spirit of wine, 1 ounce; distilled water, 10 ounces.

No. 5. *Acidum Hydro-chloricum*.—Muriatic Acid, or Spirits of Salt—is given in fevers said to have a putrid tendency, such as typhus, scarlatina, ulcerated sore throat, &c. It is usually administered in conjunction with the vegetable tonics, as decoction of bark, or quassia. After a brisk purgative, it is given in infusion of quassia, to prevent the generation of worms. It has also been employed with benefit in indigestion; it is especially serviceable in those cases dependent on a deficiency of this acid in the gastric juice; and what would appear of important interest in the employment of this acid, in dyspepsia or indigestion, is, that in the healthy state it is a principal constituent of the gastric juice, and that when mixed with mucus, it has solvent or digestive power over various articles of food. The dose is from 5 to 20 drops, taken in water or bitter infusion. Properly diluted, it forms a serviceable gargle in ulceration of the mouth or throat. It requires caution in its use, and the mouth should be well rinsed after taking it to prevent its powerful action upon the teeth.

No. 6. *Acidum Nitricum*.—Nitric Acid—is principally used as a part of other preparations, and by itself in the destruction of tumours. It acts as a tonic, and prevents the effects of mercury on the mouth and throat. When diseased parts have to be destroyed, black resinous ointment is made to surround the part, and pledgets of lint having been dipped in the acid, are placed for a few seconds firmly on the ulcer; this deadens the surface, and a healthy suppuration ensues.—DILUTE NITRIC ACID consists of nine ounces of water to one ounce of strong nitric acid. It is used in cases of fevers; when mixed with water, it is taken as a drink in typhus, malignant, and pestilentially spotted fevers. As a lotion to old and ill-conditioned ulcers, 1 drachm to a pint of water. It is given to relieve heartburn, and in some obstinate skin diseases, as the crusted tetter. In chronic liver complaints it has been much recommended, as well as in some cases of scrofula. The dose is 10 to 30 drops in a decoction of sarsaparilla, twice a day.

No. 7. *Acidum Sulphuricum*.—Sulphuric Acid.—This is applied in fixed rheumatic pains and old sprains, as an ointment, thus:—1 drachm of the acid to 1 ounce of hog's-lard. In itch, half a drachm of acid to 1 ounce of hog's-lard.—ACIDUM SULPHURICUM DILUTUM.—Dilute Sulphuric Acid.—This is a fluid ounce and a half of the acid to 14½ ounces of distilled water, added gradually. It is employed as a tonic, an astringent, and cooling medicine. It is given in indigestion, in profuse discharge of urine (called diabetes), spitting of blood, eruptions on the skin, female irregularities; in gargles, putrid sore throat, hectic wasting sweats, recoveries in fevers, to stop salivation, and to strengthen the digestive organs. The dose is 10 to 40 drops largely diluted. It must be sucked through a quill, and the mouth well rinsed after each dose. If it causes a griping pain in the bowels, add to it a little syrup of poppies. When employed as a gargle, 3 drachms of acid to 8 ounces of water. In skin diseases, as the summer rash, chronic nettle rash, and for relieving a distressing itching and tingling of the skin, no remedy is more serviceable than a weak lotion of this acid, and also in those forms of indigestion connected with an alkaline state of the stomach. Half a drachm of saltpetre, and two ounces of sulphuric acid placed on a saucer, and heated over a small fire or lamp, is used to fumigate rooms, vessels, &c., after fever or other contagious diseases.

No 8.—*Acidum Tartaricum*.—Tartaric Acid.—May be used as a cheap substitute for citric acid, in forming cooling and refreshing drinks; it is

usually taken effervescing with carbonate of soda. Twenty grains of this acid, mixed with 30 grains of carbonate of soda, makes an artificial substitute for soda water. It allays thirst, checks excessive perspiration, and seems to promote the action of the absorbents; it also acts gently on the bowels. Its continued use appears to disturb the digestive process.

No. 9. *Ammoniae Sesquicarbonas*.—Carbonate of Ammonia.—This is administered in convulsive disorders, gouty acidities of the stomach, nervous affections, debilities, flatulency, and acidities from indigestion. In large doses it is an emetic; with opium, it is given in long continuance of diarrhoea, when there is weakness of the intestinal canal. It is considered the best medicine in muscular relaxation from continued rheumatism, and is then given in large doses; also, when hoarseness proceeds from a relaxed state of the interior of the throat. Many eminent men recommend it in typhus fever. As a smelling salt, it is serviceable in fainting: it may also be taken internally, in doses of five to ten grains, in a wine glass of water; in this way it quickens the action of the heart, and excites the circulation generally.

No. 10. *Ammoniae Murias*.—Muriate of Ammonia.—Sal Ammoniac.—This is employed in fomentations, and as a lotion in mania, plethoric apoplexy, violent headaches, indolent inflammations, chilblains, and gargles. It disperses indolent tumours, when mixed with soap plaster and applied over them. To form a lotion, add a piece the size of a walnut to half a pint of water, and dissolve; cloths dipped in it produce great coldness, and thereby reduce inflammation.

No. 11. *Amylum*.—Starch.—Is occasionally used to sprinkle over burnt or scalded parts, and is a constituent of some poultices. Mixed with water, so as to form a thin mucilage, it is given as an antidote in some cases of poisoning, as by the preparations of mercury and copper. It is employed as a dusting powder in erysipelas, and to prevent excoriation in children. It is also used as a clyster, combined with small quantities of opium, in dysentery.

No. 12. *Antimonii Potassio-tartras*.—Tartrate of Potash and Antimony.—Tartar-Emetic Powder.—Given in asthma, catarrh, croup, diseases of the lungs, hooping-cough, and the commencement of feverish diseases. If given to cause perspiration or expectoration, the dose is one-eighth of a grain to a grain, halved, and taken every three or four hours. For an emetic, one to four grains is administered in solution, or in divided doses, at short intervals. When applied externally as a stimulant, it is mixed with water; and for affections of the joints and deep-seated rheumatic pains as an ointment, one or two drachms are mixed with an ounce of lard, and lightly rubbed over the part; in a few hours a crop of pustules will be produced, and often affords great relief in this painful complaint.

No. 13. *Nitras Argenti*.—Nitrate of Silver.—Formerly Lunar Caustic.—This is given in convulsions, one-twentieth of a grain gradually increased to one-eighth, in a state of solution, three times a-day. To be discontinued, if not useful in a day or two. It is applied externally to warts, &c. From 10 to 20 grains is dissolved in an ounce of water, and used to dress indolent ulcers, especially those of a fistulous kind. In excoriated nipples, a single application is of great service. It is most effectual in ringworm, affecting the heads of children, and the various forms of bricklayers' and grocers' itch, affecting the hands and other parts; to

stop the progress of erysipelatous inflammation, it is applied around the inflamed portion.

No. 14. *Bals. Copaibæ*.—Balsam of Copaiva.—This is a stimulant, a diuretic, and occasionally a purgative. It is very efficacious in chronic catarrh, dysentery, gleet, gonorrhœa, whites, &c. The dose of this medicine is from 20 drops to a tea spoonful, three times a day. It is taken dropped on sugar, or half a tea spoonful beat up with the yolk of an egg and a little water. The continued use of it impairs the appetite, and disorders the digestive functions.

No. 15. *Calx. Recens.*—Quick Lime.—Is given as an antidote in conjunction with milk, in cases of poisoning by arsenic, and the mineral and oxalic acids, in the absence of more appropriate antidotes. Drink as much as the stomach will bear every two or three hours. Linseed oil and lime-water mixed in equal parts, and well shaken together, is an excellent application to cover recent burns and scalds; rags should be dipped into it, and kept constantly applied. Mixed with an equal quantity of milk, which completely disguises its taste, it is a remedy for sickness dependent upon irritability of stomach. In vomiting of food, accompanied with indigestion, it is more effectual than any other medicine. In diarrhœa, when the mucous discharge is great, if mixed in the proportion of half a pint to a teaspoonful of aromatic confection, and ten to twenty drops of tincture of opium, and a wine glassful be taken every two or three hours, it seldom fails to arrest the disease. The internal use of lime water is also serviceable in checking discharges from the lungs, bladder, &c.

*Chloride of Lime* is unrivalled for its power of destroying putrid odours, and checking putrefaction; also, in purifying chambers or buildings, after contagious diseases. It possesses another valuable property—that of stopping the putrefactive process, and hence it is called an antiseptic. These two properties, that of destroying offensive odours, and that of preventing putrefaction, render this, and also chloride of soda, most valuable agents to the medical practitioner; he applies them in all cases of disease accompanied with offensive and fœtid odours. When diluted with water they will be found of the greatest benefit in cleansing wounds and ulcers, thereby inducing a more healthy action. In the sick chamber many other occasions will present themselves when the power of chloride of lime, to destroy offensive odours, will be found of the highest value. In typhus fever, a piece of calico dipped in a weak solution, and suspended in the sick chamber, will be often of considerable service both to the patient and attendants, to counteract the unpleasant smell of dressings or bandages, of the urine and other evacuations; in noxious smells from privies, sewers, to disinfect ships, hospitals, and stables; and in workshops in which animal substances are employed, its use is invaluable. Chloride of lime is an excellent antidote in poisoning by sulphuretted hydrogen gas and prussic acid. A very weak solution should be administered by the stomach pump, and a handkerchief soaked in the solution held near the nose and mouth, so that the vapour may be inspired. It was by breathing through a handkerchief moistened with a solution of chloride of lime, and applied in this way, so that the air became purified in its passage to the lungs, that the late Mr. Roberts (the inventor of the miners' improved safety lamp) was enabled to enter and traverse the sewer of the celebrated Bastille, at Paris, which had not been opened or cleansed for nearly forty years.

No. 16. *Camphora*.—Camphor.—Is given in typhus fever, small pox, and eruptions of a typhoid type, measles, the going back of eruptions, in feverish delirium, hiccup, asthma, hysteria, epilepsy, relaxing attacks of gout, and severe rheumatism. When given in moderate doses, it exhilarates and promotes perspiration, and in cases where opium is ineffective, it produces sleep. It is given to relieve despondency; in mania and melancholia, it induces mental quiet and sleep. In cholera, the combination of camphor and opium is often of great service. The vapour of camphor is often inhaled in spasmodic cough: fumigations of it are said to relieve chronic rheumatism. The person may be in bed, or seated in a chair, but in either case is to be enveloped in a blanket, well secured round the neck. About half an ounce of camphor is then to be placed on a heated metallic plate, introduced within the blanket, and the heat kept up until the patient breaks out into a good sweat.—Its effects soon cease, therefore it is to be given frequently. When taken in excess, it is very injurious, and then its violent effects have to be allayed by opium or emetics. The dose is from one to two grains, administered frequently in pills, powders, or emulsion, combined with carbonate of ammonia, lemon juice, tartarised antimony, and aromatics. Camphor water or julep is frequently employed as a vehicle for taking other medicines.

No. 17. *Cerat. Cetacei*.—Spermaceti Ointment.—Is made by melting together hog's lard, 1 lb.; spermaceti, half-pound; white wax, quarter pound; stir the whole together until cold. This forms a mild and simple dressing for blisters, excoriated surfaces, and may be used instead of cold cream to moisten the hands or feet, when the skin becomes hardened or cracks.

No. 18. *Cerat. Calaminæ*.—Turner's Cerate.—This is an excellent application to burns, scalds, and wounds attended with considerable discharge. It is also used for healing broken chilblains and old ulcers.

No. 19. *Cerat. Resinæ*.—Yellow Basilicon.—This is an excellent ointment, very useful in ulcers, boils, and carbuncles of an indolent character; and where it is necessary to promote discharges it will be found of invaluable service, especially if preceded by linseed meal or bread poultices.

No. 20. *Confectio Aromatica*.—Aromatic Confection.—This is administered as an antacid stimulant and carminative in doses from ten to thirty grains. It is usually added to chalk mixture, and given in diarrhœa. The form of using it in this disease and in bowel complaints, is by mixing a tea spoonful of this confection, two tea spoonfuls of chalk powder, thirty drops of laudanum, and half a pint of peppermint water well together; take a table spoonful every hour or two until the purging is stopped.

No. 21. *Confectio Sennæ*.—Confection of Senna.—Is a pleasant, mild, and very effectual purgative, and when combined with sulphur and cream of tartar, proves of invaluable service to persons afflicted with piles, and other diseases of the rectum; women, when becoming mothers, will derive the greatest benefit from its use. The dose for an adult is from one to three or four tea spoonfuls, alone, or mixed with syrup. It may be given to children, and forms an excellent vehicle for the administration of active medicines, which at times it is difficult to get children to take.

No. 22. *Cupri. Sulphas*.—Sulphate of Copper.—Blue Vitriol.—It is used to burn off proud flesh, and to stimulate obstinate ulcers. Half a

drachm to eight ounces of water forms a lotion efficacious in corroding or running ulcers of the face, &c. It is occasionally given as an emetic. The dose is from two to fifteen grains.

No. 23. *Emplas. Lyttæ*.—Blistering Plaster.—Blisters should be spread with the thumb, upon adhesive plaster, and should not remain in contact with the skin for a longer period than twelve hours, the vesicle is then to be cut, without breaking away the skin, and dressed with spermaceti ointment. When the irritation is very great, a poultice may be substituted for the ointment.

No. 24. *Emplas. Plumbi*.—Diachylon Plaster.—This plaster, on account of its adhesiveness and non-irritating properties, is used to keep the edges of wounds together, and forms, when spread on calico, a good strapping, for giving support and causing pressure in ulcers of the leg, arising from varicose or swollen veins, &c.

No. 25. *Emplas. Resinæ*.—Resin Plaster.—This is used for much the same purposes as the above, but is somewhat more irritating. When spread upon leather, it forms the well known Burgundy pitch plaster, and from its counter-irritating properties proves useful in chest affections; and when applied to parts affected with rheumatism, relief is afforded thereby.

No. 26. *Ext. Aloes, Purif.*—Extract of Aloes.—This is a purgative of a good and active character; combined with two or three grains of gamboge, and the same quantity of powdered ginger, it forms an active purge in a sluggish state of the bowels. Dose for an adult from five to fifteen grains.

No. 27. *Ext. Colocynth, Comp.*—Compound Extract of Colocynth.—Is a powerful, sure, but safe purgative. The strong drastic properties of this extract are obviated by the addition of a little extract of henbane, and in this form it proves a very useful pill in obstinate constipation of the bowels, accompanied by a sluggish state of the liver. Five grains of the extract of colocynth compound, and three grains of extract of henbane, made into two pills, may be taken at bed-time, occasionally. In apoplexy, paralysis, insanity, and violent headaches, the use of the extract of colocynth is followed by the happiest results, and in some cases of obstructed female discharges benefit is obtained by its use.

No. 28. *Ext. Conii*.—Extract of Hemlock.—Hemlock is frequently administered as an anodyne, to relieve pain in tender glandular enlargements, cancer, rheumatism, and in affections of the nerves; it is useful in allaying troublesome coughs, but should never be given in fevers, inflammations, apoplexy, or paralysis. The dose of the extract should, at the commencement, be two or three grains, and gradually increased until some good effect is produced.

No. 29. *Ext. Hyoscyami*.—Extract of Henbane.—It is used to alleviate pain and irritation in various parts of the body, to procure quietude, and to obviate spasm. For any of these objects it is inferior to opium; yet it is on various occasions to be preferred to the latter, as, when opium occasions headache and constipation, henbane seldom or ever does. Its use as a sedative in allaying irritation of the kidneys and bladder proves highly serviceable, and in the irritation of teething very small doses may be given to relieve pain and convulsions. The dose for an adult is from three to ten grains. In cases of poisoning by henbane, the same treatment may be adopted as in opium.

No. 30. *Ext. Opii Purif.*—Extract of Purified Opium.—Is used as a sedative, to soothe pain. In diarrhœa and English cholera, opium, combined with chalk, generally succeeds in effecting a cure in mild cases. Opium should never be administered when there is much fever and symptoms of determination of blood to the head. The dose of the extract is from a quarter of a grain to two grains.

No. 31. *Ferri Sulph.*—Sulphate of Iron.—Is a tonic and astringent—principally used to correct female irregularities. It is combined with rhubarb or some bitter extract when administered; large doses produce griping in the bowels. When to be mixed with water, use water that has been boiled. Sulphate of iron is administered in hemorrhages of a passive nature,—that is, flowing slowly and in small quantities,—on account of its astringent influence over the system generally. In that condition of the system, when the skin assumes a pale and bloodless appearance, indicating loss of power and great feebleness, the sulphate of iron is of great service. The appetite increases, digestion is promoted, the skin assumes its natural tint, the lips and cheeks become more florid, the temperature of the body is increased, and the muscular strength greatly augmented. The use of this preparation causes the stools to assume a black colour. The dose is from one to five grains, in the form of a pill.

No. 32. *Gentiana Radix*—Gentian Root.—Is given as a tonic and stomachic in indigestion and hysteria, continued debility, languor, and in intermittents. Gentian root is employed in indigestion and other disorders of the stomach attended with debility or torpidity, and unaccompanied by any marks of inflammation, irritation, or great susceptibility of the digestive organs; it is most frequently given in the form of infusion, in doses of from two to three table-spoonfuls twice or three times a day. It is an excellent tonic, removing flatulence, and creating a good appetite for food.

No. 33. *Hydrarg. c. Creta.*—Mercury with Chalk.—Is an exceedingly mild but valuable mercurial preparation: it is a greyish powder, much given to children to promote and improve the secretions of the liver, pancreas, and bowels. In various disordered conditions of the digestive organs, accompanied by clay-coloured stools or purging; in strumous affections, especially enlarged glands and other chronic maladies, it is administered to children with great advantage, in doses of from two to five grains. A few grains of rhubarb, carbonate of soda, or, in some cases, Dover's powder, may be combined and given with it. For an adult, the dose is from five grains to twenty.

No. 34. *Hydrarg. Chlorid.*—Chloride of Mercury, or Calomel.—Calomel may be ranked among the mild preparations of mercury, adults being more easily affected by it than children. Calomel increases the action of the secreting organs, promotes the action of the liver, and of intestinal mucus. Calomel is frequently combined with other medicines to increase their effects, as with antimony, to promote the action of the skin; and, as an alterative—that is, an improver of the constitution—of this kind, the well-known Plummer's Pills is the best form; one pill every, or every other, night, and a black draught the following morning. As a *purgative*, from two to five grains are given, followed by a little jalap, senna, or colocynth. Calomel is most extensively employed in the diseases of children, and may be given to them in nearly as large doses as to adults; there is little danger of producing salivation in children with it.

Acids should not be taken at the same time with calomel. Calomel is employed as an alterative, in glandular affections, chronic skin diseases, and disordered condition of the digestive organs, especially in those cases connected with derangement of the liver. It is very frequently given as a purgative, though, on account of the uncertainty of its cathartic (purging or cleansing) effects, it is seldom used alone, but generally in combination with jalap, scammony, compound extract of colocynth, &c. It is employed in this way when it is desired to produce a powerful impression on the alimentary canal, as in threatened apoplexy, in mental disorders, in dropsical affections, in chronic skin diseases, and in torpid conditions of the bowels. Sometimes it is used to promote a secretion of bile, as in affections of the liver, jaundice, &c. In the various diseases of children requiring the use of purgatives it is very useful, and its being devoid of taste is, of course, an advantage. It is given in combination with small doses of opium, such as two grains of calomel mixed with a quarter of a grain of powdered opium, every three or four hours, in inflammation of the liver, pleura, croup, bowels, &c. It is also given in fever and chronic (continued) obstructions of the intestines.

No. 35. *Hydrarg. Bichlorid.*—Bichloride of Mercury.—Corrosive Sublimate.—It is a virulent poison, but not unfrequently employed in chronic diseases of the skin, and venereal affections, in conjunction with sarsaparilla. The dose is from one-sixteenth to one-eighth of a grain, in a wine glassful of decoction of sarsaparilla.

No. 36. *Iodid. Potassii.*—Iodide of Potassium.—Is mostly used in scrofulous diseases, and for its resolvent influence in chronic visceral and glandular enlargements. In swelling of the glands of the neck, Derbyshire wens, cancer of the breast, syphilis, &c. For the removal of glandular enlargement, it is necessary to employ this agent externally as well as internally. A strong tincture or ointment may be applied to the part affected. With respect to the internal use of iodide of potassium, the success of the remedy depends on the use of small doses largely diluted. From one to five grains may be administered, dissolved in water or a wine glassful of camomile tea, three times a day. In this manner it is of the greatest service in rheumatic affections and dropsies, and in the enlargement of the liver. If the disease admit of a cure, the two most important and probable means of relief are iodine and mercury, which may be used separately or conjointly. The dose of the iodide of potassium is from two to six grains, two or three times a day.

No. 37. *Linimentum Saponis*.—Soap Liniment.—Is frequently used as a stimulating application, and, on account of its lubricating qualities, in various local pains, sprains, bruises, rheumatism, and tic douloureux; when conjoined with a little laudanum, it is capable of affording great relief.

No. 38. *Liquor Ammoniac.*—Liquid Ammonia.—Is applied to the skin, to excite it to action; to the nostrils and to the eyes, as a stimulant; and is used in cases of torpor, paralysis, rheumatism, hysterics, chronic ophthalmia, deep-seated inflammation, &c. From ten to twenty drops, given in milk, forms a powerful stimulant in fainting or poisoning from prussic acid.

No. 39. *Liquor Potassæ Arsenitis.*—Arsenite of Potash, commonly known as "Fowler's Solution of Arsenic."—This solution, although dangerous in inexperienced hands, has been long used as a powerful tonic in

ague, fever, periodic headache, St. Vitus's dance, epilepsy, and tic doloureux. It is given in doses of three to five drops, two or three times a day, in water, after meals. Should it occasion sickness, pain in the stomach, purging, soreness of the mouth, or pain across the forehead, the dose ought to be diminished, or the medicine discontinued.

No. 40. *Liquor Plumbi Diacetatis*.—Sugar of Lead Solution, or Solution of Acetate of Lead, or "Goulard's Extract."—Diluted in the proportion of a tea spoonful to a pint of water, it is applied as a lotion in external inflammation, and to alleviate local pains. In this manner it is applied to parts affected with erysipelatous inflammation, to whitlows, and inflamed tendons; in inflammation of the eyes, to bruises, sprains, ulcers, abscesses, &c. It may be added to poultices, or, mixed with hog's-lard, it then makes a very useful cooling ointment for burns, scalds, and ulcers. Goulard's extract is only used externally as a lotion; it is poisonous if taken internally.

No. 41. *Magnesiae Sulphas*.—Sulphate of Magnesia.—Epsom Salts.—Is a purgative, administered in colic, dry bellyache, iliac passion, dysentery, &c. It is dissolved in tea, gruel, or water. Its powers are increased by adding a little common salt, magnesia lessens the unpleasant taste, and tartarised antimony quickens its operation. It is a mild, safe purgative, acting speedily on the bowels, in doses varying from half an ounce to an ounce; but, when dissolved in a large quantity of water, a smaller dose will suffice. Thus, two drachms in half a pint of water, taken in a morning fasting, will act speedily, sufficiently, and mildly, in ordinary cases; and with delicate females a less quantity will usually produce the desired effect. To obviate flatulency, some warm carminative is frequently added, such as peppermint water and tincture of ginger. It is frequently given in conjunction with an infusion of senna, the purgative effect of which it promotes, but the griping tendency of which it checks. It is commonly termed a cooling purgative, and is of the greatest service in fevers and inflammation, on account of its refrigerating influence. The only objection to its use is its bitter and unpleasant taste; but even this, to some extent, may be obviated by administering it in infusion of roses. In cases of poisoning by the different preparations of lead and baryta, it is used as an antidote. In indigestion, accompanied with constipation, small doses of Epsom salts, combined with some bitter infusion (as of gentian, quassia, calumba, camomile), afford great relief.

No. 42. *Magnesiae Carbonas*.—Carbonate of Magnesia.—Counteracts acidity of the stomach, and is then a purgative. Magnesia is used as an antacid, to neutralize acids introduced into the stomach (as in cases of poisoning by mineral acids), or to prevent the formation of acid in the stomach. Thus, in heartburn, a tea spoonful, mixed with a small quantity of water and tincture of ginger, affords great relief; its efficacy is best seen in persons of a gouty or rheumatic habit, in which the urine contains an excess of acid. It often relieves the headache, to which such individuals are not unfrequently subject. It is a very useful laxative for children, and may be conveniently given in milk. As a purgative, the dose for an adult is from a scruple to a drachm, in peppermint water. As an antacid, the dose is from ten to thirty grains, twice a day. It is sometimes given in lemon juice; the citrate of magnesia thus formed acts as a pleasant and mild aperient.

No. 43. *Morphiae Acetas*.—Acetate of Morphia.—This is one of the

most important principles of opium. Morphia is said to be less stimulating, and less disposed to cause sweating, constipation of the bowels, and headache, than opium, although it partakes of the general character of that drug. Morphia is preferred and given internally when the anodyne, soothing, sedative, and soporific effect of opium, is wished, without its tendency to excite the brain. The dose is from one-eighth to one-fourth of a grain in a pill of bread crumbs; but it is a very dangerous drug to use in the absence of the advice of a medical man.

No. 44. *Ol. Lini. Sem.*—Linseed Oil.—Is rarely used internally; but when mixed with equal parts of lime water, forms one of the best applications known for burns and scalds. The addition of a little turpentine is sometimes advantageous.

No. 45. *Ol. Menth. Pip.*—Oil of Peppermint.—This is a carminative, that is, has the property of expelling wind, and is useful in administering other medicines, to disguise their disagreeable flavour. A few drops taken on sugar will be sufficient for a dose.

No. 46. *Ol. Olivæ.*—Olive Oil.—Given in jaundice arising from hard fixed gall-stones, colic, catarrh, also when metallic poisons or acid substances have been swallowed. As an emetic, from four to five ounces is a dose. As an ordinary medicine, mix half an ounce with water by means of gum arabic, or of a few drops of the solution of ammonia. It is useful in clysters. An ounce and a half of olive oil, and half an ounce of the oil of cloves, as a liniment, rubbed upon the stomach, morning and night, with a warm hand, is often useful in whooping-cough.

No. 47. *Ol. Ricini Opt.*—Castor Oil.—Is used to evacuate the contents of the bowels in all cases when it is desirable to avoid griping and irritation of them. The principal objection to its use is its nauseous taste, in order to cover which, some take it floating on gin, others on coffee, or peppermint water, and sometimes mixed with the yolk of an egg. Milk appears to be the best vehicle for its administration. The dose of the oil for children is one or two tea-spoonfuls; for adults, from one to two or three table spoonfuls. No substance answers the indication better and few so well, in inflammation of the bowels, and dysentery, as castor oil; and in spasmodic affections of these organs, such as colic, it is the most effectual remedy we have. In affections of the rectum, especially piles, prolapsus, and stricture, it affords great relief. In habitual costiveness it is much recommended. But if castor oil be frequently repeated, the dose must be gradually diminished, so that persons who in the first instance required one ounce or more, afterwards need only half an ounce. It possesses this particular advantage over other aperients, viz., that it operates quicker, and seldom gripes unless the oil be rancid.

No. 48. *Ol. Terebinth Pur.*—Purified Oil of Turpentine.—Is a stimulant, diuretic, cathartic or purgative, and an excellent anthelmintic or worm destroyer. It has been found useful in epilepsy, hysteria, and in convulsions of infants, arising from a disordered state of the bowels. It is also employed in sciatica, lumbago, diseases of the nerves, and as an aperient in gout. Combined with castor oil, and given to persons troubled with worms it is almost certain to expel them. As an enema in obstinate costiveness and colic it has been much used, but this remedy should be discontinued in all cases if an eruption of pimples appears on the skin. As an external application it forms an excellent addition to embrocations for rheumatism and paralysis of the extremities. It is a good

application to burns and scalds, and also to indolent tumours. It may be taken in milk, or beat up with the yolk of egg and sugar, or a little essence of ginger and castor oil. The dose as a diuretic, is from ten drops to sixty; as a purgative from two tea spoonfuls to two table spoonfuls, and the same dose, or even a larger, may be taken by strong persons to destroy worms.

No. 49. *Ol. Tiglii Croton*.—Croton Oil.—As a purgative, six drops, with sufficient soft bread, is made into twelve pills, and one or two taken at a time; but as pills this medicine is not approved of. As a mixture: croton oil, two drops; mucilage of gum arabic, one ounce, with sufficient refined sugar; these are well mingled in a mortar, and then made into a mixture. As a draught: croton oil, one drop; simple syrup, two drachms; mucilage of gum-arabic, two drachms; distilled water, half an ounce. Take in milk.

No. 50. *Pil. Hydrargyri vel Mercuriales*.—Mercurial Pills.—Blue Pill.—This pill is usefully employed in obstructions of the liver, jaundice, and many other complaints. It is an excellent gentle stimulant to the action of the bile, especially if followed by a brisk dose of salts and senna on the succeeding morning. When it is desirable to keep up its effects, opium in small doses is given with it; or, if irritating, a few grains of rhubarb must be taken every morning.

No. 51. *Pil. Hydrargyri Chlor. Comp.*—Plummers' Pill.—These pills are frequently employed as an alterative, in conjunction with sarsaparilla and iodide of potassium, in chronic skin diseases, in chronic liver affections, and in various disordered conditions of the digestive organs. The dose is from five to ten grains.

No. 52. *Plumbi. Diacetatis*.—Acetate of Lead.—Sugar of Lead.—This is considered the most efficient medicine in stopping bleeding from the lungs and womb. It must not be taken with other medicines, although ordered at the same time; and only as a pill, combined with small quantities of opium. All drinks, except cold water, or draughts of diluted acetic acid, must be avoided for at least an hour after taking the pill.

No. 53. *Pulv. Acaciæ Gummi*.—Powdered Gum Arabic.—Is given to allay troublesome coughs, diminish irritation, and in inflammation of the chest, bladder, and kidneys, as an emollient and demulcent. The dose of powdered gum is from half a tea spoonful to a tea spoonful. Powdered gum is dusted on leech bites to check the bleeding.

No. 54. *Aluminis*.—Alum.—This is administered in diabetes, diarrhœa, bleeding from the nose, lungs, and womb, and in intermitting fevers, and as a lotion for the eyes. A drachm with a pint of decoction of oak or Augusture bark is employed as a gargle; also as an injection in fluor albus. The dose is from five to fifteen grains. One or two drachms boiled in a pint of milk is taken in doses of two or three ounces. Large doses act on the bowels and cause sickness. It is best in solution or pills, with a tonic extract.

No. 55. *Pulv. Antimonii Comp.*—Antimonial Powder, or James's Fever Powder.—This is given in feverish cases, it creates perspiration. In feverish and scrofulous diseases, acute rheumatism, and gout, it is said to be beneficial. From three to eight grains is given every three or four hours, with a plentiful supply of drink. In fever cases it is sometimes combined with opium and camphor.

No. 56. *Pulv. Cinnamomi Comp.*—Cinnamon Powder.—Is aromatic,

stimulant, tonic, and astringent; it is administered in continued gout, in weakness of the stomach and alimentary canal, fluxes and indigestion. It is employed with other medicines to disguise their unpleasant taste, and to prevent pain in purgatives. The dose may be from ten grains to forty.

No. 57. *Pulv. Cretæ Comp.*—Compound Chalk Powder.—Is usually given in early cases of diarrhœa, in doses of ten grains to thirty, as an astringent, and an antacid; in the same cases and same combinations as the following preparation of chalk.

No. 58. *Pulv. Cretæ Prep.*—Prepared Chalk Powder.—Given when acidity exists in the intestines, and after irritating matters have been removed from the bowels in diarrhœa. When thin watery matter is discharging from ulcers, it is a good external application. Dose is ten to twenty grains, or more. Aromatic confection, powdered kino, or small doses of opium, in severe cases, accompanied with griping pains, may be combined with great advantage. It is also used for making tooth powder by mixing together three parts of powdered chalk, one part of finely powdered camphor and one part of finely powdered cuttle fish bone, or bark in powder.

No. 59. *Pulv. Ipecacuanhæ.*—Powder of Ipecacuanha.—This is administered as an emetic to cause expectoration, perspiration, and counteract spasmodic affections. When used as an emetic the dose is ten to twenty grains, but it should not be given to persons subject to bleeding, flowing of blood to the head, afflicted with rupture, or women about to become mothers. When given to promote expectoration, the dose is one to two grains; but when as a stomachic, or for promoting perspiration, the dose is lessened, and a little opium added. Powder of ipecacuanha is given usually as an emetic; it is recommended to be used as such in the commencement of fever, and inflammation of the throat and windpipe. It is preferred as an emetic and expectorant in the diseases of children, in consequence of it not being liable to affect the bowels. In spasmodic asthma, it is exhibited in a full dose to relieve the urgent fit, and in doses of three or four grains every morning for a time to prevent a return. It is also used with great advantage to clear the stomach of children suffering from hooping-cough and inflammation of the lungs. As a sudorific, or promoter of perspiration, in colds, influenza, and rheumatic affections, it is given in warm water, in doses of from one grain to four.

No. 60. *Pulv. Ipecacuanhæ Comp.*—Compound Powder of Ipecacuanha, commonly called "Dover's Powder."—One of the most certain, powerful, and valuable diaphoretic preparations we have, when it is deemed necessary to produce perspiration, and assuage pain. In slight colds, coughs, and rheumatic affections, it is of great service, and in diarrhœa and dysentery also. Its action on the skin is greatly promoted by the copious use of warm dilutents, such as gruel, barley, or linseed tea. The dose of this preparation is from five to ten grains, given in currant jelly or gruel, or made into a pill, or administered in a common saline draught. Like all the other preparations of opium, it should not be indiscriminately employed, as an overdose would prove poisonous, especially to children.

No. 61. *Pulv. Jalapæ.*—Jalap Powder.—This is a safe and good medicine, a stimulating purgative, and acts most powerfully on the colon; it increases the excretions so as to remove water from any of the cavities of the body; for this purpose it is made into a bolus with the submuriate of

mercury. For dropsy, it is combined with supertartrate of potass or cream of tartar. To add to its effects, ipecacuanha, or tartarised antimony is added. A usual powder is, jalap, fifteen grains, ipecacuanha, five grains, oil of cinnamon, two drops, taken at bed-time, or early in the morning.

No. 62. *Pulv. Kino Comp.*—Compound Powder of Kino.—Is an astringent, containing a small quantity of opium in its composition. It is given in diarrhœa and dysentery of long standing, also in passive bleedings and water-brash. It is generally given in the common chalk mixture in doses of from five to twenty grains. Externally it is applied as a styptic to diminish the discharge from flabby ulcers.

No. 63. *Pulv. Opii.*—Opium in Powder.—Opium in particular cases supports the powers of life, and allays spasms, pain, and irritation. It blunts the morbid sensibility of impression in fevers. It should be avoided where inflammatory action exists in consumption, attended by increased pulse and dry cough, and in determination of blood to the head. The doses must depend on the disease and the patient. A quarter of a grain taken frequently keeps up an exhilarating effect. One to two grains act as a narcotic or sleeping dose.

No. 64. *Pulv. Potassæ Nitræ.*—Nitrate or Saltpetre.—With rose water it is a cleansing gargle. A little dissolved in the mouth often removes the commencement of inflammation in the tonsils. Nitrate acts as a diuretic promoter of perspiration, and as a refrigerant or cooling medicine when the skin and body are very hot in all febrile disorders; it also reduces the frequency and force of the pulse, and is given in continued fever with tartar emetic, or calomel, with good effect. It is used as a diuretic in those cases accompanied with fulness of the arterial system. A mixture of nitrate and powdered gum has long been a favourite remedy for diminishing the scalding in passing urine, in certain diseases. Nitrate in full doses has been much recommended in scurvy. Nitrate is often used to produce cold, and freeze water; this is done by mixing five ounces of nitrate with five ounces of sal ammoniac, and dissolving the two, when mixed, in sixteen ounces of water. It is given in doses of from ten grains to thirty, as a diuretic; it should be administered in plenty of barley water; at the same time the skin must be kept cool.

No. 65. *Pulv. Potassæ Tartras.*—Tartrate of Potass, or Soluble Tartar.—This is a mild and good purgative. It hastens the operation and corrects the griping of resinous purgative medicines, and is useful with senna, &c. It is administered in solution, in doses of a tea spoonful to a table spoonful or two, mixed with water, in indigestion, commencement of diarrhœa, and in liver complaints after blue pill.

No. 66. *Pulv. Rhei. Ind.*—Powdered Indian Rhubarb.—This is a cleansing medicine; but when administered as a tonic, in indigestion and a weakened state of the bowels, should be combined with ginger, soda, magnesia, or camomile tea. From its astringent nature it is generally given in diarrhœa, any irritating matter in the bowels being removed by its purgative effect before it acts as an astringent. Its purgative action is of so mild a character that it may be given to very young children, and is frequently combined with a grain or two of calomel with advantage. The dose, as a purgative, is from twenty to thirty grains, or more. As a stomachic, or tonic, from three to six grains.

No. 67. *Pulv. Scammonii Comp.*—Scammony Powder.—It is a powerful

cleansing medicine, usually given to destroy worms, and correct a slimy state of the bowels, to which children are liable. A powder is composed of from three to fifteen grains; scammony mixed in a mortar with sulphate of potass, cream of tartar, sugar, or lemons. It is not usually given alone to children; the powder is mixed with calomel and a little cinnamon powder, which cleanses their bowels, and usually makes them sick, especially when convulsed.

No. 68. *Pulv. Scillæ*.—Squill.—Is a stimulant, a diuretic, and expectorant. It is employed as an expectorant in coughs of long standing, bronchitis, and the advanced stages of hooping cough. As a diuretic it is given in dropsies, combined with small doses of calomel or blue pill; it should not, however, be given in dropsies if there be any disease of the lungs or kidneys existing at the same time. As a diuretic it is generally given in the form of pills. In the form of oxymel of squills it is given to children labouring under hooping cough, in doses of from one to two tea spoonfuls, three or four times a day; in powder the dose is from one to ten grains; if to act as an emetic, from ten to twenty grains are administered.

No. 69. *Pulv. Secalis Cornuti*.—Ergot of Rye.—Is employed to assist labour, and stop excessive discharges. From ten grains to half a scruple, or more, is given in treacle or preserve, every half hour. But this is one of those peculiar drugs that should only be administered under the direction of a medical man, and has merely been noticed here as it is included in the list of drugs for the surgeon of a ship.

No. 70. *Pulv. Quinæ Disulphas*.—Quinine.—Is pre-eminently distinguished by its great tonic and almost specific fever properties; the only instances in which the use of this medicine is forbidden are when great nervous or vascular irritation, active inflammation, and fulness of blood, with bleeding arising from the same exist. The diseases in which this remedy manifests its greatest power to cure, are those which assume an intermittent and periodic character; that is, when the diseases disappear and return at regular intervals. When this is the case, the patient appears to be quite well during the interval, and the disease is called an *intermittent* (ague is an example), but it is called remittent when the second attack or fit makes its appearance before the first has wholly subsided. Intermittent fevers, there can be no doubt, are diseased affections of the nervous system; and one of the most curious circumstances connected with those diseases is the facility with which they are sometimes cured. Sudden and powerful impressions, both mentally and bodily such as sudden fright, terror, intoxication, a large dose of opium, or administration of quinine, made during the intermission, will often prevent the return of the fit, and effect a cure. A very necessary condition to its perfect success is that this medicine sits well on the stomach; to ensure this, an emetic is previously given to precede its employment. For an adult, about fifteen grains of ipecacuanha, with half a grain of emetic tartar, may be given in a cupful of warm water. A calomel pill at night, and senna draught the following morning, will answer the same purpose, acting as a good purgative, and generally found much needed. Quinine is also useful in many diseases dependent on deficiency of tonic strength, as seen in a lax condition of the muscles, weak pulse, incapability of great exertion, impaired appetite, and indigestion. In those cases it should be given half an hour before meals. In tic douloureux, in

St. Vitus's dance, in mortification, in bleedings, in discharges attended with great debility, such as whites, or old diarrhœas and dysentery; in obstinate ulcers, in enlargement of the glands of a scrofulous nature, in erysipelas, and in shattered or broken down constitutions, severe diseases, or operations when the strength is greatly reduced, the administration of quinine, or powdered bark, is of the greatest efficacy and value. It is usually combined with diluted sulphuric acid as an astringent, with the sulphate of iron as a more active tonic, and with the preparations of mercury in nervous complaints and other diseases. It is administered in doses of from one grain to twenty, or in the following forms. To stop intermittent fever, take sulphate of quinine, thirty-two grains; simple syrup, one pound, mixed. A spoonful to be taken every four or six hours. For intermittents and debility, dissolve twelve grains of sulphate of quinine in half a pint of good Madeira wine, or infusion of roses, one ounce three times a day. The tincture consists of six grains of sulphate of quinine, and spirits of wine one ounce; take a tea spoonful twice or thrice a day. From five to ten grains of quinine, taken two or three times daily, has cured tic doloureux. It has also been successful in head and tooth-aches.

No. 71. *Saponis Dur.*—Hard Soap, or Castile Soap, is the medical form of soap.—This is a diuretic, given in jaundice and stone, combined with rhubarb, or bitter infusion of gentian in costiveness. When administered for stone it is made into pills with a few grains of dried carbonate of soda. As a cerate, it is astringent and sedative; as a compound liniment, healing and strengthening; and as a plaster a resolvent; it is frequently employed in sprains and bruises.

No. 72. *Sennæ Fol.*—Leaf Senna.—The medicinal principle is extracted by infusion in water, or spirits of wine. Senna is well adapted for those persons requiring an active and stimulating purgative. Thus in constipation and inactivity of the bowels, in worms, and many other cases, senna acts well. It is a safe purgative for children, females, and elderly persons; to cover its unpleasant flavour it may be given in black tea; but the large dose of the powder necessary to be given, makes it objectionable, and it is therefore generally given in the form of an infusion, combined with aromatics, &c., which improve its flavour and prevent griping. The infusion is made by putting into a covered jug one drachm of senna leaves, one table spoonful of tamarinds, two table spoonfuls of brown sugar, a small piece of dried ginger; pour upon this half a pint of boiling water, let it stand until cold. A wine glassful or two of this is a dose. If combined with a tea spoonful of Epsom salts, or tartrate of potash, it forms the compound called *black draught*; an excellent purgative medicine much employed in all febrile disorders.

No. 73. *Sodæ Biboras.*—Biborate of Soda, or Borax.—Is employed, mixed with honey, as an application to ulcers in the mouth, thrush in children, and as a lotion in some skin diseases, known as *liver spots*. A solution of it in rose water is employed as a cosmetic or beautifier of the skin, and as a gargle in ulceration of the throat. If taken, as it is, occasionally, the dose is from twenty to sixty grains.

No. 74. *Sodæ Carbonas.*—Carbonate of Soda.—This useful salt is obtained from sea weeds, which, after being collected, are dried and burned in heaps; the ash is called barilla, and yields by purification from twenty-five to forty per cent. of soda. A few years ago in the Orkney Islands

alone, about 20,000 persons were employed in its collection and manufacture. Carbonate of soda is not so acrid and has a milder and less unpleasant taste than carbonate of potash; but in other respects the effects of these two salts are the same. It is given in doses of from ten grains to thirty or forty as an antacid in indigestion when much acid is in the stomach; but it is more frequently used as an *effervescing draught*, with citric or tartaric acids, making a very agreeable and cooling drink in fevers, allaying thirst and checking sickness. It is also a principal ingredient in forming *Seidlitz Powders*; forty grains are mixed with two tea spoonfuls of tartrate of soda, in a tumbler of cold water, to which must be added thirty grains of tartaric or citric acid, to be drunk off whilst effervescing, thus forming an agreeable and mild aperient dose. The *Soda Water Powders* of the shops, consist of thirty grains of carbonate of soda, contained in a blue paper, and twenty-five grains of tartaric acid in a white paper. When taken, to be dissolved in as much water as may be convenient to drink. *Ginger Beer Powders* are made in the same way, merely adding a few grains of powdered ginger, a tea spoonful of white sugar, and a drop of essence of lemons to give it an agreeable flavour.

No. 75. *Sodæ Potassio Tart.*—Tartrate of Potash and Soda, or Rochelle Salts.—It is a mild laxative and cooling salt, usually given in the form of Seidlitz powders, as directed above; and is commonly taken as a mild aperient, by delicate persons, in doses of from two tea spoonfuls to two table spoonfuls: in smaller doses, it acts as a powerful diuretic.

No. 76. *Spiritus Ætheris Sulphurici Compositus.*—Compound Spirit of Sulphuric Æther.—This volatile and inflammable fluid is a stimulant, a narcotic, and antispasmodic. As it rouses the nervous system and increases the natural heat, it is given in languor, torpor, nervous affections, and spasms; in fainting fits, lowness of spirits, cramp of the stomach, colic, dry asthma, and in typhus, where the nervous system is much disturbed. Externally it is applied to pains not arising from immediate inflammation, to nervous headache, and rheumatic toothache, to scalds and burns, to diminish the circulation in the brain, and reduce strangulated hernia. In those applications it must not be confined, but allowed to evaporate. The dose, as an antispasmodic, is from thirty drops to two drachms. This preparation of æther is often used to induce sleep.

No. 77. *Spiritus Ætheris Nitrici.*—Sweet Spirit of Nitre.—This is employed as a diuretic, antispasmodic, diaphoretic, and refrigerant in inflammatory affections. It is a good and useful diuretic in dropsies, especially in some of the mild forms of the complaint, as in dropsy following scarlatina. It is given with squills, acetate or nitrate of potash, freely diluted with barley water. As a carminative and antispasmodic it is combined with the same quantity of spirit of lavender, and is useful in relieving flatulency and sickness. As a diaphoretic, or sweating draught, in febrile complaints, it should be given with twenty or thirty drops of antimonial wine, and a tea spoonful of liquid acetate of ammonia. The usual dose of spirits of nitre is from half a tea spoonful to two or three tea spoonfuls diluted with water.

No. 78. *Spiritus Ammon. Arom.*—Aromatic Spirit of Ammonia, or Sal Volatile.—This is an excellent stimulant, and frequently employed in languor, faintings, hysteria, flatulent colic, and nervous debility, in doses of from half a tea spoonful to two tea spoonfuls, it may be given with the

same quantity of spirit of lavender in a wine glass of water; which increases its beneficial effect.

No. 79. *Spiritus Vini. Rect.*—Rectified Spirit of Wine.—Is employed both internally and externally: for internal purposes it is generally given mixed with other substances, and forming such preparations as tinctures. When it is thought necessary to administer ardent spirits internally, medicinally, brandy is the spirit usually given; this is frequently done to check vomiting, especially sea sickness. As a *powerful excitant* it is used to support life during a tedious operation, and to assist in the restoration of a person from a state of suspended animation, as in drowning, &c. In *delirium tremens* the moderate use of a long-accustomed stimulus will be necessary to the welfare of the patient. Externally, spirit diluted with water is much employed as a lotion. It is applied in a diluted state to the back and sore parts of *bed-ridden persons*, to the nipples when inclined to be sore during suckling; to the feet when the skin is blistered by walking; on the chest to excite the action of the heart in fainting or suspended animation; and to relieve the pain arising from bruises: also as a cold evaporating lotion in inflammation of the brain, as recommended in another part of this little book.

No. 80. *Sulphur Sublim.*—Sublimed or Powdered Sulphur.—Is a laxative, and promoter of perspiration; as a laxative from the mildness and permanency of its action, it is usually given in pills, combined with magnesia, or confection of senna. In consequence of its tendency to promote the action of the skin by sweating, it is given in rheumatism, in colds, and very much in skin diseases; aided by an external application of the ointment, it is a certain cure for itch. It comes in contact with the horrid little itch-insects that bury themselves under the skin, and, acting as a poison, destroys them. It is generally given mixed with treacle or honey, in doses of a tea spoonful to a table spoonful.

No. 81. *Tinctura Digitalis.*—Tincture of Foxglove.—Is given in inflammatory diseases, particularly when accompanied with increased frequency of pulse, and occurring in subjects not able to bear large bleedings. It is of great service in dropsical diseases, on account of its diuretic properties, which effect is considerably promoted by combining other diuretics with it, especially squills, spirit of sweet nitre, acetate of potash, infusion of broom, spirit of juniper, and where there is much debility it may be advantageously combined with some bitter infusion, such as of gentian, or columba. In bleedings from the nose, lungs, &c. Foxglove, on account of its sedative properties, is oftentimes serviceable, combined with acids. The dose for an adult is from ten to fifteen or twenty drops, three times a day. In increasing the doses of this medicine, great care must be observed, as it is apt to accumulate in the system, and destroy life.

No. 82. *Tinctura Ferri Sesquichloridi.*—Tincture of Iron.—This acts most powerfully upon the urinary organs. In cases of retention, if ten drops be given every ten minutes, in water, much benefit usually results in a short time. It stays bleedings from the bladder, kidneys, and womb. Sometimes it is necessary to produce sickness with it, given in tepid water. As it produces costiveness, castor oil is administered soon after it has been taken. Like all other preparations of iron, it produces dark-coloured evacuations from the bowels.

No. 83. *Tinctura Hyoscyami.*—Tincture of Henbane.—An excellent

narcotic, not affecting the head, nor disturbing the biliary secretions like opium. Tincture of henbane, in small and repeated doses, has a soothing and tranquillizing effect on persons suffering from great nervous irritability. Its power in relieving pain, promoting sleep, and alleviating spasms, is greatly inferior to that of opium, yet it is, on various occasions, to be preferred to that drug; as opium frequently causes headache and constipation. In the maladies of children, especially those arising from teething, it is valuable from its power of alleviating pain and convulsions. The dose for an adult is from twenty to thirty drops, two or three times a day.

No. 84. *Tinctura Opii*.—Tincture of Opium.—This is a convenient form for the administration of opium; nineteen drops of the tincture contain one grain of opium. When rubbed on the skin it allays pain, and its effects are increased in this application of it by adding acetic acid. Tincture of Opium, or Laudanum, is undoubtedly one of the most valuable and important remedies we possess, but requiring the utmost care and discrimination in its use, on account of its highly poisonous properties. It is given to mitigate pain, to allay spasms, promote sleep, relieve nervous restlessness, and produce perspiration, &c., but it should always be employed with great caution, giving it in small doses, and carefully watching its effects. In cases of poisoning by laudanum, the first indication is to remove the poison from the stomach, and the best means of doing so is by the stomach pump; where this cannot be procured, emetics should be freely administered: sulphate of zinc, in doses of from one to two scruples; ipecacuanha, antimonial wine, or mustard and water may be resorted to for this purpose when the stomach pump is not at hand. The dose of laudanum for an adult is from ten to twenty or thirty drops.

No. 85. *Tinctura Rhei. Comp.*—Compound Tincture of Rhubarb.—This is a cordial, and usually given with saline purgatives. As a purgative dose, take from two drachms to one ounce; as a stomachic, one to two drachms. This medicine is a popular remedy in various disordered states of the stomach and bowels, especially at the commencement of diarrhoea, and in flatulent colic. In indigestion, accompanied with debility, small doses of rhubarb, combined with infusion of gentian, prove beneficial, by promoting the appetite, and assisting the digestive process.

No. 86. *Tinctura Sennæ Comp.*—Compound Tincture of Senna.—This is a warm and good purgative, and that it may be more effective, some jalap is added. Daffy's Elixir is this tincture mixed with treacle, aniseeds, and elecampane. It is useful in costiveness attended with flatulence, and is usually employed as an adjunct to the infusion of senna. The dose for an adult is from half an ounce to one ounce.

No. 87. *Unguent. Hyd. Fort.*—Mercurial Ointment (Strong).—Is frequently rubbed into the body, for the purpose of getting the system, in a short time, under the effects of mercury; a state deemed necessary in many severe diseases.

No. 88. *Unguent. Hyd. Nit.*—Citron Ointment.—When mixed with lard in the proportion of one part to three or four, this ointment is applied to the edge of the eyelids, in an ulcerated state. The stronger ointment is a good application for many chronic inveterate skin diseases.

No. 89. *Unguent. Sulphur.*—Sulphur Ointment.—Is a cure for the itch, as before stated. The body should be well rubbed with it, night

and morning, until the symptoms vanish. Sulphur should be taken internally at the same time, after which the use of the hot bath or sulphur bath will be needed.

No. 90. *Vini Colchici*.—Wine of the Bulb of Meadow Saffron.—This is found useful in gout, as it allays pain and shortens the duration of the paroxysm. It also greatly affects the arterial system. It is administered whenever pain comes on, in the same form, doses, and cases as directed in Vinegar of Meadow Saffron.

No. 91. *Zinci Sulphas Purif.*—Purified Sulphate of Zinc.—As an emetic, especially when poisons have been taken, give ten grains to half a drachm, it is prompt in its action; it is a good tonic and astringent, in doses of one to two or three grains. It is administered in diarrhœa and chronic dysentery; combined with chio-turpentine, in the form of pills, it is given in gleet and whites. Also used as a lotion in skin diseases. As a wash for weak or inflamed eyes, or where there is an involuntary secretion of tears, take sulphate of zinc, half a drachm; distilled water, one pint.

No. 92. *Lard* is employed principally as a basis for ointments, and for this purpose should contain no salt. It is sometimes used to dress blisters.

No. 93. *Linseed Oil* is employed in the preparation of the linseed meal poultices, the uses of which need not be here explained.

No. 94. *Best Lint*.—Used for plugging wounds, and as a surface upon which ointments may be spread for dressing wounds, &c.

No. 95. *Common Tow*.—Useful for manifold purposes, such as pads for splints, &c.

No. 96. *Fine Tow*.—For the same purposes as above stated.

No. 97. *Disinfecting Fluid*. No. 98. Chloride of Lime. No. 99. Collin's patent Disinfecting Powder.—For getting rid of unpleasant odours in the sick chamber and elsewhere. See directions for using them at p. 32.

No. 100. *Emp. Resinæ*.—Adhesive Plaster, for wounds and ulcers, and holding the edges of wounds together.

Nos. 101 and 102. *Syringes*.—For injections. If deafness arise from the wax of the ear becoming hardened, syringing with warm water will generally be sufficient to remove the deafness.

No. 103. *Two Ounce Graduated Glass Measure*.—For measuring liquids accurately, which is of the utmost importance.

No. 104. *Minim Glass*.—For measuring drops, instead of the usual method of counting them, which is uncertain.

No. 105. *Bolus Knife*.

No. 106. *Three Dozen Assorted Phials*.

No. 107. *Half a Gross of Corks*.—Must be of proper size for the phials.

No. 108. *Six Yards of Flannel*, for bandages, &c.

No. 109. *Twelve Yards of Calico*, for bandages, &c.

No. 110. *Six Sponges*, for sponging the body, wounds, and other purposes.

No. 111. *Bed Pan*, for the use of invalids too ill to rise, or whom it would be improper to expose to a change of temperature.

No. 112. *Paper of Pins*.

No. 113. *Pieces of Filleting* for bandages.

No. 114. *Right and Left Trusses*, for hernia or rupture.

No. 115. *Paper of Pill Boxes.*

No. 116. *Gallipots.*

No. 117. *Two Quires of Paper.*—This is for putting up medicines in; procure printing demy.

No. 118. *Complete set of Cline's Splints.*

No. 119. *Enema Apparatus.*—This is useful for delicate persons, and is a far superior mode of acting on the bowels in constipation, than by aperient medicines.

No. 120. *Bleeding Porringer.*—This should hold about one pint and a half.

No. 121. *Set of Copper Scales and Weights.*—Quarter of a pound to half an ounce.

No. 122. *Box of Small Scales and Weights.*—For weighing grains, scruples, drachms, &c.

No. 123. *Wedgwood Mortar and Pestle.*—Copper or lead should be avoided in all vessels for keeping, measuring, or preparing medicines; earthenware glazed with lead must be guarded against.

No. 124. *Wedgwood Funnel.*—To aid in pouring liquids from one vessel to another.

No. 125. *Iron Mortar and Pestle.*—For preparing medicines, mixtures, pills, &c.

No. 126. *Plaster Spatula.*—For spreading plasters on leather.

No. 127. *Pair of Scissors.*—For various purposes in surgery.

No. 128. *Two Skins of Leather.*—For making plasters.

No. 129. *Pill Tile.*—For rolling pills, so as to divide them accurately.

No. 130. *Tin Bath for Children.*

No. 131. *Saucepans for Hospital Use.*—They should be made of tin and copper, and their sizes various.

No. 132. *Fifty Leeches.*—The best have six range coloured stripes all along their backs and sides, belly of steel blue colour with yellow spots; the common are light brown, their backs spotted with black, and belly a dusky brown. They should be in a jar placed in a cool place, having a piece of lawn linen tied over it. The water is better if rain, and it ought only to be changed when it is becoming foul.

#### INSTRUMENTS.

We insert a list of those ordered by government to be taken by every surgeon of an emigrant vessel, or what is termed, legally, a "passenger ship." It would be very wrong for inexperienced persons to attempt the use of instruments, as they might do injury irreparable, and inflict pains incurable. To handle the instruments of a surgeon is a branch of education only attained by study, practice, and instruction. The only instances in which it would be pardonable in a non-medical person to operate, are when death is inevitable, and there is a chance of life by bleeding; as in cases of apoplexy.

No. 1. *Scalpel.*—This is a long knife that tapers off to a point.

No. 2. *Bistouries.*—Blunt pointed and sharp.

No. 3. *Gum Lancet.*—This is either to aid in the extraction of teeth, or to lance the gums of children to facilitate the cutting of their teeth and allay pain.

No. 4. *Tenaculum*.—This is a fine hook to get hold of arteries in wounds, that they may be tied.

No. 5. *Forceps*.—These are something like tweezers, with the end roughened inside where the blades meet; they are useful in extracting splinters, &c.

No. 6. *Spatula*.—This may be of iron or silver.

No. 7. *Scissors*.—One of the blades should have a rounded end.

No. 8. *Two Probes*.

No. 9. *Silver Director*.

No. 10. *Caustic Case*.—This should be of silver.

No. 11. *Curved Needles*.—These ought to be of different sizes, and two of each.

No. 12. *Four Lancets in Case*.—For the purposes of bleeding and opening abscesses.

No. 13. *Case of Tooth Instruments*.—There should be a pair of forceps for children as well as for adults, also two key instruments, for the old and the young.

No. 14. *Midwifery Forceps*.

No. 15. *Trachea Tube*.

No. 16. *Set of Silver and Gum Elastic Catheters*.—Female catheter and some bougies.

No. 17. *Amputating Knife*.

No. 18. *Catlin*.

No. 19. *Amputating Saw*.

No. 20. *Hey's Saw*.

No. 21. *Tourniquet*.

No. 22. *Cupping Apparatus*.—In cases of emergency when the apparatus is not to be had, a teacup or a glass may have paper burnt into it until the air is highly rarified, then apply it quickly to the skin, after the flesh has risen, wound it with a sharp knife or razor, apply the cup again and the purpose may be answered. It will be seen that it acts in a similar manner to that when children throw a piece of lighted paper on some water in a saucer and instantly cover it with a cup. As the paper is burnt, the water is sucked under the cup.

No. 23. *Silk*—of different sizes for ligatures and sutures.

No. 24. *Trocar*.

No. 25. *Canula*.

No. 26. *Trephine*.

No. 27. *Elevator*.

No. 28. *Craniotomy Forceps*.

No. 29. *Perforator*.

No. 30. *Blunt Hook*.

## FAMILY MEDICINE CHEST.

PARTICULARLY NOTE THE DOSES ARE FOR ADULTS. SEE PROPORTIONATE DOSES PAGE 23.

HAVING given the particulars of the medicine as to quantity, doses, and its nature, as ordered by Government, and considered necessary for those to possess who have charge of the health of a hundred persons, we proceed to simplify the affair, and give such a selection of drugs as a family living at a distance from medical aid and druggists' shops, or even private families, for cases of emergency, ought always to have at command. Some constitutional habits require peculiar medicines, and therefore they must be selected accordingly. As we have before stated a small assortment, costing about ten shillings, is sufficient for a healthy family, having healthful employment, enjoying good air, and moderate exercise.

Quantity.	Name.	Quantity.	Name.
1 quart	Spirits of wine	4 oz.	Wax, white
1 pint	_____ turpentine	1 pint	Linseed oil
$\frac{1}{4}$ pint	_____ hartshorn	$\frac{1}{4}$ lb.	Spermaceti ointment
2 oz.	Tincture of opium	3 yd.	Sticking plaster
$\frac{1}{4}$ oz.	Powder _____	1 lb.	Camomile flowers
4 oz.	_____ rhubarb	28 in no.	Poppy heads
4 oz.	_____ gum	4 lb.	Linseed meal
1 oz.	Sulphate of copper	2 lb.	Unadulterated mustard
2 lb.	_____ of magnesia or Epsom salts	1 pint	Sweet oil
4 oz.	Sulphate of zinc	2 lb.	Treacle
2 <sup>o</sup> oz.	Carbonate of magnesia	$\frac{1}{2}$ pint	Opodeldoc
2 oz.	Oxide of zinc	4 oz.	Gum camphor, in bottle
2 oz.	Calomel	1 quart	Good vinegar, strongest
1 oz.	Nitric acid	$\frac{1}{2}$ yard	Spongio piline, for poultices
2 oz.	Sulphuric acid or oil of vitriol, in stoppered bottle	4 oz.	Æther, in stopper bottle
4 oz.	Sugar of lead	8 oz.	Nitric æther or sweet spi- rit of nitre
1 pint	Solution of chlorinated soda	1 lb.	Castor oil
1 pint	Solution of chlorinated lime	1 lb.	Tincture rhubarb
$\frac{1}{2}$ oz.	Lunar caustic	1 lb.	_____ of senna
3 oz.	Tartrate of soda for Seid- litz powders	1 lb.	Confection of senna
2 lb.	Sulphur	$\frac{1}{2}$ lb.	Tincture of lavender
4 oz.	Basilicon ointment	$\frac{1}{4}$ lb.	_____ of iron
1 oz.	Nitrate of mercury, or citron ointment	1 oz.	Tartarised antimony, or tartar emetic
2 oz.	Powdered galls	8 oz.	Tincture of camphor, or paregoric elixir
2 oz.	Red precipitate ointment	$\frac{1}{4}$ oz.	Oil of cloves
2 oz.	Spanish fly plaster	1 oz.	Oil of peppermint
		8 oz.	Ipecacuanha wine
		4 oz.	Iodide of potash
		1 dhm.	Croton oil
		1 lb.	Nitrate of potash

Quantity.	Name.	Quantity.	Name.
$\frac{1}{4}$ oz.	Blue pill	2 oz.	Jalap in powder
1 lb.	Carbonate of soda	1 lb.	Citric acid, to use in place of lemon juice, and for making effervescing drinks
$\frac{1}{2}$ oz.	Sulphate of quinine		Eau de Cologne
1 doz.	Aloes pills		Glass stoppered bottles to hold the fluids and pow- ders
4 doz.	Pills of powdered rhubarb		Small scales for grains, &c.
4 doz.	Myrrh pills		Graduated measure for drops
1 oz.	Collodion		Graduated measure for ounces
2 lb.	Cod liver oil		Graduated Dutch tile for rolling pills
4 oz.	Wine of colchicum		Small palette knife or spa- tula
4 oz.	Aloes		A few thin smooth pieces of board
4 oz.	Ammonia, carbonate of		An India rubber sling for the arm
4 oz.	——— muriate of, or sal ammoniac		Lint
2 oz.	Aromatic confection		Strips of linen for bandages
2 oz.	Compound chalk powder		Tape and corks
4 oz.	Extract of sarsaparilla		
2 oz.	Extract of colocynth comp. in powder		
1 oz.	Extract of henbane		
8 oz.	Carbonate of iron		
2 oz.	Sulphate of iron		
1 oz.	Scammony, compound in powder		
2 oz.	Mercury and chalk, or grey powder		

QUALITIES AND USES OF SOME OF THE MEDICINES GIVEN IN THE FAMILY  
MEDICINE CHEST NOT SPECIALLY REFERRED TO IN THE GOVERNMENT  
MEDICINE CHEST.

**ALOES** is one of the very best purgative medicines we possess; taken in small doses it acts as a tonic to the alimentary canal, assisting the digestive process, strengthening the muscular fibres, and promoting the secretion, especially of the liver. It is therefore well fitted for costiveness, with a scanty secretion of the bile, and for a torpid state of the large intestines. Aloes should not be given in pregnancy, nor in piles or stranguery, but in loss of appetite, with indigestion and costiveness depending on a debilitated condition of the digestive organs, a deficiency of bile, or a sluggish condition of the large intestines, particularly in studious persons, or in those whose occupations are sedentary, this medicine will be found most useful. In females with a torpid state of the bowels, or to promote the customary discharge, or as an efficacious remedy in *thread-worm*, aloes may be given. It is usually administered in pills of from five to ten or twenty grains, as a dose; an excellent pill is made for general use by taking one drachm of aloes, half-a-drachm of extract of gentian, and twelve drops of oil of cloves, beaten together with a little syrup or water, and divided into eighteen pills; two or three may be taken for a dose. The aloes and myrrh pill, or Rufus's pill as it was formerly called, is another good pill for females.

**ASSAFŒTIDA.**—The gum of a tree met with in warm climates.—An excellent stimulant, expectorant, antispasmodic, given in hysterical

complaints, asthma, windy colic, worms, &c. Dose, from two to five grains, in the form of a pill.

**CAMPHOR, COMPOUND TINCTURE OF.**—Paregoric Elixir.—Is an old and valuable family preparation, its active ingredients being camphor and opium. It is principally used as a cough medicine, as it soothes and allays, if without any symptoms of inflammation. It also diminishes the sensibility of the bronchial tube to the influence of cold air, checks expectoration, and allays the spasmodic cough. The dose is from one tea spoonful to three or four, given in camphor water, or *whey*, at bed time, and once or twice during the day.

**CAMPHOR WATER.**—Or, as it is called in America, Camphor Julep.—Is easily prepared, by putting a lump of camphor into a bottle of water, and allowing it to stand for a few days, the water then becomes saturated with it; sugar also assists in its diffusion through water. *This* forms an excellent vehicle for the administration of all fever medicines.

**CARRAWAY-SEEDS** deserve to be mentioned on account of their grateful effect on the stomachs of those suffering from indigestion; they form a palatable and wholesome addition to the invalid's bread or biscuit.

**PEPPERS** of all kinds are valuable as well as palatable additions to the articles of food, promoting digestion directly by their action as stimulants, and indirectly as agreeable condiments. The various spices seem to be more important in warm climates, or under circumstances calculated to relax and depress the powers of life. They all depend for their effects on the presence of peculiar essential and volatile oils. The plants which yield them are all the growth of warm countries.

**COD LIVER OIL.**—This oil is generally procured from the liver of the cod, but is contained in the livers of most fish, and may be extracted by boiling, after which it is collected and carefully filtered through flannel bags; the best oil is made without boiling, by submitting the livers to a gentle heat and pressure. This is a remedy much used at the present day, although it was first tried with much success by Dr. Percival, in 1782, and also by Dr. Bardsley, in 1807, in rheumatism. It is now recommended particularly in all wasting diseases, great emaciation, in slow decay, such as occurs in consumption, with a daily loss of strength; if properly persevered in, it will arrest the progress of the disease; the result of an extended trial of this medicine, at the hospital for consumptive patients, proves this fact; in the last report it appears that 70 per cent. gained strength and improved in health rapidly whilst taking the cod liver oil. In many cases the average increase was from a pound to two pounds weekly, during several weeks. In some cases a most remarkable and rapid increase of weight took place. In others, the disease appeared arrested, although no increase of weight occurred, and comparatively few of such cases have returned to the hospital, thereby inducing the belief that the good effect was permanent, and that cod liver oil possesses the property of controlling and arresting the disease known as consumption. For emaciation or wasting in children, scrofula, enlargement of the glands, and rickets, we here possess a remedy, unexceptionable in its administration to most patients, and such as none other can equally effect; and at the same time it supplies the body with a means of resisting many diseases. In rheumatism that has existed for a long time, where the muscles and tendons are rigid, and the joints stiff,

it may be applied outwardly as well as taken internally. In chalky gout, and in long standing skin diseases, it is said to be very beneficial. At the commencement of its use it is liable to create a feeling of sickness, and a disagreeable rising, but when habit has surmounted the first repugnance, these effects cease, and most persons are disposed to look for it as for food. Dose for an adult, a table spoonful two or three times a day. For a child, a tea spoonful, night and morning; Dr. Bardsley usually gave it in a little warm beer; a little orange wine, or syrup, renders it palatable. Its use requires to be persevered in during many months.

*Gun Cotton* dissolved in *Æther* forms the solution known as *COLLODION*, which is an excellent application to paint with a small brush over cuts or scratches. Applied with care and very lightly over the face in small pox, just before the pox gets to the height, it will prevent the unsightly scars remaining to the annoyance and disfigurement of the sufferer.

**LAVENDER, COMPOUND TINCTURE OF.**—Or Red Lavender drops.—Is much employed as a stimulant, cordial, and stomachic, to relieve uneasiness in the stomach, wind, low spirits, languor, and faintness. This is a favourite remedy with hysterical persons. Dose, half a tea spoonful to two, taken in water, or on sugar.

**SARSAPARILLA** grows in most warm climates; it is the root sliced that is used in medicine. It is a powerful alterative and restorative; and has long enjoyed the reputation of being a powerful medicine in syphilis, in scrofula, and chronic rheumatism. It is taken with a few drops of dilute nitric acid, or a few grains of iodide of potash. The dose of the simple decoction is a tea cupful three times a day; of the extract, from ten to twenty grains dissolved in water.

**SHIP-BISCUIT** should be made of flour, water, and a little salt only; the mass requires to be well kneaded, and the baking done perfectly, and then carefully preserved from damp to prevent them becoming sour; it then forms one of the best articles of food for children, and those who suffer from indigestion, and may be kept for any length of time.

**SPONGIO PILINE** is a new and excellent substitute for the uncomfortable and often badly-made poultice. It is made of small pieces of sponge and felt cloth, held together by a coating of India rubber varnish on one side; it merely requires to be immersed in hot water, and applied hot to the wound or ulcer; it must be removed every three hours, and washed in hot water.

**VALERIAN.**—The root of this plant, which grows wild nearly all over the world, is used in medicine as a tonic, antispasmodic, &c., and is given in doses of ten to sixty grains, two or three times a day, in cases of hysteria, epilepsy, and the suppression of female evacuations. It is also given with bark in intermittent fevers.

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**DISTILLATION.**—Fig. 3 represents a small apparatus that may be made of common tin, and will be found most useful for the distillation of seawater, or, indeed, any kind of water in times of scarcity.

Distillation is very generally employed for the separation of a volatile body from other substances that are not volatile, or only partially so.

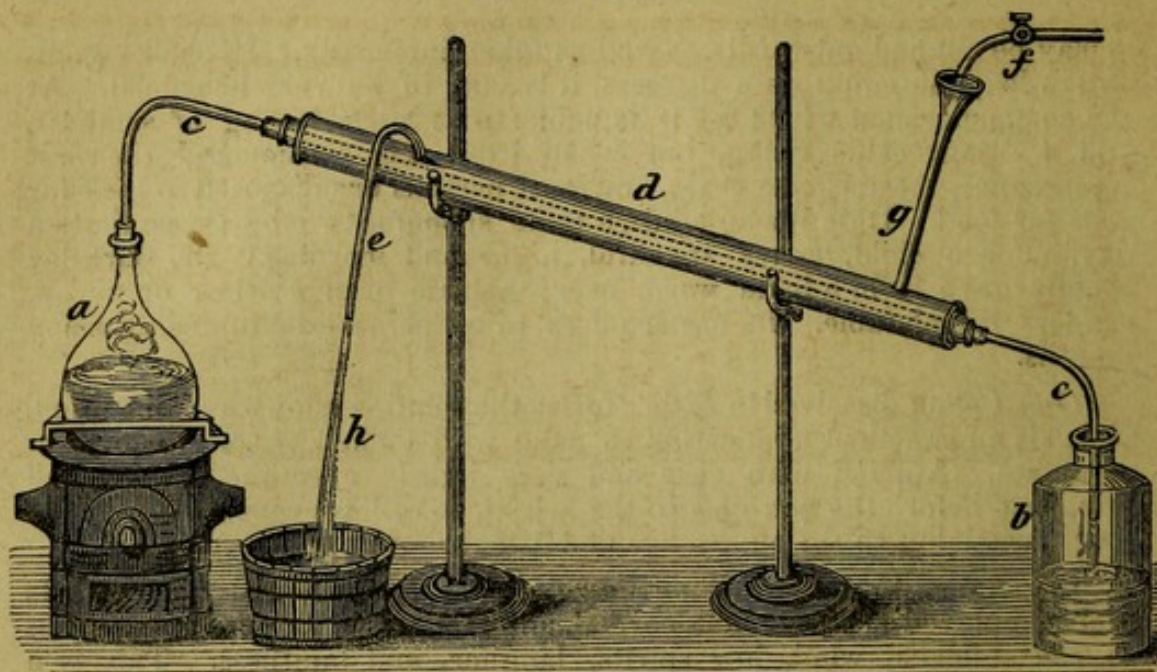


FIG. 3. APPARATUS FOR DISTILLING WATER.

For the distillation of water, spirit, &c., the operation may be conveniently carried on in such an apparatus as this. The vapour from the large vessel, *a*, made of tin or earthenware, over the furnace, or placed over a common fire, passes into the long tube, *c c*, which is encased in a wider one of porcelain, clay, tin, or zinc, *d e*. The space between the two tubes is filled with cold water, which is introduced through the funnel and tube, *f g*, whilst the warm water flows out from the tube, *e*. By such an arrangement the vapour is perfectly condensed, and may be collected in the receiver, *b*. Pure water or spirit will be the result.

### THE APOTHECARY'S SHOP.

To render this part of our work as complete as possible, we insert a list of drugs, such as any medical man would consider necessary on commencing his profession. The *doses* in which each medicine should be taken are added, and so fearful are we that the helpless *babe* may be injured by parties not practised in administering medicines, the dose of each drug for them is distinctly stated. The common *vehicles* in which medicines are mingled are given, that as near an approach to its qualities may be resorted to. When necessary to have medicines *repeated*, it is noted down. The principal *cases*, to which each drug is considered applicable, are named; and the retail London *price*, per pound or pint, at the most respectable shops, where the highest charges are made, but the best quality supplied. Apothecaries' Hall is generally preferred for finest quality drugs, and they are no doubt of a more genuine character.

## THE APOTHECARY'S SHOP.

Medicines.	Diseases proper for.	Adults.	Children from Two to Four Years.	Vehicle and Repetition.	Retail price per lb. or pt. s. d.
<i>Æther</i> .....	Asthma, cramp, and flatulency .....	30 drops to 1 drach.	8 to 10 drops .....	Camphorated julep .....	9 0
<i>Æthiop's mineral</i> .....	Scald head, cutaneous eruptions .....	15 to 30 grains .....	5 to 10 grains .....	Honey, twice a day .....	4 0
Almonds, emulsion of .....	Cough .....	wine glassful .....	1 to 2 table spoonfuls .....	Every 2 or 3 hours .....	1 0
" oil of .....	Ditto .....	1 to 3 drachms .....	30 to 60 drops .....	Honey, ditto .....	2 0
Aloes, socotrine .....	Obstinate costiveness .....	10 to 20 grains .....	3 to 6 grains .....	Pills or powder .....	6 6
" tincture of .....	Ditto, and worms .....	3 to 6 drachms .....	1 to 2 drachms .....	Water .....	3 6
" watery extract of .....	Costiveness .....	10 to 15 grains .....	3 to 4 grains .....	Pills, occasionally .....	0 0
Alum powder .....	Flooding, chronic dysentery .....	3 to 10 grains .....	.....	Ditto, 3 times a day .....	0 6
Ammoniac gum .....	Chronic cough, asthma, &c. .....	10 to 15 grains .....	.....	Pills, 3 a day .....	7 0
" milk of .....	Ditto, ditto .....	3 table spoonfuls .....	1 dessert spoonful .....	2 or 3 times a day .....	1 9
Antimonial powder .....	Inflammatory fever, pleurisy, &c. .....	3 to 5 grains .....	1 to 3 grains .....	Honey .....	8 6
" wine, as emetic. ....	.....	2 to 8 drachms .....	1 to 2 drachms .....	Water .....	3 6
Ditto, as an alterative .....	St. Anthony's fire, cutaneous eruptions .....	12 to 20 drops .....	4 to 8 drops .....	Barley water, twice a day .....	3 6
Aromatic confection .....	Purging, cramp in stomach .....	15 to 30 grains .....	4 to 8 grains .....	Cin. water, 2 or 3 tms. a day .....	10 6
Assafoetida .....	Hysterics, asthma, hooping cough .....	.....	.....	.....	1 0
" tincture of .....	Ditto, ditto .....	30 to 60 drops .....	8 to 12 drops .....	Water, ditto .....	6 0
" volatile spirit of .....	Ditto, and fainting .....	20 to 40 drops .....	4 to 8 drops .....	Ditto, ditto .....	6 0
" pill .....	Ditto .....	10 to 15 grains .....	.....	Pills, twice a day .....	16 0
Balsam of copaiva .....	Whites, gleet, gravel .....	20 to 40 drops .....	6 to 8 drops .....	Honey, ditto .....	4 6
" of Peru .....	Flatulence, asthma, gleet .....	5 to 10 drops .....	.....	Ditto, ditto .....	16 0
" Tolu, tincture of .....	Ditto, and chronic cough .....	30 to 60 drops .....	.....	Ditto, or water ditto .....	6 0
Bark, Peruvian, powder .....	Ague, indigestion, weakness .....	20 to 60 grains .....	6 to 10 grains .....	Mint water, 4 or 6 times a day .....	6 6
" decoction of .....	Relaxation and weakness .....	3 to 4 table spoonfuls .....	1 to 2 table spoonfuls .....	3 or 4 times a day .....	1 4
" tincture of .....	Ditto, ditto .....	2 to 4 drachms .....	40 to 60 drops .....	Water, ditto .....	4 6
Buchu leaves .....	Irritation in bladder, prostate gland, &c. ....	wine glassful .....	.....	.....	6 6
" infusion of .....	Ditto, ditto .....	.....	.....	.....	.....
" tincture of .....	Ditto .....	2 to 3 tea spoonfuls .....	.....	3 times a day in decoction of marsh-mallow root .....	6 6
Calomel .....	Venereal disease, foul ulcers, &c. ....	1 to 2 grains .....	1 to 1 grain .....	Pill, twice a day .....	8 0
Camphor .....	Hooping cough, convulsive fits .....	2 to 4 grains .....	1 to 2 grains .....	Ditto, ditto .....	4 0
" julep of .....	Nervous fever, ditto .....	2 to 4 table spoonfuls .....	3 to 4 drachms .....	3 times a day .....	0 8
Cardamom seeds, tincture of .....	Indigestion, flatulence .....	2 to 3 drachms .....	.....	Water, ditto .....	4 0
" comp. ditto .....	Ditto .....	2 to 4 drachms .....	.....	Camomile tea, ditto .....	4 0
Castor oil, cold drawn .....	Colic costiveness .....	4 to 8 drachms .....	1 to 2 drachms .....	Mint water .....	2 6
Cascarilla .....	Indigestion, weakness .....	.....	.....	.....	4 0
" tincture of .....	.....	1 to 3 drachms .....	20 to 30 drops .....	Water, ditto .....	3 6
Catechu, tincture of .....	Chronic looseness, flooding .....	1 to 2 tea spoonfuls .....	10 to 20 drops .....	Mint water, ditto .....	4 0
Chalk, prepared .....	Looseness, acidity .....	10 to 15 grains .....	4 to 6 grains .....	Ditto, 4 times a day .....	1 0
Camomile flowers .....	.....	.....	.....	.....	.....
" powder of .....	Indigestion, worms, &c. ....	10 to 20 grains .....	6 to 10 grains .....	Ditto, 2 or 3 times a day .....	4 6
Cinnamon powder .....	Indigestion, flatulence, &c. ....	5 to 10 grains .....	2 to 4 grains .....	Water, 3 times a day .....	10 0
" essence of .....	Flatulence, colicky pains .....	3 to 10 drops .....	1 drop .....	Water .....	60 0
" tincture of .....	Looseness .....	3 to 4 drachms .....	20 to 30 drops .....	Ditto .....	4 6

Medicines.	Diseases proper for.	Adults.	Children from Two to Four Years.	Vehicle and Repetition.	Retail price per lb. or pt. s. d.
Columbo powder.....	Indigestion, chronic looseness.....	10 to 20 grains.....	3 to 5 grains.....	Mint water, 3 times a day ..	4 0
" tincture of .....	Ditto, ditto .....	1 to 3 drachms.....	10 to 20 drops .....	Ditto, ditto .....	3 6
Crabs' claws, prepared .....	Purging, heartburn .....	15 to 20 grains.....	5 to 10 grains .....	Ditto, every 3 or 4 hours .....	2 0
Creaceous pow., with opium .....	Obstinate purging and dysentery .....	10 to 20 grains.....	4 to 6 grains .....	Ditto, ditto .....	10 0
Contrainerva powder .....	Recent colds, rheumatism.....	10 to 40 grains.....	6 to 10 grains .....	Water, every 3 or four hours .....	6 6
Cod liver oil .....	In debility, strumous children, cough, consumption, &c.	1 table spoonful ..	2 tea spoonfuls ..	Twice a day, in orange wine, or warm beer.....	1 6
Colchicum seeds, extract ..	Rheumatism, gout .....	1 grain .....	.....	Pill, twice a day .....	40 0
" tincture ..	Ditto, ditto .....	1 tea spoonful ..	.....	Water, twice a day .....	4 6
Colocynth pill, compound..	Costiveness .....	10 to 20 grains.....	4 to 8 grains.....	Occasionally .....	30 0
" extract, comp..	Ditto .....	10 to 15 grains.....	4 to 6 grains .....	Ditto .....	30 0
" powder .....	Ditto .....	Ditto .....	.....	Ditto .....	11 0
Cream of tartar .....	Inflammatory eruptions of the skin, &c.	1 to 4 drachms.....	20 to 30 grains.....	Honey, every morning .....	1 0
Cubebs, ground .....	Fluor albus, gleet, &c. ....	15 to 30 grains .....	.....	3 times a day, in water .....	4 0
Dover's powder .....	Rheumatism, recent colds, &c. ....	10 to 20 grains .....	3 to 6 grains .....	In water .....	21 0
Elixir of vitriol.....	Indigestion, flatulence .....	10 to 20 drops .....	3 to 5 drops .....	Ditto, twice a day .....	4 0
Electuary, lenitive .....	Costiveness .....	2 to 3 drachms.....	1 to 1 drachm .....	Occasionally .....	2 0
Epsom salts .....	Ditto .....	4 to 8 drachms.....	1 drachm .....	Mint water .....	0 10
Foxglove, powder of .....	Dropsy .....	1 to 2 grains.....	.....	Ditto, twice a day .....	6 6
" tincture of .....	Consumption, palpitation .....	10 to 40 drops .....	.....	Water, 3 or 4 times a day ..	4 6
Gentian, tincture of.....	Indigestion, flatulence, &c. ....	1 to 2 drachms.....	12 to 30 drops .....	Ditto, ditto .....	3 6
" extract of .....	Ditto, ditto .....	5 to 10 grains .....	.....	Pills, twice a day .....	9 0
Ginger powder.....	Gout, indigestion, flatulence .....	20 to 60 grains .....	.....	Water, twice a day .....	4 0
" tincture of .....	Flatulence, ditto .....	1 to 2 drachms .....	.....	Sodawater, once or twice a day ..	4 6
Gualiacum gum.....	Chronic rheumatism, gout .....	5 to 15 grains .....	.....	Pills, ditto.....	6 0
" vol. tincture of ..	Ditto .....	1 to 3 drachms .....	.....	Honey & water, 3 times a day ..	4 6
Hartshorn, spirit of.....	Hysteria, convulsions, heartburn .....	20 to 40 drops .....	5 to 8 drops .....	Water, ditto .....	2 0
Hemlock, powdered .....	Hooping-cough, cancer .....	2 to 3 grains .....	1 grain .....	Mint water, twice a day .....	6 0
" extract of .....	Ditto, ditto .....	Ditto .....	Ditto .....	Ditto, or pill, ditto.....	6 0
Hiera picra .....	Costiveness, flatulency .....	15 to 20 grains.....	4 to 6 grains .....	Mint water .....	4 0
Hoffman's anodyne, or compound spirit of .....	Nervous fever, asthma, hysterics.....	30 to 40 drops .....	6 to 10 drops.....	Ditto, twice a day .....	6 6
Jalap, powder .....	Costiveness .....	20 to 30 grains .....	4 to 6 grains.....	Mint water .....	6 6
" extract of .....	Ditto .....	10 to 15 grains.....	3 to 5 grains .....	Pills, occasionally .....	60 0
" tincture of.....	Ditto .....	2 to 4 drachms .....	.....	Mint water .....	4 6
Iodine, tincture of .....	Scrofula and wen .....	10 to 30 drops .....	.....	Decoction of mint water, two or three times a day.....	6 6
Ipecacuanha powder .....	.....	20 to 30 grains .....	5 to 10 grains .....	Water .....	12 0
" wine .....	.....	4 to 8 drachms.....	2 to 3 drachms.....	Ditto .....	3 6
Kino gum, tincture of.....	Looseness .....	2 to 3 drachms .....	15 to 20 drops .....	Mint water, 3 or 4 times a day ..	6 6
Lavender, compound spirit ..	Faintness or lowness of spirits .....	30 to 80 drops .....	10 to 20 drops .....	Water .....	4 6
Lobelia inflata, extract .....	Asthma, and winter cough .....	1 grain .....	.....	Pill, twice a day .....	50 0
" tincture.....	Ditto, ditto .....	20 to 40 drops .....	.....	Water, 2 or 3 times a day ..	6 6
" ethereal .....	Ditto, ditto .....	40 to 80 drops .....	.....	Ditto, ditto .....	10 6
Magnesia .....	Heartburn and acidity .....	20 to 40 grains .....	5 to 10 grains .....	Mint water.....	3 6

Magnesia, calcined .....	Heartburn and acidity .....	20 to 40 grains .....	5 to 10 grains .....	Mint water .....	6 0
Manna .....	Costiveness .....	4 to 8 drachms .....	1 to 2 drachms .....	Ditto or tea .....	6 6
Mercurial pill .....	Venereal disease, &c. ....	5 to 12 grains .....	2 to 4 grains .....	Pills, twice a day .....	16 0
Mercury, with chalk .....	Scald head, cutaneous eruptions .....	5 to 10 grains .....	3 to 4 grains .....	Honey, twice a day .....	6 0
Musk .....	Convulsions, locked jaw, &c. ....	5 to 20 grains .....	2 to 5 grains .....	Mint water, 3 times a day .....	100 oz.
Muriatic acid, dilute .....	Scrofula, cutaneous eruptions .....	10 to 30 drops .....	3 to 6 drops .....	Water, twice a day .....	0 8
Myrrh, powder .....	Green sickness, weakness .....	5 to 10 grains .....	2 to 4 grains .....	Mint water, ditto .....	6 6
" tincture of .....	Ditto, ditto .....	1 to 2 drachms .....	10 to 15 drops .....	Water, 2 or 3 times a day .....	4 6
Nitre, powder, purified .....	Strangury, heat of urine, fever .....	5 to 20 grains .....	2 to 4 grains .....	Barley water, ditto .....	1 0
" sweet spirit of .....	Ditto, ditto .....	20 to 60 drops .....	6 to 12 drops .....	Ditto, ditto .....	4 6
Nitric acid, dilute .....	Diabetes, scrofula .....	12 to 30 drops .....	4 to 6 drops .....	Water, ditto .....	2 0
Nutmeg, spirit of .....	Flatulence, cramp in stomach .....	4 to 6 drachms .....	1 to 2 drachms .....	Ditto, ditto .....	4 6
Opiate confection .....	Purging, colic, &c. ....	10 to 20 grains .....	3 to 6 grains .....	Bolus .....	9 0
Opium, purified .....	Restlessness, acute pains, asthma .....	1 to 2 grains .....	.....	Pill .....	39 0
" tincture of .....	Ditto, ditto .....	10 to 30 drops .....	3 to 5 drops .....	Mint water .....	4 6
Oyster-shells, prep. ....	Looseness, acid in stomach, &c. ....	10 to 20 grains .....	5 to 8 grains .....	Ditto, 4 times a day .....	2 0
Paregoric, elixir .....	Cough, asthma, cramp .....	1 to 2 drachms .....	15 to 20 drops .....	Barley water, ditto .....	3 6
Peppermint, essence of .....	Colicky pains, flatulency, &c. ....	3 to 12 drops .....	1 to 2 drops .....	Water .....	16 0
Poppies (white), extract of .....	Spasms, acute pain, cough .....	5 to 10 grains .....	1 to 2 grains .....	Pill .....	20 0
" syrup of .....	Ditto, ditto .....	2 to 4 drachms .....	1 tea spoonful .....	Water .....	2 0
Quassia, tincture of .....	Indigestion, flatulency .....	30 to 60 drops .....	10 to 12 drops .....	Ginger tea, 2 or 3 times a day .....	—
Rhatany powder .....	Ague, diabetes .....	10 to 40 grains .....	5 to 8 grains .....	Mint water, every 3 hours .....	3 6
" tincture of .....	Indigestion, relaxation, whites .....	2 to 4 drachms .....	20 to 30 drops .....	Ditto, 3 times a day .....	9 0
Rhubarb powder .....	Costiveness .....	20 to 30 grains .....	5 to 8 grains .....	Mint water .....	6 6
" tincture of .....	Ditto, colic, &c. ....	4 to 8 drachms .....	1 to 2 drachms .....	Ditto .....	18 0
Rochelle salt .....	Costiveness .....	6 to 12 drachms .....	2 to 4 drachms .....	Ditto .....	4 6
Roses, infusion of .....	Indigestion, flooding, &c. ....	1 to 2 ounces .....	3 to 4 drachms .....	2 or 3 times a day .....	2 0
" conserve of .....	Cough .....	1 to 2 drachms .....	1 drachm .....	Ditto .....	1 6
Saffron, syrup of .....	Lowness of spirits .....	2 to 3 drachms .....	1 tea spoonful .....	Water .....	12 0
Salt, Glauber's .....	Costiveness, &c. ....	6 to 12 drachms .....	1 to 2 drachms .....	Mint water .....	2 0
" Epsom, purified .....	Ditto .....	4 to 8 drachms .....	1 drachm .....	Ditto .....	0 10
" Cheltenham .....	Ditto .....	6 to 12 drachms .....	1 to 2 drachms .....	Ditto .....	0 10
" Polychrist .....	Feverish heat .....	1 to 3 drachms .....	30 to 40 grains .....	Ditto .....	4 6
" tasteless .....	Costiveness, &c. ....	6 to 12 drachms .....	1 to 2 drachms .....	Gruel or broth .....	2 0
" of tartar .....	Heartburn, rickets .....	5 to 8 grains .....	1 to 4 grains .....	Mint water .....	4 6
Sarsaparilla powder .....	Scrofula, &c. ....	20 to 60 grains .....	5 to 10 grains .....	Ditto, 2 or 3 times a day .....	1 0
" comp. decoct. of .....	Ditto .....	3 to 4 ounces .....	1 to 2 ounces .....	3 or 4 times a day .....	19 0
Scammony powder .....	Obstinate costiveness .....	10 to 20 grains .....	2 to 4 grains .....	Mint water .....	1 6
" compound .....	Ditto .....	15 to 30 grains .....	5 to 6 grains .....	Ditto .....	50 0
" comp. with calomel .....	Ditto, worms, and dropsy .....	15 to 25 grains .....	5 to 6 grains .....	Honey .....	40 0
Senna, infusion of .....	Costiveness and worms .....	2 to 3 ounces .....	3 to 4 drachms .....	Occasionally .....	1 6
" tincture of .....	Ditto and colic .....	6 to 12 drachms .....	2 to 3 drachms .....	Water .....	3 6
Soda, carbonated .....	Heartburn .....	20 to 40 grains .....	8 to 10 grains .....	Water, 2 or 3 times a day .....	1 0
Soluble tartar .....	Piles and costiveness .....	4 to 6 grains .....	1 to 2 drachms .....	Mint water .....	3 0
Spermaceti powder .....	Recent cough .....	1 to 2 drachms .....	20 to 30 grains .....	Honey, 3 or 4 times a day .....	3 6
Spirit, nitre, sweet .....	Strangury, gravel, fevers .....	20 to 60 drops .....	6 to 12 drops .....	Barley water .....	4 6
" sal volatile .....	Hysteria and fainting fits .....	Ditto .....	6 to 10 drops .....	Water .....	4 6

Medicines.	Diseases proper for.	Adults.	Children from Two to Four Years.	Vehicle and Repetition.	Retail price per lb. or pt. s. d.
Spirit, nitre, sal volat., fetid	Hysteric and fainting fits.	20 to 60 drops	5 to 10 drops	Water	4 6
Syrup of white poppies	Coughs, restless irritation, fever	2 to 4 drachms	1 tea spoonful	2 or 3 times a day	2 0
" buckthorn	Costiveness	Ditto	1 to 2 drachms	Mint water	2 0
" ginger	Flatulence, cramp in stomach	2 to 3 drachms	1 drachm	Water	2 6
" Squill powder	Dropsy, asthma, chronic cough	1 to 2 grains	$\frac{1}{2}$ to 1 grain	Pill, twice a day	6 0
" oxymel	Ditto, ditto	2 to 4 drachms	1 drachm	Mint water, ditto	2 0
" tincture	Ditto, ditto	15 to 30 drops	6 to 10 drops	Ditto, ditto	4 6
Steel, wine of	Indigestion, rickets, worms, &c.	3 to 6 drachms	1 to 2 drachms	Water, twice a day	3 6
" muriat. tincture	Ditto, ditto	10 to 30 drops	3 to 6 drops	Ditto, ditto	4 6
" salt of	Ditto, ditto	1 to 3 grains	$\frac{1}{2}$ to 1 grain	Ditto, ditto	2 6
" prepared	Ditto, ditto	10 to 40 grains	2 to 4 grains	Honey, twice a day	3 0
Sugar or acetate of lead	Bleedings internally, & in lotions exter.	1 to 5 grains	.....	Pill, two or three times a day	2 0
Sulphate of quinine	Ague, general debility	2 to 8 grains	.....	Pill, 3 or 4 times a day	18 0
Sulphur, flowers of	Cutaneous eruptions, piles, worms	1 to 2 drachms	10 to 20 grains	Honey, once a day	0 8
" milk of	Ditto, ditto	Ditto	Ditto	Ditto, ditto	1 0
Tartar emetic	.....	1 to 2 grains	$\frac{1}{4}$ to $\frac{1}{2}$ grain	Water	6 6
Tin powder	Worms	20 to 40 grains	10 to 15 grains	Honey, every morning	3 0
Tincture aloes	Costiveness, worms, green sickness	3 to 6 drachms	1 to 2 drachms	Water	3 6
" assafoetida	Hysterics, asthma, whooping-cough	30 to 60 drops	8 to 12 drops	Ditto, twice a day	6 0
" bark, Peruvian	Indigestion, weakness, &c.	2 to 4 drachms	40 to 60 drops	Water, 3 times a day	4 6
" Huxham's ditto	Ditto, ditto	Ditto	Ditto	Ditto, ditto	4 6
" benzoin, comp.	Flatulence, asthma	20 to 40 drops	6 to 8 drops	Honey	6 0
" cantharides	Whooping-cough	10 to 30 drops	6 to 8 drops	Barley water, twice a day	4 6
" cardamoms	Indigestion, flatulence	2 to 3 drachms	$\frac{1}{2}$ to 1 drachm	Camomile tea	4 0
" comp.	Ditto, ditto	2 to 4 drachms	Ditto	Ditto	4 0
" cascarella	Ditto, ditto	1 to 3 drachms	20 to 30 drops	Water	3 6
" catechu	Purgings, relaxation	1 to 2 drachms	10 to 20 drops	Mint water, 3 times a day	4 0
" columbo	Indigestion, weakness, &c.	1 to 3 drachms	10 to 20 drops	Ditto, ditto	3 6
" gentian, comp.	Ditto, flatulence	1 to 2 drachms	12 to 30 drops	Water, 3 times a day	3 6
" guaiacum, gum	Indigestion, gleet, whites, &c.	20 to 60 drops	5 to 6 drops	Honey, twice a day	4 6
" ditto, volatile	Indigestion, rheumatism, &c.	1 to 3 drachms	.....	Water, ditto	4 6
" henbane	Spasms, acute pains, &c.	20 to 60 drops	3 to 5 drops	Mint water	4 6
" hops	Nervous indigestion	1 to 2 drachms	.....	Water, 3 times a day	6 6
" jalap	Obstinate costiveness	2 to 4 drachms	1 drachm	Mint water	4 6
" myrrh	Green sickness, debility, &c.	1 to 2 drachms	10 to 15 drops	Water, 2 or 3 times a day	4 6
" opium	Spasms, acute pains, &c.	18 to 30 drops	3 to 5 drops	Mint water	4 6
" Turpentine, Venice	Gleet, fluor albus, gravel	10 to 15 grains	.....	Honey, twice a day	1 6
" spirit of	Ditto, gravel, rheumatism	15 to 20 drops	.....	Ditto, ditto	1 6
" Chio	Ditto, ditto	10 to 15 grains	.....	Ditto, ditto	8 6
" Valerian powder	Nervous headache, &c.	20 to 30 grains	6 to 8 grains	Water, 3 times a day	3 0
" tincture of	Ditto	1 to 3 drachms	.....	Ditto	4 6
" volatile	Lowness of spirits, &c.	40 to 80 drops	10 to 40 drops	Camomile tea, twice a day	4 6
" Vitriol, elixir	Indigestion, flatulence, relaxation	10 to 20 drops	3 to 5 drops	Mint water, twice a day	4 0
" Wine of colchicum	Rheumatism and gout	20 to 30 drops	.....	Ditto	4 6
" ipecacuanha	.....	4 to 8 drachms	2 to 3 drachms	Water	3 6

## MEDICAL PLANTS, ROOTS, &amp;c.

## WHEN TO BE COLLECTED, DRIED, AND STORED.

JANUARY AND FEBRUARY.—The roots considered to be now fit for gathering are the dandelion, &c.—The wolfsbane, with purple flowers, the roots and leaves of which are used externally for rheumatism and gout, by rubbing the parts affected with them, &c.—Mosses are collected. The crocus blossoms. The petals, when gathered and dried, are com-



FIG. 4. THE CROCUS (SATIVUS, OR MEADOW SAFFRON).

monly known as saffron. No flower is so sensible of the effects of light and heat as the crocus; its petals expand during the day and close at night. But they will expand at night under the light of a lamp or candle; or, if placed within the influence of the heat of a fire, though shaded from the light of it, the petals open in such circumstances as readily as they do in bright light.

MARCH.—Coltsfoot flowers and leaves are in season. They form the basis of most of the British herb tobaccos, they are also used externally to diminish inflammation; an infusion of the dried herb is much employed

as an expectorant in coughs, and shortness of breath, as tea; or the steam is inhaled for the same purpose. A strong decoction of them is useful in scrofulous cases, and the juice, drunk liberally, is serviceable in gravel.

APRIL.—Violet flowers may be gathered for making syrup, and for drying; these possess few, if any, medicinal virtues.—Scurvy grasses may be obtained from muddy places near the sea, at this season of the year. Those herbs abound in valuable principles, which are dissipated by heat—they are useful in scorbutic affections. Dose of their juice from two to four or six table spoonfuls. One curious plant, which is found only at this season, is the toothwort (*Lathræa squamaria*). It grows on the roots of trees, and has a yellow stalk, clothed with white tooth-like scales instead of leaves, and bearing very pale purple flowers. Another curious plant, which is in perfection at this season, is a kind of liverwort (*Marchantia*



FIG. 5. MARCHANTIA HEMISPHERICA.

*hemisphærica*), which, in fruit, looks like a number of little green toadstools growing out of flat leaves, and which is generally found with the common liverwort—on the earth in flower-pots, on the banks of ditches, or in the moist crevices of rocks.

MAY.—Horseradish, a powerful antiscorbutic remedy, and useful in rheumatic affections, dropsies, paralysis, and diseases of the skin.—Cowslips are used to flavour wines, and are said to possess sedative or composing properties.

JUNE.—Wormwood tops possess bitter and stomachic properties, excite the appetite, promote digestion, and are sometimes given to expel worms from the body. It is usually given in the form of an infusion.—Foxglove leaves, deadly nightshade, hemlock, henbane, lettuce, are to be obtained at this season of the year, for the purposes of making extracts and tinctures, and also for drying, that they may be powdered.—Elder leaves during this and part of next month, for preserving and for making elder flower water.—Flowers of the red poppy should be gathered in dry

weather for making the syrup.—Flowers of roses are in season for making rose water, and for drying the petals; also for making elder ointment and green oil, the flowers are for the water.—Rosemary, for making the oil said to possess the power of promoting the growth of the *hair*.

**JULY.**—Colchicum seeds are collected in this month or the end of June, for the purpose of making the wine or tincture, a remedy employed in the cure of rheumatic affections, &c.—Poppyheads, for making the extract and syrup, should be gathered before they are quite ripe.—Peppermint, Pennyroyal, and Spearmint, for making the waters of each.—Common Balm, Hyssop, Horehound, and Garlic.

**AUGUST.**—Camomile flowers; the warm infusion is used externally as a fomentation, and internally to promote vomiting; the cold infusion, or the extract, is taken as a tonic and stomachic in indigestion accompanied with loss of appetite.—The hop plant grows wild in many parts of the country, and may be collected at this period for medicinal use.—The fruit of barberry (ripe); when prepared as a conserve, forms with water an agreeable and refreshing beverage.—Marshmallow-root is in the best condition for yielding the mucilage on which its medical efficacy depends in coughs, colds, &c.—The fruit of the mulberry is coming to maturity, and should be used for preserve or syrup, making a good drink in fevers, &c.—The berry of Buckthorn is found wild in woods and hedges, the unripe berries are used as a yellow dye, the juice of the ripe fruit forms sap-green, and it also, when boiled with sugar, forms an excellent purgative syrup for children. All these preparations should be made about this time.—Poppyheads become ripe, and may be still gathered.—Stramonium, or the thorn-apple herb, is now fit for collecting; it is used as a herb tobacco in asthma, &c.

**SEPTEMBER.**—Hips, the fruit of the dogrose, collected from the hedges, boiled with sugar until thick, makes the conserve of hips.—Elder berries should be collected for wine, &c.—The root of Dandelion is now filled with a white milky juice, which, when dried or thickened, forms a bitter and efficacious extract, much used in liver and urinary complaints.—Liquorice root, Valerian, Orris, Sweetflag, &c., may be dug up and dried.

**OCTOBER.**—This is the month for collecting barks of trees. Some fruits may still be found.—Saffron (the stamens of the crocus) may be gathered during this month.—Quince seeds, Juniper berries, and Dandelion root may still be found in a good state for use.

**NOVEMBER AND DECEMBER.**—The stems of the woody Nightshade, for making the decoction, are collected.—The tops of Savine, for making the ointment, which is useful to dress blisters with, when it is wished to keep them open.

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## MEDICAL CASES, THEIR SYMPTOMS AND TREATMENT.

(THE DOSES ARE FOR ADULTS.)

*Absorbents, or Antacids*—Are medicines administered to counteract acidity in the stomach or intestinal canal. In most cases, emetics and aperients are given previous to their being taken, they are:

Ammonia, carbonate, in doses from	5 grains to 1 scruple.
Ammonia, liquor of . . . . .	10 to 20 drops.
Ammonia, aromatic spirit of . . . . .	20 to 30 drops.
Lime water . . . . .	2 ounces to half a pint.
Magnesia, calcined . . . . .	20 to 40 grains.
Magnesia, carbonate of . . . . .	Half to 2 drachms.
Potass, carbonate of . . . . .	10 grains to half a drachm.
Potass, solution of . . . . .	10 drops to half a drachm.
Soda, carbonate of . . . . .	10 grains to half a drachm.
Soda water . . . . .	Half a pint.

*Ague*.—This intermittent fever occurs every twenty-four hours, every forty-eight hours, or every seventy-two hours; it has three stages,—1. The cold, which is accompanied by convulsive shaking. 2. The hot, with pains in the head; and 3. The sweating, when perspiration takes place. During the first stage, bathe the feet in warm water, if possible procure a warm bath, give warm drinks, cordials to promote perspiration, æther or opiates, and if severe, an emetic. In the second stage, keep giving as in the first, and cold acidulated liquids; if there be congestion of blood to the head or delirium, leeches or cupping must be applied to the temples, and no opiates administered. During the time between the stages, give bark and wine, and aromatics; if this occasions purging, give opiates and astringents, if costiveness, rhubarb. If the bark produces a feeling of sickness, then change it for quinine, in full doses.

*Alteratives*—Are medicines that effect a gradual cure and do not affect the bowels in any unusual manner. They are, antimonials, mercurials, hemlock, guaiacum, sarsaparilla, sassafras, tar; sulphur, vapour, sulphuric and chlorine baths. They are useless if they act violently on the system.

The usual way in which a mercurial alterative for cutaneous diseases, indigestion, &c., is given is in the form called Plummer's pill, thus:

Calomel and antimony, of each . . . . .	1 drachm.
Guaiacum, powder . . . . .	2 drachms.
Treacle . . . . .	Sufficient quantity to mix and

make into pills of 5 grains weight in each, to be taken night and morning.

*Anodynes*—are narcotic, sedative, and soporific. Sometimes a particular narcotic will have no effect, but on changing to another the desired effect is produced. Examples and combinations in which they may be used:—

### A PILL.

Purified opium . . . . .	4 grains.
Extract of henbane . . . . .	15 grains.
Extract of lettuce . . . . .	10 grains.

Mix and make into six pills, take one at bed time in long continued cough.

## DRAUGHT.

Camphor water	. . .	1 ounce.
Compound spirit of æther	. . .	Half a drachm.
Tincture of opium	. . .	10 drops.
Syrup of poppies	. . .	1 drachm.

Mix and take at bed time in influenza, cold, cough, bronchitis, &c.

## CLYSTER.

Tincture of opium	. . .	1 drachm.
Infusion of linseed	. . .	6 ounces.—Mix.

## POULTICE.

Dried hemlock leaves	. . .	2 ounces.
Crumb of bread	. . .	6 ounces.
Water	. . .	Half a pint.

Boil together; used in foul ulcers, &c.

## DRAUGHT.

Tincture of opium	. . .	15 drops.
Syrup of poppies	. . .	2 drachms.
Spirit of Cinnamon	. . .	1 drachm.
Water	. . .	One ounce.

This is taken on the approach of the warm stage in ague and intermittent fevers.

## HENBANE PILLS.

Extract of henbane	. . .	Half a scruple.
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Powdered liquorice root . . . Sufficient quantity to make ten pills, give one or two to procure sleep, ease pain, and allay irritation arising from a tickling cough.

Anodynes should be most carefully administered to children, and only in cases of emergency, when the aid of a medical man cannot be had. A much smaller dose in proportion affects children than adults.

*Antacids.*—Are principally used for acidity of the stomach, with tonics for heartburn; in many cases of female irregularities, accompanied with heartburn; but their chief application is in diarrhœa and indigestion.

The doses in combination are:—

## FOR HEARTBURN.

Carbonate of magnesia	. . .	10 grains.
Carbonate of soda	. . .	5 grains.
Ginger in powder	. . .	5 grains.
Sugar or liquorice in powder	. . .	15 grains.

Take as a powder two or three times during the day.

## DIARRHŒA IN INFANTS.

Carbonate of magnesia	. . .	$\frac{1}{2}$ a drachm.
Rhubarb, in powder	. . .	20 grains.
Dill water	. . .	3 ounces.
Aromatic spirit of ammonia	. . .	30 drops.
Sugar	. . .	A tea spoonful.

Mix: Two tea spoonfuls two or three times a day.

## IN DIARRHŒA FROM ACIDITY, AND DYSENTERY.

Comp. pow. of chalk, with opium	20 grains.
Extract of catechu	5 grains.

Take as a powder after each liquid stool.

## ANTACID MIXTURE.

Lime water	. . . . .	1 ounce.
Milk	. . . . .	1 ounce.—Mix.

This allays irritation of the stomach.

## FOR GRAVEL, HEARTBURN, AND DIARRHŒA.

Liquor of potass	. . . . .	2 drachms.
Lime water	. . . . .	6 ounces.

A table spoonful or two occasionally in beef tea.

*Anthelmintics.*—These are medicines for worms, given on an empty stomach with treacle; those that do not purge ought to have some aperient given after them:

## FOR TAPE WORMS.—WORMS RESEMBLING THOSE ON THE EARTH.

Gamboge	. . . . .	5 grains.
Calomel	. . . . .	5 grains.
Treacle	. . . . .	A sufficient quantity.

Make a bolus to take on awaking in the morning.

## FOR MAW WORMS—LITTLE WHITE ONES.

Common salt	. . . . .	2 ounces.
Cochineal	. . . . .	2 scruples.

A powder. Take half a drachm on awaking in the morning, in camomile tea.

## FOR THE SAME AS A CLYSTER.

Socotrine aloes	. . . . .	10 grains.
Hard soap	. . . . .	$\frac{1}{2}$ a drachm.
Alum water	. . . . .	2 pints.

*Antiseptics.*—Prevent Putrefaction. They are the tonics, as Peruvian bark, camomile, &c., which can be generally used for those of relaxed habits. The refrigerating, as acids, given to the young, strong, and plethoric. The stimulating, as wine and alcohol, for the old and debilitated. The antispasmodic, as assafœtida and camphor, for the irritable and hysterical.

## ELECTUARY IN SCURVY.

Bark, powdered	. . . . .	Half an ounce.
Aromatic confection	. . . . .	Half an ounce.
Syrup of oranges	. . . . .	Sufficient quantity.

Mix, take the size of a nutmeg every quarter of an hour, in a glass of Seidlitz or soda water.

## SCURVY IN THE GUMS.

Infusion of roses	. . . . .	6 drachms.
Alum	. . . . .	Half a drachm.
Honey	. . . . .	1 drachm.

Mix and make into a gargle.

## GARGLE IN PUTRID SORE THROAT.

Decoction of bark	. . . . .	6 ounces.
Muriatic acid	. . . . .	Half a drachm.
Tincture of orange peel	. . . . .	5 drachms.
Tincture of myrrh	. . . . .	1 drachm.—Mix.

## ANOTHER.

Decoction of bark	. . . . .	6 ounces.
Tincture of Myrrh,	. . . . .	2 ounces.
Diluted sulphuric acid	. . . . .	Half a drachm

Mix for a gargle.

*Antispasmodics.*—Spasms are involuntary contractions of the muscles; when from irritation, narcotics are best; as opium, camphor, and æther: when from debility, tonics; as zinc, mercury, and Peruvian bark. But those truly antispasmodics are musk, castor, combustible animal oil, ammonia, assafoetida, valerian, &c.

## ANTI-HYSTERIC MIXTURE.

Take assafoetida, 1 drachm; and gradually mix well with

Peppermint water	Half a pint.
Aromatic spirit of ammonia	2 drachms.
Tincture of castor	3 drachms.
Sulphuric æther, compound of	1 drachm.

Strain and take a table spoonful every two hours.

## MIXTURE IN CONVULSIVE COUGH.

Tincture of opium	6 drops.
Ipecacuanha wine	1 drachm.
Simple syrup	3 drachms.
Carbonate of soda	24 grains.
Water	1 ounce.

This mixture may be given in whooping-cough, the sixth part every six hours for a child five or six years old.

## DRAUGHT IN PALPITATION OF THE HEART, WITH GREAT NERVOUS IRRITABILITY.

Tincture of foxglove	10 drops.
Camphor mixture	1 ounce.
Tincture of columbo	1 drachm.

To be taken twice a day.

## DRAUGHT IN HYSTERIA AND WINDY COLIC.

Camphor mixture	1 ounce.
Fœtid spirit of ammonia	2 drachms.

*Apoplexy.*—When this fit takes place it may be known by loud breathing and loss of sense or motion, flushed countenance, fixed eye, foaming at the mouth, grinding of the teeth, and sometimes an involuntary evacuation. If the patient vomits and a profuse sweat comes on, he

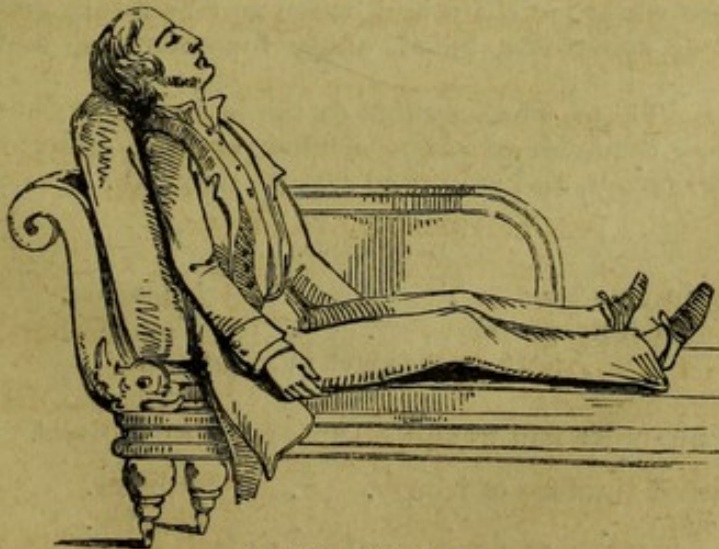


FIG. 6. APOPLEXY.

is recovering. Loose all things that are tight, especially at the neck, place the person in a sitting position, as in fig. 6, but give nothing during the fit, as it might get into the windpipe, raise the head and admit air. Bleed from the arm, jugular vein, or temporal artery; apply leeches and cupping glasses, which are always safest, blister the back and feet, give aloes, scammony, colocynth, and calomel. If a meal has been taken before the fit, this being frequently the case, administer an emetic of ipecacuanha or mustard, and warm water, or by tickling the throat with a feather. If the feet are cold, apply a bottle of hot water, or a mustard poultice.

*Aromatics.*—These have a fragrant smell and agreeable taste; they are administered to dispel wind from the bowels, and are on this account called *carminatives*.

#### FOR FLATULENT COLIC.

Sulphuric spirit of æther . . .	2 drachms.
Comp. tincture of cardamoms . .	Half an ounce.
Spirit of aniseed . . .	6 drachms.
Oil of carraway . . .	12 drops.
Syrup of ginger . . .	2 drachms.
Peppermint water . . .	5 ounces.

Mix and take two table spoonfuls when the wind is troublesome.

#### AROMATIC CARMINATIVE PURGATIVE.

Tincture of senna . . .	1 ounce.
Powder of aloes . . .	10 grains.
Peppermint water . . .	3 ounces.
Syrup of ginger . . .	1 ounce.

Two table spoonfuls for a dose, repeated in three hours if necessary.

*Arsenic Swallowed.*—This is known by violent vomiting, thirst, faintness, and pain in the stomach. Keep drinking small quantities of milk, which will aid the vomiting, and, if possible, Glauber's or Epsom salts should be had and administered without loss of time. Sugared water, linseed tea, lime water, or chalk and water may be freely given. If there are inflammatory symptoms, bleed, apply fomentations, and administer clysters.

*Astringents.*—These, when applied to the body, make the solids denser and firmer; they diminish excessive discharges, and often lessen morbid sensibility or irritation, and may thus restore strength.

#### OINTMENT.

Galls, in powder . . .	1 drachm.
Hog's lard, prepared . . .	1 ounce.

Apply to the part in piles, &c.

#### DRAUGHT FOR UTERINE AND OTHER BLEEDINGS.

Muriated tincture of iron . . .	10 drops.
Water . . .	1 ounce.

Take every three hours.

## PILLS FOR INTERNAL BLEEDINGS, &amp;c.

Superacetate of lead . . . .	3 grains.
Purified opium . . . .	1 grain.
Extract of hemlock . . . .	10 grains.

Make three pills, one to be taken twice a day, drink after them vinegar and water.

## INJECTIONS FOR WHITES AND DISCHARGES IN FEMALES WHEN THE PARTS ARE IRRITABLE.

Oak bark, bruised . . . .	6 drachms.
Distilled water . . . .	10 ounces.

Boil ten minutes, then use four ounces mixed with four ounces of linseed infusion.

*Bad Smells.*—People living in large towns are frequently slowly poisoned by the smells from drains and privies; at other times they have an ordeal of typhus fever to pass through, and such fruitful parents of the cholera lead them quickly to the grave, no doubt much to the gratification of those political economists who prate about redundant population. If, however, a person suddenly come upon a smell so pungent as to cause him at once to drop down, he must be instantly conveyed to a distance where there is fresh air, his head, face, and chest must have cold water dashed upon them, then let a person press upon his breast-bone, and shove his bowels up to his chest, and suddenly let them go, producing the same action as breathing, this must be continued some minutes. Rub the chest and limbs with brandy or ammonia, mixed with oil, as a stimulant. Hold ammonia or strong smelling salts to the nose, tickle the throat to cause sickness. If cold, get him to bed, put bottles of hot water to his feet, thighs, and armpits, and if possible get some brandy or spirit down his throat; or put him into a warm bath, and use the flesh brush whilst in it.

On ship board the *bilge water* is a source of much annoyance and danger to the health in long continued bad weather. Great attention is necessary to prevent fever, &c. arising from it, by the use of *peat charcoal*, or the disinfecting fluids directed at page 150.

*Bed Wetting.*—This is frequently the fault of the nurse, for a child a few weeks old may be taught the practice of cleanliness and regularity. Tonics of quinine or steel may be given, the child should not sleep on its back, it should be awakened at regular periods, and placed on the chamber utensil. When apparently incurable, then use assafœtida, clysters, and nauseous medicines. Some recommend doses of cantharides; if a female, by touching the orifice of the urethra with nitrate of silver, the smarting will awaken so as to check this disagreeable practice.

*Belladonna.*—The Deadly Nightshade (*Atropa Belladonna*) is usually met with in sheltered situations, hedges, and waste ground, on a calcareous soil. The plant dies down to the ground every winter, shooting forth early in the spring, growing rapidly, and with great luxuriance; stems branching, and slightly downy, with large healthy-looking leaves, mostly two together of unequal size, ovate and acute, very different in appearance from all other kinds of Nightshade. The flowers are drooping, dark full purple in the border, paler downwards, about an inch long, and have no scent. The berries are of a rich purplish black, sweetish to the taste, about the size of a

small cherry, and of a *deadly narcotic quality*. The effect that is usually produced upon any one who has eaten of the berries is to dilate the pupil of the eye, in a most extraordinary manner ; obscurity of vision, giddiness, delirium, and death, soon follow. The remedy in a case of poisoning, is



FIG. 7. THE DEADLY NIGHTSHADE (ATROPA BELLADONNA).

to empty the stomach as quickly as possible. Domestic emetics are always at hand, in mustard and salt. A dessert spoonful of flour of mustard, or a table spoonful of salt, may be taken, stirred up in a tumbler full of warm water, tickling the throat with a feather dipped in oil ; but the stomach-

pump should always be preferred when it can be obtained. After which, drinks of vinegar and water, or lemon juice in green tea, should be given every ten minutes. Our engraving (Fig. 1) represents a flower cut open, showing the position of the stamens; fig. 2, the calyx with the pistil; and fig. 3, a berry cut in half, to show its two cells, in each of which are several seeds. Towards the close of the month of May several curious wild flowers may be found, one of the most remarkable of which is that called Herb Paris (*Paris quadrifolia*). This plant, in some parts of the country, is



FIG. 8. HERB PARIS.

called one-berry, or true-love, from its fruit being a single purple berry, growing in the centre of a green-spreading calyx. The flowers are green, and of no beauty. The plant is only found in sheltered woody spots, and it is generally considered poisonous. Another poisonous plant, which is found in great abundance at this season, is the wild chervil, also called the May-weed, or cow-parsley. It is an umbelliferous plant, with white flowers, which, Lees tells us, it produces in such abundance, as often to "completely cover and whiten over whole fields, especially in the vicinity of coppices."

*Berries, Poisonous.*—When these have been swallowed give strong emetics, such as the sulphate of zinc, or mustard, aiding the operation by tickling the throat, if faintness ensue, a little sal volatile or brandy may be given, followed by a clyster, or a brisk purge.—The Fools' Parsley has often been eaten in mistake by children for common parsley. The symptoms in two children who had done so, were, insensibility, staring of the eyes, vomiting, and convulsions; emetics were given, purges, and vinegar diluted

with water or milk; and mustard baths to the feet and legs. Poisoning from mushrooms and other poisonous plants may be treated in this way.

*Black Spots on the Face.*—These, when examined by a microscope, are seen to be little worms. They are generally near the nose. There is nothing better than to wash the parts with warm water, and dry with a hard rough towel; if they can be pushed out by gentle pressure it is better to remove them; should they form into little matter spots, prick them with a needle when ripe, and nip the matter out.

*Blisters.*—A simple form is one third hartshorn with two thirds of oil, with which the skin is rubbed, more especially in stiff joints, or pains. As a blister, a mustard poultice is frequently used, it is made by mixing mustard and water as thick as if for the table, then spread about a quarter of an inch thick on a piece of fine muslin, and apply. On an adult it may remain between a quarter and half an hour; on a child two or three minutes after the skin turns red. After taking it off wash the part gently with a sponge and warm water, then dry easily with a soft piece of linen. Another form with mustard, is a liniment made by putting an ounce of mustard in powder with a pint of spirits of turpentine, shake two or three times during three days, after settling, pour off the liquid quite clear and free from the mustard. With this the affected part must be rubbed to have the desired effect. When the part smarts much then leave off, otherwise such a sore will be created as to prevent its reapplication for some time. When an irritation of the skin has to be continued, a dozen drops of croton oil is employed, this is to be rubbed on with some soft material for two or three days, when little itching spots will appear; the fluid collected in them must be let out. If necessary a week hence this may be repeated, and so on, being an efficient and useful perpetual blister. In particular cases the above is too slow a method, then Spanish flies are employed. The ointment consists of three ounces and a half of white or brown wax, an ounce of resin, three ounces of lard, and three ounces and a half of suet, these are set near the fire to dissolve, stirring them with bone or a piece of wood, when well fused, sift in six ounces of Spanish flies, well powdered, keeping up the stirring to well mix them; when cool cut a piece of sticking plaster, a little larger than the size of the place to be blistered, and spread the ointment on with the thumb, the thumb at times must be dipped into water to prevent the ointment sticking to it; lay the plaster on the part and gently press it, then put on a bandage to keep it in its place. The blister must be kept on a day or day and night, according as the part becomes satisfactorily blistered. *Children* under ten years of age should not have it on longer than *three or four hours*, and the blister will rise a few hours afterwards, or it may be quite sufficient for the skin to be smartly inflamed. It is a good precaution that should always be adopted, to cover the blister with a piece of tissue paper, pressing it on with the hand till it has a greasy look all over. Should a frequent desire to pass the water come on, and it be painful to do so, remove the blister at once, and keep dressing the part with spermaceti till the part be quite free from the blister; also give mild drinks, such as gruel. When a blister is taken off, cut the thin skin and press out gently all the water with a sponge. Do not rub the skin, but preserve it whole as possible, as it is a good aid to a cure. Spread thickly on a piece of linen some spermaceti ointment, and lay it on the blistered part,

then put over it more linen, and slightly bandage it. In about four hours remove the dressing and press out any water that may remain underneath the skin, putting on fresh spermaceti and taking out the water as long as any remains. After the inflammation ceases, which is usually in twelve or sixteen hours, it will be sufficient to dress the place morning and night. If it be thought better to keep up the inflammation longer, then put on a dressing of yellow basilicon for a couple of days, after which have recourse to the spermaceti. If it should create a running sore or ulcer, poultice the part with bread and milk, after which dress with wax and oil laid on linen, Turner's cerate, or zinc ointment, and if there be much discharge dredge on flour, starch, or powdered chalk.

*Boils.*—The celebrated Hunter said "I was myself always troubled with boils until I took thirty drops of liquid solution of potash, night and morning, in milk, for two months, when all my boils disappeared, and I have had since no return of them." Boils are symptoms of a weak constitution, a disordered digestion, or studious anxious mind, hence the health should be improved by good air, exercise, and generous food. They may first be softened by bathing with warm water, then make an opening with a sharp knife at the most prominent part that the matter may escape, poultice for a day or two, then apply a plaster of galbanum or resin, and administer simple aperient medicine. Should they, however, continue to appear, give doses three times a day of twenty drops of liquid potash, in milk, or from ten to twenty grains of carbonate of soda, in infusion of orange peel. Sea bathing is useful; as, indeed, is change of air, especially from town to country.

*Bowels, Inflammation of.*—Pain is felt around the navel, which is increased by pressure. Sickness at the stomach, wind, bilious vomiting, thirst, heat, and anxiety, great costiveness, and difficulty in passing the water, are its symptoms. Bleed immediately freely, and, if the pain has not ceased, do so again, if possible, within four hours. If not relieved, again bleed next day, apply twenty leeches to the stomach, or use cupping-glasses; put a blister on the bowels or upper part of the thigh, foment, administer soothing clysters with aperients. When sickness has abated, give ten to fifteen grains of calomel made into little pills. Let this be followed by a mild aperient draught of senna or castor oil. A little barley water or beef tea may be the patient's drink.

*Brain, Inflammation of.*—This is seen by redness of the eyes and face, a black and dry tongue, clear urine, sudden startings, and picking of the bed-clothes. There is delirium and fever, difficult breathing, pain in the head, and a dislike to the admission of light, with acute hearing. This disease is distinguished from others having similar symptoms from the wandering of the mind coming on *before* the fever. Bleed freely, largely, and frequently from some of the leading veins; blister the head, neck, and legs; give stimulating clysters, and place the feet in a bath thus prepared:—Flower of mustard, four ounces, in a sufficiency of water for the feet; this must be used in a *lukewarm state only*, for, if it be hot, the effect will be contrary to what is desired, and do great injury. Shave the head, and apply spirituous embrocations; keep cloths dipped in vinegar and water to the temples; give cold acid drinks, nitre or salt of harts-horn, and purge with calomel and good doses of neutral salts, but not so as to produce sickness. Quiet, a darkened room, and simple drinks are absolutely necessary.

*Breasts Inflamed.*—There is considerable pain, heat, and swelling. Take aperient medicine, bathe the parts with a cold lotion, have them drawn. When matter is seen, poultice and foment, and, if a throbbing ensue, lance the abscess, to allow the matter freely to escape.

*Bruises.*—Put on a poultice or flannels dipped in hot water and wrung out. If near a joint, and severe, apply about a dozen leeches, and then poultice, or apply hot wet flannels; but this only to grown up people. Continue the leeches and other remedies until the swelling and pain cease, which will most probably be the case after two or three bleedings by the leeches; afterwards apply to the joint a plaster of ammoniacum or mercury. Care should be taken to give the joint perfect rest until cured, to avoid bad consequences.

*Bunions.*—Have shoes made adapted to the distortions created, by studying the shape of the foot instead of the boot. The Spaniards have a more sensible mode of measuring for boots or shoes than the English, and their manufacture looks as well; the foot is placed firmly on the ground, with the whole weight of the body on it, and the shape is marked out with chalk, and very exactly copied.

*Burns or Scalds.*—These frequent and painful accidents require prompt attention. Many increase the injury from a burn by running away for assistance, instead of laying down and rolling themselves in anything at hand to put out the fire, as in fig. 9. First cut the clothing from the

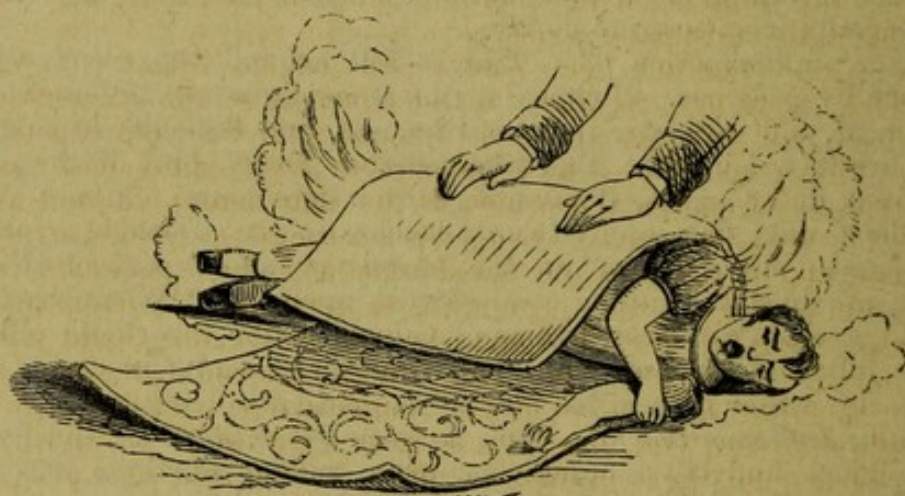


FIG. 9. BURNING.

person, but if any part adhere to the skin, leave it on, cutting around it with great carefulness, that any blisters may not be broken, and the water escape. Place the patient in bed, and keep him warm, should he be troubled as if with cold; give some wine or brandy and hot water, with a full dose of opium. Should the skin be broken, wet applications are best; but if not broken, the blisters being whole, then dry ones are preferable. This should always be remembered, that the more the injury is kept from the air the better. It is common with many people to cover the part with flour, and then wrap it up in wadding or cotton wool, which, is nothing more than a warm, soft covering, keeping off the external air, and leading to a cure. In America, a child being dreadfully burnt, the mother placed it on some cotton, and ran off for assistance; she had to go

some miles, and on her return, expecting the cries of agony from the little sufferer, and hearing all silent, imagined her babe was dead; but, on entering the house, found the wool adhering to the body of the child, who had rolled about in it; and, the air being kept from the body, while the wool gave warmth, the little thing was free from pain and sitting amusing itself. When wool is applied over a burn, the best kind, if it can be had, is that which is termed *wadding*, the unglazed side being placed against the burn; it should be several times doubled, and then wrapped over with a piece of linen, both to keep it in its place and aid in sheltering the wound from the air. When the burn is slight, it is recommended either to keep the part near a fire, or in water about 112°, until the pain ceases, or to bathe it with oil of turpentine or alcohol warmed by immersing the vessel holding them in boiling water, and afterwards wrapping the part up in some soft, warm material. In *severe cases*, the plan of Mr. Kentish, of Newcastle, is usually adopted, as having been most successful. The parts are first bathed with lukewarm turpentine, after which, as early as possible, a liniment is applied, consisting of resin ointment, one ounce; oil of turpentine, half an ounce, thickly spread on lint, and then wrapping the parts up warmly in flannel, to remain on as long as possible, if no great discharge or bad smell arise from the part. If shivering comes on, the skin cold, and the pulse weak, give brandy and hot water, æther, or ammonia; place hot bottles or bricks to the feet, under the armpits, and between the thighs; but this stimulating application must be done most carefully, not to cause congestion in the head or chest; and yet they should be judiciously persevered in, to avoid a relapse. If there should be vomiting or great pain, give one or two grains of opium. To children give, according to age, from one to two drachms of the compound tincture of camphor (paregoric elixir). Should there be symptoms of insensibility, a dropping off to sleep in the patient, those last-named medicines must not be administered. During the feverish state, give small doses of castor oil or rhubarb to keep the bowels open, and a diet of barley water, gruel, beef tea, or arrow-root. Should the head or chest become inflammatory, and congestion take place, then there must be leeches applied, or the patient be bled; but this must be cautiously done, and aperients administered. If there be great tenderness at the right side, underneath the ribs, or irritation at the pit of the stomach, then only diet with barley water or gruel; and give small doses, two grains of mercury with chalk (hyd. c. creta), and three grains of extract of henbane, as a pill. A low diet and aperients must be persevered in until the ulcers are healed. If the wound is irritable and painful, hot and swelled, if ulcers seem to spread, and abscesses form under the skin, poultices must be applied, or water dressings; a Dover's powder given at night, and aperients. When these symptoms are conquered, apply a lotion of zinc, and an ointment of chalk, zinc, or calamine, lint, and strips of plaster. When there is a great discharge, powder over the sore with very fine chalk, or, if that cannot be had, starch. Should the contents of the blisters seem milky, and the edges of the wound have a red, inflamed line all around them, then the fluid must be let out, and the edges of the part gently pressed, that it may be made to escape. If the scab over the sore does not crack, so as to allow the matter to escape, and there is an uneasiness, then apply a poultice, which in a few hours will cause it to come off. The crust may either be put on again or some absorbing cerate. When burns arise from

lime, the first thing is not to remove it, but to bathe the lime on the part with vinegar, which will change its nature; then poultice, which will take it off after a few dressings. The sore can be cured either by dressing it with Turner's cerate or poultices. When unslaked lime gets into the eyes, bathe with vinegar and water; carefully remove all the particles, reduce the inflammation by leeches, and bathe with poppy water; also administer a good dose of aperient medicine.

*Carbonic Acid Gas.*—Accidents arise from entering brewers' vats, wells, and other places where this gas has accumulated, and there is no circulation of air, from close rooms in which coals are burnt, and there being no chimney for the smoke to pass off; also from burning charcoal. The person drops down insensible, and must be immediately brought out from the place into the open air. A person, if quick, and with a handkerchief over his mouth, or a sponge dipped in lime-water, may rush in and rescue the insensible body. The treatment must be the same as directed in bad smells from privies and drains, with artificial respiration, warm baths, stimulants, &c.

*Carminatives.*—These ease pain and dispel wind. See also *aromatics*.

#### DRAUGHT FOR FLATULENCY AND INDIGESTION.

Rind of Seville oranges . . . .	3 drachms.
Fresh lemon peel . . . .	2 drachms.
Ginger, in powder . . . .	Half a drachm.
Boiling water . . . .	8 ounces.

Infuse two hours and strain; then take

Of the above . . . .	Half an ounce.
Spirit of peppermint . . . .	Half a drachm.
Spirit of lavender . . . .	Half a drachm.

This draught to be taken three times a day.

#### ANTIPLATULENT MIXTURE.

Oil of aniseeds . . . .	10 drops.
Refined sugar . . . .	1 drachm.

Beat up together, and add

Tincture of ginger . . . .	2 drachms.
Peppermint water . . . .	6 ounces.

Mix: take three table spoonfuls as required.

#### FOR WIND IN THE INTESTINES,

*Particularly the Colon, which violently distends them.*

Assafoetida . . . .	6 grains.
Rhubarb . . . .	4 grains.
Oil of aniseeds . . . .	5 drops.

Make two pills, and take every five or six hours.

*Cathartics, Laxatives, Purgatives, Drastics.*—These are different terms for purging medicines. A laxative only acts as a mild purge in emptying the bowels, whereas a purgative not only so acts, but affects the whole system; and, when very violent, it is denominated a cathartic or drastic. Examples of excellent combinations of these medicines:—

## CATHARTIC PILLS.

Compound extract of colocynth . . . . .	1 drachm.
Extract of henbane . . . . .	6 grains.
Oil of nutmeg . . . . .	4 drops.

Well mix together, and divide into twelve pills; take two every two or three hours till effective.

## APERIENT DRAUGHT.

Epsom salts . . . . .	3 drachms.
Spearmint water . . . . .	3 ounces.
Antimonial wine . . . . .	20 drops.

Mix, and take for a dose early in the morning.

## LAXATIVE MIXTURE.

Sulphate of magnesia, or Epsom salts . . . . .	Half an ounce.
Sulphate of iron . . . . .	5 grains.
Camphor mixture . . . . .	3 ounces.

Two table spoonfuls twice a day.

## FOR THE PAINTER'S COLIC.

Castor oil . . . . .	Half an ounce.
Yolk of egg . . . . .	Sufficient quantity.

Beat up and then add,

Syrup of poppies . . . . .	2 drachms.
Tincture of opium . . . . .	5 drops.
Distilled water . . . . .	8 ounces.

A draught to be taken every three or four hours.

## CERATES.—CALAMINE CERATE.

Prepared calamine . . . . .	4 ounces.
Yellow wax . . . . .	4 ounces.
Olive oil . . . . .	8 ounces.

Shred the wax, pour on the oil, let them melt over a slow fire, when sufficiently cool stir in the powdered calamine. This is applied to ulcers and wounds where the skin is broken; to burns and scalds after the pain and violence of the inflammation have ceased. With half a drachm of the soft extract of opium, to an ounce of the cerate, it is employed to gently smear the eyelids in ophthalmia tarsi. When a teaspoonful of the Goulard lotion is mixed with this cerate, it forms the common application of many eminent surgeons to scalds and burns.

## COMPOUND CERATE OF LEAD.

Acetate of lead . . . . .	2 ounces.
Yellow wax . . . . .	4 ounces.
Olive oil . . . . .	9 ounces.
Camphor . . . . .	Half an ounce.

With a little oil the camphor is rubbed down. The remainder of the oil and wax gently melted near a fire, and the lead stirred in; when nearly cold, the oil with the camphor is added, and stirred till cold. This is used in burns and scalds, and to prevent that constant flowing of tears in aged people.

## CERATE OF HEMLOCK.

Hemlock ointment . . . . .	1 ounce.
Spermaceti . . . . .	2 ounces.
White wax . . . . .	3 ounces.

For inveterate sores.

## CERATE OF SAVINE.

Fresh savine leaves, bruised . . . . .	Half a pound.
Yellow wax . . . . .	4 ounces.
Prepared lard . . . . .	1 pound.

Melt the wax and lard, boil the savine leaves with them, strain through linen. This is to keep up the discharge of parts blistered. On changing the application for another ointment or dressing, always well remove any left on the wound.

## CERATE OF HONEY.

Olive oil . . . . .	Half a pint.
Clarified honey . . . . .	Half a pound.
Yellow wax . . . . .	4 ounces.
Lead, plaster of . . . . .	4 ounces.

This is a drying and gently stimulating application.

## CERATE OF HONEY WITH TURPENTINE.

Clarified honey . . . . .	4 ounces.
Common turpentine . . . . .	4 ounces.
Fine wheaten flour . . . . .	Sufficient quantity.

Mix the flour till of the consistence of a cerate; apply night and morning to chilblains in a state of ulceration.

*Chapped Hands.*—Boiled potatoes not only cleanse the hands, but prevent *chaps* in winter, and keep the skin soft and healthy. Gloves made of chamois leather, and worn constantly, will prevent them.

*Chicken Pox.*—This disease is a contagious fever, attended with pustular eruptions, mostly confined to the period of childhood, and appears but once in a lifetime. A chilliness comes over the body, then flushes of heat, pains in the back and head, thirst, restlessness, a quick pulse, and an eruption. From the second to the fourth day the vesicles, or little spots, are filled with a yellowish watery fluid; about the fifth they die away, leaving crusts or scales, that fall off on the 7th or 8th day. A little cooling aperient medicine should be taken, and a low diet adhered to. Should, however, the fever be high, take small doses of antimonial powder, with saline draughts, and nitre with plenty of water, and use gentle laxatives or softening clysters. Tepid baths may be used when the patient is recovering. This may at the outset be distinguished from small pox, as there is no fever before the appearance of eruption; whereas, in small pox, there always is, and the disease, with the little spots or pustules, are much slower in their progress—small pox extending to fourteen and twenty-one days.

*Chilblains*—Have already been referred to at page 6. When the skin is red in patches, and slightly swelled, and there is much heat or itching, or pain and lameness, apply a leech, or puncture with a needle or lancet, and put on a liniment of one part of tincture of cantharides and six parts soap liniment; but almost any kind of stimulant might answer equally

well, as mustard, turpentine, camphorated spirit, and ammonia, or rub with strong brine or snow. All, however, that may be used must be cold, and the friction continued until there is a great increase of heat and smarting. Should the part be much swelled and puffed up, and the skin around bluish or purple, then the liniment must be applied with a feather, for the greatest care ought to be taken not to break the swelled parts. If the third stage has set in, that is, ulceration and sloughing, with pain, heat, and irritation, a poultice ought to be applied; but whenever this last application can be avoided it should be, as stimulants, either as lotions or ointment, are preferable, such as yellow basilicon, Turner's cerate, zinc ointment, &c.

*Choking.*—Children are apt to attempt to gulp down their victuals before being properly masticated. Parents ought always to impress on their progeny the importance of cutting their meat into small pieces, and chewing it well before attempting to swallow it. Sometimes a drink of water will force the piece down; but, if not, then the fingers and thumb should be applied to get it back again; if too far down for this, perhaps the finger alone may shove it down. Some parents keep a piece of whalebone, with a small piece of sponge tightly tied on one end, in case of such accidents. When a fish bone, or any other small sharp article, sticks in the throat, a crust of bread, slightly chewed, may be partially swallowed, and then gulp some water, this usually carries it down. In cases of small hard substances being swallowed, they are frequently expelled by suddenly turning the child's head and body downwards, or by fastening to a plank placed over an upright, as children do in playing see-saw, with head downwards, then bringing the end down with a smart blow to the ground. The half-sovereign swallowed by Mr. Brunel, whilst at play with his children, was dislodged in this way, after many other attempts had failed. Persons thoughtlessly speaking or laughing while eating are apt to get a little of their food into their windpipe; this causes a most distressing cough, and, if not at once ejected, can only be treated by a skilful surgeon. There are on record instances of hard substances having thus been swallowed, and the parties only saved from choking by making a small hole in the windpipe; or it may be got out by the person being turned head downwards, as directed above.

*Cholera.*—This is principally induced by the disregard of sanitary measures, both in town and country. We may state, for the satisfaction of persons who dread its approach, that it is always preceded by warning symptoms, several hours before its violent attack; therefore, such premonitory hints ought to be regarded and at once allayed by some simple medicine; in some cases people are too apt to neglect the gentle hint, and heedlessly invite the disease, by rushing into some intemperance of eating, drinking, or continuing near bad smells, and then date the disease from the moment when they had confirmed its visit, and it is energetically struggling with the vital powers of man. It is the greatest folly imaginable to fear its approach—it is a disregard of the watchful guardianship of Providence, and truly soliciting its pains and penalties. Be moderate and careful in diet, keep the feet warm, avoid great heats succeeded by colds, be not over anxious in mind, and there is little risk. The Spaniards, to avoid violent diarrhœas, to which their country makes them subject, wrap around the bowels a silk scarf, and this warmth is, no doubt, beneficial, and would be so in this country when cholera rages over the

land. Remember this, *never move the patient from the apartment where seized by the disease*, as, from experience, we know ninety-nine cases out of one hundred are then followed by death. Purify the room as much as possible, and remove as many exciting causes as in your power. The disease usually begins with violent griping pains, vomiting, and is followed by purging and spasms of the muscles of the belly, sometimes extending to the legs and arms; the tongue is dry, urine high coloured, little of it, or suppressed entirely; thirst urgent, pulse weak and frequent, countenance anxious, and strength rapidly fails. The treatment consists in first allaying the spasm and irritable state of the digestive canal, by giving five grains of calomel, with half or one grain of opium, followed by repeated injections of gruel or starch in large quantities, to bring away the irritating matter, repeating the dose of calomel every two or three hours, if needful. Warm fomentations, or turpentine, mixed with ammonia or soap liniment, may be freely applied over the whole of the bowels. Should the surface of the body become cold, and symptoms of exhaustion appear, it will be necessary to give stimulants, as small quantities of brandy and water hot, camphor, sal volatile, &c. When the more urgent symptoms have been relieved the bowels may be emptied by gentle laxatives or injections, and little nourishing diet of a farinaceous kind may be permitted during convalescence.

*Colds.*—In slight cases great abstemiousness should be observed, some people term it “starving a cold;” drink abundantly of gruel or barley water, with a little lemon juice or cream of tartar in it. In more severe cases, where there is pain in the breast, and difficulty in breathing, then bleed, use only a low cooling diet, and if not relieved, blister over the part affected. Take small but frequent doses of antimonials and other medicines, to promote perspiration, called diaphoretics, with plenty of gruel or barley water. Also, gentle aperients. When the cough is annoying and there is soreness of throat, on the cessation of inflammation, then use demulcents. If sleep be distressingly disturbed, take an opiate with a little purging medicine at bed time. Sometimes a cold may be removed by abstinence, and drinking a quantity of cold water at bed time. A treacle posset, that is, treacle and milk boiled together with a spoonful of æther, will cause such a perspiration as to remove the pains arising from a severe cold.

*Cold Feet.*—To those afflicted with nearly perpetual cold feet, we recommend that the feet be rubbed for several minutes with the hand or flesh-brush, as hard as can be borne, which will induce a circulation and flow of the blood. Frequent ablutions are necessary, as the pores are often obstructed and the facility of perspiration impeded by those who are neglectful in this respect. When washed in cold or warm water, the feet should be rubbed until thoroughly dry, with a warm towel or flannel.

*Convulsions.*—These arise in children from several causes; should it be worms, see a remedy in Anthelmintics; if from teething, which is generally the case in young children, lance the gums freely; should no other instrument be at hand, a pocket knife will do to make it bleed well; if from what has been eaten, give an emetic; if from sour matter in the bowels, administer a laxative clyster and a rhubarb draught.

*Corns.*—If the skin about the corn be very hard, rub it with nitrate of silver or liniment of ammonia, or touch it with strong nitric acid or

chloride of antimony. The best thing for soft corns between the toes is nitrate of silver. Ivy leaves are a comfortable application.

*Corrosive Sublimate.*—Should any one accidentally swallow this, the best remedy is raw eggs beat up with water. Should none be at hand, then swallow thick flour and water, magnesia, or lime water.

*Croup.*—The peculiar shrill sound of the cough, dry, and resembling the crow of the cock and the hissing sound of breathing, distinctively mark this disease. It requires prompt attention to save life; bleeding is the first thing, and that freely, by leeches or cupping. Give an emetic of ipecacuanha or tartarised antimony wine; then two or three grains of calomel, every three or four hours, according to the age and strength of the patient. Keep the child nearly upright in bed, and after inflammation has subsided, give antispasmodics. A blister may be applied to the neck, and the discharge kept up by applying a poultice. Children liable to this disease should always be warmly clad, wearing flannel next the skin, and proper remedies given upon the earliest appearance of the attack. With care, they usually “grow out of it;” that is, the constitution will repel the attacks, after the tenth or twelfth year.

*Clysters.*—This mode of administering purgatives in many instances is far superior to any other, as it does not unnecessarily stimulate the whole of the bowels, and render them feeble and unhealthy, so as to require constant attention; besides, in some states of the body, the stomach will not retain the requisite medicine. There are diseases, such as lockjaw, some forms of insanity, &c., in which nourishment has in this manner to be conveyed to the body.

#### FOR DYSENTERY, VIOLENT PURGING, PAINS IN THE LOWER BOWELS, &c.

Starch	. . . . .	8 ounces or a pint.
Tincture of opium	. . . . .	40 to 60 drops.

#### LAXATIVE,—APERIENT.

Epsom Salts	. . . . .	1 ounce.
Thin gruel, warm	. . . . .	1 pint.
Fresh butter, or olive oil	. . . . .	1 ounce.

#### ASTRINGENT, IN PILES, &c.

Galls, powdered	. . . . .	Half an ounce.
Distilled water	. . . . .	1½ pint
Boil down to a pint and strain, administer warm.		

#### IN STONE; STOPPAGE OF URINE; IRRITABILITY OF BLADDER; LOCKJAW, &c.

Turpentine, spirit of	. . . . .	Half an ounce.
Infusion of linseed	. . . . .	One to two pints.
The yolk of an egg	. . . . .	Mix together.
Administer warm.		

#### IN SPASMODIC COMPLAINTS.

Tincture of assafoetida	. . . . .	Half an ounce.
Tincture of opium	. . . . .	20 to 40 drops.
Thin gruel	. . . . .	One to two pints.

A COMPOUND GIVEN IN STUPOR, ETC., FROM INJURIES TO THE HEAD  
OR SPINE.

Extract of colocynth . . . .	1 scruple to $\frac{1}{2}$ a drachm.
Boiling water . . . .	One pint.
Common salt . . . .	Half an ounce.

NUTRITIVE, TO BE REPEATED EVERY SIX HOURS.

Milk, mutton, broth, starch, &c. .	6 ounces.
Warm water . . . .	4 ounces.

*Deafness.*—Here we shall only treat of the most simple kinds, for in other cases not being of immediate necessity, a proper medical man may be consulted. Deafness usually arises from a cold, eruptive fever, stomach derangement, and after scarlatina; when it proceeds from wax hardening in the ear, there being a defective action in the glands, first syringe out the ear with warm milk and water, or soap and water, then drop into it one part of ox gall and three of the balsam of tolu, well mixed; if this be not at hand, then a few drops of a saturated solution of common salt every morning and night. Should there be a thin acrid or fœtid discharge along with the deafness, then blister behind the ear, and keep up a constant discharge from it. If cold should have been the exciting cause, then take medicine to cause perspiration, put the feet in warm water before retiring to rest, and keep the ears warm. When fever is the cause, it subsides as strength comes to the body. If there should have been great pain, fever, and swelling of the glands of the neck, then a reddish serous discharge, which afterwards becomes mattery with a very bad smell, open the bowels well, take only liquids, syringe with warm water or poppy decoction, and constantly keep on a warm poultice; bran in a soft bag steeped in hot water is best. If pain in the head and ear be very great, apply leeches between the ear and cheek bone, near to the spot where the motion of the jaw is felt in eating. Never stuff cotton into the ear, if warmth be required, place it in the outer part to protect the entrance.

*Demulcents.*—Possess no great power in themselves, they are of a mild glutinous nature, and by mixing with acrid and stimulating matters, lessen their injurious effects.

A FEVER AND DEMULCENT DRAUGHT.

Almond mixture . . . .	1 ounce.
Carbonate of potass . . . .	20 grains.
Syrup of poppies . . . .	1 drachm.

Pour into this a table spoonful of lemon juice, and drink while effervescing.

COUGH ELECTUARY.

Spermaceti powder . . . .	2 drachms.
Powder of gum arabic . . . .	1 drachm.
Syrup of poppies . . . .	2 drachms.
Syrup of tolu . . . .	2 drachms.
Nitrate of potass . . . .	Half a drachm.
Water, or camphor water . . . .	3 ounces.

Dose, two table spoonfuls three times a day, in a tickling irritating cough.

*Detergents.*—Deterge means to cleanse. Detergents cleanse and remove humours that adhere to and obstruct the vessels. They are also applied to foul ulcers; honey, honey of borax, tincture of myrrh, alum, water, turpentine, &c., are the principal.

*Diabetes.*—This peculiar disease is characterised by a large increase in the quantity of urine, sweet, and smelling like new hay, supposed to arise from exposure to cold, privation, and other debilitating causes; and also some defect in the digestive organs, which converts nearly all the nourishing part of the food into sugar. Great moderation must be observed in the diet, consisting principally of meat, with a little bread, and warm animal broths to allay the thirst. The warm bath is used to restore the action of the skin, and flannel worn; castor oil taken to keep the bowels open, and five to ten grains of Dover's powder at bed time, occasionally, or half a grain of opium.

*Diaphoretics.*—Are medicines that cause perspiration; the action being increased by being in bed, or remaining in the warm atmosphere of a room.

#### DIAPHORETIC POWDER.

Compound powder of ipecacuanha	15 grains.
Powder of antimony	2 grains.

Take at bed time, in some warm liquid or gruel.

#### POWDER.

Ipecacuanha	2 grains.
Purified opium	1 grain.
Nitrate of potass	16 grains.

Take at bed time in a severe attack of influenza or bronchitis in gruel.

#### TONIC AND DIAPHORETIC MIXTURE, FOR RHEUMATISM.

Guaiaicum, resin of	2 drachms.
Gum arabic	2 drachms.

Pound well together, then add,

Tincture of opium	30 drops.
Tincture of bark	2 drachms.
Camphor water	8 ounces.

A wine glassful twice a day.

#### IN CONTINUED RHEUMATISM, ETC.

Gum guaiacum, in powder	10 grains.
Compound powder of ipecacuanha, or Dover's powder	5 grains.

Confection of roses, sufficient quantity to make two pills.  
Take at bed time.

#### DRAUGHT FOR GENTLE PERSPIRATION.

Camphor mixture	1 ounce.
Liquid acetate of ammonia	Half a drachm.
Antimony wine	20 drops.
Paregoric elixir	2 drachms.

*Diarrhœa.*—There is a rumbling in the inside, with a weight and uneasiness of the lower part of the belly before each discharge, and a

gripping sensation, often sickness and vomiting. It is wrong to suddenly arrest looseness in the bowels, except in women "near their time." The causes of diarrhœa are very various, consequently the treatment must be as varied as the cause; we may first notice diarrhœa with inflammation, arising from irritation or ulceration of the intestines, often an attendant upon consumption and fever. It is known by acute pains, tenderness of the bowels, thirst, and dark slimy evacuations, and is best relieved by small doses of two or three grains of mercury with chalk (or grey powder as it is commonly called), mixed with six or eight grains of Dover's powder, and taken in gruel every three or four hours; injections of starch with a few drops of laudanum, fomentations to the stomach, and chalk mixture after every stool.—Diarrhœa proceeding from *unwholesome food* or foul accumulations in the intestines. This is a very common form, being produced often by unripe fruit, sour food of any kind, &c. A dose of rhubarb and magnesia, or castor oil, followed by the aromatic chalk mixture, is generally sufficient.—Diarrhœa, proceeding from *debility* and *relaxation*, is generally accompanied with slight fever, and is apt to follow any of the other forms, small doses of sulphuric or muriatic acid with opium, relieves this. The best mixture is two drachms of diluted sulphuric acid, six drachms of paregoric elixir, two drachms of syrup of poppies, and six ounces of camphor mixture. Mix, and take two table spoonfuls every two or three hours.—Diarrhœa in young children often arises from the irritation of weaning, bringing up by hand, and during teething. A very small dose of grey powder (mercury with chalk) mixed with rhubarb, two or three grains of each, followed by a tea spoonful or two of chalk mixture, to which previously add ten drops of paregoric elixir, are the remedies to be employed. Baked flour or biscuit powder may be tried as food. In all cases of diarrhœa it is important to attend to the skin, and to keep the body warm, in bed, if possible.

*Diuretics*.—Are for the purpose of promoting the flow of urine, &c.

#### PILLS IN GRAVEL, STONE, AND DROPSY.

Dried carbonate of soda	1 drachm.
Hard soap	1 scruple.
Oil of juniper	6 drops.
Syrup of ginger	Sufficient quantity.

Make into thirty pills, take three a day.

#### POWDER IN DROPSY, ETC.

Cream of tartar	1 drachm.
Sulphate of potass	10 grains.
Rhubarb, in powder	5 grains.

Take three times a day.

#### PILLS FOR THE SAME.

Powder of dried squill root	2 grains.
Blue pill	5 grains.
Opium	Half a grain.

One pill at bed time, for four or five nights, followed by the above powder the morning after.

## INFUSION FOR DROPSY.

Bruised juniper berries	. . .	2 ounces.
Bruised aniseeds	. . .	2 drachms.
Boiling water	. . .	1 pint.

Let it stand for three hours, then strain. Take two table spoonfuls often.

## DRAUGHT FOR DROPSY.

Acetate of potass	. . .	Half a drachm.
Oxymel of squills	. . .	2 drachms.
Compound spirit of juniper	. . .	Half a drachm.
Nitric spirit of æther	. . .	20 drops.
Water	. . .	1 ounce.

Take daily.

## DIURETIC, AND STIMULATING DRAUGHT.

Carbonate of potass	. . .	10 grains.
Compound infusion of gentian	. . .	8 drachms.
Compound spirit of æther	. . .	1 drachm.
Tincture of cinnamon	. . .	1 drachm.

Take as occasion may require.

*Draught and Mixture.*—A draught is usually a dose not exceeding an ounce and a half. A mixture is taken in several doses of about two or three table spoonfuls often repeated.

*Drowning.*—Keep the head raised, dry the body and rub with hot cloths, let one person press on the chest with his flat hands, and another, also with their flat hands, shove the belly up to the chest, then suddenly

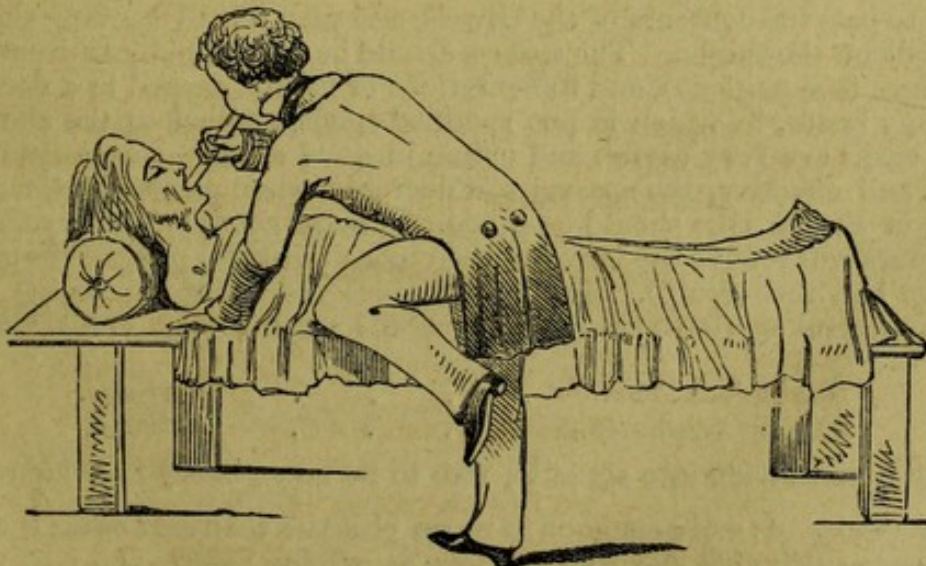


Fig. 10.

take away their hands, and in this way, by performing the action of respiration, endeavour to restore breathing. A hot bath is also of great

value. Have several assistants to rub the body with their hands. Clear the mucus from the mouth, hold the nose, and then suck out the foul air with a tube, and blow in fresh air, as represented in the cut. Place hot bricks and bottles of hot water in the armpits, between the thighs, and at the feet, keep up the friction the whole time; irritate the nostrils with a feather, or hartshorn, and administer a clyster of warm turpentine. If possible, apply electricity. When swallowing can be performed, give weak warm wine, or spirit and water, and soon afterwards a mustard emetic. After restoration, purge or give such medicines as seem to be required. Persons have been recovered who have been under water twenty-five minutes. Twelve hours' exertion may result in restoring a person to society. Bleeding is often required during the progress of recovery, particularly when the respiration is laborious, the brain oppressed, and when delirium or wandering, the frequent attendant on restored animation, is present.

*Drunkenness.*—When a person has so far forgot the dignity of man, and cast aside that which distinguishes him from the brute—his reasoning faculties—by becoming insensible in mind, and powerless in motion, from imbibing fermented or spirituous liquors, loose all articles of clothing from the neck, raise the head and admit air, tickle the throat with a feather to produce sickness, or give warm water with a little mustard in it; or thirty grains of sulphate of zinc, dissolved in water, as an emetic; the stomach-pump is generally preferred by the surgeon; rub the chest with some strong liniment, apply blisters to the nape of the neck, put the feet and legs into a mustard poultice, and when the stomach has been thoroughly emptied, give tea or coffee and a strong aperient draught, or Seidlitz powder effervescing.

*Dry Bellyache.*—Arises from long-continued, obstinate costiveness, and is a common complaint with white-lead factory-workers and painters. It is particularly painful around the navel; strong spasms in the intestines, wind is passed, and bile vomited; there is slight sickness, thirst, and desire to pass the contents of the bowels, and ease felt by bending the body forwards on the thighs. The spasms should be remedied by antispasmodic medicines (see page 65), and fomentations of flannel dipped in a decoction of poppy heads, in which is put rectified spirit, applied to the abdomen; warm baths are very useful, and opium in good doses. Purgatives being taken, and effective, the spasms will decrease, when castor oil, tincture of senna, or Epsom salts should be given. A laxative clyster every three or four hours will relieve the bowels; then more powerful purgatives must at once be had recourse to. Mr. Druitt gives the following recipe as “a very powerful aperient, that often succeeds when almost everything else fails:”—

Barbadoes aloes	.	.	.	.	24 grains.
Strong sulphuric acid	.	.	.	.	6 drops.

Mix, and divide into six pills; two to be taken every four hours.

*Dysentery.*—Is more common in warm climates than cold ones; it usually commences with cold shiverings; there is griping, wind, and costiveness. desire to empty the bowels, and frequent discharge of very bad-smelling matter, which is sometimes pure mucus, mixed with blood, or blood alone; the appetite ceases; sickness, fever, and debility affect the patient. If the fever be inflammatory, then blood must be taken, and a very cooling diet

adopted. Some physicians place great reliance on calomel and opium, and very extraordinary doses of these medicines have been administered in warm climates with the best effects. It will be best at the commencement of the attack to use warm fomentations to the stomach, give five grains of calomel, with five or ten grains of Dover's powder at night, and half an ounce of castor oil, with ten drops of laudanum, in the morning, followed by a starch injection, so as to clear out all irritating matters and soothe the bowels. When the symptoms improve, if the patient feel weak, gentle tonics, such as bark or camomile tea, with rhubarb, may be administered. The state of the bowels must be carefully watched during the cure. Blackberries, in some cases, have proved extremely useful in dysentery. To eat the berries is very healthy; tea made of the sprigs and leaves is very beneficial, and a syrup made of the berries is still better. Blackberries have sometimes effected a cure when all other means have failed. Repeat the dose of calomel and Dover's powder for a night or two, if necessary.

*Embrocations.*—For inflammation of the skin, bruises, swelling of the glands, and contusions where blood-vessels have been ruptured under the skin, a pint of good vinegar and half a pint of strong spirit is found very beneficial. Alum added to it is good for slight chilblains.

#### FOR SPRAINS AND BRUISES,

Especially where the parts are discoloured with blood underneath the skin, in rheumatic swelling of the joints.

Vinegar . . . . .	1 pint.
Distilled water . . . . .	$\frac{1}{2}$ pint.
Rectified spirits . . . . .	$1\frac{1}{2}$ pints.
Camphor . . . . .	2 ounces.

Mix the vinegar and water, dissolve the camphor in the spirit of wine, and then put them all together.

#### FOR SPRAINS, BRUISES, AND OTHER INJURIES.

When the skin is not broken.

Carbonate of ammonia . . . . .	2 ounces.
Vinegar . . . . .	2 pints.
Proof spirit . . . . .	3 pints.

Mix the ammonia with the vinegar; when the effervescence ceases, add the spirit. In inflammation of the joints of some standing, this is mixed with linseed meal, and applied as a poultice twice a day.

#### FOR LUMBAGO, GOUTY PAINS, AND RHEUMATISM,

The following is often highly beneficial:—

Soap liniment . . . . .	2 ounces.
Spirit of camphor . . . . .	1 ounce.
Oil of thyme . . . . .	2 drachms.
Tincture of opium . . . . .	1 drachm.

Mix. A piece of lint dipped in this, and put in a hollow tooth, frequently arrests its aching.

*Emetics.* — Medicines given to produce sickness, or nauseate the stomach. Examples:—

AN EMETIC DRAUGHT.

Tartarised antimony . . . . .	1 grain.
Ipecacuanha wine . . . . .	2 drachms.
Water . . . . .	1½ ounce.

Half to be taken, and repeated in twenty minutes, if sickness be not induced.

SOLUTION OF TARTARISED ANTIMONY.

Emetic tartar . . . . .	2 grains.
Distilled water . . . . .	4 ounces.

Dissolve: take two table spoonfuls every fifteen minutes till sickness follow.

MIXTURE.

Ipecacuanha wine . . . . .	Half an ounce.
Tartarised antimony . . . . .	1 grain.
Tincture of squills . . . . .	Half a drachm.
Distilled water . . . . .	7 ounces.

Take four table spoonfuls; if not effective. take two table spoonfuls every half hour afterwards.

*Emmenagogues* are medicines to promote the natural functions peculiar to females.

DROPS SUITABLE FOR THE DELICATE AND IRRITABLE.

Muriated tincture of iron . . . . .	Half an ounce.
Compound tincture of aloes . . . . .	Half ditto.
Tincture of lavender . . . . .	Half ditto.

A tea spoonful in a wine glassful of camomile infusion three times a day.

EMMENAGOGUE PILLS.

Aloes pill, with myrrh . . . . .	1 drachm.
Compound iron pill . . . . .	1 drachm.
Carbonate of soda . . . . .	1 scruple.

Make into thirty pills: take two twice a day.

MIXTURE FOR THE WEAK AND PALE, IN CASES OF RETENTION.

This is the old celebrated Griffiths' mixture.

Myrrh, in powder . . . . .	2 drachms.
Sulphate of iron . . . . .	50 grains.
Carbonate of potass . . . . .	1 drachm.
Spirit of nutmeg . . . . .	1 ounce.
Water . . . . .	18 ounces.
Sugar . . . . .	2 drachms.

Pound the myrrh with the carbonate of potass and spirit of nutmeg perfectly; then add gradually the water, after which the sulphate of iron and sugar. In retention, take two table spoonfuls every fourth or sixth hour.

*Epilepsy*—This is generally felt coming on by a pain in the head, dimness of sight, noise in the ears, palpitation of the heart, wind in the intestines, and stupor. When the person falls down, the whites of the eyes are only seen, the fingers are clenched, and one side is agitated; foam comes from the mouth, the tongue is protruded, with violent contortions of the whole body. If the cause be worms, give from half an ounce to an ounce of the oil of turpentine. When there is occasional sickness, wind, and disturbed sleep, showing indigestion as the exciting cause, give an emetic of a solution of the sulphate of zinc in a watery infusion of camomile tea, and repeat it, as may be necessary, in two or three days. If the stomach after this is weak, take a bitter infusion, with some ammonia, as a stimulant. If the bowels are costive, take magnesia; if relaxed, some chalk mixture. If the fit proceed from a suppressed discharge, take aloes, or the emmenagogue ordered above; loss of blood in piles, then apply leeches to the parts, foment, &c. If a child of costive habit be attacked, then a little calomel and jalap will be found best. Care should be taken not to let the tongue get injured during the fit, and the nose, temple, and pit of the stomach may be rubbed with æther or weak ammonia. When people are subject to these fits, they should have good air, diet, and exercise; take cold baths, and, as a tonic, half a grain of sulphate of zinc three times a day, gradually increasing the dose.

*Expectorants* are for the purpose of relieving the throat, lungs, and air passages from an accumulation of mucus.

## POWDER.

Myrrh, in powder	. . .	16 grains.
Ipecacuanha, in powder	. . .	6 grains.
Nitrate of potass	. . .	10 grains.

Divide into four: take one every four hours.

## DRAUGHT.

Syrup of squills	. . .	1 drachm.
Ipecacuanha wine	. . .	10 drops.
Carbonate of potass	. . .	10 grains.

Take with a dessert spoonful of lemon juice effervescing three times a day.

## MIXTURE.

Ipecacuanha wine	. . .	1 drachm.
Sweet spirit of nitre	. . .	2 drachms.
Syrup of squills	. . .	6 drachms.
Camphor water	. . .	3 ounces.

Mix: a table spoonful when the cough is troublesome.

*Eye-Waters* are useful in inflammation and irritation of the eyes.

Acetic acid	. . .	1 ounce.
Proof spirit	. . .	Half an ounce.
Rose water	. . .	8 ounces.

This is applied to weak eyes that water, and to remove the prickling sensation felt in the eyes after being strained; it is also used in continued inflammation. Strengthen or weaken by the quantity of vinegar.

## ACETATE OF AMMONIA WITH CAMPHOR.

Liquid acetate of ammonia . . .	2 drachms.
Camphor mixture . . . . .	2 ounces.

This is astringent and stimulating. In very severe cases, where there is great pain, leave out the camphor, and mix with the ammonia decoction of poppies two ounces, hot, and strained through linen. Or the following may be used.

Decoction of poppies . . . . .	2 ounces.
Rose-water . . . . .	1 ounce.
Camphor mixture . . . . .	1 ounce.

This is also useful in the commencement of inflammation, when there is pain and swelling, and for children having a mattery discharge.

*Fainting.*—Let the person be placed flat (see fig. 11), raise the feet, dash cold water on the face and chest, and put smelling salts or some stimulant to the nose. If he can swallow, give a little brandy and water, or cold water, to drink, or water with half a tea spoonful of sal volatile, or spirit of lavender in it.

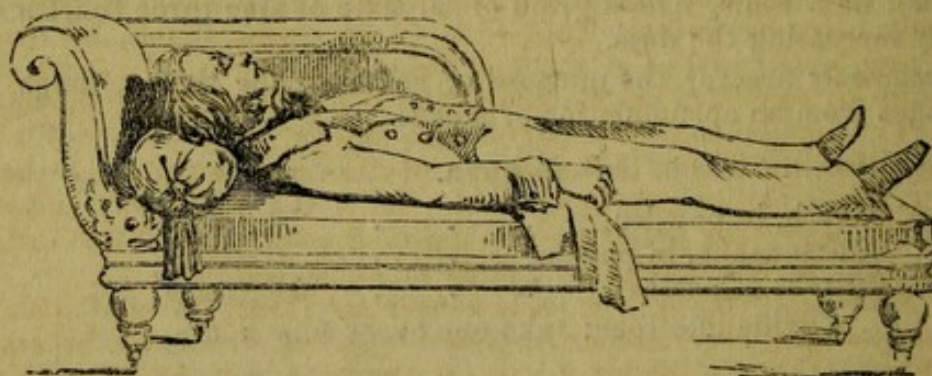


Fig. 11.

Should there be coldness of the extremities, apply hot bottles to the feet and legs.

*Fevers.*—It is a very difficult task to attempt to instruct a non-medical person how to act in cases of fever, as they differ so much in character and causes; and the treatment depends in a great measure on the constitution and habits of the individual labouring under the attack. In fever, the functions of the body are disorganised, the pulse quickened, the tongue foul, and shivering followed by heat.

Bleeding is in general good, if had recourse to in an early stage, but the old, or the free-liver should not be bled, and if the thick part of the blood is found to be soft and small in proportion to the fluid part, then bleeding must not be resorted to. Should inflammation take place, then local bleeding may be adopted.

Emetics may be given at the commencement of the attack to the young and strong, but to them only.

Purgatives.—A gentle clyster may be administered, and by keeping up a moderate action on the bowels, in slight cases of fever, it often subdues the disease; where there is much excitement, a small bleeding from the arm should precede the purge.

Mercury is given as a purgative, as an alterative, and to subdue inflammatory action generally.

Antimony, to cause perspiration, should be carefully administered.

Mineral acids check thirst and heat of the skin at first, and in the last stage of the disease are useful from their antiseptic character.

**Cold.**—Cold air should be freely admitted; and when there is no internal inflammation, let the body be well sponged with lukewarm vinegar and water. Should there be inflammation of the brain, the head should be shaved, and vinegar and water, brandy and water, iced water, or a lotion of equal parts of the liquid acetate of ammonia, spirit of wine, and camphor mixture constantly applied. Water should be poured from a height upon the head, which will give relief; after which apply the cold lotions; and should the symptoms threaten to return again, pour on the cold water.

**Fever, Inflammatory.**—This is known by a white tongue, redness of the eyes and skin, flushes, ending with violent and continued heat, anxiety, impatience, strong pulse, hurried breathing, and great thirst. Costiveness exists, the urine is high-coloured, and leaves a brickdust-like sediment. Bleeding should be performed, and repeated, as may be necessary; the drink should be plentiful, such as acidulated soda water, after the effervescence has ceased; balm tea or lemonade, with the infusion of roses in them, or even common water. The windows or doors should be open, that there may be abundance of cool air, but not a draught. Vinegar and water should be sprinkled on the floor; the bed clothes be occasionally removed. The body should be sponged with vinegar and water while of greater heat than usual, and there is not a profuse perspiration. If there be delirium, then treat as before directed; but if the pulse sink and the extremities become cold, there must be mustard poultices applied to the feet, and small doses of camphor and æther administered in water.

**Fever, Nervous.**—This is called a low nervous fever, or mild typhus. The tongue is at first covered with a white mucus, but afterwards becomes dry and brown; there is vomiting, pains in the head, and the whole body aches; the pulse is weak and intermitting, the respiration short, alternate chilliness and flushings, giddiness and confusion of ideas, urine pale and watery, delirium. When the disease advances, the eyes are red, the pulse at the temples throb, the urine foetid, and there is twitching of the tendons. At the commencement of this disease give an emetic, and soothe the mind of the patient, and endeavour to induce perspiration. If there be no perspiration and no feeling of chilliness, but the body remains at a great heat, sponge with cold water, or place in a cold bath. If this is not successful, and the bowels costive, the tongue dry and crusted, the pulse hard, then give mild aperients, and cordial preparations to cause sweating; after which cinchona, cascarilla, &c., as tonics; port wine, Madeira, camphor, or æther, and if the body keep at a great heat, pour on it cold water. To support the strength during the continuance of the disease, give wine with sago or arrow-root, and if no symptoms of a putrid nature, veal or chicken broth. To induce sleep, give a little opium, with some medicine that induces perspiration. If the feet become cold, put on a mustard poultice, and apply hot water.

**Putrid, or Typhus Fever,** is more sudden in its attack and rapid in its progress than the last-named. The pulse is quick and small, bilious vomiting, great pain in the head, strange sounds in the ear, throbbing of the arteries, ferret-like look of the eyes, tongue dry, with a brown or black

crust on it and on the teeth; urine first pale, then high-coloured, and with a bad smell, breath hot and offensive; wandering of the mind; the expression of the countenance is that of anxiety and suffering; the smell of the body is peculiar. These are appearances of the earlier stages; afterwards red or purple spots break out, like flea-bites, and blood may flow from different parts of the body. The pouring cold water on the body when there is no perspiration, and it maintains its great heat, is highly recommended by some medical men; and considerable relief has been given by administering three table spoonfuls, every three hours, of a mixture composed of three drachms of compound spirit of æther, and seven and a half ounces of camphor mixture. There should be frequent change of linen, good ventilation, and plentiful fumigation; also sprinkle the room with vinegar, camphorated spirits, or chloride of lime; give acid drinks, grapes, oranges, and other acid fruits. Peruvian bark, with acids, is recommended, and occasionally rhubarb and cream of tartar, calomel, and mild clysters. If large purple spots appear about the mouth and throat, then administer gargles, the same as in putrid sore throat; if bleeding comes on, then give the following draught every third hour:—

Muriatic acid . . . . .	20 drops.
Decoction of bark . . . . .	1½ ounce.
Tincture of bark . . . . .	2 drachms.

Should the patient sink in the advanced stages unexpectedly and suddenly, give wine, or even brandy, with ammonia. The greatest care should be taken by the patient, when recovering, in every particular as to food, clothing, atmosphere, and the bowels, to guard against a relapse.

*Filaria Medinensis, or Guinea Worm*, is an extremely common parasite of the human frame in some parts of the world. It is chiefly met with in the tropics; the proper habitation of the worm is in the torrid zone, but it is not confined to that zone; and from its great frequency in Guinea it derives its name. In India it is mostly prevalent in the months of November, December, and January. Though endemic in some parts of the world, it is now an established fact, that all persons are subject to its attacks if placed in a contagious district. Mr. Busk, who has seen more of this disease than most men, tells us, "that the exposure of the bare surface of the feet and legs to the water in which the native canoes on the coast of Africa are to be found is quite sufficient to endanger an attack. This mode of introduction will account for the frequency with which the legs and feet are first affected by parasites, as it is common among sailors in warm latitudes to go about with the feet and legs bare; and that the contagious material is conveyed in water is also further indicated by the well known fact, that in India, where it is the custom for the natives to carry water in skins on their backs, the worm makes its appearance on the back and shoulders first.

"The entrance of the worm into the body is apparently unattended with any observable symptom, and the person affected is unconscious of its presence until the period when it is ready to make its exit." In the first instance, it lies dormant under the skin for several months, as shown in No. 2 of fig. 12, inclosed in an oblong sack. In this embryo or egg-like existence it appears to produce little or no inconvenience. It here commences a rapid growth, estimated by Mr. Busk at about an inch a week, until it often reaches the enormous length of six feet. When the full

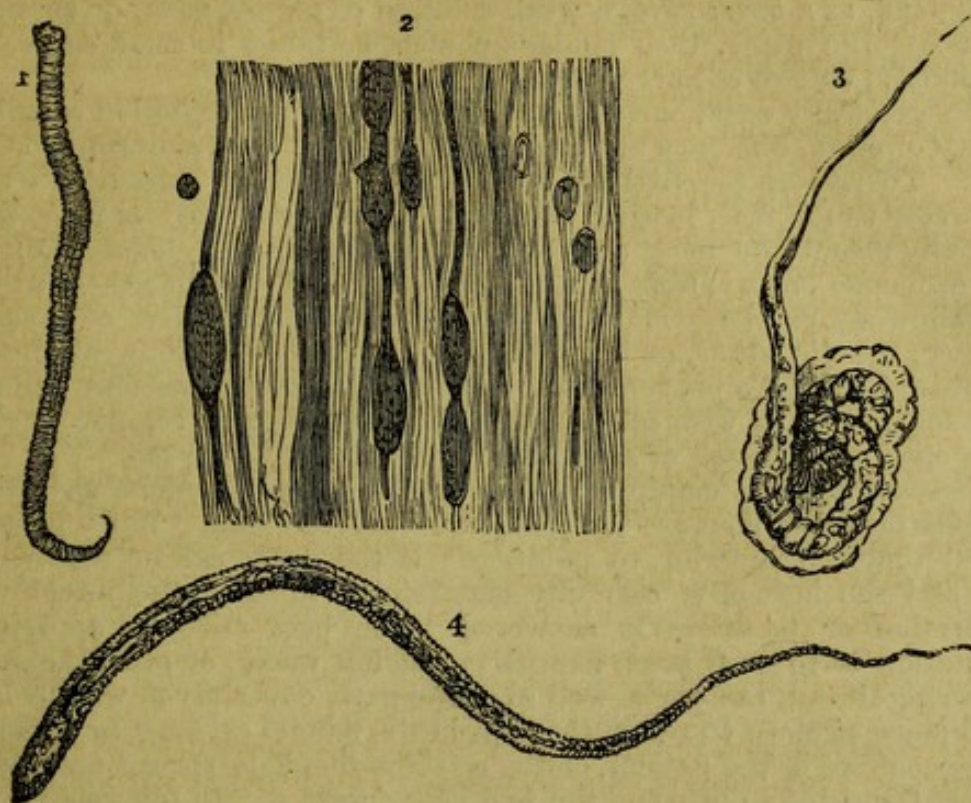


Fig. 12.

4 represents the young guinea worm; 1, the convoluted form when macerated in water; 3, the mode in which the young are found rolled up.

growth is attained the worm perforates the skin, and in so doing creates excessive pain, inflammation, and suppuration in the part, and presents his head at the surface through a small pustule apparently containing matter only. "The whole worm, when mature and fresh, is of a transparent, milky-white colour, and presents an indistinct, brownish, wavy, longitudinal streak; it is round and about  $\frac{1}{12}$  of an inch in diameter; it is tough and elastic to a remarkable degree, and may therefore with care be withdrawn by a cylindrical or screw motion entire from his hiding-place.

To extract the animal entire a cut may be made across his track, and then a small roll of sticking plaster be put under it, round which it should be carefully wound day after day till extracted. If broken off, he will continue to live and be an annoyance. Extreme cleanliness and the application of strong smelling substances applied, such as assafoetida or garlic, are said to prevent the annoyance. The Chigoe is another minute insect, getting under the skin of the feet, producing a violent itching, and forming a little bag of bluish-looking matter, containing the creature and its eggs. The bag must be extracted entire, and the cavity filled with tobacco ashes. If not carefully done, violent inflammation follows.

*Fish, Poisoned by Eating.*—This is felt an hour or two after the meal; a weight is felt at the stomach, headache and dizziness, heat about the head and eyes, thirst, and sometimes an eruption on the skin. At once excite vomiting, by tickling the back of the throat with the finger or a feather, and drink plentifully of warm water. Afterwards take a smart purge. On the removal of the cause, drink vinegar and water, and also sponge the body with it. Sugar and water, with a little æther, may be taken. Some

recommend, as a corrective, a weak solution of potass, soda, or ammonia. If spasms take place, then laudanum must be taken in small doses, or a tea spoonful or two of paregoric elixir, in water.

*Fits* generally commence by yawning, stretching, dejection of spirits, anxiety of mind, difficulty of breathing, sickness, and palpitation of the heart. To restore the patient, apply strong smelling salts to the nose, cold water to the face, loosing any part of dress that may appear tight, especially round the neck and body, as it is frequently caused by that bane of female beauty, *tight lacing*. Rub the temples with æther; as soon as swallowing can be performed, give sal volatile and spirit of lavender in water; a little æther, or if nothing else at hand, a little weak brandy and water cold. To prevent their return, give a little aperient, followed by tonics, combined with sal volatile and lavender; take regular exercise in the open air; change of scene, and cold bathing in the sea.

*Fomentations* are employed to diminish swellings, reduce the pain of inflammations, and increase the perspiration of the skin. When properly applied they are superior to poultices; if the parts can be placed in a bath, and the heat of it carefully maintained, then all the intention of fomentation or poultices is answered. The best mode of applying a fomentation is to well steep flannel in the hot water, or other fluid, and then wring it out, and lay it well over the part, covering it with a large folded piece of cloth to retain the heat in the flannel as long as possible; for the comfort of the patient, cloths or skins should be spread underneath the part fomented to prevent the bed being wetted. In ten minutes or a quarter of an hour another piece of flannel should be steeped and wrung out, then the first removed and the second piece applied; this change of flannel must be continued as long as necessary, always taking care to keep up the heat of the fluid. Poppy water for fomentation is made by boiling one ounce of poppy-heads in a pint of water for a quarter of an hour, and then strain for use; mallow water, by an ounce of dried mallows to a pint of water.

*Freckles, to Remove from the Face.*—You may generally remove freckles without using cosmetics (which are oftentimes dangerous by reason of their containing mineral agents), by merely stimulating the absorbent vessels of the skin to take them up and carry them away as refuse. Any smart stimulant will act in this way; but it has been found that the safest are taken from the vegetable kingdom. One of the best and easiest is Withering's Cosmetic Lotion, which is made of a tea cupful of soured milk cold, and a small quantity of scraped horseradish; let this stand from six to twelve hours, then use it to wash the parts affected twice or thrice a day.

*Gout.*—This is a severe pain in the small joints, mostly the feet, as if the bone was dislocated and warm water was being poured on it, and then a chillness and slight fever; it returns at regular periods, and gradually goes away. When the fit is over, perspiration appears and the part swells. In some cases the symptoms vary, and the stomach, head, or other internal part, may be attacked. Opiates with antimony should be occasionally given, and the bowels freely opened with calomel, rhubarb, aloes, and aperients. Medicine to promote perspiration should be attended to, and the parts kept carefully warm. When the fit has passed, tonics should be taken, as bark, or from five to ten grains of the flowers of hops, in one or two ounces of a decoction of the same flowers. When

the head is affected, it is likely to lead to apoplexy or palsy, place a large blister to the back of the neck and shoulders, and small ones to the inside of the thighs, also mustard poultices to the soles of the feet, and take potass, soda, or ammonia, æther, and aromatics; or, as an aperient, from six drachms to an ounce of the tincture of aloes. If the lungs be affected by it and asthma produced, blister the back or breast, place mustard poultices on the soles of the feet, and take opiates and antispasmodics.

*Green Sickness* is a female complaint, indicated by paleness of the countenance, whiteness of the tongue and skin, pains in the head, and generally in the left side, palpitation, breathlessness, nervousness, and hysteria, and the peculiar evacuations of the female sex are decreased in quantity or entirely stopped. An ounce of castor oil should be taken, and, before dinner, pills composed of 2 grains of Barbadoes aloes and 2 grains of the sulphate of iron; now and then a draught of the tincture and infusion of rhubarb with manna, and, when the bowels are not freely open, senna and Epsom salts; this last may be aided by a warm-water clyster. Rhubarb relieves the palpitation of the heart, and a blister the pain in the side or head. A mild nutritious diet, change of air, and exercise are beneficial. The mixture known as Griffith's mixture is always of the greatest service, taken as directed at page 86.

*Gripping*.—This is a suffering of childhood from the folly or ignorance of nurses, and may be known from the anguish of the child's countenance, sometimes followed by convulsions. If the attack be slight, then give a few drops of sal volatile, and afterwards a dose of castor oil. But, should the bowels not be free, administer a clyster of thin gruel or warm water, with a little castor oil and soap; or steep a blanket in hot water, wring it well, then fold the child naked in it, and wrap other warmed coverings over the blanket. In very young children it frequently arises from over-feeding; and a small dose of castor oil, with a little dill or carraway water, will afford relief.

*Headache* proceeds from various causes: indigestion, inactivity of the liver, &c.: the root of the evil must be removed. In some instances a half tea-spoonful of citric acid, taken in half a tumbler of water, proves a remedy.

*Heartburn*.—Should this proceed from acidity of the stomach, its immediate effects may be removed by magnesia or ammonia; and if costiveness exist, a little rhubarb should be taken at the same time; after which some stomachics, a little carbonate of soda, with a tea spoonful of tincture of cardamoms in water, after meals, is a much-used remedy. If heartburn is occasioned by a disordered stomach, an emetic, with plenty of camomile tea, affords relief; this should be followed by aperient and stomachic medicines. Should the cause be worms, take a calomel pill at night, and a black draught the morning after. Restore the tone of the stomach by taking a pill every day half an hour before dinner, composed of  $\frac{1}{2}$  grain of quinine and 3 grains of pill aloes with myrrh, commonly called *pill rufus*. Carefully avoid indigestible foods and flatulent vegetables; masticate the food well, take a small quantity of food at each meal, exercise daily in the open air, avoid suppers, and sleep on a hard mattress.

*Hiccup*.—This may often be removed by holding the breath, by swallowing a piece of bread, by a sudden fright, or a draught of weak liquid. When from heat and acidity of the stomach of children, a little rhubarb and chalk will remove it. Should it proceed from irritability of the

nerves, take a few drops of sal volatile, with a teaspoonful of paregoric elixir. If it still continue, rub on soap liniment, mixed with tincture of opium, or a blister may be placed on the pit of the stomach, or sipping a glass of cold water with a little carbonate of soda dissolved in it. When occurring in advanced stages of fever, give a tea spoonful of compound spirit of æther.

*Hooping Cough* is easily distinguished by the peculiar hoop when the child draws in its breath. Change of air has often effected a cure, when the disease obstinately resisted medicines. If the child be too severely ill to be taken abroad, it should be kept in one apartment, and the temperature carefully kept at the same degree. Promote expectoration, or an emetic may be given occasionally of ipecacuanha wine every other night; if feverish, a grain of calomel and a warm bath may be given at bedtime. If inflammation arise, a leech or two may be applied to the throat or chest; frictions to the spine of oil, soap liniment, and a little laudanum; the same to the soles of the feet. A mixture, composed of 2 drachms of ipecacuanha wine,  $\frac{1}{2}$  drachm of carbonate of soda, 2 drachms of paregoric elixir, and 1 ounce of water; a tea spoonful or two, according to the child's age, may be given three or four times a day.

*Hysteria*.—Hysterical fits generally occur to the young—that is, from fifteen to twenty-five years of age, and then usually females; in most cases either arising from anxiety of mind, from not having the feelings under control, or suppression of natural discharges. When the fit is on, hold strong smelling salts, or, rather, the smoke of burning feathers, to the nose; give water, with some sal volatile in it, as a drink; sprinkle cold water on the face and breast, and let there be free admission of air; all tight things, stays, &c., should be loosened. Should there appear to be a flow of blood to the head, then bleed; keep the bowels open with a dose of castor oil and oil of turpentine, every second or third morning. See the treatment recommended for fits; the same would do good in this complaint.

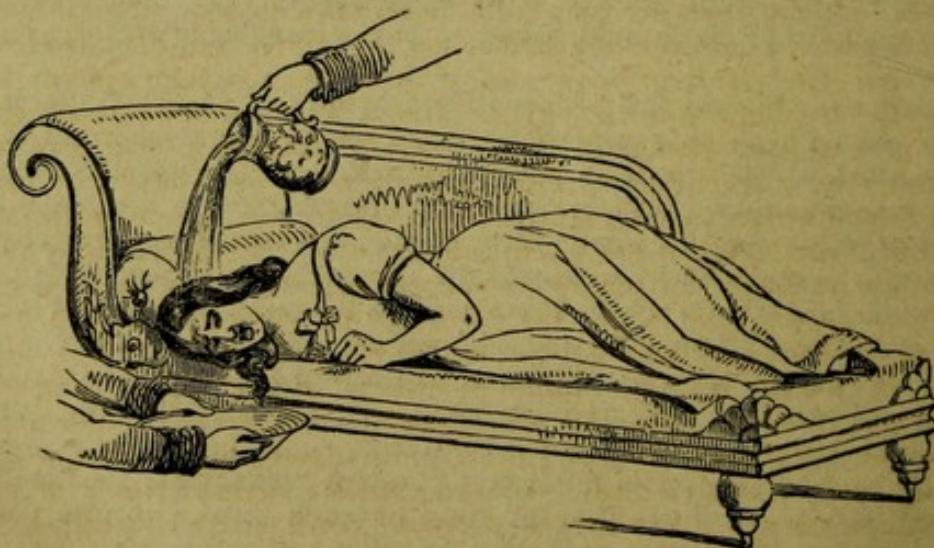


Fig 13.

Place the head over a basin, and pour water from a jug over the head and chest till the patient becomes chilly and revives. Never use anything

but cold water for the hysterical fit, unless the party turn very cold, when you should discontinue it, and apply warmth to the feet.

*Indigestion.*—First avoid the cause in diet; take a gentle emetic, correct the acidity with alkalis—that is, half a tea spoonful of magnesia, carbonate of soda, or a wine glass of lime water with milk, with absorbents along with laxatives; moderate diarrhœa by absorbents, as chalk mixture, and if the stools be a clay-like colour, purge with calomel and colocynth; take tonics with aromatics and vegetable bitters; keep the feet and legs warm. Drink soda water, toast and water, brandy and water occasionally; but the greatest attention should be paid to the diet, and indulgence in spirituous or vinous liquors; take plenty of exercise, and good open-air and muscular exertion, will generally prevent attacks of indigestion.

*Itch.*—This is easily known by the uneasy pimples on the wrist, fingers, hams, and waist, and is caused by a minute insect getting under the skin. Sulphur mixed with treacle or milk, is taken internally, and the body rubbed with the following sulphur ointment every night, made as follows:—

Powdered sulphur . . . . .	1 ounce.
Powdered black pepper . . . . .	1 drachm.
Hog's lard . . . . .	3 ounces.
Essence of bergamot . . . . .	1 drachm.

Or the bed may be warmed with half an ounce of sulphur mixed with two drachms of nitre, put among the hot coals; the patient gets in naked, and the bed-clothes are tightly tucked about the neck and shoulders. In about seven nights the cure is effected, when every piece of linen must be changed and washed, as well as bedding and all other clothing cleaned and exposed to the action of the air some time before they are again used; they may be also fumigated with sulphur in a closed room.

*Jaundice* is known by the yellowness of the skin, eyes, and urine; sickness, pain in the stomach, bitter taste in the mouth, and blue or earthy yellow colour of the evacuations; the bowels are usually costive, but may be loose. If the veins be very full, bleed; take an emetic, give medicines containing soap, calomel, rhubarb, aloes, or squills, and demulcent drinks. The bowels must be kept open, and, if there be pain, take opium; if much fever, effervescing saline draughts. Drink water of cider in which a red hot iron has been plunged. Keep cheerful company, and take air and exercise. In women, before childbirth, it must be relieved by bleeding, warm fomentations to the part where the liver lies, opium, with laxatives and pills of rhubarb and soap. In infants, castor oil is generally sufficient to remove it; but if the yellowness becomes green, then the case assumes a serious aspect, and it will be necessary to give from 2 to 4 grains of calomel, or grey powder, with a dose of rhubarb the following morning, given in barley water. Jaundice nearly always depends upon some derangement of the liver, this will therefore require particular attention.

*Laudanum, Poisoned by.*—Take from ten to twenty grains of sulphate of zinc, or four or five grains of tartar emetic; drink largely of mustard and water, or any other means adopt to continue the vomiting. After the stomach has been thoroughly emptied of the poison, drink hot, strong coffee or tea; have a large, strong clyster of salt and gruel, or soap and water. To prevent drowsiness, dash cold water in the face, bleed and blister the neck and legs, and rouse the person by every means. If cold comes on, then use friction to produce warmth.

*Lead, Sugar of*, when swallowed, should be counteracted by an emetic of ten grains of white vitriol, or a good dose of antimonial wine. A good dose of Epsom salts should follow, and plentiful drinks of milk, with carbonate of soda or lime in it. While other remedies are being procured, vomiting may be excited by putting the finger or feather into the throat.

*Lightning, struck by*.—If the stroke be severe, it is instantly fatal; but if only partial insensibility be produced, dash cold water over the face and head, and use friction, and bleed. If a burn, the case will require the treatment directed for burns—with friction and warmth. If deprived of the use of a limb, stimulants and a little aperient medicine. The directions given for treating apoplexy will also, in some cases, be suitable in this.

*Lime Burns*.—First neutralise the lime with vinegar and water; do not pick it off; then poultice; afterwards apply a little spermaceti or sticking plaster. If in the eyes, apply vinegar and water as quickly as possible, and afterwards bathe with warm water. Give a dose of calomel and opium at night, followed by a rhubarb draught the morning after.

*Liniments* are for the purpose of subduing swellings, or to act as counter irritants on the skin, and thus prevent inflammation sinking deeper into the part. Rubbing gently with the hand or hair brush often answers the purpose of dispersing swelling. When a joint has to be rubbed, the hand sometimes hurts the skin, and cannot well be continued more than a quarter of an hour, in which case it is usual to lay on the palm a little oil or lard.

*Opodeldoc*.—This is more commonly known by the name of *Soap Liniment*—to make which, put an ounce of camphor into half a pint of strong, pure spirits, slice very thin three ounces of hard white soap, and put it also into the bottle; shake it several times a day, until the whole is perfectly dissolved, when it is fit for use.

*Mustard Liniment*.—Shake well for a few days an ounce of fresh-ground mustard in a pint of spirits of turpentine; when well settled, carefully pour off the liquid from the mustard. Cover the hand when applying it, and only continue until the part smarts. Useful in chilblains, lumbago, &c.

*Hartshorn and Oil* is a common application, especially in stiff necks and slight rheumatism: the proportions are one-third hartshorn to two-thirds of oil.

*Chilblain Liniment*.—Camphor, 10 grains; turpentine, 2 drachms; soap liniment, 10 drachms.

*Liver, Inflammation of*.—There is first a chilliness, then a pain in the right side, extending up to the shoulder bone, which is felt more acutely when the part is pressed; a cough, sallow complexion, and ease only found in lying on the affected side, vomiting of bilious matter, saffron-coloured urine, are the early symptoms. Purge with calomel and jalap every night till the inflammation has ceased. Put leeches over the part where the liver lies, or use the cupping glasses, give sickening doses of tartarised antimony. Let no food but gruels be taken; if still the inflammation be not subdued, place blisters over the liver and keep up their action. In India and warm climates it is the practice to give large doses of calomel until salivation is produced, often with general blood-letting; in this country a milder treatment generally succeeds.

*Lotions* are employed for different purposes, to cool and soothe the parts, to dry and absorb, or to irritate and stimulate.

*Cold water* is very common now in medical practice as an evaporating wash. A single piece of linen is laid over the part, which is exposed to the air, and as it dries more water is dropped on from a sponge; if to ease severe pain, add a tea spoonful of laudanum.

*Spirit Lotion*.—Rectified spirit of wine, 1 ounce; water, 15 ounces. Should this spirit not be at hand, use a quartern of good drinking spirits; an evaporating wash in inflammations and bruises.

*Lead Lotion, or Goulard Water*.—Sugar of lead, 1 drachm; diluted acetic acid, half an ounce; spirits of wine, half an ounce; water, 10 ounces. When used as a lotion for the eyes, the proportions are two grains of the sugar of lead to two table spoonfuls of water.

*Freezing Lotion*.—Common salt, saltpetre, and sal-ammoniac, in equal parts. Add a sufficient quantity of water to render it liquid.

*Zinc Lotion*.—Sulphate of zinc, one drachm; water, one pint. This is a drying wash used in cracking of the skin, and after burns and scalds, to heal them and arrest the discharge.

*Lime Water* is also employed as a drying wash. Pour nearly a pint of water gradually on to a pound of unslaked lime, stir well, let it stand until the lime has sunk, then pour the water off, and it is ready for use. Useful also in indigestion, mixed with milk; astringent in dysentery and diarrhoea; and good in children's bowel complaints.

*Lumbago*.—Treat as rheumatism; cupping and warm baths; stimulating plasters or blisters. Doses of oil of turpentine; and applications of camphor or soap liniment to the loins at bed-time, with friction and warmth. The guaiacum mixture, or in powder, is very beneficial to elderly people.

*Measles*.—This is a contagious fever, and comes on with sickness, fever, shivering, pain in the head, and cough. The eyes are heavy, swelled, inflamed, and water runs from them and the nostrils, with a great disposition to sleep, and a peculiar bright red at the point and edges of the tongue. In three or four days there is an eruption like flea-bites, first on the face, neck, and breast, and soon after over all the body; these rise, but no matter comes from them, as in small pox. They continue about three, four, or five days, then dry away; but the fever, cough, pain at the chest, and difficulty of breathing continue. Give cooling and aperient medicines, with spare diet, principally of a farinaceous kind, and keep in mild temperature. Simple diaphoretics to cause perspiration do good. Paregoric elixir in small quantities, occasionally, at night; soothe the cough with pectorals, but if obstinate, apply blisters; bathe the feet in warm water at bed time, and wrap them in flannel.

*Milk*.—Dr. Conquest, in his admirable work, "Letters to Mothers," gives the following "proportions of the various substances that enter into the composition of the milk of woman, of the cow, the goat, and the ass:—

	WOMAN.	COW.	GOAT.	ASS.
Butter	. 8.97	2.68	4.56	1.29
Sugar	. 1.20	5.68	9.12	6.11
Cheese	. 1.93	8.95	4.38	1.95
Water	. 87.90	82.69	81.94	90.65

"It will be apparent," continues the doctor, "that in the milk of woman there is the largest quantity of butter, and the least quantity of cheese; and in the milk of the cow and the goat the sugar and cheese are greatly in excess, as compared with that of woman. It is thus shown that the practice of adding sugar to the milk of the cow for infants is erroneous."

*Mouth, Sore.*—This may be alleviated by a tea made of blackberry leaves, or borax and honey.

*Mother, about to become.*—None but those who have entered on such an ordeal can describe the emotions of a woman's mind thus situated—her hopes, fears, and anxieties. She feels elevated in her social position, lengthening her existence, as it were, beyond the tomb, and founding a claim in the mysterious future. Obeying the grandest ordinance of Nature, she is all gratitude to her Creator; her physical existence she finds changed, and her duties of life increased; she is desirous of fulfilling her responsibilities in a befitting manner, that the new principle of life nourished by her may issue into existence with safety, health, and perfect organisation. A celebrated French authoress terms the momentous period "the martyrology of maternity;" but, if it be so, it only exists as far as there has been a deviation from Nature's laws, and the penalty is justly weighed in accordance to the amount of crime. Sorry are we that the dress, habits, manners, and education of modern female society lead to such penalties; but man may preach in vain, till women themselves arouse to a sense of the pernicious and destructive practices, and vigorously effect a reform. During pregnancy, all *food* should be light, nutritious, and easy of digestion. All excitement in food, drink, body, and mind should be carefully avoided. From the change going on in the system, the digestive organs may be deranged, and the appetite become depraved; but, instead of pandering to such *longings*, the effect of which will be severely felt afterwards, a remedy should be sought in gentle doses, sufficient to cleanse the bowels, of rhubarb and magnesia, Epsom salts, castor oil, or Seidlitz powders, taken on retiring to bed. Oranges, baked apples, figs, raisins, prunes, and green vegetables are useful for this purpose. If obstinate *costiveness* exist, remove it by a clyster of a pint and a half of soap and water, or gruel having dissolved in it half an ounce of Epsom salts. Above all things, out-door exercise will be found beneficial. Avoid indolence in lying in bed or lolling on couches, lifting heavy weights, or violent emotions of the body. The feet should be kept warm, and the body free from *tight bandages*. Those who have often been mothers sometimes, in the later months of their period, find benefit in wearing around them a flannel roller. Keeping the *skin* clean, and promoting the circulation of the blood by rubbing the body, are what we may term necessities to those who desire the health of themselves and their future offspring. If *sickness* in a morning be very distressing, it is advisable to breakfast before rising, and lie a short time afterwards. Effervescing draughts and infusions of gentian or camomile in a morning, before sickness comes on, are also useful. For *heartburn*, or what is called water-brash or qualm, a little magnesia, soda, chalk, ammonia, or sal volatile will usually prove effective. Should the bowels become too *relaxed*, use only solid food and boiled milk, rice, sago, or arrowroot. If *piles* be threatened, occasionally take a little cream of tartar, or mix it with castor oil or sulphur; wash the parts affected frequently with warm water or Goulard water, and espe-

cially avoid *heating* food or strong drinks. When the pain ceases, foment with alum and water, or apply gall ointment. *Spasms* must be met by taking a little sal volatile and spirits of lavender, or a teaspoonful of paregoric elixir. Let particular attention be paid to the passing of the water, that regularity may be sustained during the first months. When the water flows involuntarily, the person should keep as much in a horizontal position as possible, and be careful both as to quantity and quality of food. If *faintness* is felt, then recline, having the feet well raised: admit the air, and apply cold water to the temples, mouth, and chest, and smelling salts to the nose. Women of an apoplectic tendency, if troubled long and severely with *headache*, should be bled, and be very particular as to diet, and take aperient medicines—salts and senna, &c.—in the morning. *Aches and pains* that are usual must be treated in the ordinary manner for such complaints, adopting the simplest remedies. In costiveness immediately preceding birth, administer a clyster of hot gruel, with a table spoonful of castor oil in it, which will greatly conduce to the patient's comfort. When the *limbs and veins swell*, some saline aperient medicine, such as Seidlitz powders, should be taken, and rest for several hours a day on a bed or couch; should this not prove effective, then the limbs may be rolled with bandages, in the same manner as recommended in swelling of veins or broken bones. In cases of *cramp*, the same course as to resting the limbs in a horizontal position should be adopted, rubbing the parts well, and bathing them in warm water; or dip flannel into hot water, wring it out, lay it on the limb, and cover it with some rug to retain the heat.

*The Mother and her Babe.*—A child when first born should be gently washed in a bath with a sponge and a little soap. The wet ought to be absorbed from its body, not rubbed off, but nothing else than the soap and water must be used. If it does not readily become clean, a little warm lard may be employed, and then washed off. Administer to it half a tea spoonful of castor oil once or twice, but never permit any other substance than its mother's milk to pass its lips. Both on the mother and the child's account, let it suckle as soon as convenient after birth. If the navel become sore, wash it with Goulard water, and dress it with spermaceti ointment or lard on lint.

After birth, the mother should have a bandage drawn round her loins, which greatly aids her weakened back; no sleeping draught must be administered, but if great pain exist, foment with flannel and warm water, and gently rub the stomach. In cases of costiveness, give castor oil, senna, or rhubarb; if there be a stoppage of water, foment with hot water, and give five or ten grains of nitrate of potash in the gruel.

In all cases be very attentive to the state of the bowels, that regularity may be established. The food must be light and nutritious, not too sloppy. When the discharge continues excessive, frequently apply water, and inject lukewarm green tea, in which there may be about half a tea spoonful of laudanum if there be much pain at the same time.

The mother should not sit up in bed too early; and for some weeks ought to lie on a couch or bed as much as possible; by doing so a future life of misery may be avoided.

If the breasts feel hard and knotty, rub them with the hand and a little hair powder. Should there be any difficulty in suckling the child, foment the breasts with warm water; and if the nipple be short, take an

oil flask, or soda water bottle, burn a little spirit in it, then apply it over the part, when it will be drawn out.

When there is reason to think the nipples will become sore, as a preventive frequently bathe them with strong alum water, green tea, or port wine and brandy in equal parts. It is of service to protect delicate nipples with glass, India rubber, or wax shields. When they become excoriated or ulcerated, wash them with a solution of alum, and sprinkle with a little calamine or zinc powder. If one nipple only be affected, do not let the child use it until healed, or an artificial teat can be had. The breast should be regularly drawn. In simpler cases, perhaps well bathing them in cold brandy and water, or spirits of wine and water may be found efficient, still using an artificial teat until quite healed. When there is an overflow of milk, the breast must be constantly fomented with alum water, but before the child is put to suckle, well wash it; the mother should be abstemious and take some saline aperient. The most painful complaint to this part is where inflammation attacks the breasts; they feel uneasy and painful, and swell from stagnation and over-distention of the milk. The pains are sharp and shooting; ultimately a throbbing is felt; an abscess being formed, the skin changes colour and bursts, leaving a disfiguring scar and slow-healing wound. When this complaint first sets in, every effort should be made to empty the breast; if not successful, dip linen in a little brandy and water, lay it on the breast, do not cover it, and as soon as dry wet it again; also take doses of Epsom salts, keeping the bowels freely open; this is to prevent the flow of milk. If the disease still progresses, put on a dozen leeches and poultice; this may be done two or three times. When the throbbing is felt, then the matter has formed and will burst; after which, poultice and continue taking the Epsom salts. Should a medical man be near, the annoyance of a scar may be avoided by his finding the seat of the matter and letting it out with a lancet; this will also prevent a foul ulcer, difficult to heal. The breast should be well supported.

At first, a child should suckle about every three or four hours, but afterwards at regular periods of the day, and not during the night. If a child be allowed to sleep with the nipple in its mouth, the mother will bring upon herself the painful consequences of their soreness. An infant should be moved about for a little time after suckling or feeding, and not fed immediately before sleeping, but after it. By continually resorting to the breast on the child crying from some pain, perhaps arising from being overgorged, disease is originated.

A child ought to suckle about nine months; and never more than twelve months; during which it ought to have its mother's milk only. Nature, however, points out that the true time to wean a child is, when it has teeth to masticate solid food; or a mother finding herself again pregnant, ought at once to cease suckling her child. To get rid of, or drive the milk away when the child is weaned, the breasts ought to be rubbed with soap liniment, olive oil, or laudanum, or kept wet with linen dipped in brandy and water: at the same time they should be gently rubbed with the hand and a little hair powder. She should be very abstemious, and take doses of saline aperients, Seidlitz powders, or Epsom salts.

The food of children just weaned should be very simple: fresh cow's milk—without sugar in it; rice, gruel, broths, white fish, and the yolk of eggs. Animal food in very small quantities; but no pork, veal, or salt

meat. Pastry and sweetmeats are injurious until after the teething is completed.

When a child is to be brought up by hand, the best substitute for its proper milk is that of the ass, fresh and warm. If cow's milk be used, it must be diluted with two-thirds warm water, and no sugar; this it may have twice a day; the other food being weak broth or beef-tea, a little arrow-root, sago, rice, or tapioca.

When beef-tea is made, the proper way is to pour water on the beef and keep it nearly an hour on the *hob*; that is, at a temperature of 90 or 100 degrees. When flour is used, it should be baked until grey, then mixed with broth or beef-tea; but with milk and water it constitutes the most appropriate diet. The food ought to be made fresh for each meal, and the vessels carefully scalded to prevent sourness. A little sugar and salt to qualify the food may be used. The proper mode of feeding infants is *not* with the spoon, but a sucking-bottle, having a little sponge covered with a piece of wash-leather, which must be very often washed, and in which little holes are perforated; this, neatly made, should resemble a nipple, and be soft and pleasant to the child's mouth.

Suckling mothers should avoid wine and spirits; if anything be taken, bitter ale is the best; milk is superior to tea.

Infants should sleep warm, be loosely clothed, have no pins or bandages, never wear a cap, and have flannel next the skin always.

When a child becomes sore in the folds of the skin—which usually arises either from want of cleanliness or neglect of keeping the parts perfectly dry—apply a soft rag to absorb the moisture, then dust it with fine starch powder, or hair-powder without essential oils; but if very sore, and it does not mend with the above, first wash it with thin gruel, and then with a lotion of eight ounces of rose-water and sixteen grains of white vitriol (sulphate of zinc). Fuller's earth powder will answer the same purpose.

A child should be bathed and well washed every morning. Its dress should be warm, coming up to the neck and down to the wrist, but not thick or cumbersome; bandages about the legs, arms, or waist, are exceedingly hurtful; and as to stays, those who desire to deform their offspring, and bring on ill health and incurable diseases, can use them, none others will.

When red gum, as it is called, appears, give a little aperient medicine; but if the eruption looks yellow, it is then jaundice: if it suddenly goes in, and the bowels are disordered, a warm bath must be had recourse to. When white spots appear about the mouth and tongue, which is called the thrush, be very cautious as to quantity and quality of food given, and administer a little magnesia. If sickness without vomiting continue for some time, give five grains of ipecacuanha; or, if the child be some months old, a gentle dose of ipecacuanha-wine will, as an emetic, relieve the stomach. Vomiting may arise from so many causes that it would be wrong to attempt any general directions. In looseness the causes may be various, and ought to be treated accordingly, removing the exciting cause. In the meantime, sago, arrowroot, boiled milk, tapioca, beef-tea, and baked flour, may be given as food; and half or a tea spoonful of syrup of poppies, or ten to thirty drops of paregoric elixir in water and sugar; and a flannel wrapped round the abdomen. Costiveness may be removed by light thin diet, and an injection of soap and water warm. Rhubarb, senna, or castor oil are serviceable aperients.

In teething children should have a piece of liquorice root, or India rubber, with which they can press their gums, and aid the passage of the teeth; they are greatly eased also by the gums being rubbed by the finger. When difficult to cut, many serious appearances present themselves, most of which may be allayed by cutting with a gum-lancet, or strong pocket-knife, well down to the teeth.

In a bruise or sprain the parts should be well bathed in warm water; but if very severe a lotion should be used, composed of spirit, or eau de Cologne and water, with a little sal ammoniac in it.

Do not place plaster over wounds; but wash clean with water, and soak a little lint in it, then bind the lint over the part.

In the administration of any medicines ordered in other parts of this little book *to children*, remember that most of the doses have been calculated for adults. Refer to the tables, page 23.

*Mumps*.—This is a swelling of the glands of the neck after slight inflammatory fever, that impedes breathing and swallowing. It sometimes moves to other parts of the body, and then becomes dangerous. The application of flannels to the neck, friction, with hartshorn and oil; a diet of arrow-root, gruel, &c. The bowels should be opened by mild cooling laxatives, the parts kept warm, and cold avoided; if much inflamed, leeches may be applied. If the lumps suddenly disappear and fever increases, then the parts must have warm fomentations and stimulating liniments to induce their return. If fatal consequences be apprehended by the brain becoming affected, bleeding, emetics, and blisters must be had recourse to.

*Mushrooms, Poisoned by*.—The best remedy is an emetic, and that, if at hand, the sulphate of zinc; twenty grains dissolved in a tumbler of hot



FIG. 13. MUSHROOM, AGARIC.

water, or half an ounce of antimonial wine. A cooling aperient may be given after the stomach has been emptied.

*Fungus*.—Accidents often occur from persons mistaking these for mushrooms. That called *Agaricus*, is distinguished by the under part of the cap having parallel plates, called gills, within which the seeds are placed. That called *Boletus*, has tubes or circular cells instead of gills. And it is this striking difference that distinguishes it from the mushroom. The *boletus*, too, is of a circular form; the puff ball is well known, and it has its seeds internally. There are nearly three hundred different species of *agarics* in this country; of all these, one only has been selected for cultivation in our gardens, the *agaric campestris*, or common mushroom. The gills are loose, pinky red, changing to a liver colour, in contact with the stem, but not united to it. Very thick set; the gills are white, changing to brown when old, and becoming scanty; regularly convex; fleshy, flatter with age; from two to four inches, and sometimes more, in diameter, liquefying in decay; the flesh white; the stem solid, white, and cylindrical, from two to three inches high, half an inch in diameter. When the mushroom first makes its appearance, it is smooth and nearly globular, and in this state it is called a button.



FIG. 14. FUNGUS HYDNUM.

We have another curious vegetable substance of the fungus tribe (*Fungus Hydnum*) generally found growing on trees. The fungi form a numerous tribe of vegetable bodies, differing in firmness from a watery pulp of short duration, to a leathery woody texture, often very permanent.

*Nettle-rash*.—This is an itching eruption, resembling the stings of nettles; sometimes there is a long weal-like appearance, as if struck with a whip. Generally they disappear in the day time, and break out at evening with a slight fever. The only remedy needed in most cases is frequent cooling aperients, with an occasional dose of calomel at bed-time, light diet, and sponging the body with a weak lotion of vinegar and water; the administration of an acid medicine internally, such as diluted nitric acid, twenty drops in a wine glassful of water twice or three times a day, after the bowels have been well cleared out, may restore. This troublesome complaint frequently arises from some article of food disagreeing with the stomach, such as shell fish, mussels, lobsters, mushrooms, &c.

*Night Blindness.*—This is common between the tropics, from the strong light to which the eye is exposed during the day; as night approaches blindness comes on and continues till sunrise. Sight is not lost by this complaint, and it gradually subsides. The recovery may be aided by blisters to the temples, mild cooling applications, and purgatives.

*Nose, Bleeding from.*—This is of common occurrence, and generally an effort of Nature to relieve some overloaded vessel; should it continue long, sit upright, bathe the nose with cold water, or vinegar and water, taking care that some of it gets well up. If this be not effective, put a little bruised alum into water, or oak bark boiled in water, and when cold inject it into the nostril, or soak a small piece of lint in it, and stuff that up. Should a person be subject to this complaint, the bowels must be kept freely open, which will generally prevent its recurrence.

*Nose, things stuffed up.*—This is a child's trick, often attended with much inconvenience. Give a pinch of snuff to make it sneeze, or close one nostril after the child has drawn in its breath, and cause it to blow out the breath violently through the stopped nostril. If the fingers can nip the nose above the substance, do so; and gently get a slightly-bent bodkin round it, so as to easily draw it forth.

*Oxalic Acid, Swallowed.*—This causes sickness; but to counteract the ill effect, magnesia, chalk, lime, or whitening, should be mixed with a fluid: water will do until milk or gruel can be had. The stomach must be emptied of its contents as soon as possible, by drinking plentifully of the above fluids warm, or by the aid of an emetic.

*Ointments* are used for the purpose of dressing sores, and to protect them from the air; the most simple serve this purpose best. They are made by melting the ingredients together in a pipkin by the side of the fire; be very careful not to let them boil.

*Ointment, Common.*—Melt together one part of yellow wax and two parts of hog's lard: white wax is sometimes preferred, and olive oil may be substituted for the lard.

*Tartar Emetic Ointment.*—Tartar emetic, 1 drachm; lard, 1 ounce: mix. Applied instead of blisters to the chest, &c., in inflammation.

*Spermæti Ointment.*—Melt, as before, a quarter of an ounce of white wax, three quarters of an ounce of spermaceti, and three ounces of olive oil. Use as a dressing, after blistering.

*Ointment for Piles.*—Powdered galls, 2 drachms; sugar of lead, 20 grains; lard, 2 ounces: rub them on the bottom of a plate well together.

*Elder-flower Ointment.*—Elder flowers, 2 lbs.; lard, 2 lbs.: simmer till crisp, and strain. Used as a cooling ointment to sun-burns, &c.

*Peruvian Balsam Ointment.*—Peruvian balsam, 1 drachm; hog's lard, 1 ounce: mix. An excellent healing ointment for sore breasts, excoriations, &c.

*Red Precipitate Ointment.*—Red precipitate of mercury, 1 drachm; common ointment, 1 ounce: mix on the bottom of a plate. Useful as a stimulating dressing to wounds and sores, as is the following also:—

*Yellow Basilicon.*—Melt together yellow wax, 2 ounces; white resin, 5 ounces; hog's lard, 7 ounces: stir well while melting.

*Palpitation of the Heart.*—This often arises from some organic affection; therefore persons with this complaint should be careful in avoiding

all excitement and violent exercise. If from relaxation of the system, or weakness, then bark, cold bathing, musk, ammonia, &c., must be resorted to, and blisters applied over the heart. When from biliousness, take five grains of blue pill at bed-time, and a rhubarb draught the following morning; repeat this about twice a week. Low diet, repose, quietude of mind, improvement of the digestion and general health, by strict attention to the state of the stomach and bowels.

*Palsy.*—This is a diminution of motion or feeling, sometimes of all the parts below the head. One side of the body in some cases is affected, and in other cases only one particular part. Emetics and continuous blisters, strong clysters, valerian, and castor oil are all applicable to the complaint. If the disease occur in a debilitated constitution, and where the head is not affected, strong stimuli may be given, such as salt of hartshorn, horse-radish, and strychnine, with mustard plasters to the part most affected. The part may be stung with nettles; but rubbing the limbs with stimulating liniments, and also the spine, is decidedly beneficial; electricity, if it can be procured, and shocks passed through the parts; warm and salt water baths, with a frequent and good use of the flesh-brush, and exercise in the open air.

*Pectorals.*—Those that allay and soothe in cough, &c., are—oil of almonds, olives, and aniseed, honey, spermaceti, liquorice, linseed, and compound powder of tragacanth. The balsamic are—balsams of Peru and Tolu, benjamin, and sulphur. The sedative are—paregoric elixir, syrup of poppies, &c. (See *Expectorants*.)

*Piles*, the symptoms of which are—pain or giddiness in the head, sickness at the stomach, wind, feeling of weight in the back, loins and bottom of the belly, pain when performing the functions of nature; tumours project, and sometimes bleed. Endeavour to remove the cause: never ride on horseback; rather moderate the bleeding than suddenly arrest it, as it may be Nature seeking this mode of relief from some more serious complaint; keep the bowels freely open, so that no irritation nor straining may add to the pain and annoyance. If the tumours be much inflamed, apply leeches, and dress the part with lint soaked in a solution of the acetate of lead or sulphate of zinc; foment and poultice, and anoint with the gall ointment; if these are not effective, inject cold water after each stool. People with much blood should take small doses of nitre mixed with sulphur; and thirty drops of the balsam of copaiva in milk, morning and evening, relieve the pain. In old-standing cases, give confection of black pepper, in doses of one drachm three times a day.

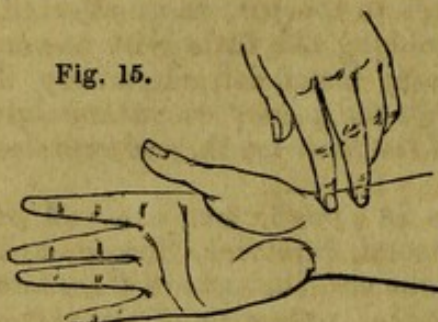
*Pimples.*—A weak solution of sugar of lead or sulphate of zinc may be used as a wash; if not effective, try camphorated spirit 2 drachms, corrosive sublimate of mercury 1 grain, rose-water or almond-water half a pint, applied night and morning. When there is great irritability of the skin, a decoction of the woody nightshade may be used instead of the rose and almond water. If they arise from the condition of the blood, then alteratives and cooling purgatives must be taken. A Plummer's pill at night, and a teaspoonful of decoction of sarsaparilla twice a day, with a black draught once a week, are an excellent remedy.

*Pleurisy.*—This is felt as an acute pain on one side near the ribs, extending to the shoulder-blades, back, and breast; it comes on by shivering, followed by heat and restlessness; the pain is increased when the side is lain on; there is difficulty of breathing, red cheeks, sickness, and dry

cough. Bleed from the arm as much as the person can bear, or until the pain is relieved, then give a dose of tartar emetic or antimonial wine, followed by five grains of calomel and an aperient draught, a mustard poultice, and, if necessary, blisters. Cupping and leeches would be effective in slight cases, with a dose of calomel and tartar emetic, followed by some softening clyster, arrow-root, sago, and such like; farinaceous food must be strictly adhered to. To relieve the teasing cough, a mixture, composed of nitre, spermaceti, oil of almonds, and a few drops of laudanum, may be taken.

*Protruding Bowel.*—This generally arises from weakness in children. The child should not be suffered during this complaint to sit, but be kept laying; in the tenderest and gentlest manner possible, the gut must be pressed back, then a few small folds of linen must be piled on the place to press and kept it in, and be held there by a bandage, or tightly-applied napkin.

Fig. 15.



*The Pulse.*—The pulse may be best felt an inch above the root of the thumb (Fig. 15), and about half an inch from the outer side of the arm. Where there is any doubt, apply your ear over the left side of the chest, as the action of the heart may sometimes be heard, even when the pulse can scarcely be felt.

*Prussic Acid.*—When this has been swallowed, hold ammonia to the nose, and dash water on the face and chest; give half a tea spoonful of sal-volatile in a wine glassful of water, repeating the dose in ten or twenty minutes. Try artificial respiration, or pass an electric shock down the spine; frictions with the hand, or strong liniments.

*Purgatives.*—(See *Cathartics*.)

*Rattle-snake Bite.*—(See page 120, *Cobra di Capella*.)

*Rheumatism* is of two kinds: one accompanied with fever or inflammation of the parts, which usually attacks the young; the other without these symptoms, which chiefly attacks the aged. For the first, bleed, give nitre, camphor, guaiacum, or antimonials, and occasionally calomel with opium. Bark should be freely taken if debilitated. Rub with liniments of soap, camphor, and oil; liniment of ammonia, &c. It is best treated by giving three grains of calomel with six grains of Dover's powder, at bed-time; and a draught of twenty or thirty drops of wine, or vinegar of colchicum, ten grains of acetate of potash in a wine glassful of camphor water, two or three times a day. Foment with warm applications, drink freely of gruel, &c., and take medicine to cause perspiration. Keep the parts well wrapped up, and leave off meat. For the second kind, take compound powder of ipecacuanha and calomel in small doses; about three grains of precipitated sulphur of antimony, and three grains of camphor; gum guaiacum with volatile salts (ammonia), an opiate with nitre and the camphor mixture; bathe the part well. Mustard, both internally and externally, has proved beneficial with warmth and friction. If the complaint has existed for some time, take three grains of iodide of potash, and ten grains of carbonate of potash in a wine glassful of camomile tea, two or three times a day. Let the diet be light and nutritious. In some peculiar instances the following plan has effected speedy relief:—Rub dry flour of mustard upon the part affected, holding the part at the same time

before a fire. Give it a good rubbing for some time, sufficient to bring out a rash on the skin, and relieve the pain. One rubbing is generally found sufficient.

*Ring-worm.*—This is when crusts appear on the head, of a bright yellow colour, in patches or round rings; and the hair is discoloured, dry, twisted, and falls off. It is contagious, and generally goes through a small family. Have the head washed daily, using a mild and small quantity of soap, then touch the places gently with caustic, or a lotion of 10 grains of caustic to one ounce of vinegar and water. Zinc ointment is often very effectual; or an occasional hot bath, with sulphur dissolved in it; or citron ointment, with a course of alterative medicine. Give a calomel and jalap powder at bed-time occasionally.

*Scalds*—(See *Burns*.)

*Scald Head.*—Shave the head, wash it often with soap and water, then put on a small quantity of citron ointment; give a little grey powder at bed time occasionally, and a dose of rhubarb the morning after. If obstinate, apply blisters; but if it occur while a child is *teething*, the best plan is to keep the head clean, and merely apply a little spermaceti ointment, and not attempt to dry it up on any account.

*Scarlatina.*—Is accompanied with fever and a bright red colour of the skin; the scarlet colour is deeper under the joints, buttocks, &c., and the tongue presents a peculiar *strawberry*-like appearance. As it progresses there is inflammation and swelling of the throat. Give mild purgatives, rest in bed, spare diet, cooling acid drinks, and, when the surface of the body is very hot, sponging with cold water may be resorted to; inhale the steam of hot vinegar and water, or gargle with the same, or muriatic acid diluted freely with water; mild aperients or clysters should be regularly given to clear out the bowels. If the patient gets very low, it may be necessary to give wine and water, beef-tea, or carbonate of ammonia, with citric acid effervescing. After the fever has subsided, a warm bath, with frictions to the skin, may be used; but great care is required, as convulsions often set in, and the child quickly dies.

*Scarlet Fever.*—The symptoms of this disorder commence as a fever, with cold chills, shivering, a feeling of sickness, thirst, hot skin, and quick pulse. On the second day the face, neck, and breast is of a bright scarlet, which gradually extends over the whole body. If pressed upon, the colour disappears, but immediately after returns, but on the fifth day begins to disappear altogether, and a scaly scurf peels from the skin. The fever subsides with the rash, leaving great weakness behind. Let the person be placed in a large airy apartment; give a light diet without animal food, and cooling acidulated drinks, with gentle aperients towards the last stage of the disease. If the throat is much affected, leeches may be applied; ice, or cold drinks; blisters, or mustard poultices and vinegar, and water gargles. Towards the decline of the eruption, bark, quinine, wine and water, with a nutritious diet, will be required.

*Scratches.*—These are to the majority of people very simple affairs, but there may be circumstances—such as the thing by which the scratch has been done being impure, other matters lodging in the torn skin, or particular constitutions—that may cause a simple scratch to become a serious affair. If the scratch should inflame and the parts around it swell, put leeches on the swelled part, spreading them about. In the absence of leeches, as a

last resource cut the part with a clean sharp instrument in several places to cause bleeding, after which poultice.

*Scurvy.*—For sea scurvy take vegetable food of every description, fruits, oranges, lemons, or the lime; lime water, lemon juice, nitre dissolved in vinegar, citric acid, cider, &c. If with great weakness, these medicines may be given in infusion of malt, wine, ale, or liquors made of molasses or sugar. Bark and diluted sulphuric acid are beneficial; gentle aperients, such as Epsom salts in tamarind drink. Ulceration of the gums will require alum gargles, decoction of bark, port wine and water. The legs may be fomented with warm vinegar and water; and acute pains require opium at bed-time. Land scurvy is a scruffy or scaly eruption, often with itching and pain, often of a darkened colour, chiefly on the thighs and legs, which fade after a few days, and new patches appear. Take sarsaparilla with gentle mercurials; lime water; compound juice of scurvy grass; citric acid dissolved in water; flowers of sulphur and cream of tartar, with tonics; a nourishing diet and proper exercise; avoid damp and cold. If accompanied with bleedings from the mouth, nose, or legs, and general debility, tonics and stimulants, with a generous diet frequently changed; this disease often arises from living too long on one kind of food deficient of nutriment.

*Sea Sickness.*—An occasional draught of the ginger-beer powders; soda or Seidlitz powders; a few drops of laudanum on sugar; two or three drops of creosote on sugar; half a tea spoonful of sal-volatile in water; remaining quiet in the horizontal position, or in bed; a little cold brandy and water; a draught of bottled stout;—have all been tried with occasional success. (See the Letter of an Emigrant, p. 144.)

*Small Pox* commences with shivering, heat, fever, sickness, pain in the head, back, stomach, and loins, with great drowsiness on the third or fourth day. Eruptions, like small millet seeds, cover the face, hands, breast, feet, and extend over all the body, with pain and soreness of the throat. About the fifth day the spots fill with matter, the skin becomes red, the face, hands, feet, and eyelids swell. On the seventh or eighth day the pustule attains its full size, and appears filled with matter; about the eleventh day the centre becomes dark and scales fall off, leaving marks or pits. When the pulse is strong, and before the eruption appears at the commencement of the disease, take an emetic and purgative medicine. Abstain from animal food, beer, and spirits. While the fever continues, take cooling medicines, and such as produce perspiration, with laxatives; but if the pulse be low, take cordials, with opium, at bed-time, to induce sleep; during the eruption, keep the patient cool in a well-ventilated room; give cooling drinks, lemonade, and saline medicines. When the eruption has ceased, keep the bowels gently open; if restless, take anodynes nightly, and drink plenty of gruel, barley water, or toast and water. If there should be great purging, gently arrest it with aromatic chalk mixture, or a tea spoonful or two of paregoric elixir in water. Should delirium or severe fever occur, then apply blisters. If the spots sink in, take bark, and cause perspiration with a little hot wine and water. Spirit of nitre or æther will be excellent, and mustard poultices to the feet. If the eyes become much swollen, a blister behind the ears, or leeches to the temple will relieve them; bathe the eyes with milk and water, or anoint them with oil or lard. The room must be kept cool, a little vinegar and water thrown about; and, to prevent the face being marked, make a mask

of some light material, spread over with fresh butter or cold cream, and wear it, leaving holes for the eyes and mouth. Before the spots or pox come to the height, cover the face with a very thin solution of gutta-percha or collodion. This has been found very successful. Fumigations of chlorine, change of all linen, prompt removal of all offensive matters, rooms well washed and exposed to the air, will prevent contagion. It will also be necessary to prevent all intercourse for a month or six weeks with other children.

*Spitting of Blood.*—Try a table spoonful of salt. Live low, if of a full habit of body, with fever, bleed; take nothing heating, and avoid exertion. If severe, refrain from conversation; remain in a lying position, and perfectly quiet; suck ice, take manna, tamarinds. Phosphate of soda and sulphate of potass are useful; also small doses of nitre. The drink should be cold and acidulated. Should it continue to a dangerous extent, take—

Powdered acetate of lead	. . . . .	2 grains.
Extract of henbane	. . . . .	5 grains.
Compound powder of ipecacuanha (Dover's powder)	. . . . .	12 grains.

Make four pills, and take one every hour.

*Stomachics* are gentian, camomile, orange and lemon peel, rhubarb, essential oil of juniper, peppermint, cloves, and most tonics.

*Stroke of the Sun.*—Dash cold water on the head, bleed, apply blisters, mustard poultices to the feet and buttocks, friction to the spine, with strong liniments. Should the symptoms assume that of inflammation of the brain or apoplexy, treat as directed under those heads.

*Sudden Death.*—This appearance is sometimes only a suspension of the functions of life. Friction should be employed, and hot bottles applied. With a tube breathe into the body, and gently press it out again by pressing on the chest, producing artificial respiration as directed in drowning. This treatment should be persevered in for at least twelve hours. When there are signs of returning animation, administer a spoonful of brandy and water, or any other stimulant at hand.

*Swallowing, Difficulty of.*—This generally arises from inflammation of the lining membrane, which treat as a sore throat. If it comes on gradually, take 2 to 3 grains of calomel every night, with a slight purgative to prevent salivation, such as a black draught or Seidlitz the morning after.

*Teething.*—Should convulsions occur, lance the gums; should this not be effective, give a few drops of tincture of assafoetida, with a carminative, such as oil of aniseed, carraway, or dill, with magnesia; if a rash, give two or three grains of grey powder of mercury, with chalk, at bed-time, and a tea spoonful of syrup of rhubarb next morning; if a cough, spermaceti or balsamic pectorals, with a grain or two of saltpetre; blister, or give a grain of calomel, with two or three of antimonial powder, and the same of gum arabic powder, at bed-time. Lancing the gums of children may be most easily and safely done with a pocket pen-knife; cut firmly, and make the incision reach down to the tooth.

*Tetters*, known as *Scaly Tetters*.—Scabs, scurf, pimples, ring-worm, shingles, grubs, and freckles are all included in this form of disease, and may be washed with a weak solution of zinc, or the bichloride of mercury lotion. Try also camphorated spirit, and the red precipitate ointment at page 104, with cooling aperients, brimstone and treacle, Gregory's powder,

and sulphur baths. If there be great irritation of the skin, allay the itching with a lotion made by boiling a handful of each of the woody nightshade and marshmallow in a pint of water, and using this for a wash frequently.

*Throat, Inflammation of.*—Give an emetic early; take aperient medicines; apply a liniment to the throat—hartshorn and oil on flannel—or blister; gargle with saltpetre dissolved in barley water, or weak acid and water. If these are not effective, apply to the throat a bread and milk poultice, with a few grains of camphor added, and inhale the steam from hot water, sage-tea, or vinegar. If there be an abscess, wait until it presents a point; then open it with the finger nail, or give an emetic, and gargle with an infusion of roses and tincture of myrrh. Should there be danger of suffocation, inhale the steam of æther, in hot water; apply leeches to the throat, or mustard poultices. The strength will sometimes require to be kept up with clysters of animal broths, gruel, or starch.

*Tic Doloureux.*—A very painful affection of the nerves, generally seated in the face or head, but may attack other parts of the body. The remedies usually employed are—carbonate of iron, half a drachm to one drachm, two or three times a day, taken in treacle; quinine, 2 or 3 grains, with 2 or 3 of the extract of henbane, two or three times a day. If from cold, or accompanied with fever, take calomel and Dover's powder at bed-time, with a mild aperient after; or a tea spoonful of sweet spirit of nitre and ten drops of laudanum in a wine-glass of camphor water at bed-time. A stream of cold water poured over the part affected has been known to cure.

*Tonics* give strength and vigour to the body, and are frequently required after weakening diseases, fevers, &c., employed as directed in their proper places.

#### PILLS, TONIC AND PURGATIVE.

Sulphate of iron	. . . . .	10 grains.
Extract of gentian	. . . . .	Half a drachm.
Aloes	. . . . .	1 drachm.

Mix: divide into thirty pills. Take two daily an hour before dinner.

#### IN INTERMITTENT FEVERS.

Peruvian bark	. . . . .	Half an ounce.
Sulphate of magnesia (Epsom salts)	. . . . .	3 drachms.

Mix well: divide into four. Take one every other hour between the paroxysms, dissolved in water.

A mixture given in hysterics, tic doloureux, debility after fever, &c.

Decoction of bark	. . . . .	6 ounces.
Tincture of bark	. . . . .	Half an ounce.
Aromatic confection	. . . . .	1 scruple.
Aromatic spirit of ammonia	. . . . .	1 drachm.

Two table spoonfuls twice a day.

*Toothache* has sometimes been relieved by quinine, in weakly constitutions. If it proceeds from a disordered stomach, or stoppage of natural evacuations, or cold, or rheumatism, proper remedies for these must be had recourse to. Should it be hollow or decayed, apply creosote, chloroform, or some essential oil on a piece of cotton wool, and put it in the

part; or pills of camphor and opium may be taken. The nerve may be destroyed by touching it with strong nitric acid, or with a hot iron. Sulphate of zinc has proved effective in doses of two to five grains.

*Urine, Blood voided with.*—This is known by its being deposited at the bottom of the vessel; if it arise from some internal injury, or the person be stout, then bleed and take acidulated infusion of roses, having a small quantity of nitrate of potass dissolved in it, every two or three hours; with Epsom salts every second or third day. If it continue, astringents will be necessary; but this and other remedies must depend on the cause. Ten drops of tincture of iron, half a tea spoonful of paregoric elixir in camphor water, or barley water, three times a day, will do good. Should it be a symptom of putrid fever, or some dangerous disorder, antiseptics will then be proper.

*Urine, Suppression of.*—Take oily medicines, castor oil, and plenty of gum arabic water, with opiates or camphor; also foment the belly with hot water, rub a liniment of ammonia and opium over the lower part of the person, and take warm baths. If there be a total suppression, try placing the legs and feet in very cold water, blood-letting, and diaphoretics, and ten grains of Dover's powder, every four or six hours, in gruel.

*Vitriol, Swallowed.*—Take abundance of soda, or potash, dissolved in plenty of water. Magnesia and milk, or whiting, lime, or powdered chalk, in milk or water.

*Vomiting Blood.*—This is unaccompanied with a cough when from the stomach, is of a dark colour, and has other matters with it; it may be from blows or bruises, but is generally a symptom of some disease. If it be positively found to be from an overflow of blood, and there are symptoms of fever, then a little blood may be taken from the arm, but in no other case. The following draught may be taken:—

Infusion of roses	. . . .	12 drachms.
Dilute sulphuric acid	. . . .	10 drops.
Syrup of roses	. . . .	1 drachm.
Tincture of opium	. . . .	10 drops.

Make a draught, to be taken every one, two, or three hours.

Or this:—

Alum . . . .	. . . .	10 grains.
Infusion of roses	. . . .	12 drachms.
Dilute sulphuric acid	. . . .	10 drops.
Tincture of opium	. . . .	5 to 10 drops.

Take every three or four hours.

If these are not successful, take in a wine glass of cold water muriated tincture of iron, 20 drops every hour, and alum, 10 grains every four hours.

Ice may be eaten, or acidulated and very cold drinks; remain very quiet in bed, do not talk, keep the room cool, and exclude the light.

*Warts.*—Pare off the decayed parts, and touch them with caustic; or cut them off with scissors, and then touch them with caustic or blue stone. By tying round the bottom a fine hair or silk thread, they will die away; or rub them daily with a file and ipecacuanha powdered.

*Wind.*—(See *Antispasmodics*.)

*Worms.*—Worms very frequently exist without producing any inconvenience whatever; on other occasions they are attended with the follow-

ing symptoms:—Disgust of food, or irregular appetite, nausea, vomiting, griping pains in the stomach, disturbed and starting in the sleep, foul breath, headache, dilatation of the pupils of the eyes; in young children, squinting, head symptoms and convulsions. In addition, there is often itching about the fundament, with pains in the loins. The condition of the bowels should be carefully regulated, and all errors of diet avoided, for worms are most frequently found in children who are ill fed upon unwholesome and indigestible food. Common purgatives—such as jalap, scammony, &c.—will sometimes suffice to expel the worms. If these fail, give a dose of turpentine, or a few grains of camphor. A decoction of the tops and flowers of the male-fern has been very much used, and with great success—as well as the root of the pomegranate, followed by a brisk purgative, to ensure the evacuation of the parasitical animals, after which a course of vegetable or universal tonics, with wholesome food, exercise, and a proper regimen, will be found the best means of preventing their return.

See also some excellent medicines at page 65, *Anthelmintics*.

*Yellow Fever*.—In this there is weariness, chilliness, and faintness, pains in the head and eye-balls, involuntary sighing, inclination to sleep, a clammy mouth, furred tongue, variable pulse, hot and dry skin, bilious vomiting, yellow skin and eyes, blood flows to the head. As it advances, there are purple spots and large stains, black tongue, black vomit, black fur on the teeth, and blood from the mouth, nose, nostrils, and bowels. Blood should be taken, and good purgatives—such as the extract of jalap with calomel—and if necessary a clyster, until the bowels have been moved six times; but this must only be at the commencement of the disease, and under the stated regulations; sponge the body well with cold water, change the linen frequently. If these remedies be well followed out, in twenty-four hours the symptoms will abate, and not proceed to the second stage. This will be known by the comfortable feelings of the patient, and the natural state of the pulse and skin. Should unfavourable symptoms still continue, then carbonate of ammonia and spices—such as, capsicum,—in the form called pepper punch, must be administered immediately on symptoms of vomiting appearing. Arrow-root, or other mild diet, in small quantities, may be given; the head and upper part of the person must be kept cool with cold water.

The free use of purgatives in this fever is most necessary; and from the frequent torpidity of the bowels in hot climates, must be given with a liberality that would alarm us in temperate. They ought to be repeated, and, if necessary, assisted with clysters, until they have produced at least five or six copious actions on the whole of the bowels. The best are calomel, jalap, extract of colocynth, &c., as given above. In giving arrow-root, or other simple articles of nourishment, let it be in small quantities, so that total emptiness may be avoided, or the stomach offended by loading.

*Zinc Ointment*.—Pound well together, oxide of zinc, half an ounce; lard, three ounces. This is a drying ointment to use after burns or scalds.

## SURGICAL CASES.

*Abscess in the Breast.*—This sometimes occurs from ignorant nurses pinching the breasts of very young mothers, to force out the milk therein. Warm fomentations of flannel, or lint dipped in hot water, should be applied to lessen the swelling, and, if they do not burst, a small opening may be made into the centre, or most prominent part, or a surgeon should be applied to, to open them with his knife. They always leave an ugly scar, and instances are known of the injury sustained preventing the most delightful duty of a mother—that of suckling her own babe.

*Accidents, Sudden.*—These generally take place in travelling. The first thing is to remove any pressure on the body, and allow the air to come freely to the injured portion. If violent bleeding be perceived from any part, endeavour to arrest it, by placing on it a pad of folded linen and a bandage

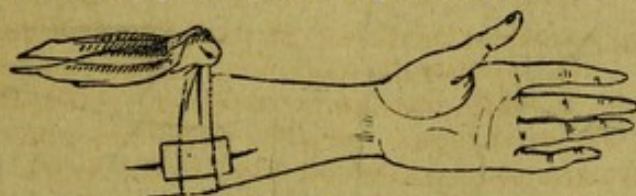


Fig. 16.

(see fig. 16); should it be a limb, and the blood be of a bright scarlet, tie a bandage tightly above the part; the tightness may be increased by inserting a piece of stick, and twisting it round (see fig. 17). Should no medical man

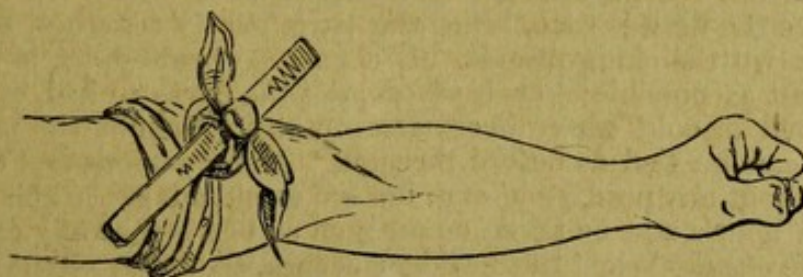


Fig. 17.

be obtainable, this bleeding must be stopped by using a little hook called a tenaculum, the nearest approach to which is a shoemaker's sewing awl. This is put into the wound, and the vessel from which the blood flows hooked and drawn forward; a piece of silk is then tied round the vessel, and if the blood ceases to flow, the wound is drawn together, and bound over with plaster. If blood is still ejected from the wound, there must be other arteries injured, which must be treated in the same manner before the wound be closed. Often pressure, long continued with the finger, will stop the bleeding. (See fig. 18.) If no wound be perceptible, and the lips and face pale, the hands and feet cold, lay the parties out flat, get warmth to the body, and administer a little brandy

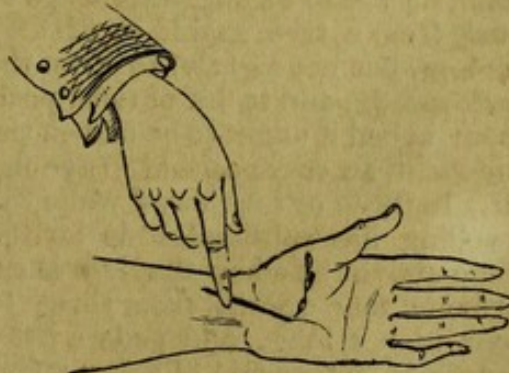


Fig. 18.

and water every few minutes, and afterwards beef tea, or if the person have only fainted he will speedily recover; but if the injury be greater the remedies must be persevered in for hours, and every attention rendered. Should the effects proceed from a blow, that is, the party be stunned, then raise the head, apply warmth to the feet, and some pungent smelling salts to the nose. If the flesh be cut, bathe with a sponge and cold water until any dirt be cleared away, and the bleeding stop, then bring the edges of the wound carefully together, and keep them so by strips of sticking plaster. (See fig. 19.) On the extremities a piece of linen may be laid over the wound, and then bandaged. But should the wound be very extensive, take a needle, thread it with silk, dip in oil, and enter the skin about one-eighth of an inch deep, tie each stitch with a knot (see fig. 20),

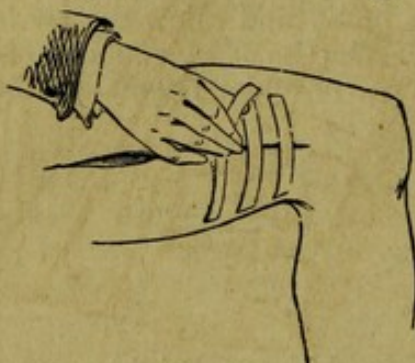


Fig. 19.

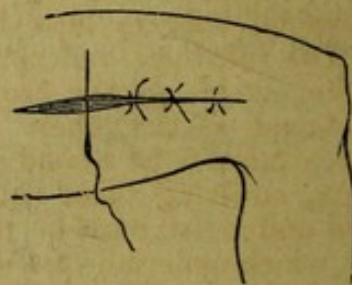


Fig. 20.

and about thirty hours afterwards cut the silk, and draw out the thread. If the part have a throbbing sensation, bathe it with cold water. In cases where the flesh is torn, bring the parts gently together, and lightly strap them with sticking plaster. If a part be bruised, let it remain as much at rest as possible; but, if severe, get the party to bed, and apply a cloth dipped in cold water every few minutes. Should the part bleed, the vessel can be tied as before directed. Many persons feel themselves shaken without any positive injury; but we would advise, in this case, that at least an hour's rest be taken on a couch or bed before any exercise.

*Arm, Broken.*—When this accident occurs, the party ought to fold his handkerchief cornerwise, and, knotting two of the ends together, place it on his neck, and thus form a broad sling for the injured limb until he gains assistance. A piece of thin wood, nearly the length of the broken limb, a piece of strong pasteboard or bark from a tree, should at first be tied on, but not tightly, to keep the part steady, and in its natural position; in bed it ought to be laid on the pillow, in an easy position. (See fig. 21.) In three or four days, when the swelling has subsided, if it be the bone above the elbow that is broken, provide four splints, from three to four inches long, and pads a little larger in size, made of a few strips of blanket tacked together, or pieces of linen stuffed with any light, soft, material. Try them on the sound



Fig. 21.

arm to see that they fit well; and having two linen bandages, about three inches broad and six yards long, place the arm in a bent position, with the bones in their proper direction, and commence by rolling the bandages round the hand and arm, not tightly, but the edges overlapping each other, and continue this a little above the elbow. The other roller is now passed two or three times round the arm where the first ended, after which a pad is placed, and a splint above it, on the muscular part of the arm, reaching nearly to the inside bend. The roller is passed two or three times over this splint; the second pad and splint is placed from the shoulder to the elbow, and a few turns of the roller given round it; the third pad and splint is put from the armpit, but not so high as to be uncomfortable, this is also bound round. The third pad and splint is put on the outside of the arm, and there fastened as the others. The roller is continued to be wound round the splints, covering them entirely. The hand and wrist must be placed in a sling, which materially assists the completion of a case. (See fig. 22.) In about a fortnight the bandages are unrolled, and then again applied for three weeks longer.

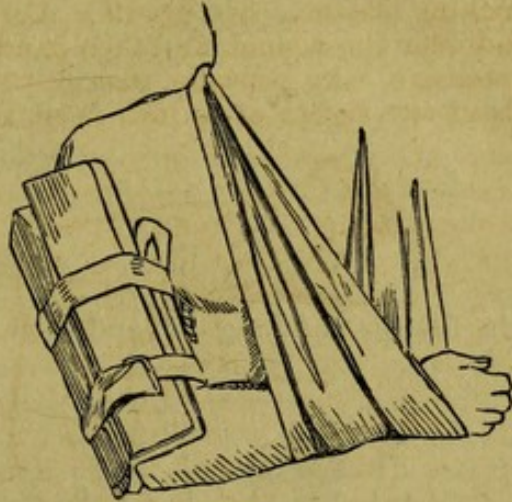


Fig. 22.

When there is a difficulty about the splints, or the application of them, the second roller may be increased in length, and well soaked in strong gum water or starch, and then wound round. The arm must then be carefully and properly placed on a pillow until the whole of the bandage is perfectly dry, when it will be stiff, and answer the purpose very well; this need not be removed until the end of a month or five weeks. If the two bones below the elbow be broken, provide two splints, one measuring from the tip of the fingers to the elbow, the other from the finger ends to the inside bend of the arm. Apply two pads, one to the back and the other to the inside of the arm, which must be bent flat ways, in an angle to the other part of the arm; lay on the splints, the shorter one to the inside part, and roll a bandage entirely round them; place the arm in a sling resting on its back, and supporting it well. This may remain on a month or five weeks.

*Arterial Bleeding.*—This is distinguished from venous bleeding by the bright red colour of the blood, and coming forth in jerks. Fold a piece of soft linen rag into a little pad, lay it on and then bandage the part. If assistance be not at hand, press the finger on the part until it arrive, or proceed as directed at page 113. When the artery is completely divided, both ends should be tied tightly and smoothly in a double knot. When wounded it should be tied at the wounded part.

*Bandages or Rollers.*—The best material is stout unbleached calico from one to six fingers broad, and from six to twelve yards long; they are kept ready for use by being rolled up. These should always be put on with great nicety and smoothness. The manner of rolling the foot will be seen in fig. 23, a bandage about three fingers in breadth and six yards in length, is passed from hand to hand, the left hand performing

the principal part of the operation. After being carefully placed round

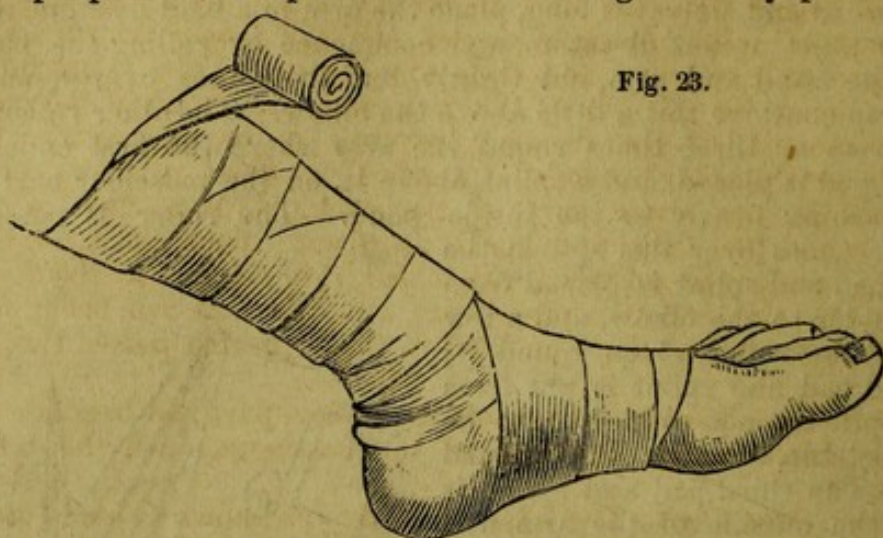


Fig. 23.

the foot or hand, fig. 24, and then carried up the limb, and in every turn

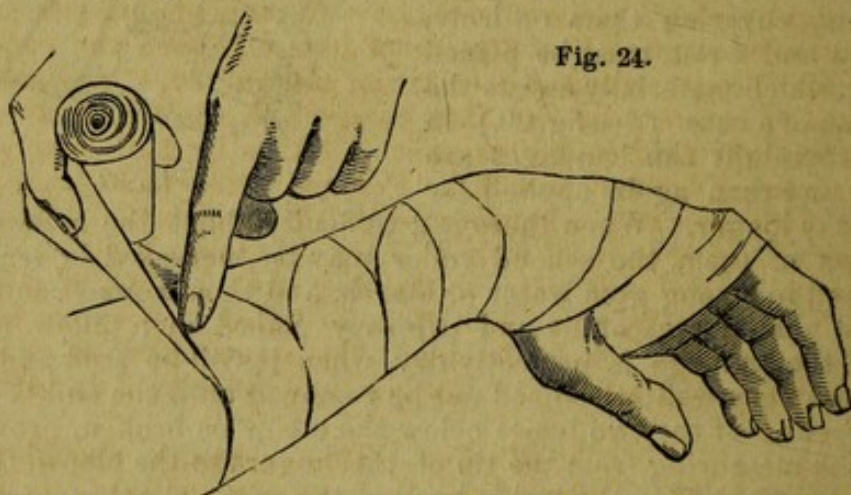
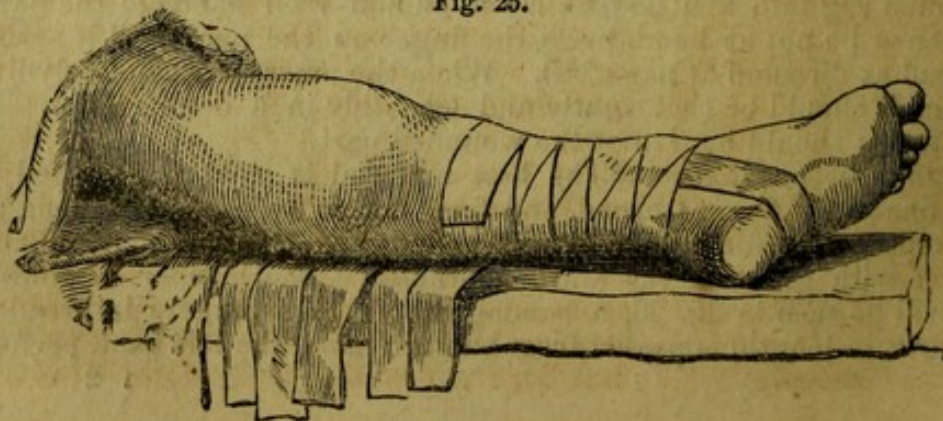


Fig. 24.

folded sharply and smoothly back upon itself that it may lie evenly on the limb. Sometimes the last end is slit up a short way, by which means it can be knotted on to the part. The four-tailed bandage is useful either for the knee or head; it consists of a piece of linen a yard and a half long and nine inches wide, it is split up the middle at each end nearly to the centre, and can be thus applied.

The many-tailed bandage, fig. 25, consists of a piece of roller about

Fig. 25.



one-third longer than the limb to be enveloped by it; on this piece is sewn pieces of roller, at right angles, one half longer than the round of the limb to be enveloped, and each should overlap the other one-third, thus one keeps on the other; this is a useful mode when the patient is much exhausted, or the dressing requires to be frequently changed. Another serviceable bandage, intended to keep poultices or other appliances on the lower part of the back, is made first of a strap to pass round the loins and buckle in front; from the centre of the back is a straight broad piece with a pad, this reaches to the division of the legs, to this end two pieces are attached that are brought up on each side in front, and there buckled to the strap that passed through the loins.

*Bent Bones.*—Tie a splint against the hollow part and bandage lightly, gradually increase the tightness of the bandages until the bones are straight.

*Bite of a Mad Dog.*—There is no remedy yet known to avoid one of the most dreadful deaths, but at once to cut the part out fully a quarter of an inch around the wound, then to apply caustic. If a knife be not at hand bandage tightly with a piece of cord above the wound until one can be had and if caustic be wanting heat a piece of iron and burn the inside of the wound. Mr. Youatt, who has been bitten several times, recommends the application of *caustic*; he has thus escaped all disease, and in several instances has only used *caustic* to animals bitten by mad dogs, which has always prevented further mischief. Persons bitten have been saved by salivation with mercury, administered in full doses and fearlessly. If it be a finger or toe, chop it off without delay. As, most frequently, there is a mistake as to the real state of the dog, save its life, if possible, to ascertain if it be really mad; and if it be killed, endeavour to have it dissected by a person who understands the appearances, as upon ascertaining the alarm was a false one much mental suffering is saved the party bitten.



Fig. 26.

*Bleeding.*—This operation should never be performed by any one, without their having some previous instructions from a medical man, as it frequently is attended with very serious results. The proper vein to open will be better understood by the diagram, than any written description we can offer. (See fig. 26.) When about to bleed, the finger must be placed on the vein below B, to ascertain if any pulsation is felt, for, if this be the case, an artery, as at A, lies under, and there is danger of wounding it; so that only a skilful person ought then cautiously to make the attempt. But let a bandage be tied in a rose knot a few inches above the elbow, this will cause the veins to swell and be well seen; take hold of the arm just below where the vein has to be opened with the left hand, placing the fingers and palm underneath, and the thumb on the vein, to prevent its moving. In the right, between the thumb and the first finger, hold the blade of the lancet, having


doubled its shield back to an angle. The fingers of the right hand are rested on the arm, the lancet is then made to pierce the flesh and vein between *b* and *c*, moving it in a kind of circular manner thus , care being taken not to go too deep, so as to cut the lower part of the vein. The patient may grasp a stick, or move the fingers, so as to aid the flow of blood. If it be thought the person will faint before enough blood be extracted, let him lie down to undergo the operation; but, if fainting be desirable, then let him stand upright. On a sufficient quantity having flowed, place the thumb on the cut, unloose the bandage, wash the arm with a sponge,



Fig. 27.

make a little pad of cotton or lint, put it on the wound after closing it, half bend the arm, and then bandage, not very tightly, in a form called by the profession a figure of eight (see fig. 27), the centre crossings meeting on the pad. The arm should be slung or kept still for two or three days, to allow the wound to heal. If bleeding be a necessary operation, we would advise unskilled persons to bleed from the top of the foot, in which there does not exist the same danger as from the arm. Tie a bandage tightly round the leg just below the knee, when the veins will swell out; but if deep seated, and they do not do so readily, place the foot in hot water. Select the largest vein, and operate as on the arm with a lancet, but taking care to cut the vein longways, not across. When the operation is completed, untie the bandage, let the patient then lie down, apply a small pad and a little sticking plaster, to stay the blood and cause the wound to heal.

*Bleeding from the Temporal Artery.*—This is an extremely hazardous operation for any one to undertake who is not a medical man, and no person, unless so qualified, should attempt it, unless death be inevitable, and this operation appears the only chance. The largest branch of the artery above the outer angle of the eyebrow is the one selected; when found, it is to be well steadied between two fingers, between which the incision is to be made. The lancet is held and used in the same manner

as directed in bleeding from the arm, but there is this difference, the artery is cut across not long-ways. In the first operation with the lancet the artery is cut about half-way through, but when sufficient blood has been abstracted, the artery has to be completely divided. The part is then covered with a piece of folded linen, and a piece of cork or some equivalent, to form a compress applied, and a bandage wound round the head to keep it in its place. (See fig. 28.) This must be continued for about ten days. If the part bleed afterwards, or swell, forming what is termed an aneurism, perhaps the artery had not been completely divided, which must be done, and pressure again applied; but should the part be much inflamed or ulcerated so that the compress cannot be used, a transverse incision must be made on each side of it, and the artery be tied at the two ends.

*Blows on the Head.*—These should be carefully attended to even if slight, for symptoms of evil from them may not be observable for some time afterwards. If the scalp be torn it should be washed with great care and replaced, and a pocket handkerchief split up to form a bandage, to be applied as in fig. 28. On a severe blow producing concussion, in which the party is insensible, or only at moments seems to be so, which will in some cases continue several days, gentle heat may be applied to the feet and slight friction used, but in the majority of cases it is better to let the patient have quiet and rest only, as both bleeding and stimulant most likely will increase the severity of the organic derangement. When reaction takes place, which is often indicated by vomiting, then the bowels should be well acted on, and if the patient is a subject that can bear to be bled it had better be done. If the pulse be hard and full with pain and lightness of the head then again bleed, purge, administer saline and antimonial draughts several times a day, shave the head and apply wet cloths. If delirium or convulsions take place blood must be taken as extensively as possible, which, if not successful, doses of acetate of morphia  $\frac{1}{2}$  to  $\frac{1}{4}$  grain, or 1 grain of opium must be administered. For six weeks after recovery a cooling diet only should be taken, and all fatigue, excitement and intemperance in every respect carefully avoided. The frequent effects left are removed by mild mercurial alteratives, blisters, or setons, shower-bath friction, and proper diet.

*Broken Bones.*—For general treatment, see *Accidents, Sudden*, page 113. As it is often the case more harm results from carelessly moving the party than from the injury itself, every pains must be taken to do it gently on a door or hurdle. (See fig. 29.)



Fig. 28.



Fig. 29.

If the patient has to be moved far, it would be a good plan to strap the limb and apply an apparatus made by rolling a bunch of twigs, the length of the limb, in each end of a piece of thick sheeting (fig. 30), tied round, after being applied, by three or four pieces of broad tape.

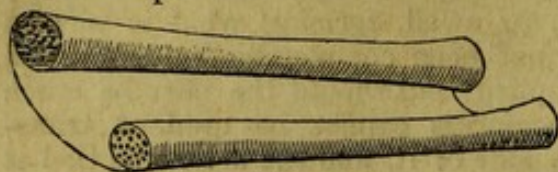


Fig. 30.

By these means the limb would be kept better in situation; or a case might

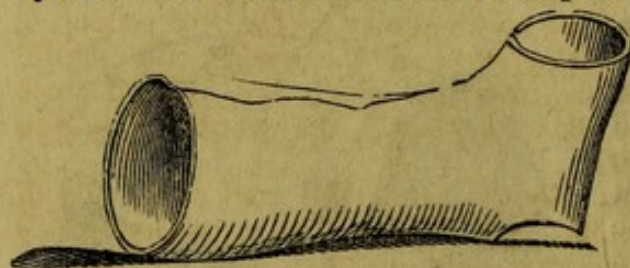


Fig. 31.

be made of the form of the leg, of pasteboard, thick leather, or gutta percha, which may be placed on the limb with a bandage. (Fig. 31.) Keep the limb steady, and in a position as near its natural direction as possible, otherwise the broken parts of the bone may

force themselves through the flesh, and thus seriously increase the evil.

The *Cobra di Capello*, or *Hooded Snake of the East Indies*, is generally reputed as the most dangerous of the serpent tribe of that country. This serpent has long been remarkable for the elegance of its form, the strength of its body, and the danger which accompanies its bite.

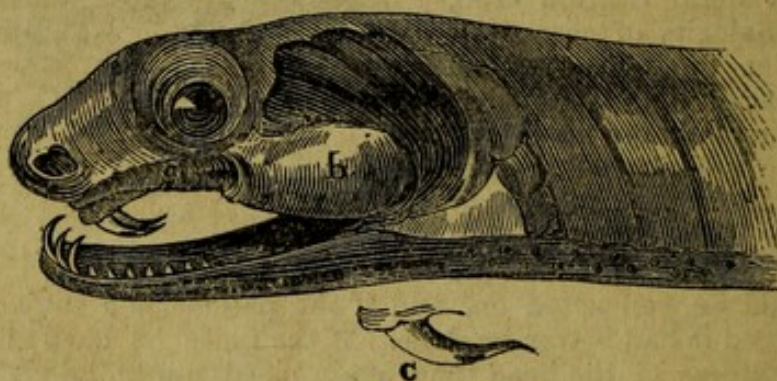


Fig. 32.

When the Cobra has raised himself for combat, he makes a full inspiration, by which the whole body becomes inflated. The scales are separated from each other, and the interstitial skin becomes visible from the head to the tail; in this manner, as the animal breathes, the body alternately swells and sinks, but the hood and neck remain expanded. Having sufficiently excited himself, he moves with great velocity and sparkling eyes, then suddenly darts upon his enemy with open mouth, injecting his poison at the instant he strikes.

The Cobra has two rows of teeth, seemingly in the palate, and two poison fangs; these fangs appearing much shorter than the teeth, being hidden by a membranous bag which encloses the poison; to supply these

fangs, the poison is discharged from the small aperture in the side of the fang, as shown at c. In snakes, the lower jaw is not articulated with the upper, as in other animals, but by means of two bones connected to the lower part of the back of the head, and are loosely connected by means of powerful ligaments. By means of this, when the snake opens his mouth, the condyles of the lower jaw, moving on the bone at the back of the head, are thrown outward, and carry the extreme point of the upper jaw along with them, and dilate the back of the throat to a very great degree, and at the same moment the upper jaw is made to uncover and erect the fangs and press upon the poison bag.

b represents this poison bag, with its duct leading to the fang, c, the skin having been removed for the purpose of better showing the gland with its duct, and the surrounding muscle. The effect of this serpent's bite has been long known to be very terrible, but was at one time supposed not to be fatal in Europe; but the severity of the accident may, as has been supposed, depend in a great measure upon the state of the health, the depth, situation, and number of the wounds, the time which has elapsed since the animal made use of its fangs, and, consequently, the quantity of poison which has penetrated into the system.

The Abbé Fontana ascertained that the hundredth part of a grain of the poison was sufficient to kill the smaller animals. The symptoms which follow the bite are an intense stinging pain in the wound, which soon swells and becomes livid; sickness, faintness, difficulty of breathing follow, and the person sinks into a gradual sleepy quiet death in the space of one or two hours. The same symptoms have been noticed in cases of the viper bite of our country; the progress seldom proceeds to a fatal termination. One case of the kind occurred, the patient dying in St. Bartholomew's Hospital; but great bodily prostration and many days of suffering generally ensue. In the treatment, all agree who have had any experience in hot climates, that it is first necessary to suck the bite, or even cut out the bitten part, then apply caustic to the wound, and remove the great depression and sleepiness that follows. It is absolutely necessary, to keep the person moving and give repeated doses of strong and effective stimulants, such as brandy.

Bites of serpents and venomous reptiles of this class are sometimes



Fig. 33.



Fig. 34.

very troublesome. Tie a piece of string tightly round the part, as in fig. 33.

as near as possible to the wound, and between it and the heart, to prevent the return of the blood to this organ. Wash well with warm water, and place one end of a large quill, or small tube, over the wound, and keep sucking at the other, which will produce a vacuum, and act as a cupping-glass. (See fig. 34.) Then thoroughly suck the wound, or soak it in hot water, to encourage bleeding from it; apply caustic, or cut out the bitten part, and give hot brandy and water, or some sal-volatile in water, as a stimulant to the nervous system. The most efficacious remedy, administered internally in India, is a draught composed of thirty drops of solution of arsenic, ten drops of tincture of opium, a table spoonful of lemon or lime juice given in a wine glassful of water, or peppermint water, and clysters administered to purge, until the symptoms abated. If the symptoms are slight, the swelled parts may be well rubbed with a liniment of oil, turpentine, and liquid ammonia; also, leeches and hot fomentations, with cordials to prevent fainting.

*Collar-bone Broken.*—Roll up some linen or make a pad about as thick as the arm, place it under the armpit, and keep it in its place by a string or ribbon from each end tied at the opposite side of the neck. Take a bandage roller, give it a few turns round the upper arm, near the elbow, and then bind the arm to the side by fastening the bandage round the body. Place the arm in a sling, supporting the elbow well so as to keep it up, and in about a month the bone will be re-united.

*Crushes.*—If the part be so severely injured as to threaten sloughing, or a separation of the part, tepid water, or poppy fomentation, with a little tincture of Benjamin, should be applied. Tincture of Benjamin or Benzoin, on lint, is highly useful, sealing up the wound, as it were, from the contact of air, and disposing it to heal. If the fingers or toes have been severely crushed so that it may seem impossible to save them, they should not be too hastily amputated, as they often recover under favourable circumstances, long continued rest being very essential. In other cases, more simple, apply a bread and water poultice, or a piece of folded linen rag, or spongio piline dipped in cold water. If there be pain, heat, redness, swelling or throbbing, then there is inflammation or the formation of matter; keep applying cold water fomentations for the first thirty-six hours, all bandages being lightly tied, after that time put the part in a hot water bath, or foment with hot water and apply poultices. Openings are to be made, if necessary, to prevent the lodgment of putrid blood and matter.

*Cuts.*—See *Accidents, Sudden*, page 113. Clean the wound well with a sponge and cold water until the bleeding stops, bring the edges exactly together, place on it a piece of linen rag and bandage. Or place a few strips of sticking plaster across the wound, leaving a small opening between each. In absence of this, unravel a piece of rope or twine and wind the tow over the wound, then rub over the tow some thick gum water, or dip a piece of linen in the white of an egg, or collodion may be brushed over it. If it swell and feel painful, ease the bandage by cutting through the opposite side. Should it throb, soften the application with warm water to remove it; if the matter from it is a cream colour the same dressing can be used, but should the edges gape, be inflamed or pale, and the matter watery, with a bad smell, then place a strip or two of sticking plaster on it and a bread and water poultice over it until the appearance is healthy.

*Cuts from the Flesh.*—If a piece of flesh be cut out, wash it, and the part from which it was cut, without a moment's loss of time, replace it exactly in its proper place, and keep it there with a piece of sticking-plaster. If the piece cannot be replaced, bathe the part with cold water until the bleeding stops, and place over it a piece of soft linen. (See directions, page 113.)

*Dislocations.*—When once these occur, they are apt again to take place. The most usual are of the jaw and arm. On the jaw slipping out of its sockets, the person should seat himself on the floor, and have placed between the double teeth, on each side, a piece of hard wood, or two knife-handles, about an inch square, as far back as possible. These some one should hold, and, another person going behind, place the head against his knees, and, interweaving his fingers, put his hands underneath the person's chin, and gradually and forcibly pull upwards, when the jaw will slip into its place. The jaw may be tied up for a few days; at any rate the person should exercise great care not to laugh or yawn during that time. When the arm is dislocated, the person must lie down on his back, and, another person lying down at the side of the dislocated limb, with his feet to the other's head, first placing a doubled cloth or pad underneath the pit of the displaced arm; he then puts one of his feet against the arm, and, grasping the wrist with both hands, pulls steadily and strongly until he hears the click of the bone when going into its place. Less strength may be used if the patient, while the operation of pulling is going on, moves his body a little to one side. If a person fix a rail on one side of a door and grasp it, the top of the door coming under the arm-pit, and the body hanging at the other side, and he then move his body about, the arm will fall into the joint. The same mode may be adopted over a gate. Sometimes the neck will get a twist on one side by a sudden fall; the person must then seat himself on the ground, and, another person taking hold of the head with both hands, give it a sudden twist in the opposite direction. When the hip is dislocated, it generally requires great strength to get it in again. The operation is the same as in the case of an arm, the operator's foot being placed between the patient's legs, and grasping the ankle. The movement of the body here also facilitates the operation.

*Ear-ache.*—Common cases have been relieved by placing in it cotton wool moistened with sweet oil and laudanum. A flannel bag of salt or camomile flowers made very hot, and secured over the ear most affected, at bed-time, will often do much good.

*Ears, things stuffed in.*—This is a trick of children. If a hard substance, lay the head down with the ear having the substance undermost, and throw some water in with a syringe, but a substance that will swell must not have water applied, but heat to dry it, and get it to drop out. If distinctly seen, but not otherwise, a probe or bodkin may be tried to be passed behind it, or if possible the substance grasped by a pair of small forceps, nippers, or compasses, and thus extracted.

*Eye, black.*—Bathe with warm water, scrape a little horse-radish, or the root called Solomon's seal, and place it on the part with a light bandage. Spirits or Eau de Cologne mixed with water may be applied.

*Eye, blight in.*—This arises from some little vessel being burst, and the white is a dark red; it requires perfect rest.

*Eyes, inflammation of.*—When this takes place, the person has the sensation of grit being under the eyelids, pricking, and paining. There

is redness and heat; pain is felt on moving the eye ball, the parts swell, light cannot be borne, and tears flow. Place leeches round the eye, taking care not to get to the eye itself; or bleed by cupping; as long as inflammation continues, repeat the operation. If it has arisen from sand or some such cause, remove the substance and let the patient confine himself to a perfectly darkened chamber. Purge with calomel and jalap, and if necessary take emetics; use fomentations, sweating medicines, and the mustard foot bath. Apply cooling astringent lotions, and if the pain be intense, add to them a few drops of the tincture of opium, or bathe the inside every six hours with a decoction of bruised poppy heads, and a quarter of a grain of opium. Should the inflammation not give way to this treatment, place a blister behind the ears, and dress with savine or some ointment to keep up the discharge, and bathe the head with cold water. To prevent the eyes glueing together during the night, put on the eyelids a little spermaceti ointment.

*Eye, Inflammation of, or Ophthalmia*, is a very common disease affecting the eyes of settlers in Australia. This arises principally from the land winds driving before them a very fine dust or sand, which at the moment, occasions but little annoyance, and therefore persons continue their occupations exposed to it for some time. It may also arise from the direct action of very strong light, of this and heat together, the influence of wet and cold, or over-exertion of the sight, with much stooping of the head, and many other causes. The first indications of an attack are red and slightly swollen eyelids. The upper eyelid may be so much swollen as to overlap the lower; the white of the eye is bloodshot, and spots of dark-coloured blood may be seen here and there, giving it a velvety look. There is watering of the eye, then a discharge of matter, and films getting over the front of the eye occasion a dimness: then a flood of tears affords temporary relief. The light is unbearable; there is pain across the forehead, stiffness of the eyelids, all increasing towards night, although on first moving them in the morning the sensation as if something were in the eyes is much felt. If not early attended to, the inflammation may proceed so rapidly that the front of the eye may ulcerate away. In consequence of the peculiarity of structure and functions of the eye, and the danger of its usefulness being for ever interfered with, it is usual with medical men to treat inflammations affecting it with more activity than they do in some other organs. To obtain this at the very commencement, rest, quiet, and low diet, with a strong purge of five grains of calomel and ten or twenty of jalap, must be enjoined. If there is great sensibility of the eye to the light, two grains of tartar emetic and an ounce of Epsom salts must be dissolved in half a pint of water, two or three table spoonfuls to be taken every half hour until vomiting is produced; then continue the same dose every four or six hours. The eye itself may be bathed three or four times a day with warm water, and the eyelids at night smeared with a little spermaceti or simple ointment. If the inflammation does not begin to subside after waiting and pursuing this treatment for twenty hours, the person, if strong, must be at once bled from the arm until faintness ensue. After bleeding, a warm bath may be given, with ten grains of Dover's powder at bed-time, and a black draught the next morning; after which five grains of nitre or saltpetre, in barley water, may be taken every two or three hours. As the inflammation subsides, the redness will become less and less until it quite disappears. If the lids continue swollen, a

blister may be applied behind the ears, or the lids pencilled with red precipitate ointment, or a drop of laudanum put into the eye itself. A return to better diet may be permitted, with beer, if the person is much weakened.

*Eyes, sore, of babies.*—This sometimes arises from a derangement of the maternal parent's system, of which she is aware. The eyes are glued together, the lids are red, and kept close; the white of the globe is scarlet, and so swelled as to turn out the lids; there is a thick matterly discharge, and the babe but a few days old is restless and feverish. Wash the eyes with a weak astringent collyrium, as directed at page 87: or put two grains of nitrate of silver in an ounce of distilled water, and take a large drop on a camel's hair brush and put it between the lids of the eyes once a day. When the discharge is sensibly decreased, smear the lids at night with weak citron ointment. Touch the eyes with the utmost delicacy, and when washing them out turn the lids over and use a fine sponge. Give a grain of calomel, or two grains of mercury with chalk powder, and follow it with castor oil the following morning.

*Eyes, sore, from lime or sand, and sunshine.*—Our soldiers suffered severely from these causes in Egypt, and it often breaks out in crowded barracks, schools, and ships; technically it is termed Purulent Ophthalmia, or Contagious, or Egyptian Ophthalmia. The eyes are itching, watery, and sore, the lids swell and stick together during sleep, and there is a feeling of dust in them, the inner surface is red and has a very bad appearance. These are the earliest symptoms; in a more progressed state there is great pain, headache and fever, the eyelids enormously swollen, accompanied by a profuse discharge of matter, and the sight may be entirely lost by ulceration in a few days, or the disease may pass into a chronic form and last for months. The disease was first imported into Europe from Egypt, by the English and French armies; but it has since been shown by Mr. Guthrie (the first surgeon who successfully treated the disease) that it is a contagious disease that may arise from atmospherical and local influences, in the most opposite climates, and in all seasons; but that a very warm, or a warm and damp climate or season is peculiarly favourable to its development—fatigue and exposure, want of cleanliness, improper food, abuse of spirituous liquors, and the crowding together of large numbers of persons in ill-ventilated or damp places. The treatment consists in applying leeches around the eye, constant applications of tepid water, and opening medicines. If the symptoms are not abated, or in very bad cases, bleed from the arm, apply leeches around the eye, give three grains of calomel with ten grains of Dover's powder at bed time, and a black draught the next morning, with drops composed of ten grains of nitrate of silver dissolved in one ounce of water dropped into the eye from a quill night and morning, the eye being bathed and cleansed with tepid water frequently. It may also become necessary in some cases to give a pill composed of two grains of calomel and a quarter of a grain of opium every four hours, until the gums are affected or salivation is produced. When the violence of the inflammation has subsided, it will be necessary to improve the diet and give tonics, such as quinine or bark: also, to apply blisters behind the ears or on the nape of the neck. The patient must likewise be removed as much as possible from the cause that gave rise to the disease in the first instance.

*Eye, Substances in.*—Foreign bodies often insinuate themselves be-

tween the eyelids, causing great pain. Draw down the lower lid with the fore finger of the left hand, as in fig. 35, and remove by a piece of moistened paper. If the substance be under the upper lid, place a bodkin across the lid, and draw back the lid so that it is completely inverted. (Fig. 36.) Inflammation is very apt to occur after these accidents, for

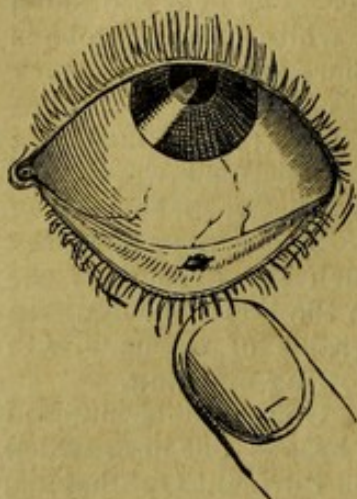


Fig. 35.

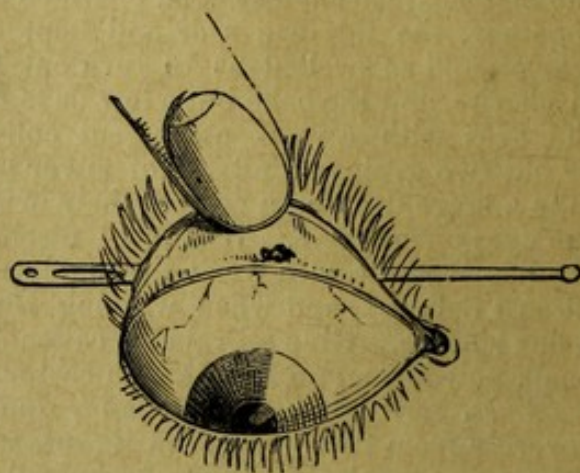


Fig. 36.

which the eye should be well bathed with warm water several times a day, and afterwards an eye-water may be used, made of a drachm of alum to a pint of water, which may be employed two or three times a day.

*Eyelids, Tumours in.*—These may have to be removed by a surgeon's knife, but it is as well to try to disperse them without an operation is possible, by introducing beneath the lid, on going to bed, one part of citron ointment and four parts of spermaceti, well mixed by a bone knife. In a few days or a week they most likely will disappear.

*Fingers Broken.*—Lay a splint on the front part, having straightened the finger, and with a narrow bandage bind it from the tip to the end; keep the hand in a sling for a month. If stiff afterwards, steep it well in warm water, and then move it gently with the other hand.

*Finger, Dislocation of.*—Take a piece of tape, make a slip-knot hitch over the joint, and make a firm pull forwards, keeping the hand steady until the bone is heard or felt to slip into its place. (See fig. 37.)

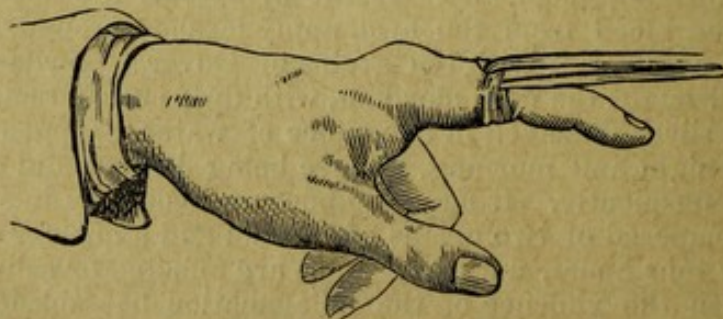


Fig. 37.

*Fingers Nipped or Crushed.*—The pain is much soothed by putting the hand as soon as possible into as hot water as can be borne. If much injured, scrape the nail, that it may bend to the new accumulation of

blood, or nick it, to let the blood out, a day or so after the accident. (See page 122.) If it becomes inflamed and painful up the limb, make a solution of one spoonful of common salt and two of saltpetre in half a pint of water; into this dip a bread poultice, and apply it.

*Fractures, Compound.*—For this serious accident every effort should be made to procure surgical assistance, as a dangerous wound generally exists at the same time. Strap the wound with sticking-plaster; lay over the limb a linen cloth wet, which keep so by sprinkling water upon it. Get a few hoops, and nail them on two slight pieces of wood, to form a kind of shed for the limb, and let air underneath the bed-clothes, to prevent steam arising. If a dirty matter first comes away, and then a cream-like one, the symptoms are favourable. After the wound has healed, set the bones as in another case. If fever or inflammation set in, the greatest care must be taken in administering medicine and stimulants. An arm is much easier to treat than a leg, and not so dangerous.

*Frost Bites.*—Rub well with snow the parts that appear of a dull red colour; after some time continue the friction with cold water, keeping the part away from a fire or warm room. When a person has become insensible from intense cold, rub the body all over with snow until warmth and sensibility be somewhat restored; then dry it well and continue the friction with fur or flannel. After this, place the person in a cold bed in a room without a fire, and administer a clyster of salt and water with a little oil of turpentine; when he can swallow, give a few spoonfuls now and then of warm weak wine and water. Continue mild cordials and simple nutriment, but be guarded not to excite fever or headache. See page 6.

*Gravel and Stone.*—These are surgical cases, and require all the skill, experience, and practice of a practitioner to treat them correctly; nevertheless, we may give some advice as to general conduct for the adoption of persons so afflicted, that they may mitigate their sufferings until they can procure efficient advice. In *gravel*, let the food be plain but generous, which may include a little *good* malt liquor or sherry wine. Avoid bodily fatigue or mental anxiety, but take exercise. Bark, quinine, or steel, with mineral acids and opium, allay pain and nervous irritation, without lessening the appetite or causing the bowels to be costive, and should be taken an hour or two before meals. Medicines that act only as diuretics ought to be avoided. Sugar, pastry, hard beer, cyder, and acid French wines, are bad. When the stomach is disordered, small doses of soda, potass, or ammonia, may be taken after meals. The only mode of slight relief in *stone* is for the patient, before making water, to drink so as to fill the bladder; then to lie on his face, and first stop the water; then allow it to escape in gushes, which may perhaps bring the stone with it. Sir B. Brodie has dissolved some kind of stones, by injections of very dilute nitric acid passed through a double gold catheter; but this must only be attempted by a medical man, who can judge of the peculiarity of the stone deposited. Small doses of diluted nitric acid, taken internally in barley water or camomile tea, have often proved of great service.

*Gums to Lance.*—This is performed with an instrument called a gum-fleam, or lancet. The chin is held in the left hand, the thumb pulling the under-jaw down; the fleam is then brought down on the centre of the swelled gums, and cut deep enough to feel the teeth against the instrument.

*Gun-Shot Wounds.*—These must be treated the same as bleeding from wounds in *Accidents* (see page 113). If a fleshy part be wounded,

sponge and bathe well with water, to stop bleeding and cleanse the wound; then apply a piece of lint crossed by strips of plaster. The agitation of the patient should be soothed by a few spoonfuls of wine or spirits; but, if he suffer much in his mind, an opiate may be administered. Afterwards wet a few folds of linen with a simple lotion, apply it to the part, and lightly bandage. Keep the patient quiet, and let him seek rest in bed. A few days after, moisten the cloths with warm water, and remove them. Inflammation will now have set in; if the patient can bear it without a chilly sensation, dress it with cold water. On suppuration being well established, apply mild stimulating lotions, or poultices, and bandages. When matter forms beneath, it must be let out by the knife, if no other means will do it; but its accumulation may often be prevented by compression. Low diet, purging medicine, and quiet are great assistants to recovery. If the party be stout or in full habit, and the wound severe, then he must be bled. Leeches will allay inflammation, and if there be much pain, opiates should be given at night. Pieces of clothing or wadding should be extracted from the wound. If a ball lodges in a bone, it will require a chisel to remove it. If a bone be severely splintered, then amputation becomes necessary.

*Hanging.*—At once remove the rope if the face be red, swollen, and livid; bleed from the jugular vein or arm, dash cold water on the face and chest, endeavour to produce artificial respiration by alternately breathing or blowing into the mouth and pressing on the chest and belly, in order to expel the air, and thus imitate the natural breathing; and, if possible, pass a galvanic current from the nape of the neck to the pit of the stomach. Strong liniments may be rubbed on the chest, and warm frictions over the whole surface of the body; bottles of hot water to the feet, under the knee joints and between the thighs. No time should be lost; and therefore the first person who discovers the hanged individual should act, without running for assistance. All depends upon promptness and presence of mind. Keep the head and shoulders raised, and continue to use frictions, rubbing with the hand or hot flannels; inflation of the lungs, the occasional pouring down a little weak wine and water, for several hours, until stiffness of the limbs show certain indications of death.

*Harvest Bug, The.*—This is a minute red insect, numerous at harvest time, that buries itself in the skin, and causes such an irritation that scratching can hardly be resisted, on which troublesome sores follow. We remember being called in by the superintendent of a ladies' school, who was in great distress of mind, as she supposed one of her pupils had caught the filthy disease of itch. Upon inquiring whether the young lady had been in the fields, we were assured she had not been so; but, upon more minute questions, learnt she had received a present of a splendid bouquet from the country. This sufficed for us to allay the fears of the mistress, that the appearance so much resembling the itch was the effect of the harvest bug. The best application is a warm decoction of the *woody-nightshade*, to be met with in most shady roadside hedges in the country; or a weak Goulard water, with a few drops of laudanum added to it, with a black draught, or some cooling aperient medicine, taken early in the morning. (See *Insects' Bites*.)

*Insects, Bites from.*—Examine the parts with a magnifying glass, and extract the sting with a pair of pincers or forceps. Apply to the wound turpentine, hot vinegar, hartshorn, spirit, or eau de Cologne. Soap or

camphor liniment may be used to remove any swelling that remains. For the bites of bugs, fleas, gnats, mosquitoes, &c., the best remedy is eau de Cologne, or some spirits, to convert the itching into a slight smarting; and the application of any strong perfume will act as a preventive against their nightly visits. There are two great classes of insects which give rise to poisoned wounds. Those which sting, as bees, wasps, hornets, ichneumons; those which suck, as the gnat, horse-fly, flea, bug, &c., and have a set of lancets at the mouth to pierce the skin. (Fig. 38.)

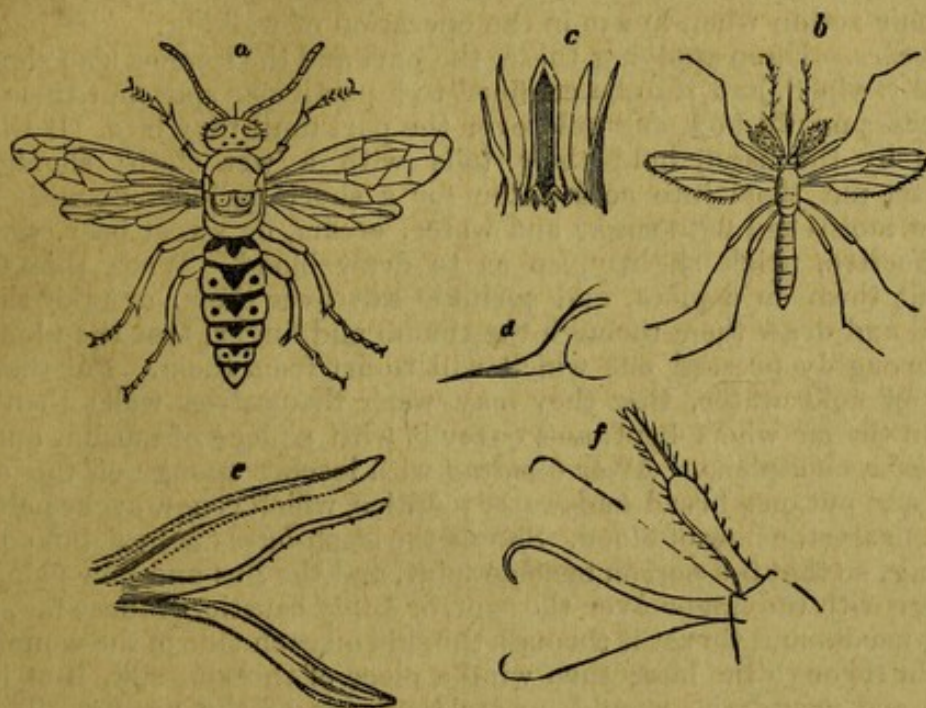


Fig. 38.

a. Hornet.  
b. Gnat

c. Lancets of Horse Fly.  
d. Sting of Wasp.

e. Lancet of Flea.  
f. Lancets of Bug.

*Issues.*—Sometimes it is necessary to create these ulcers to draw matter away from certain parts. The skin and fat are nipped up between the finger and thumb, and then divided with a lancet so as to admit a pea, instead of cutting; the sore is sometimes made with a blister or caustic. The pea is smeared in ointment of yellow resin. In some instances, when great irritation is required, ointment of cantharides is applied to the pea. When fungus appears, the pea is dipped in blue vitriolic water. The pea is held in its place with the common diachylon plaster. If inflammation appear, aperient medicines must be given, and the issue dressed with ointment of wax. (See page 104.)

*Knee-cap Broken.*—This is a distressing accident, as a cure is seldom so perfect as to render the limb as sound for ordinary use as before. The person must be laid on his back in bed and be well propped up with pillows, so that he be in a half-sitting position. A broad bandage must then be placed over his neck, and brought down to the heel, forming a sling by which the foot and leg will be raised up from the bed, and the toes be on a level with the head. When the swelling has subsided, a ban-

dage pretty tightly tied must be put on just above the knee and another just below, then, on each side, with a piece of tape, they must be drawn together as cords are laced on parcels; this will bring the two parts together, the one being drawn up by the muscles of the thigh, and the other drawn down by the muscles of the skin. A month will effect a cure as far as Nature works, still there will be a weakness for many weeks, and difficulty in the use of the limb, which must be exercised by sitting on a high stool or gate and swinging it well, throwing it upward as high as possible; this will accommodate the muscles so as to equalize their powers and facilitate their action when in use in the operation of walking.

*Leeches.*—Upon applying these, the part and the leeches also should be carefully wiped, and, if to be confined to a particular spot, put them into a wine-glass or pill-box, and hold over the part until they bite. If they are put on by the hand, hold their tails with a wet cloth; should they not bite, put them into cold water for a short period. Sometimes the part is moistened with sugar and water, cream, or sweet beer, which, if not effective, prick slightly, so as to draw blood. When they fall off full, put them on a plate, and sprinkle salt over them, or take them by the tail and draw them through the thumb and finger, that the blood may be thoroughly pressed out which will squirt from them. Put them into plenty of cold water, that they may wash themselves well; then place them in the jar where kept, and cover it with a piece of muslin, and keep them in a cool place. After *bleeding* with leeches sponge off the clotted blood, and put on a bread-and-water poultice, which renew every half hour, to encourage the flow of blood. Should the leech-bites not heal, but continue bleeding, so that the person become faint, and the lips and face pale, make pressure with the finger over the spot, or apply caustic. If these fail, take a strong needle and thrust it through the skin on each side of the wound; that is, right through the bite; then wind a piece of thread—silk, if at hand—round and round the wound, under the ends of the needle. This will raise it up like a small spot; in four days cut the silk, and carefully draw out the needle. Try a small piece of lint, dipped in the tincture of iron, pressed on the hole for a few minutes, or a leaf of the Indian hemp. Never put them on the eyelids. If leeches stick too long, never pull them off, but touch them with salt.

*Leg, Broken.*—If one of the bones be broken, by laying the leg on its outside on a pillow, keeping the knee a little bent, and raising the foot a little at the toes, with a rest of a few weeks, a cure is often effected; but in other cases it may be necessary to have recourse to splints; these are

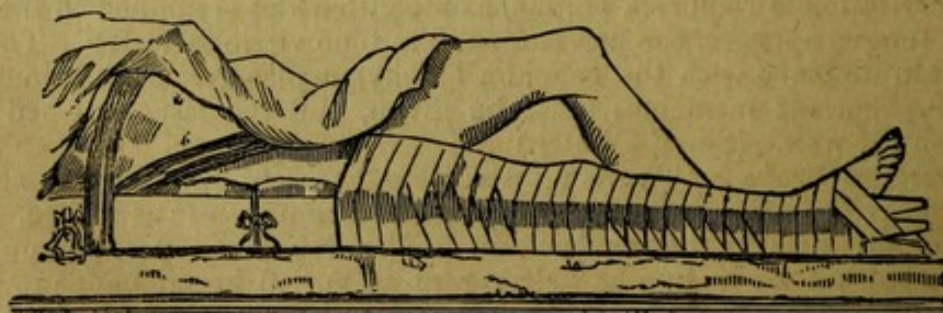


Fig. 39.

to be in size to suit the limb, one on each side, having holes for the ancles; they are not applied until the swelling has disappeared, and are then well padded inside, and rollers put round outside to keep them on; the leg is to be laid in an easy bent position on its outside. (Fig. 39.) Often splints are not used, but a bandage soaked in gum or starch water carefully rolled round it, commencing at the instep and being continued to the knee, and then returned to the foot and again to the heel; often after a few days the leg may be gently used. On bandaging the leg, one person should gently take hold of the ancles, and, easily and steadily, slightly pull it while the bandages are being rolled round the limb. If the bone, at the end of a proper time, appears crooked, then the limb must rest on the heel, and have a small weight over a pulley at the bottom of the bed attached.

*Plasters.*—Black sticking-plaster is made by straining some black silk, and brushing upon it some strong thick gum water, or isinglass jelly. After it is dried it is fit for use.

*Sticking Plaster.*—This in surgical cases is much used as strapping; to one part of resin plaster add two parts of soap plaster and melt together in a pipkin near a fire; when about ready, stretch some black silk or good glazed calico, then pour the mixture on; have ready a knife, or piece of iron called a spatula, heated so that it will singe paper slowly; with this spread the plaster evenly over the surface.

*Cheap Plaster.*—Burgundy, or common pitch, spread upon white or brown paper, forms a good plaster when others are not at hand; this is called "The poor man's plaster."

*Blistering Plaster* is made by stirring into some common ointment powdered Spanish flies.

*Poultices.*—Linseed meal poultice.—Mr. Abernethy is always quoted as the great authority for making good poultices; his directions are as follows: "Scald your basin by pouring a little hot water into it, then put a small quantity of finely-ground linseed meal into the basin, pour a little hot water on it, and stir it round briskly until you have well incorporated them; add a little more meal and a little more water, then stir it again. Do not let any lumps remain in the basin, but stir the poultice well, and do not be sparing of your trouble. If properly made, it is so well worked together that you might throw it up to the ceiling, and it would come down again without falling in pieces; it is, in fact, like a pancake. What you do next, is to take as much of it out of the basin as you may require; lay it on a piece of soft linen, let it be about a quarter of an inch thick, and so wide that it may cover the whole of the inflamed part; put a bit of hog's lard in the centre of it; and when it begins to melt draw the edge of the knife over and grease the surface of the poultice. When made in this way, it is beautifully smooth; and it is delightfully soft; it is warm and comfortable to the feelings of the patient."

*Yeast Poultice.*—Flour 1 lb., yeast 1 oz.: hot water to mix, and keep stirring until beaten together.

*Bread Poultice.*—Mr. Abernethy again thus directs:—"I shall now speak of the bread and water poultice. The way in which I direct it to be made is the following: Put half a pint of hot water into a pint basin, add to this as much of the crumbs of bread as the water will cover; then place a plate over the basin, and let it remain about ten minutes; stir the bread about in the water, or, if necessary, chop it a little with the

edge of the knife, and drain off the water by holding the knife on the top of the basin, but do not press the bread, as is usually done; then take it out lightly, and spread it one-third of an inch thick on some soft linen, and lay it upon the part."—"A very admirable soft poultice," says Mr. Druitt, "for parts that are excoriated, or that threaten to slough from pressure, during long illnesses, may be made by mixing equal parts of bread crumbs and of mutton-suet, grated very fine, with a little boiling water; keep stirring them in a saucepan over the fire till they are well incorporated."—"This poultice may be made with poppy water, if you think sedatives are necessary. It may also be made of hemlock juice, if recently expressed, and it is a very good application to irritable sores. So also you may make a carrot poultice; but it should not be made with the great coarse substance of that vegetable; you should use the recent juice. This poultice admits of medication; but there is nothing better that I know of than the bread poultice for broken surfaces."—*Abernethy*.

The new material, called *Spongio piline*, made from layers of sponge and felt, is far more agreeable and effectual as a poultice than all the bread messes of former times.

*Mustard Poultice*.—Mix equal parts of flour of mustard and wheaten flour with warm, not boiling water.

*Alum Poultice*.—Beat up the white of two eggs with one drachm of alum. Afterwards drain it off from the unmixed portion of alum, put it between muslin and apply it to sore eyes, having a thin humory discharge.

*Hemlock Poultice*.—Two drachms of dried hemlock leaves to two pints of water boiled down to one. Add sufficient linseed meal to make it of a proper consistence. It lessens pain and aids the recovery of cancerous and scrofulous ulcers and other malignant sores.

*Pricks*.—The object, if any, should be pulled out, and then a poultice applied. If the bit of needle, splinter, or thorn, cannot be reached, cut through the skin and then poultice, but the part should not be nipped to thrust it out. If the part throb, pain, or swell, then leeches may be frequently applied around the place, after which poultice and keep warm; take a dose of calomel and Dover's powder at bed-time, the next morning castor oil. If matter can be discovered, it is better to make a good cut down to it, and let it escape as quickly as possible. Should the wound have been caused by some rusty or foul thing, then poultice till the inflammation subsides, and it discharges freely; after which it should be bound up and healed with sticking-plaster, or ointment spread on lint.

*Ribs broken*.—This is known by a sharp pain in the side every time the person breathes. A broad long flannel roller should be passed tightly round the chest and well strapped on. This must be kept on a month, having been once changed, and the patient should rest quietly in bed. If pain and a cough come on, the patient should be bled, and have twenty drops of laudanum, or a tea spoonful of syrup of poppies in a glass of water three times a day. If the bowels become constipated, a little gentle aperient may be given on the third or fourth day after the accident. If the ribs on both sides be broken, or the breast-bone, then there must be no bandage, but the patient must lie quietly in bed, and take twenty drops of laudanum every four hours.

*Ruptures*.—This sometimes occurs near the navel of very young

children. After very carefully and gently returning the protuberance into the hole, a piece of cork that will cover, but not go into, should be placed over it; a few strips of sticking-plaster should then be placed across this; to hold it in its place, and the whole bound on with a broad flannel bandage. The part must be cleanly washed daily, and the cork and other applications continued until the rupture is reduced. In grown-up persons the swelling is usually in the groin, which disappears on lying down. A person so afflicted should be especially attentive to the bowels and avoid all violent exertion until he procure a truss, which is a mechanical contrivance, and requires to be properly and skilfully fitted on. After once adopting them, they should be worn night and day, and one kept in reserve in case of the other getting out of order. Should the bowel escape out of its place, and the person become so sick at the stomach as to reject every thing taken, and the bowel cannot be easily returned, then a warm bath should be tried; if, after this, the bowel still will not go back, then cold water, or salt and saltpetre, should be applied. The person may be bled, as a last resource, until he faints, as another effort to cause the swelling to be reduced, and clysters of gruel with salt or castor oil administered. Some say they have succeeded when other methods failed, by holding the person head downwards. Chloroform inhaled will enable an easy reduction to be effected.

*Setons.*—These are to drain off an accumulation of matter from some part. Pinch up a little of the skin and fat; thrust a needle through it, threaded with a skein of silk or cotton to an extent of two inches, then release the needle; pull the thread a little further through every day, which will keep up the discharge. Should it be considered that there is not a sufficient flow of matter, cover the thread with yellow basilicon. A seton inserted in the nape of the neck will relieve epileptic fits, and some skin diseases and ulcers may be cured in like manner.

*Shocks.*—These may occur from sudden emotions of the mind, as well as from blows and other accidents. The patient should be laid in bed, kept quiet, heat applied to the whole body, and a spoonful of brandy and water administered every two or three minutes for a short time, and then beef-tea.

*Sprains.*—Give the part rest; apply warm fomentations. If inflammation set in, or a large joint be affected, put on leeches and cooling applications, which may be removed at intervals if necessary. When the inflammation subsides, use friction and stimulating liniments; bandage with flannel. If very severe, apply blisters, or poultices made of bread and vinegar and water. Sprains are often more troublesome to cure than broken bones, and much longer about. Much patience is therefore needed, with rest and perseverance.

*Stabs.*—The danger of such accidents is, that there may be some important deeply-seated part injured. They are treated as common wounds: the bleeding stopped by cold water and a sponge, then the edges brought together with strapping, and bound up. If inflammation set in, foment with cold water for a day or two, then with warm water, and apply poultices. At times, when apparently healing, there will be a painful sensation; and matter formed below will force its way out: this may happen more than once. The patient should be kept quiet.

*Strains,* when severe, require that the part be kept at rest. If it be a limb, it is better to apply a slight splint. Fomentations of warm poppy

heads should be applied. If a joint be affected, or there is much inflammation, leeches or cupping, and cooling lotions must be had recourse to; but if a very bad case, then blisters are better. On the subsiding of these symptoms, rub the part with a stimulating liniment, composed as directed under the head *Liniment*, page 96; bandage with flannel and rest as much as possible.

*Stye on the Eye.*—If these are frequent and obstinate, bathe the eye with warm water. Should they smart and ache, then bathe with warm poppy water. Give a grain or two of calomel with five or eight grains of rhubarb, in proportionate dose to the age, and apply a bread and water poultice as hot as can be conveniently borne. After the stye has become mature, burst, and the scab fallen, rub the edge of the eyelid every night with an ointment of four parts spermaceti ointment, well mixed with one part citron ointment.

*Stuns.*—In this case, if accompanied with bleeding, stop that with cold water and a sponge; lay the patient down, raise the head, apply warmth to the feet, and smelling salts to the nose.

*Sutures.*—These are for the purpose of holding together the edges of a wound in soft fleshy parts that are loose and moveable, where sticking-plaster would not, of itself, hold sufficiently secure. They consist of stitches, from half to three quarters of an inch apart, between which strips of plaster are placed, and are not drawn out for several days if they do not irritate the part much; but if they do, then they must only be continued one or two days. The needle should be threaded with silk, or hemp thread well waxed and flattened. It should always be borne in mind that the edges of wounds are never to be drawn together with any degree of strain or force to the parts, as then the process of healing will not take place. In what is technically the interrupted suture, a stitch is taken straight through the edges of the wound, as in ordinary sewing, and then knotted. In the twisted suture fine steel needles, with flattened points, are passed through the edges of the wound, then silk is twisted in the figure of eight around them, as a boy twists his kite twine on a stick. It is better not to cut the silk, but continue each end down to the next needle, and so on; it is a safety to fix on the ends a knob of wax. Fig. 40 shows the mode of making and tying sutures.



*Tears in the flesh* may occur from rough stumps of trees, unplanned wood, hedges, rails, &c. If it be a rough cut in the flesh, dress the wound with sticking-plaster; if a part be thrown back, lay it carefully in its place, strap it lightly on with plaster, and then put a poultice over it.

*Tendons of the Leg.*—The great tendon lying at the back of the heel from a sudden strain becomes so slack as not to support the body, or allow of the usual action and use of the leg. In this accident a padded board should be procured, and the foot and leg secured on to it with a bandage, in the same position as if the person was kneeling on the floor or board, the toes being kept well back. In about three weeks the leg may be again used, but should be aided by a high-laced boot, to support the ankle and that part of the leg, and a heel to the boot about three inches high, which may be daily pared down. Ship carpenters and men

using scythes are apt to cut this tendon: in such a case, the same mode of care as we have stated must be resorted to; but the lips of the wound should be nipped up, and the needle and silk be passed in a waving form through and through it; then put a strip or two of plaster on. The silk may remain three or four days before being drawn out, unless it seems to inflame the part and cause it to ulcerate, then it should be removed.

*Thigh Broken.*—When this accident happens, place the patient on his back upon a bed; if it be a mattress, let there be boards underneath it. Get rollers, and commence rolling the limb at the toes, as directed at page 128, fig. 36. After having got it bandaged a little above the ankle, assistants must be in readiness, one of whom should take hold of the body of the injured party by the hips, and another place his hands underneath the knee, to raise and hold it up, while the operator at the same time raises the foot up a few inches, and, having hold of the ankle with both hands, steadily and easily pulls the leg until it is of the same length as the sound one. The limb still being raised, the bandage is continued up the whole length, and, where necessary to join it, is sewn—not pinned. On arriving at the groin, the roller is passed round the hip and back again; then fastened. After this measure is taken of the sound limb for a splint, from the armpit to an inch or two below the foot,—in which part a good deep notch is cut, and a hole made for the comfort of the ankle joint,—a roller is fixed on that part coming opposite the breast, and another at that part opposite the loins. The splint is next well padded, so that all the edges are covered. A bandage is now commenced at the toes, and, on arriving at the ankle, the splint is laid to the outside of the broken limb; the roller is passed over it, and brought over the instep and the notch at the end: this is done two or three times; then, with assistance, the bandage proceeds around the limb and splint all the way up to the hip, where it is crossed over the loins and back again. The rollers at the parts opposite the breast and loins are passed around the body, returned, and fastened on the splint: this keeps the whole steady. The limb is now to be rested on its heel, and another bandage fastened to the ankle, and brought down to the foot, one end of this to be fastened to one side of the bed-rails, and the other end to the other side, that it may be kept immovable. Should there be twitchings in the limb, or it get shorter than the other, then there must be a bandage tied round the ankle, and a weight of about half a stone hung over a pulley at the bottom of the bed, for about four days. In three weeks the bandages may be taken off, a little at a time, and immediately replaced by others. By the time other bandages are required, the cure is usually completed. When all the quietude necessary for the above treatment cannot be had, which is the case at sea, and may be the case in the backwoods or bush, then more splints are used. The process we have described is proceeded with, as far as attaching the splint we have named firmly to the ankle and body; but, before continuing the rollers further than the ankle, another splint, reaching from the top of the inside of the thigh, a little below the foot, and having a hole for the reception of the ankle-joint, is firmly tied at the top part with a piece of roller, and then the first-used roller is carefully and firmly passed around it at the ankle and foot, embracing also the other splint; this being well effected, a third splint, reaching from the projecting bone at the buttocks to a little beyond the heel, is placed on the back of the limb; remembering always to pad them well, and especially the edges, so as not to hurt the flesh.

The roller now is placed a few times around the three splints, and all firmly bound on; then comes the last splint, which should commence about an inch below the groin, and reach a little above the part of the foot where the ankle bends it. This splint must have a few runs of a saw outside of the part that will rest on the knee, so that the wood will bend with ease, to accommodate the rise at the knee. Place this splint on the front of the leg, then continue the rolling over the whole four, all the way up to the hip. If care be taken in getting the leg in the first instance to its right length, this mode of bandaging it will keep it so firm that a good cure will ensue. It is considered clumsy, but sure; and where a person rolls about, as at sea, or has to be conveyed in a litter or other conveyance, as may be the case in battle, this is the best mode. When the splints hurt, cut the bandage at the part, and stuff in some cotton wool or other soft material, and re-bandage. Some dispositions are so irritable, or from other causes, the straight position of the limb cannot be borne, and more harm than good arises in continuing or adopting it: in such instances, a slight incline plane is to be made, resembling a pair of compasses widely opened, but shorter on the rising part on which the thighs are to rest than the incline for the legs. In this mode three short splints are used, as the thigh only has them applied to it, one on the top and one on each side, there being none underneath; but this part has to be protected by padding. It is usual before applying the rollers, to use three straps with buckles, to hold the splints lightly in their places. The incline must be well and softly padded, and the heel a little raised. A pad is placed between the broken and the sound limb, at the ankles and knees, which are to be tied together; and as a further security for the steadiness of the limbs, pegs should be inserted at the outside, and between the legs.

*Toes Broken.*—When such an accident occurs, at once lay up, and keep the foot at rest; if it be the big toe, or those near to it, a slight splint and a narrow roller may be used; this injury is generally accompanied with a severe bruise of the flesh, in which case there must first be applied fomentations of cold water followed by a bread and water, or linseed-meal poultice. Should the part become much inflamed, with pain up the limb, add to the poultice two table spoonfuls of common salt and one table spoonful of saltpetre, dissolved in half a pint of water.

*Tooth Drawing.*—The single teeth may be easily extracted by grasping them firmly, and as low down on the gum as possible, with a small pair of *pliers* or *forceps*. (Fig. 41.) Do not press heavily on the sides of the tooth, or it may be crushed or broken off; give a rotatory motion at same time. The double teeth are generally drawn with an instrument dentists call a key instrument; this has a claw to seize the tooth and press it against a bolster, it then acts as a lever; but with a strong and steady hand, most of the teeth may be drawn out with the forceps.



Fig. 41.

After a tooth has been drawn, sometimes a severe bleeding takes place from an artery; to arrest this, try a strong solution of the nitrate of silver; if this be not successful, clear the hole of the clotted blood, and press into it a piece of lint, made thin at the end, so that it may reach the very bottom, fill it with lint the height of the gum, then put upon it a bit of cork, or a few folds of linen, so that when the mouth

is closed the teeth opposite the hole may rest upon it, then bandage over the chin to the top of the head, to keep it firm. Sometimes wax, putty, or other similar materials, have been found to answer, and the extracted tooth has even been employed to stop the bleeding.

*Vaccination.*—Before this operation be performed, attention should be paid to the health of the patient, as the desired object may be defeated if disease exist. Another point is, that the subject from whom the matter is taken be healthy and has no hereditary disease. The time of taking the matter ought to be from the fifth to the eighth day before the inflammation has spread around the mattery sore. Good matter is *clear and transparent*. The operation is performed with a fine lancet, on one arm; the lancet is placed horizontally, and three slight incisions made in the skin, about an eighth of inch deep, if possible without drawing any blood, and at such a distance that the spots will not run into each other. Then, puncturing the matter-spot of the person from whom he has to take it, to allow a little to escape, he dips the tip of the lancet into it, and inserts it in each cut he previously made. The operation has been successfully performed with a penknife, a razor, or a needle. If the matter has been preserved on points, it should be breathed upon to render it fluid, then one inserted into each puncture, and allowed to remain about four minutes. The most efficient manner of conveying this matter, or lymph as it is called, to the colonies, has been a subject of great interest to the medical profession, and that proposed by Dr. Gregory is generally admitted as the best; it consists of ivory points, shaped like a lancet, which are to be well armed and carefully dried, and placed in well-corked bottles, which retains its virtues several months. On using these points they are breathed upon, and inserted in the punctures made by the lancet, retained there a few minutes and gently pressed. The sores must be carefully protected from injury during their continuance, and a little cooling aperient medicine administered after the twelfth day.

*Veins, Swollen.*—This is most usually a female complaint, becoming worse during the evening; the limb is painful with a feeling of weight. The best remedy is an elastic stocking, which must be put on before the person gets out of bed in the morning; apply a lotion of ten grains of caustic, dissolved in three ounces of water, every night, on a rag to the swollen veins. Should this not be available, either from the expense or situation of the party, then roll the limb the same as directed when broken—that is, have a bandage about six yards long, and commence at the foot and roll it up over the whole leg. It should be most carefully and evenly applied from the toes upwards. Should the veins of the thigh be similarly affected, continue the roller up to the hip, and give it a turn round the loins. Always do it before rising. Great attention ought to be paid to the bowels, that they continue freely open; to effect this purpose take two pills, composed of five grains of pill rufus (aloes with myrrh), and three grains of blue pill at bed-time, two or three times a week. It happens sometimes a vein will burst: stop the bleeding by pressure, then make a pad by folding up a piece of linen, and bind it on; saturate the part with a weak solution of caustic in water; continue this until healed so far as the bleeding is concerned, when a piece of plaster may be bound over it.

*Whitlows*—are of three kinds, called the cutaneous, the subcutaneous, and the tendinous. The commonest occur near the root of the nail, and commences with inflammation and a painful throbbing sensation. When

the part rises like a blister, cut it, to allow the thin watery matter to escape, and put a bread and water poultice over it. When allowed to continue, proud-flesh grows; upon this taking place, the skin around it should be cut off with a pair of scissors, and then poulticed for some days, after which dress it with a little spermaceti ointment; in this instance the nail is likely to drop off. The second kind of whitlow occurs at the soft, fleshy, front part of the tip of the finger; inflammation takes place, there is great pain and throbbing. There should be a careful examination to find any splinter, piece of needle, or other foreign matter that may perhaps be there and cause the evil; after which apply a leech, and well foment with hot water. Should this treatment not speedily bring the whitlow to such a state as to proceed to recovery, the inflamed part should be cut well into. If the finger-end continues some time tender and painful, and does not suppurate, then it should be well rubbed with lunar caustic; at the same time medicines should be administered, as aperients, alteratives, and tonics. The tendinous whitlow is the worst; it is felt as a severe throbbing pain, extreme tenderness, little but tense swelling, and the whole system is disturbed; the danger is, that the matter extends along the muscles and tendons, destroying them, and leading to a loss of the limb or uselessness during life. Apply leeches, fomentations, and purgative medicines; cut with a scalpel freely through the inflamed parts, to get the matter to escape, if there be any, or to allow the blood to flow to prevent it forming. The matter, if any, must be got out, therefore the finger should be well laid open; and if the matter continues up the hand, that also must be cut till the matter comes out well and freely away; but mind, on account of arteries, it is dangerous to cut between the bones of the hand; if matter exist there, cut on the top of the bone, and put in a director to the part.

*To make a Metallic Amalgam or Cement, to fill Decayed Teeth.*—Take a small quantity of metallic silver in powder, or reduce some lunar caustic to this state by dissolving a little in water, to which add about the same quantity of common salt; this will throw down a white powder, or precipitate. Pour the fluid off, and then boil it in some potash water until it is converted into a dark-brown powder, which strain and collect by pouring through blotting paper, and let it dry. Take a portion of this powder and mix with it a few globules of quicksilver: knead it well with the fingers, and squeeze out any superfluous mercury. Then the cavity of the tooth having been properly scraped out and dried with lint, fill it with the amalgam, making the surface of the metal smooth, and even with that of the tooth. The patient must be desired not to use the teeth for some hours, till the amalgam has become hard.

ON THE  
PRESERVATION OF HEALTH AT SEA,  
WITH THE  
GOVERNMENT ORDERS RELATING THERETO.

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A VOYAGE to Australia embraces some of the greatest variations of climate; it is also one of the longest taken by passengers; therefore instructions relative to it must contain all the information requisite, which can be modified to suit shorter voyages and more equable temperatures. We begin with the very first subject that should occupy the attention of intending emigrants, as conducive to their safety and health.

THE CLIMATE OF AUSTRALIA.

It is not to be wondered at that the accounts received are so very conflicting, when we consider that everything in this region of our earth is so widely different from what we are accustomed; even the quadrupeds, the birds, the creeping things, and the vegetable kingdom appear to be as reversed in their nature and habits as the seasons of the year. The most beautiful flowers are without perfume, the greatest part of the trees without shade, shedding their bark instead of their leaves; in short, all Nature here may be said to be reversed. We cannot wonder, therefore, to find the north winds hot, the south winds cold, and the east wind healthy; the mountain tops warm, the valleys cool; and the rivers dwindle as they run, and become lost ere they reach the sea. The European eye must cease to wonder as it follows the sun travelling northward; and to find that with July he must associate mid-winter, and with January midsummer. Here, then, he will find spring begins early in September, and a genial warmth goes on increasing, as the rain diminishes, till about the middle of November, when summer commences. The warmth is by this time heat, which increases until, by the end of the month, the rivers begin to dry up, vegetation ceases, and the whole country becomes parched up. At the close of February the temperature begins to sink, and by the middle of March autumn begins; and early in April showers and sunshine alternate, the ground is covered with verdure, the air is clear, bracing, and buoyant. In June winter comes, if that can be called winter which is distinguished only by torrents of rain and overflowing rivers. During this time, and till the end of August, there are delightful days, and even weeks, between the rains, more beautiful and exhilarating than the finest weather in England.

"The average of good and bad days throughout the year is twenty-five extremely hot days, sixty wet or cold days, and the rest delightfully agreeable, with the air bright and balmy, and the deep blue sky unstained by a cloud. In mid-winter the thermometer rarely ranges lower than 46° Fahrenheit, and ice is rarely or never seen; but in summer, in the latitude of Sydney and Melbourne, the mercury frequently indicates 90 or 100°. The variations in the temperature are sudden and extraordinary; at noon, it is frequently higher by 20° than in the morning; and the average heat of one day is greater by 15° than that of the next. The north wind is always dry and often violent; in winter moderately warm, in summer intensely hot, drying up grass and fruit, and filling the air with a dense cloud of sand and dust. Occasionally this wind travels so slowly, that its movement is scarcely perceptible; and then the earth is so exposed to the unobscured rays of the sun, and the scorching but almost motionless wind, that a thermometer in the shade will indicate 120°, or even more; during this time, sheet lightning sweeps through the atmosphere at night."

For the fullest and most useful account of all that is known of this wonderful country Australia, see "The Three Colonies of Australia"—Illustrated London Library. By S. Sidney.

#### CHOICE OF A SHIP.

The *first-class* ships are those that have been inspected during the building, and are certified to be in a state of complete repair and efficiency by an inspector of Lloyd's, and assented to by the Committee; they are designated A 1. Ships that are built of the same materials, and are under the same supervision as A 1, but from partial deficiencies appear not to be entitled to the same rank, are marked 11 A; that is, if kept in perfect repair, they will be a first description of a first-class ship, eleven years. When there is some little difference in the mode of building or workmanship, they are called 10 A, which is still a first description of a first-class ship. The second description of first-class ships are those beyond a certain age, and have not undergone such repairs as to keep them in the first description, but are still in a condition for the safe conveyance of dry and perishable cargoes; they are marked  $\text{Æ} 1$ . In Lloyd's list those in this class considered fit for such cargoes "to and from all parts of the world," are distinguished by the letters  $\text{Æ} 1$ , being printed with red ink, and a star before them. *Second-class* ships are not thought fit for dry cargoes; they are marked E. *Third-class* ships are considered only proper for short voyages, and the conveyance of cargoes not subject to sea damage; they have the letter I.

Now, the first-class ships of the first description, and those of the second description with the star and red ink, are the ships that emigrants ought to select. The size of the ships is of no great importance. We know those who have often made the voyage, prefer one of about 500 tons to a larger vessel, stating they had more comfort, and that the vessel sooner recovered from the shocks given by heavy waves; whereas in the large vessels they hardly recovered their tremor before another wave came, and thus continued the unpleasant motion. From the same cause it is the opinion of some that small vessels are safer. As regards the latter

part, however, we need only state that during the last twenty years there have been but one or two Australian emigrant vessels lost at sea, which speaks highly of the condition of our ships and their skilful management.

Having ascertained the class of vessel, the next inquiry should be the name of the owner, that it may be judged if he ranks as a man who values his character, as then he will not permit any imposition on the part of his officers, for the sake of paltry gain. One chief point, however, is the respectability of the shippers, for they have to fit up and victual the vessel; if, therefore, they are greedy, avaricious men, unknown in character and station, it is necessary to be wary, for your health and life are actually in their hands. The question should be asked, and, if possible, the truth ascertained,—What can be had for money on board when at sea? And if it is discovered that a store is laid in for sale, depend upon it the rations will be short and bad, for the purpose of creating customers. The fittings of the vessel must be learnt, of the proper mode of which we shall advise hereafter, and also the rules to be observed on board ship. Always choose a ship where there is an equality of passengers, as then you will have the entire range of the vessel, and not be confined to a wet small portion.

Another very momentous affair is the kind of cargo the ship will take out; this would be deeply impressed on the mind if a tithe of the suffering recently experienced by some emigrants could be felt by those who intend going on shipboard,—where the decks were too hot to be trodden, water, for fourteen days, had to be poured upon them, to prevent their bursting into flames; the emigrants, in the mean time, in painful suspense. Therefore it behoves all to see to the kind of cargo put on board: Government provides positively against some kinds, but not all.

There are several other points that ought to be seen to, little thought of by those about engaging a passage, but the neglect of them deeply felt afterwards. Although a passenger may be informed there are life-buoys on board, this ought not to satisfy him, as they are too often kept in places difficult of access, and thus in times of need useless. One boat at least should be kept equipped with oars, clear and ready to lower at any moment. Lightning conductors, properly fixed, are requisite for safety. The decks of hard wood, so that they may be readily wiped dry, not absorb the wet, and be easily cleaned. In some of the American ships the wood is salted; this always produces an unpleasant dampness. There should be a sufficiency of good scuttles, and also proper-sized stern-posts, well secured. The water-closets of new materials, not second-hand, otherwise they will be worn out before the voyage be accomplished. The cook-house should be fitted up with new utensils, and the boilers have their taps so low as entirely to empty them, otherwise the coffee or cocoa will be mixed with soup, and the soup with coffee or cocoa. The cook-house must be properly enclosed, if a dinner be desired every day. The capabilities of the cook should be known, and a one-voyage man be objected to.

*Outfit.*—The following is that recommended by Mrs. Chisholm's society:—Knife and fork, table and tea spoons, metal plate.—Hook pot, drinking mug, meat dish, water can, washing basin, two cabbage-nets, one scrubbing brush, half a gallon of sand, flour-bag, half a Bath brick, two sheets of sand-paper, two coarse canvass aprons, hammer, tacks.

Leathern straps, with buckle, to secure the beds neatly on deck when required to be aired. Three pounds of marine soap.

Cleanliness being necessary to health, and order to comfort, not one of the above articles should be neglected. Passengers by placing their shoes in a cabbage-net, and tying the net to the rigging, dry them without the risk of their going overboard, which frequently happens when suspended by the shoestrings. The Government order the following outfit to be provided :—

LIST OF ARTICLES TO BE PROVIDED BY THE SHIP FOR THE EMIGRANTS, BUT NOT KEPT BY THEM AFTER ARRIVAL.

The Contractors are also to provide for each mess of six persons the following articles :—

One mess-kit, with handle.

One tin oval dish, about 14 inches long and 4 inches deep.

One tin round butter dish, about 7 inches in diameter and 3 inches deep.

One mess bread-basket, about 14 inches long, 6½ inches deep, and 10 wide, with handles.

Two three-pint tin-pots, with covers and bar-hooks, for boiling water.

One three gallon water-breaker, properly slung for use.

One potato-net.

One pudding-bag.

One mess-towel.

With an addition of one-fifth to provide against loss or breakage. These articles are not to belong to the emigrants after arrival.

*Clothing.*—During the voyage the heat of the tropics has to be endured when attention to the cleanliness of the person will be found the greatest source of comfort. White clothing must at such a time be the best; but as it would be wrong to expend money purposely for a few weeks' wear, a little contrivance will suffice for the time. Draughts must be carefully avoided. On the subject of clothing Mrs. Chisholm remarks :—"In reference to stockings, two pairs of good ones were better than six pairs of bad ones. A supply of needles and worsted was also essential. She would recommend every young man to take such materials; for both on board ship and in the colonies they would have to mend their own stockings. A great deal of money was generally wasted in the slop-shops, and great stress was laid on the necessity of clothing for both hot and cold weather. She was anxious to expose this fallacy. All that was necessary in cold weather was to protect the joints, not to load the body with a great amount of extra clothing. An old blanket cut up and sewed inside the waistcoat or trousers would be found very useful. It was a delusion to talk of things being very dear in the colony. Women would not find it necessary to take out more than two gowns for the voyage. Thin slippers should be avoided, as they are very apt to give cold. In the list of articles recommended by the society to be purchased were cabbage-nets, which were the most useful things that could be taken to sea, as well for cooking as for other purposes. One might be used for putting children's shoes in at night, and hanging them up, by which means they would be dry in the morning. Coarse aprons, Bath brick, and sandpaper were recommended to be taken, and numerous were the inquiries what they were to be used for. Many who were about to face the diggings contemplated

with horror the idea of cleaning their own knives. Her object was that females, in particular, should have with them every thing necessary for health, comfort, and cleanliness, in order that there might be no pretext for interfering with them by the officers of the vessel." A Guernsey frock, or a waistcoat with sleeves, are found capital wear on the voyage. Both adults and children ought to wear a light shoe, but not thin slippers made to fit without ties, for these are apt to come loose, and from the unequal position of the ship they are trod upon and many awkward dangerous falls are the consequence. A carpet-bag in the passengers' cabin is better than a box for clothes that may be constantly required. Those who take with them an unnecessary quantity of bedding and clothing entail upon themselves a trouble, labour, and anxiety they deeply regret.

*Extras.*—Those who have money to spare may take with them a little of the very best quality of lime-juice, two bottles of wine, a bottle of brandy, a ham, a few pounds of patent flour, a pound of arrow-root, some rice, tea and sugar, and a jar of home-made pickles.

Nothing better can be taken to qualify the salt meat, and as a preservative against scurvy as well as admirable for children, than a small supply of preserved vegetables; they occupy little room, are moderate in price, and are recommended by Mrs. Chisholm.

We cannot better conclude this part of our subject than by some extracts from the journal of a gentleman who went to Adelaide with a large family; it was published in "Sidney's Emigrants' Journal" for 1850. We may premise that Mrs. Chisholm's valuable reforms on emigration had not then been felt in every private and governmental "passenger ship" as at the present time, therefore the whole of the recommendations we have thought it necessary to insert.

The gentleman writes at sea: "All who mean to follow us with infants should begin some time beforehand to gather up calicoes and linen for napkins, for they must go overboard as soon as used; and be sure to have some of the delicacies of the season ready to hand for use, till all the sickness has passed away—such as jams, marmalades, cheese and pickles, raisins and nutmegs, eggs and preserved meat,—for their children are great sufferers. Some sound apples, too, for baking, and let them be 'lavish' in their stock of aromatic vinegar, hartshorn, and camphor; unfortunately we were without either of these three last things, and had no eau-de-Cologne nor other scent, things of great value and importance too. Supplies of small strong-made bags are of immense convenience, a hammer and some nails, and strings, lines and clothes, packed in bundles, and their contents noted down for reference; good boxes and packing are of great moment as regards all clothes that are to be put away, for they have to encounter rough usage. . . . Everything should be under lock and key. . . . Let all emigrants be sure to bring a 'lavish' supply of powders to mix with the water, such as ginger-beer, lemonade and lemons, and lime juice, too, should not be omitted. . . . Preserved milk and preserved yeast are very valuable for the young people. . . . Lots of our men are without stockings and shoes, and most without coats and waistcoats; in fact, for men, we want now sound but light pumps, light washing trowsers, strong cheap shirts, good socks and water jackets, or waistcoats with sleeves. Children want strong unbleached overalls, and as much under-clothing as possible dispensed with. Women with lots of old clothes for the voyage find them such an intolerable nuisance as to wish them all

at the bottom of the ocean; in fact, old clothes are old rags here in a fortnight; sound, strong, common articles that will bear a haul are wanted. . . . The following should be packed in a box ready to get at altogether,—viz., a small stewpan, a piece of rag, say two yards square; preserved milk and meat, and six pint bottles of lime juice, and care to be taken not to throw away the tins or bottles, they are of value to use; six common half-pint white-ware mugs, and as many plates, a dozen cheap tea spoons, some strong cord, and twine, and waste paper, a rag bag and coarse cloths for washing and for dishes, over and above the things I told you were gratuitously supplied. . . . As I don't choose to be the subject of the annoyance of paying exorbitantly for washing, and then having the doing of it looked upon as a favour, I have commenced washing my own shirts, and think of having a clean one daily while this hot weather continues. . . . Extra sugar for sweetening lime juice, some arrow-root, tapioca, barley-water, and other drinks, is necessary."

While this work was passing through the press we received the following letter from an experienced voyager, which contains sound, practical, and valuable advice:—

"First,—it is a very common practice, as you may notice, to advertise ships for emigrants, as 'A 1, twelve years,' which is very likely to deceive people unacquainted with nautical matters, as it merely means that the ship was *once* 'A 1,' which might have been twenty years ago, as far as a landsman (or certainly a *woman*) could know, as every man of sixty years of age has *once* been only thirty. Such an advertisement is calculated and *intended* to deceive.

"People of the class who usually go out in emigrant ships are generally very ignorant of the sea and of all nautical matters; and I have known very *considerable* inconvenience and annoyance arising from such ignorance or a want of a little foresight. A great deal of the distressing results of sea-sickness arises from landspeople going to sea with foul stomachs (*especially* women). Now, if, previous to sailing, a course of medicine for two or three days, under the direction of a medical man, in order to clear the system of bile, were taken, the worst effects of sea-sickness would be obviated.

"The sea air is extremely constipating to most people, even to many sailors; therefore a good stock of *gentle* aperient pills should be taken, *one every* night for the first fortnight, will greatly relieve sea-sickness, for which I send you the following *sure remedy*:—One to three drops of creosote, to one oz. of sweetened water, to be repeated every two hours until the sickness ceases. N.B. As creosote sometimes affects the throat, it is best made into pills in the same proportion. The body to recline horizontally.

"A good supply of waste paper for cloacal purposes. This *necessary* precaution is *very* generally overlooked by landspeople, and much distressing annoyance is the result. There are no shops at sea, and 200 people, for a four months' voyage, are often very much put to it, from the neglect of so desirable a precaution; more so than people on land can readily imagine. With pills and paper, people are armed against half the evils of a long voyage.

"Epsom salts is a bad and inefficacious medicine at sea. To such as can obtain it, a good large jar of pickled cabbage is a most valuable and agreeable pickle to take, being *antiscorbutic* and helping down many a ration of

necessarily salt and tough beef. Sour kroust ought to be made *by authority* one of the standard and most important stores in an emigrant ship—as those navies (Russian, Swedish, and Danish) to which it is supplied, never suffer from scurvy. Potatoes is one of the *worst* things for sea, as whilst very bulky, there is *at best* only 25 per cent. of nutritive matter in them, and they are exceedingly indigestible and *constipating* (the worst quality at sea), the gluten acting on the bowels like so much paste.”

“Two or three ounces of carbonate of soda is a very desirable sea stock for emigrants, as a little taken in water corrects acidity of stomach, or ‘stomach-ache’ and, irritation, to which many at sea are liable.”

*Health.*—The chief sources of this are personal cleanliness, cleanliness of berths, wholesome food, means of ventilation, supply of water, and convenience for washings.

*Personal Cleanliness.*—For this purpose passengers ought always to inquire if shower baths are erected for their use; and if not, get a written guarantee there shall be accommodation for two—one for the men, the other for the women; and if the shippers are too shabby to provide such requisites, a small subscription will purchase them, or a good-sized colander and a sheet or counterpane may be substituted.

*Cleanliness of Berths.*—The bedding ought to be taken on deck, and the berths thoroughly washed out not less than once a week.

*Wholesome Food.*—The names of the contracting parties for supplying this important department should be ascertained, that it may be seen whether they are honourable and respectable men. The emigrants ought also to have the privilege of taking down the marks on the casks, that it may be proved they are receiving that which has been stated to be provided for their use. Have part of the biscuits packed in casks. Recent events have shown the necessity of emigrants seeing that a separate place is provided for the stowage of their provisions; the inspecting officer ought to see them deposited in a place of security; and deliver one key to the emigrants’ surgeon, and another and different one to the ship’s steward.

*Between Decks.*—It is of great importance that this part be kept dry and clean. To keep it dry, there should be a good tarpaulin fixed on each side of the hatchways a few feet high, and slanting, extending beyond about two feet. Real good mats ought to be both at the hatchway and at the bottom of the ladders, to wipe the wet and dirt from the feet. In such a voyage as that to Australia, a dozen and a half of scrapers, two tons of good dry sand, and five dozen of holystones will be necessary, to keep the decks as clean as in a well-regulated ship they should be. The sand may be sifted and washed, so as to be serviceable on another day, in scouring the tables and forms. A cask of whitewash is an important item, with brushes, for cleanliness.

*Ventilation.*—Although insisted on by act of Parliament, yet too much discretion is left in the hands of others; and it is awful to contemplate the scene between decks in rough weather, with hundreds of passengers and the hatches fastened down.

*Water.*—The value of a drop of water is discovered by the emigrant when it comes to be carefully meted out to him; he should take care that the quality is good and the measure legal. A very simple apparatus was used on board of some of Mrs. Chisholm’s ships, for distilling water at

sea, by which sufficient was obtained for washing purposes, without interfering with the quantity regularly allowed for dietary and other applications. Any arrangement of this kind enhances the value of a passage in a ship so provided. See also page 54.

*Washing.*—Passengers should insist on there being two days set aside for washing clothes, and proper provision for their doing so; the wash houses ought to be on deck. By having this regulation as to two washings in a week carried out, the expense in the purchase of clothing at the outset is greatly reduced, and comfort and health promoted.

*Dietary.*—As this is important to health we insert the best scale, drawn out by Mrs. Chisholm, which every emigrant should compare with that furnished by the shippers of vessels they think of proceeding with, as it is careful in respect to the quantity being sufficient and fair in exchange for the money paid. Some think the allowance too liberal, and engendering waste; but being found just in one case, it may be applied to others. The quality was the very best.

Biscuits, per week, 3lbs.; beef, ditto, half a pound; pork, ditto, 1lb.; preserved meat, ditto, 1lb.; soup bouilli, ditto, 1lb.; fish, ditto, a quarter lb.; flour, ditto, 3½ lbs.; raisins, ditto, half a lb.; preserved fruit, ditto, a quarter lb.; suet, ditto, 6 oz.; peas, ditto, 2-3ds of a pint; rice, ditto, three quarters lb.; preserved potatoes, ditto, half a lb.; carrots, ditto, half a lb.; tea, ditto, 1½ oz.; coffee, ditto, 2 oz.; sugar, ditto, three quarters lb.; treacle, ditto, half lb.; butter, ditto, quarter lb.; cheese, ditto, quarter lb.; oatmeal, ditto, 2 oz.; lime juice, ditto, 1 gill; pickles, ditto, 1 gill; mustard, ditto, half an oz.; salt, ditto, 2 oz.; pepper, ditto, half an oz.; water, ditto, 5 gallons 1 quart; ditto, ditto, each infant, 1 gallon 3 quarts.

Where three children are taken as one adult, it is customary only to allow provisions and space for one person; therefore parents should make a specific bargain to have for their children that quantity of food and space requisite for health.

Dumb-bells for exercise are useful, and musical instruments for the amusement of passengers are valuable in engaging and pleasing the passengers.

#### THE VOYAGE.

*Extracts from the Instructions to Surgeons of Emigrant Ships sailing under the Superintendence of her Majesty's Colonial Land and Emigration Commissioners.*

FROM these instructions will be gathered the requisites necessary to ensure health on board a vessel conveying a large number of passengers; and as it is afforded for free emigrants, less cannot be granted to those paying for their passage.

*Principal Objects of the Surgeon Superintendent's duty during the Voyage.*—The principal objects of the surgeon superintendent's attention during the voyage will be the maintenance of good order and regularity among the people; the management of the dietary, the care of the sick; and the keeping of a journal which shall constitute a sufficient record of the proceedings on all these subjects.

*Cleanliness.*—The surgeon superintendent will perceive that several of the regulations are devoted to the object of enforcing cleanliness

amongst the emigrants, in their persons, their decks, their sleeping-places, and their clothing.

*Clean Linen.*—With reference especially to the latter purpose, a muster is appointed for Sunday. The surgeon should also establish a practice among the people of putting on clean linen upon some other fixed day in the week besides; as, for example, Thursday, which is the day kept for the purpose on board her Majesty's ships of war; and there should, if practicable, be a muster for inspection on that day.

*Ventilation.*—He will pay attention to securing a proper degree of ventilation, and will cause the ports and scuttles to be opened whenever, on consulting with the captain, that officer may consider that it can be done with safety to the ship. Care must be taken that they are shut in time to prevent the influx of water, and that when closed they are made thoroughly tight.

*Dryness between Decks.*—Great care should be taken to preserve dryness between decks. For this purpose all washing must be strictly prohibited there, and holystones and dry rubbing alone used to clean the deck. The swing stoves and hot sand should be used frequently, and wherever damp may appear. The mode of using the sand is as follows:—A sufficient quantity is placed in the stoves and heated to 200°, or as high as it will bear, and then spread on the deck to about one inch in thickness: when the object has been effected, the sand is to be put by for future use.

*Air and Exercise.*—The emigrants should have every encouragement to take the air on deck. The surgeon superintendent is to consider it his duty to promote music and dancing, and every harmless means of combining exercise and amusement. In the hot latitudes the people should have the benefit of the awnings, and should as much as possible be sheltered from the sun in all parts of the deck; and it will probably be found desirable likewise in those latitudes, although it has not been thought fit to be enjoined as a regulation, that the men should agree among themselves to keep large watches on deck at night, so as to leave the sleeping places below more airy.

*Crossing the Line.*—The emigrants are not to be molested on crossing the Line.

*No Gambling.*—Gambling must not be permitted.

*Discipline.*—Throughout the treatment of the people it will be the aim of the surgeon superintendent to maintain good moral conduct, cheerfulness, and regular habits, establishing fixed days and certain hours for as many purposes as he can; and endeavouring to bring the whole of his system into a settled routine, capable of insensibly uniting itself with the daily life of the emigrants as a matter of course.

*Diet of the Sick.*—The sick will be victualled according to the discretion of the surgeon superintendent, who is at liberty to cause to be issued to them, in addition to the medical comforts required for their use, the whole or any part of their regular rations, or any other of the articles furnished by the scale of victualling, as he may deem best.

*Prevention.*—The surgeon superintendent will keep a watchful eye on the health of the emigrants with a view to discover the earliest symptoms of fever, flux, scurvy, or any other complaint, and in order that he may take the most prompt means to stop the progress of the disease amongst them.

*Visiting the Sick.*—He is to visit the sick at least twice a day, and

oftener if necessary, paying every attention to their nursing, medical treatment, and general comfort; and assigning to them the most suitable diet.

*Use of the Hospital.*—The hospital being intended chiefly for patients labouring under infectious complaints, or such diseases as render confinement to bed necessary, he is not to admit into it persons affected with slight complaints, but is to attend to them in their own berths.

*Infection.*—When patients with infectious disorders have been received into hospital, their persons have to be thoroughly cleansed, and their clothing washed in boiling water, or fumigated before it is stowed away, to prevent the possibility of infection.

*Journal of the Voyage.*—In reference to all the preceding duties on the voyage, the surgeon superintendent is to keep a daily journal of his proceedings, noting every occurrence of moment. He is to particularise the times when the decks are scraped and holy-stoned, &c.; the ship fumigated; the bottom boards of the berths scrubbed and taken on deck; the bedding shaken and aired; washing-days allowed; the luggage brought up. He is also to notice the Sunday and other musters; and is to state, every day, the nature of the weather. The crossing of the Tropics and of the Line should be noticed.

*Medical Journal.*—Independently of the preceding general diary, the surgeon superintendent should keep a distinct medical journal, showing on what day each patient is entered for treatment, and on what day discharged; and whether cured, transferred to other hands, or dead; stating also the nature of the disease, and the method of treatment: and if there be any causes connected with the voyage which appear likely to have occasioned the disease, he is to assign them, and point out whether there seems to him any practical method of obviating them for the future, more especially if the complaint be of an infectious nature.

*Dietary Scale.*—The following is to be the scale for one adult. Women to receive the same as men; children between one and fourteen to receive one-half. Infants under one year to be allowed one quart of water daily, but no rations.

The same issues are to continue on the same days of the week as below.

DAYS.	Biscuit.	Beef.	Pork.	Preserved Meat.	Flour.	Oatmeal.	Raisins.	Suet.	Peas.	Rice.	Preserved Potatoes.	Tea.	Cocoa Nibs.	Sugar.	Treacle.	Butter.	Water.
	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	pint	oz.	oz.	oz.	oz.	oz.	oz.	oz.	qts.
Sunday	8	...	...	6	6	3	2	1½	...	...	4	¼	...	...	2	...	3
Monday	8	...	6	...	6	3	...	...	¼	...	...	...	½	4	...	2	3
Tuesday	8	...	...	6	6	3	2	1½	...	4	...	¼	...	...	2	...	3
Wednesday	8	...	6	...	6	3	...	...	¼	...	...	...	½	4	...	...	3
Thursday	8	...	...	6	6	3	2	1½	...	...	4	¼	...	...	2	...	3
Friday	8	...	6	...	6	3	...	...	¼	...	...	...	½	4	...	2	3
Saturday	8	...	...	...	6	3	2	1½	...	4	...	¼	...	...	2	...	3

Mixed pickles	...	...	...	One gill.
Mustard	...	...	...	Half an ounce.
Salt	...	...	...	Two ounces.
Pepper	...	...	...	Half an ounce.

} Weekly.

While in port, and for one or two days afterwards, if practicable, two-thirds of a pound of fresh meat, one pound and a half of soft bread, and one pound of potatoes per adult, are to be issued with a suitable supply

of vegetables, in lieu of the salt and preserved meat, and of flour, suet, raisins, rice, and peas.

It will be in the discretion of the surgeon-superintendent to issue, three times a week, to children under seven, four ounces of rice or three ounces of sago, in lieu of salt meat.

The surgeon will be at liberty to draw an additional quart of water daily for the use of each person sick in the hospital.

*Medical Comforts.*—A supply of medical comforts is to be put on board in the following proportion to 100 statute adults:—

- 56 lbs. of oatmeal.
- 20 lbs. of West India arrow-root.
- 40 lbs. of Scotch barley.
- 100 lbs. of sago.
- 20 lbs. of tapioca.
- 30 lbs. of preserved boiled beef in 1 lb. tins.
- 20 lbs. of preserved boiled mutton in 1 lb. tins.
- 400 pints of lemon-juice, in wickered stone bottles of 5 gallons each.
- 300 lbs. of sugar.
- 24 bottles of port wine.
- 12 bottles of sherry wine.
- 66 gallons of approved stout, including at least six dozen in bottles, the rest in 9-gallon casks.
- 5 gallons of brandy.
- 15 gallons of vinegar.
- 12 dozen pints of preserved milk.
- 2 cwt. of marine soap.

The emigrants have no right to the medical comforts as to the articles of dietary, but they are to be issued exclusively at the discretion of the surgeon, whether for the sick or to preserve health.

[Small medicine chests, especially fitted for the use of emigrants or families, are provided by Mr. G. S. PEDLER, chemist, 199, Fleet-street, at prices suitable for all classes.]

#### HINTS ON THE DIETARY.

*Porter.*—The porter is principally intended for nursing mothers and persons in feeble health. The surgeon may allow, if thought proper, a pint of stout daily to women who are nursing.

*Preserved Milk.*—Preserved milk is provided to the extent of 10 dozen pints for every 100 adults; and the surgeon will make liberal use of it for preserving the health of the younger children.

*Water.*—In regard to the management of water, both the surgeon and the master should carefully bear in mind that the butts in which the water is laid in are old measure, while the daily allowances are served at the new imperial measure, which is larger, by one-fifth, than the former.

*Lemon-Juice and Sugar.*—*Quantity and Rate of Issue.*—The issue of lemon-juice to each person is to be 1 oz., with  $\frac{3}{4}$  oz. of sugar. An equal quantity of sugar used to be allowed, but it is found that three-fourths make a better proportion. The quantity to be placed on board is 400 pints of lemon-juice for every 100 adults. It is, generally speaking, not considered necessary to commence the use of the lemon-juice until after the first three or four weeks at sea. More frequent issues of lemon-juice will probably be advisable in the hot latitudes than in the cold.

## DIRECTIONS FOR USE OF THE DISINFECTING FLUID.

OBJECTS.	MODE OF APPLYING THE FLUID.	Proportion of Mixture. Fluid. Water.
To purify SICK ROOMS and the WARDS of HOSPITALS, WORKHOUSES, PRISONS, FACTORIES, and CROWDED PLACES, the between-decks of SHIPS, &c.	Moisten with the diluted solution a piece of flannel-cloth, attached to a long rod, and wave it through the air of the apartment for ten minutes at a time,—in addition to which, the floor should be mopped or sprinkled over with the same dilute solution, if necessary, several times a-day, and a small quantity put into the close-stools and bed-pans. The water-closets should also be cleansed with it, and a couple of gallons occasionally thrown down each	1 to 60
To purify FEVER WARDS, in cases of death.	<p>N.B.—<i>For use on board ships, between decks, and places where, from imperfect means of ventilation, it may be inconvenient to wet the floors.</i>—Moisten with the diluted solution thick pieces of flannel-cloth—the thicker the better—and wave them through the air of the apartments for ten minutes; and then suspend them in the most convenient manner to the deck-beams, or across the rooms; and keep other similar pieces of cloth, thoroughly and repeatedly saturated with the same solution, in flat dishes upon the floors. It is essentially necessary that the bilge-water in the holds of vessels be purified agreeably to the instructions given below.</p> <p>When a patient dies of fever, the body should be sponged over with the dilute solution, and the clothes and bedding should be immersed and kept in a sufficient quantity of it for forty-eight hours before being washed. The floor should be well mopped over with the solution. Flannel, moistened with it (as before recommended), should be waved through the room</p>	1 to 40
To purify the CLOTHES, LINEN, &c., of sick persons.	Immerse the articles in the dilute solution, as directed in sick rooms	1 to 60
To prevent the communication of INFECTIOUS DISEASE.	Sprinkle the dilute solution over the whole of the floor of the apartment, and very slightly on the coverlid of the patient's bed. The clothes used should be immersed in the solution, and afterwards thoroughly dried. Moisten pieces of flannel-cloth, and use them as directed above	1 to 50
To purify the odour of NIGHT-CHAIRS.	Put half a pint of the dilute solution into the pan previous to its use, and, when emptied, rinse it out with a small quantity	1 to 50
To purify BILGE-WATER, and the Holds of SHIPS.	<p>The quantity to be used at a time is twenty gallons of the dilute solution for each hundred tons of the ship's measurement. It should be poured into the air-holes of the ship, so that it may find its way by the limber-holes into the well; and it should be thrown by a small engine into places where it may be inconvenient to introduce it by other means. A portion may also be poured down the ship's pumps, the boxes being previously removed to allow of its free passage below. The solution should remain in the ship twenty-four hours. At the expiration of that time the ship should be pumped as dry as possible, the well thoroughly cleansed and washed with the solution, and the operation repeated as often as required</p>	1 to 20

N.B.—When floors and other wood-work are washed with the solution, the use of soap or soda should be avoided immediately before or after its application.

