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BY

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# PREFACE.

THIS little book, now presented to the public for the third time, although without reason to be ashamed of its antecedents, has assumed an *alias*. Two large editions of the "Care of the Sick" have been exhausted; and, during the time that it has been out of print, so many inquiries have been made for it, both of the publisher and of myself, as clearly to show that a large demand still existed. This demand should have been sooner satisfied, but that I have been so greatly occupied with the duties of professional life, and with works of a more scientific and arduous character, that I could not give sufficient time to the revisal and correction of any volume less strictly professional. When, however, my Treatise on "Diseases of the Joints" had been satisfactorily launched; when my discovery or invention

(whichever it may be called) of an efficient means of treating certain deformities without any cutting or mutilation of parts had been perfected, I at length was able to give some attention to the re-appearance of this little volume.

On considering, however, the whole subject under the advice of my publisher, it appeared desirable to change the name, and somewhat also the form, of the work. The colloquial tone of the lecture has therefore been modified into more precise and more readable language; the name has been changed from the "Care of the Sick" to the "Guide in the Sick Room." But, in spite of these alterations, the nature of the work remains the same; it is still, I believe, all that it pretends to be—a set of simple and practical directions as to the best mode of performing certain offices about the sick, which are constantly necessary, and frequently ill done.

RICHARD BARWELL.

32, GEORGE STREET,
HANOVER SQUARE.

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A

# GUIDE IN THE SICK ROOM.

## CHAPTER I.

Object of this Volume—Disease—Division into Rapid and Lingering—Greater Portion of Latter due to Scrofula—Registrar-General's Return—Number Dying of one Form of Scrofulous Disease in a Week—Causes of Scrofula—Impure Air—Ventilation—Means of carrying it out—Nuisance Removal Act—Board of Works—Residence in the Mews of London—Skin Cleanliness, its Value—Uses of the Pores of the Skin—Clean Clothing—Light, its effects—Dark Courts of London—Case of Scrofulous Family living in Dirt, Darkness, and Bad Air.

IT must be understood that in this little work I speak not of medical, but of nurse treatment. Were I asked how any unprofessional person should treat illness medicinally, I would answer, "Not at all: avoid, by all means, dosing your friends and acquaintances, more particularly if they be children." Beware of patent medicines; and never give babies Daffy's Drops, Dalby's Elixir, or any other of those horrors, that add so much to the pains and difficulties of infant life. With these words I would dispose of the subject

of all medicinal treatment: were I to fill a thick volume, I could not possibly give safer or less injurious rules.

It is well to begin thus at once by disclaiming all desire of making my readers physicians or surgeons; not only because it would be impossible to succeed, and hurtful to fail, but also, because *doctoring* is more popular than *nursing*. The former will always be done badly, and the vain attempts thereat will prevent the latter being done well. Often have I seen, when a poor man has met with an accident, or is taken ill, that half his female neighbours will crowd into the room, each, without at all knowing what is the matter, recommending her favourite remedy. No doubt they begin with a praiseworthy desire to benefit the sufferer; but soon such wish is overpowered by zeal for their several nostrums. Then arguing commences, and the telling of dreadful experiences; the room gets hotter and closer,—the tongues louder and shriller,—and, in fact, the presence of such doctors becomes worse than the disease.

Among the rich, nursing is tolerably easy. There is money to procure all that the sick man needs; servants to bring everything to the chamber-door; the chamber itself is lofty, airy, and only inhabited by the invalid; quiet and cleanliness may be easily commanded. Different is the case in the poor man's one room, where all the family are crowded together, where cooking must be done, where doors and windows fit badly, and where the

noisy children of other lodgers rattle up and down the stairs. But even these difficulties may in part be conquered. My object is to show how this may be done, and what particular evils should chiefly be combated. It will be necessary at first, however, to point out some differences in the kinds of sickness most frequently met with. The chief broad division will be into Rapid and Lingering Diseases, the latter of which we will discuss first. Slow, or, as we call them, chronic maladies, chiefly arise from a certain complaint called

SCROFULA,

which manifests itself in different ways, producing Consumption, Bone-Diseases, Joint-Diseases, and others, as the special disposition of the sufferer may determine. This affection, namely Scrofula, is very widely spread in the United Kingdom: so much so, that it would be below the truth to say that at least three-quarters of the people have the seeds of that disease in their constitution.

There is a sort of newspaper, which is published weekly, called the "Registrar-General's Return." Its history, value, and the method of production is not very widely known; but it is known that in every district in England there is a person called the Registrar of Births, Deaths, and Marriages. When a child is born the birth has to be registered at the office within a certain number of days. When a person dies, a medical man gives a certificate of the cause of death, which must be left

with the Registrar before that dead person can be buried. Every Saturday night the Registrar makes up his tally of births and deaths, and sends them on Monday morning to the General Registrar Office at Somerset House. On the following Wednesday his report is published; it shows the number of boys and of girls born in England during the past week; the number of persons dead in London, and in each district and part of town; their occupation, their age, and the diseases of which they died; also much other information that I will not enter into now.

We find in this paper, the return of the week ending January 2nd, 1864, that in those seven days two hundred and twenty-four persons died of one particular form of scrofulous disease in London alone. From such a number—viz. one person dying of this disorder every three quarters of an hour throughout the week—one may form a rough calculation of the many thousands who are ill with it (for it is a slow disease), and of the many, many more, who, without being actually ill, are, nevertheless, so touched with the affection, that a slight cause will render it active.

It cannot have been the desire of the Creator that so many of his creatures should thus be born of diseased parents, and with a blight upon them, which renders their life sickly, their death premature. We must not blindly attribute such error to our creation; but look for the fault within ourselves, or rather to our carelessness concerning the laws of our life and health. We are not so reckless

on any other matters. If we wish to keep a book clean we do not put it in the dusthole ; if we wish to keep a fire alight we do not smother it with rubbish ; yet I declare that with our health, and with our lives, we do things as foolish every day —almost every hour. We are punished by such diseases as Scrofula ; but we do not take warning ; Typhus comes, still we are not warned ; the more rapid stroke of Cholera may startle us now and then into a terrified repentance of our sins against ourselves. Yet with all this, people do not even now understand, indeed it is difficult to persuade them, that their bodies require pure air to breathe, cleanly skins, and light, to continue them in health ; and that the want of these will surely bring on diseases —the chief among them, Scrofula.

There is no doubt that the scrofulous taint passes from parents to children ; but it is certain that it may be very much overcome by good management, or may be goaded into actual disease by bad. Also, I feel convinced, it may be produced, even in persons born of healthy parents, by a long course of impure air, dirt, and darkness.

## THE VALUE OF FRESH AIR.

It is well known that, by certain movements of the chest, air is constantly being pumped in and out of the lungs ; and that the air breathed in is by no means the same as that breathed out. The pure air drawn into the lungs contains a certain gas, which is to be mixed with the blood, and to be

used in various operations of the body. The air breathed out is useless, because it contains no more of this gas ; and, moreover, it is poisonous, because it has exchanged its useful gas for a hurtful one, and is mixed besides with certain injurious matters thrown off from the body ; therefore any person going on breathing the same used air over and over again, would soon be poisoned to death ; and any one breathing an air in which there is a certain amount of used gas, would be more or less poisoned, according to the degree of mixture.

Most people have felt, in the morning, that the room, they have been sleeping in, is close and uncomfortable,—or have still more often found, it may be observed, on first entering a room where many people have been sleeping or working, that the air is heavy, scarcely to be breathed. This arises from the small amount of good gas which remains, and from the great amount of bad gas and of other poisonous matters, which are in the air. It is true, perhaps, that people are not smothered by this closeness, because they cannot so perfectly close their windows and doors as to prevent some draughts of fresh air enlivening their rooms. When a poison is not strong enough to kill quickly, it causes illness, which gets worse and worse, and at last ends in a slow death. Thus, persons who constantly sleep in a close and poisonous atmosphere, may not on any one morning be found dead in their beds, but they will gradually get pale and weakly, lose their strength, the enjoyment of their lives, and die ; their children, if they have produced any in this bad air, will begin

life with the seeds of the complaint, the first fruit of the poison, already in their systems, a fruit which will ripen into a blight and strengthen to a plague.

Pure air is perhaps the most plentiful of God's gifts; it is all around us, piled many miles over our heads, and beyond our reach. It is so contrived as to be always shifting and changing, purifying itself, when it has been used. But men act contrary to Nature's laws; they build houses without proper means of ventilation, they shut out, as closely as they can, all air from their rooms, crowd together in too small a space, breathe again and again the poisons from each other's bodies,—they fall ill, bequeath and inherit lingering disease.

If the healthy body throw off into the air such poisons, is it not likely that the diseased should scatter around still more hurtful matter? In the sick room we nevertheless find a great dread of pure air, not only among the poor, but among the rich also. I know, that among the poorer people, doors and windows are kept closed for the sake of warmth and to save fire; but they may be sure that the cold will not hurt them so much, nor make them in the end so uncomfortable, as the want of pure breathing. There are many diseases, which, if their poisons be not mixed with a certain amount of air, will spread like fire among haystacks; but which, when thus mixed, may be approached with safety. Let all be careful, both in health and in disease, to have sufficient pure air to keep their room healthy.

It is not always easy to ventilate a room or a

house without causing too much draught and cold. Some houses are so built, as to render it very difficult to air them properly; those with windows or doors only on one side are hardly to be efficiently ventilated, and are all of them most unhealthy;—the researches of the House-to-house Visitation, established during the Cholera-time of 1848, showed the extreme sickliness of these dwellings; and all experience of the years since elapsed has gone to prove it more distinctly. A house which has not windows or doors on both sides, through which no thorough draught can be established, should therefore be avoided as a dwelling-place.

When such a complete passage of air as above supposed has been produced, the next object is so to spread and break it, as to gain the full advantage of great ventilation, without the disagreeables and coldness of a chill, large draught. Air will flow through a room readily enough, if there be an opening on one side, low down in the chamber-walls, at which it may come in, and a higher one on the other, at which it may go out. We want to get sufficient air to pass through, without allowing it to come in such a full stream as to give colds and rheumatism; and for this purpose it is better to have several little holes than one large one. A good plan is to take out one of the upper window-panes, and to put in its stead a plate of zinc, with a certain number of holes in it, about the size of a quill, and at the lower part of the door to make an equal number of holes about the same size. If the zinc plate, etc. cost

more time or money than can be devoted to such purpose, one may take the advice which "An Old Friend" gives in a little pamphlet or tract he has published on the "Worth of Fresh Air." He advises his friend to "take a large gimlet, and bore a row of holes through the upper part of the window-frame, just above the glass; make them sloping a little downward, so that the rain may not run in." He then goes on to say, that with wooden pegs to fit these holes the amount of air may be regulated. This appears to me a very excellent piece of advice, and would, no doubt, answer extremely well.

## HOUSE-CLEANLINESS.

Closely connected with this subject of ventilation is that of house-cleanliness. The air, bad as it is, which has been spoiled by much breathing, is probably less unwholesome than that in which any vegetable or flesh has been putrefying. Such air, however, we frequently find in the rooms of careless or dirty housewives, who, after a time, get used to the smells and discomforts of an ill-kept room. I say, however, that these matters are not merely uncomfortable, but most unhealthy; that nothing, which is likely to putrefy, no refuse food, nothing, which is of itself dirty, should be kept in a living-room. All this is well known; and I am of course aware, that every decent woman wishes to have neatness and tidiness about her; but it may be that some of my readers will desire to convince a disorderly person of the value of this

sort of cleanliness. Then she may be told, that diseases are very often caused by breathing air which is loaded with the gases from a putrefying substance, or which is rendered unclean by the fumes from dirty water, from foul clothes, or from other impurity. She may be shown that these evils are not remedied by pushing the dirty matter, whatever it be, under the bed, or hiding it under a bit of carpet or behind a table—the bad gases will come from it just as freely. Let her be convinced that, if even a disease have not actually been caused in her case, such evils will slowly, but surely, undermine the health.

Perhaps the room which a poor person may inhabit is one of those little pictures of neatness that do one's heart good to look at; nevertheless the staircase may be black and tainted; it may be a well-staircase, at the bottom of which is a closet, whose foul smell floats up the stairs into the very chamber itself. What, under such circumstances, becomes of that ventilation whose value I have, to the extent of my power, tried to inculcate? Either the chamber-door must be closed, stopping up every crack and cranny, to keep out the foul air, and so the room be allowed to get close and heavy, or an air filled with impure and unwholesome vapours must be allowed to enter. In either way the place is not healthy—not fit for a human being to live in, and not worth the money that may be paid for it. In such cases the landlord is bound to correct the nuisance; and if persuasion does not lead him to do so, the "Inspector of Nuisances"

for the special district must be informed of the circumstance.* His address is to be found by application to the beadle of the parish or district church, at the vestry-room or office.

This is a simple case; but the fact is, that many of the persons who rent rooms in such houses owe their landlord one or two weeks' rent: their furniture is more or less at his mercy, and they dare not complain. Just at the present time the mode of managing these matters in London is undergoing alteration, and it is to be hoped that, by the new system, a better means of watching and enforcing the removal of nuisances will be carried out, and that the tenant will be spared the necessity of complaint.

The external senses are given to man, not merely that he may by their aid seek what is pleasant and serviceable, but also that he may avoid what is hurtful. The sense of smell is especially useful for this purpose, for nearly everything that smells badly is injurious. Thus the horrible stench that issues from flooded cellars or foul closets, the close smell of a room over-crowded and ill-ventilated, and very many other such odours, are all signs of unhealthy atmosphere. The foul vapours poured from ill-stopped drains into a close court or narrow alley, where only a small portion of fresh air can mingle with it, is extremely hurtful. Such places therefore should be avoided;—the more airy the street the better, but if a court must necessarily be

* The Officer of Health of the District is the person with whom, under the new regulations, complaints should be lodged.

taken, it should be one that has an opening at both ends, so as to allow as free a circulation of air as possible.

Let me also say a word or two about the Mews of London, where, in the Grosvenor and Belgrave Square district, a great many working-men's families live. The dwelling-rooms in these places are mostly on the first floor, the basement being occupied with carriage, harness-houses, and stables. Those rooms that are over the coach-house are healthier, for they are generally sweet; but those that are over the stables smell strongly of horses, and are not healthy. Some people will assert that the smell of horses is wholesome. I have no prejudice against horses, but both reason and experience lead us to the same conclusion, viz. that the atmosphere of any animal refuse is injurious.

A clergyman, of the parish in which, some fourteen years ago, I lived, asked me to see a woman who was ill. I have not altogether lost sight of the family since, for sometimes one, sometimes another, is ailing. The house these people lived in had a double set of rooms—those to the right of the staircase, over the coach-house; those to the left, over stables. Some two or three years ago they moved from the right to the left side of the house. Since this time illness has been much more frequent among them, and their ailments of a less tractable kind.

It is well perhaps to remark, that the bad effects of impure air and closeness are first observable in children. Those tender buds soon begin to droop,

to grow pale and languid, to lose their appetite and their mirth. Even among people rich enough to live where they like, we see the ill effects of a change from a dry country air to the fogginess of a low-lying fashionable district. This change is first and most marked in the children of the family, who often have to be sent away from town before the elder persons begin to complain.

## BODILY CLEANLINESS.

I am afraid, that, until of late, it has been much our habit to wash with care those parts of our bodies, which, being uncovered, are visible to our neighbours, and to neglect those which are hid from view. This ought not to be. It is washing the outside of the vessel, while the inside is left unclean; it is hypocrisy in soap and water. The skin is intended, like the lungs, to carry away from the blood useless and hurtful matter; but instead of being blown off in a draught of air, as is the case in the lungs, this poison oozes forth from many little channels, and a good deal of it must stay on the skin until it is washed away. Now the effect of not washing is, first that this poisonous matter hangs to the body, and then that the channels, through which it should come, get clogged. Hence it results that the poison must be partially got rid of in some other way with discomfort and injury; and, moreover, the skin itself, not being able to perform its functions, becomes diseased. What would be said of a man with a fine house,

pure, healthy, and beautiful, who stopped its drains, shut out the air, lived in darkness, and accumulated the refuse in his bedroom? Yet no worse could truly be said of him than of one who lives in a full room with the window shut, and who does not really and honestly wash himself.

The skin carries away an enormous amount of material in the twenty-four hours—sometimes more, sometimes less, according to the warmth of the weather or clothing. It is important to health that this drainage from the blood should be active, nor stopped by any sudden chill, particularly with persons liable to coughs and colds, or to any weakness of the chest. It is in great measure for this purpose that we wear clothes; and that we increase their thickness in winter. It follows, however, of necessity, that those articles of dress which lie next the body must retain a considerable portion of the matters passing out by the skin, and that they should therefore be frequently changed. If this be not done, it is evident that the clothing will keep constantly close to the skin substances which it is desirable not to retain, which are more or less poisonous, and for the separation of which a wonderful and beautiful mechanism has been made. Unfortunately, however, cleanliness of garment is, with many people, like cleanliness of skin, a matter of show rather than a living, wholesome reality. When I was staying in Ireland, some hospitable natives of that island asked me to dinner, and I went. They were not rich people, but would have been none the less extremely agreeable, had they

not been afflicted with some great and warlike ancestor, in honour of whom a good deal of unnecessary plate was put upon the table; but the cloth was not clean. A contradiction of effect is produced wherever splendour is mingled with dirt; for a speck thereof takes off all the glory of the show. One is rather disgusted than pleased by the grandeur of a silk dress, if it appear to cover under-garments of doubtful cleanliness, and we do not admire the most splendid waistcoat, if it be buttoned over a dingy shirt. The fact is, that an inward feeling points to cleanliness as a duty; as a mark of respect, which we owe to ourselves and to one another, and any attempt to excuse uncleanliness by finery, appears like a false pretence, a boastful fib, or some other species of clumsy deception.

## VALUE OF LIGHT.

A scarcely explainable, but great influence is exercised upon our health by light. I say, I cannot explain it, but I can give many examples where its power in other matters is unmistakable. There is a poison so intense, that a couple of drops will kill a man like a stroke of lightning. If this liquid be put into a bottle, well stoppered, and kept in the dark, it will preserve all its qualities for years; if it be kept in the same bottle, but in a strong light, it will in a few days have become very much weaker, and it gradually changes altogether. The beautiful effects of photography, with which we are now all acquainted, are entirely produced by the influence

of light on a chemical substance called the iodide of silver. If we take a growing plant, put it into a dark room, and nurse it there for some days, we shall find, when we take it out, that it will have become white. The human body is more delicate than the poison, the silver, or the plant; and it is certain that many chemical and electric changes, necessary for its health, can only go on under the influence of light.

In London there are many narrow courts and alleys where the high houses, standing close together, shut out every draught of air and every ray of sunshine: the whole place seems in constant twilight; even the stale, dank mosses on the outhouse roofs seem blighted with darkness. In these places the men and lads, who go to their employment in less confined spots, more or less keep their colour; the women and the children, who remain much at home, are faded and colourless, like plants kept in the dark.

I have wandered away from the subject of nursing people with lingering sicknesses, to the effect on health of air, cleanliness, and light. I might indeed be taxed with writing under false pretences; but, before I am altogether condemned, let it be proved that I am wrong.

I promised, some few pages back, to speak of the evils chiefly to be fought against in the management of lingering illness. The want of air, cleanliness, and light, are the principal evils which, in a poor man's house, must be combated. They are apt, as we have seen, to cause diseases; therefore to

continue them, if they be once produced. In the course of my hospital duties, I visited, some summers since, a case of scrofulous Bone-Disease in a child. The people were by no means among the poorest sort of hospital patients, but were of very dirty habits. The room was so close, that I scarcely could breathe; the blind was always half or quite pulled down; though, had it been raised, but very little sorry light could have come through so dirty a window. Everything in the room was filthy and disorderly; the man working in old slippers, with uncombed head; the woman with unfastened gown, and stockings down at heel. There were several children besides the one I was to see, but they all had crooked or actually diseased bones, or other strong marks of scrofula.

The patient herself was lying in this close air, with hot dry skin and tongue, heavy aching eyes, and flushed face; all showed that no medicine, no blister, would do good without fresh air. Her bed was just under the window, and apparently could not be moved, because every corner had its own particular heap of disorder. If the window were opened while the bed remained there, the poor child would catch cold. In fact, difficulty after difficulty was raised, to show the impossibility and imprudence of admitting any fresh air. These were gradually overcome, the bed moved, and the window opened. Slowly the patient mended; and at last her little chair was got into the court, the fever disappeared, and she was soon able to move about again. I gave some medicines during this

time; they were the same she had been taking, without benefit, for a month or more, while still well enough to attend at the Hospital; and I therefore cannot think that the physic had much to do with the cure.

Thus, then, I say, that preservation of health is so closely allied to the subject of nursing in lingering disease, that I have done no wrong in passing from one subject to the other. A medical man of experience and talent does not prescribe this or that form of medicine, merely because a patient has a white or brown tongue, a quick or slow pulse; he endeavours to trace the disease to its origin, and against this, when he has found it, he fights. Such causes of illness, as I have mentioned to you, ought to be evident to every one—to the nurse as to the doctor, to the patient as to the nurse. They are more easily combated and overcome by the inhabitants, each one in his own house, than by the medical attendants or parish-officers. But where any one undertakes to do the part of a nurse among his or her brethren, let him remember that good will always be done in lingering diseases, by enforcing *ventilation*, *cleanliness*, and *light*.

## CHAPTER II.

Management of Children at Birth — Food — Sleep — Clothing— Washing—Exercise—Teething—Teaching to Walk—Weaning— Diseases congenital and subsequent to Birth—Their Signs and Dangers.

IN the last chapter I mentioned, that children were the first to suffer from want of pure air, cleanliness, and light. This remark will naturally lead us to consider the circumstances which conduce to the health of children, and with that subject I propose to occupy the ensuing pages. The knowledge of how to manage an infant does not come by intuition; simply from the fact of being its mother, of loving it dearly, and of having the greatest possible desire to do well for it. In the first place, want of room and of time may interfere, perhaps also the want of perception and of temper; moreover, the very best intentions are constantly marred by the greatest ignorance on the necessities and the banes of bodily life. The existence of such ignorance may be inferred from this simple fact, that of all children born in London, nearly one-third die before they reach the age of five, and rather more than a sixth before they have lived even a single year. In France, it appears that one-fourth of all children born are cut off during

their first year. It would be unfair to suppose that every child dying thus early does so from mismanagement; but we must nevertheless consider it fortunate, that every mismanaged child does not die.

An infant comes into the world little, tender, and utterly dependent, so helpless, that its merest necessities must be supplied by others, yet with scarce any power of expressing its wants. It is therefore necessary that those, among whom the babe comes, should have considerable knowledge of what is good, and what is not good for it; also that they should have a certain amount of perception as to the meaning of the few signs it is able to make. The management of a child consists simply in placing it under those circumstances in which nature can best take its course; thus, if the infant be born in the usual healthy condition, it only requires to be kept warm, clean, properly aired, and fed. The mismanagement will consist in the opposite of these directions, in fighting against nature, feeding out of all reason, physicking beyond all sense, allowing dirt and bad air to do the rest. As we shall, however, be obliged to go more into details, it will be well to commence with the management necessary during the first few hours of life.

When the child is born, it is immediately entrusted to some person, who is usually an experienced nurse; but such is not always the case, for in the houses of the very poor, the person who takes the babe is frequently young, and often very

much afraid of her charge. Now the first thing, which is to be done with the child, is to wash it thoroughly in warm water, and before a fire—not before a fierce little furnace, such as infants are occasionally roasted at; but before a moderate fire, such as will keep up the natural warmth of the child's body. The nurse should wear a thick apron, and, sitting down upon a low chair, should cover her lap with a piece of soft thick flannel, and upon this she may lay the infant, with its head towards, and supported by, her left hand. The basin is on the ground to her right hand, and is provided with a piece of soft flannel and a sponge. She is now carefully to wash the face, beginning with the eyes; she should tenderly open the lids till she can just see the outer edge of the lower one, and may gently cleanse the opening with *perfectly pure water and clean sponge;* then she should, letting the lids close again, wash their surface, and the fold, that is often between them and the nose. Neglect of such careful attention, or the use of the same water and sponge that have been employed for other parts of the body, has often caused inflammation of the eyes, and occasionally led to irretrievable blindness. When the whole face has been thus fully washed, the rest of the head, and more particluarly the ears, should be sufficiently cleansed with soap and flannel, and then the other parts of the body may be attended to. The skin of an infant is folded over rolls of fat into many grooves and dimples; such are most frequent about the neck, where it joins the shoulders, and

about the thighs. In fat infants, the folds of the body are very deep, and must be carefully opened out and washed, then very well dried, and dusted with a little violet-powder; if all this be not done, irritation of the skin is sure to take place. When the whole business of washing has been properly carried out, the basin, etc. may be exchanged for a basket containing the child's clothes. That part called the navel-string is usually wrapped in one or two pieces of fine old linen, in which a hole has been cut; round the middle of the infant, confining the above-mentioned part gently to the stomach, a bandage is to be bound. It would be unnecessary for me to enter into a description, or even to give a list of the things, which babies are to wear; I fancy all women are pretty well acquainted with them; but I must mention, that all the garments which can be so arranged, should tie with strings run through them, so as to allow of their letting out, or enlarging as the child grows. Where a pin is permissible at all, as, for instance, in the napkin, the so-called "safety pin," which cannot scratch the child, should be used. A handy woman can best secure the garments by stitching them where any fastening is required; nevertheless, some portion of the dress may cause irritation, and, therefore, if a child cry long or violently, without apparent cause, its dress should be examined. It has happened that such a cause of pain has produced a violent fit of crying of such duration, that it has at last ended in convulsions.

When the baby has been washed, dressed, and

sufficiently admired, what is next to be done with it? Some old women insist on giving it castor-oil, others imagine great good to result from a tea-spoonful of some water into which a hot cinder has been thrown. Both these plans are entirely unnecessary: the water, if given at all, cannot have been improved by the cinder; and forcing a defenceless infant to begin life with so nasty an experience as castor-oil, is simply cruel; moreover, such a dose is sure to cause irritation, and perhaps inflammation of the bowels. A wondrous provision of Providence has arranged, that the first milk of the mother shall be a purgative of sufficient power, and of the safest action; and therefore to give any other purgative, is an unwarrantable interference with that arrangement. The child, however, is not to be suckled as soon as born; it has quitted the mother full of blood, and requires no food; it will, if left in quiet, fall asleep for about three or five hours; the instinct for food will be then formed, and the mother will have usually sufficiently recovered to satisfy it. Sometimes, however, the milk will not come into the mother's breast for several hours; and then, that the child may not be exhausted, it will be necessary to find some person recently confined, who is both able and willing to suckle the infant two or three times; or, if such cannot be discovered, the child must be fed with a little cow's milk, mixed with about half as much water, and a very little sugar. No sort of pap should be used, neither of bread, of biscuit-powder, nor of any other material. A warning must be given

against placing a child to take its first sleep in the same bed with, and close to, its mother. It is a common practice, to slip the child into the bed at the mother's back, so that she may keep the infant warm. Soon after delivery, however, the woman ought to fall asleep, and if it be a first child, she may turn over so as to overlie, and to endanger its life; or, if she have heard of such occurrences, fear may render her fidgety, wakeful, and feverish.

## FOOD.

This is all that need be said about the management of infants during the first few hours of their existence. We will follow the slender current of their lives a little further; it is a stream which, almost from its source, must be curbed or hastened, as circumstances may require. Education must begin its influence almost from the commencement of life; firstly in the matter of food. An infant's earliest life is made up simply of feeding and sleeping; but it must learn to use the day chiefly for the former, the night chiefly for the latter purpose. It will require nourishment every two or three hours during the day, but at night the intervals should be longer: thus, if the mother give the breast just before she settles for the night, say about eleven o'clock, she may teach the child to require food, quite at first, twice, a little later, only once between that hour and seven the next morning; thus she will have from six to seven hours tolerably free from interruption, and will be better able to preserve

her health during the trying period of suckling. If the child cry between whiles, it should be soothed by caresses, taken out of the cradle, have its legs rubbed, and so on ; when it finds that it is not to be suckled at those hours, it will soon learn to restrain its restlessness. Avoid letting the infant sleep during the night at the breast ; if it fall into a doze, remove it gently, for when it thus slumbers, it has had enough food, and any more will injure it. Nothing is more common than allowing children to over-fill themselves, and many of their stomach ailments arise from that cause.

Most mothers, particularly among the poor, have the very bad habit of suckling their infants whenever they cry, without any reference to the cause of their complaints. One sees them, if the child fall, or otherwise hurt itself, immediately force the breast upon the half-unwilling infant. Such treatment will, it is true, often check the child in the middle of a grand roar, and allow only some trifling sounds of discontent to gurgle, half drowned, about the throat. Nevertheless, when it is considered that the child was by no means hungry, perhaps had only just been suckled, it cannot be supposed that overfilling him with food is beneficial ; on the contrary, it only distends, perhaps causes irritation of the stomach. There are three modes in which the breast may silence a crying child—by satisfying him, by stupifying him, and by making him sick. It is only when an infant cries from hunger that it succeeds in the first method ; the two last are injurious. Besides this direct injury to the infant,

constant suckling hurts the mother in ways to be hereafter mentioned.*

## SLEEP.

A child should not be accustomed to require rocking; it is a habit which many learn simply because it is less trouble to the mother to rock a cradle, than to soothe a crying, or to watch a wakeful child: moreover, it keeps him longer asleep than he would otherwise be. The fact is, that a healthy, well-trained child will take its proper allowance of sleep without either rocking, caressing, or shaking on the knees to make it "go off," as it is called; and such jogging and rattling of the brain till heavy and sleepy with blood, is not a wholesome sort of proceeding. In the very commencement, the infant should be taught differently, and when the time for it to slumber has come, it should be placed, wide awake, in the cradle, and it soon gets the habit of falling asleep there. It is a

* Children have different reasons for, and different modes of, crying, not difficult to be distinguished. Accompanying the cry from hunger are certain signs no mother can mistake. Discomfort, besides the mere cry, causes tears after the first six weeks; long continued, or often repeated crying of a not hungry child, nearly always proceeds from pain or discomfort. Children often cry a little simply from a demand of nature for a freer expansion of the lungs, and for the play of certain muscles: the infant performs that exercise just as it might yawn or stretch. Thus, though it is wickedly cruel to neglect an infant who is crying violently with signs of pain, yet it is a mistake to be over-desirous of stopping at once a good hearty cry, which evidently proceeds from no pain, and which is doing the infant's lungs a world of good.

bad plan to have a very low cradle, in which the infant lies near the ground; the bad air of an imperfectly ventilated room sinks to the floor; and when the cradle is thus low, the child does not breathe so pure an air as it might otherwise do. One often finds, that infants are covered too warmly in their beds; so much so, that they are frequently bathed in perspiration. The beds of young infants are, on account of their tender limbs, very soft, so that the body sinks pretty deeply, and is partly enclosed in it, and thus a small amount of upper-clothing is sufficient: the quantity should vary of course with the weather, but should never be such as to cause much moisture on the skin, otherwise the child will be greatly weakened. As soon as the infant is taken out of the cradle, the upper clothing should be thrown back, so as to allow the air to come to both sheets, that the bed and clothing may be freshened. Occasionally, the interior of the bed itself is to be aired or changed. The bed should consist of a simple bag filled with soft horse-hair, wool, or both, and this should be occasionally emptied, the hair or wool pulled apart, well aired, and returned into the bag. Or it may be necessary to wash and re-dry the materials; in the meantime, of course, the bag must be stuffed with other hair or wool. The windows of the child's sleeping-room should be opened as soon as he quits it, and care must be taken that it be always well ventilated.

## CLOTHING.

The clothes of children should be suited to the weather. How commonplace that remark sounds! it is in fact a *truism*, yet it is often practically denied. How is it that so many children are allowed to go bare-chested, bare-armed, and bare-legged even in very cold weather, when it is well-known, that if a grown-up person were to venture out in such a condition, he would surely take cold? Children have less power of resisting changes of weather than adults possess, and their skins therefore should be even more carefully guarded against sudden chills. Mothers who have a funny little pride in the pretty mottled legs of their offspring, declare that their children do not catch cold, at the very time when their noses run and their lips crack. But the mere catching a cold is of less importance than the slower working of such a system. In the last chapter I explained at some length the function of the skin in carrying away much fluid material from the body. Now, constantly keeping the skin cold, or exposing it to sudden chills, checks the passing away of this fluid, drives the blood to internal organs, chiefly to the lungs, and throws on them the work of the skin. Such treatment is very apt, in a child of scrofulous parentage, to sow even thus early the first seeds of consumption, or to cause inflammation of the lungs, and other evils. Many a child is sacrificed to its parent's pride in its

pretty arms and legs. Some persons have an idea that in thus exposing children's limbs they are hardening them. I am not an advocate for making children tender, but I would wish to distinguish between that fault and the opposite one of under-clothing them. Many infants grow up to strong men under the most adverse circumstances, bad ventilation, bad food, careless nursing, and cold. We see many such about the streets, plump, rosy, and bold, who have been brought up in the hardest manner; they have been born strong enough to thrive through all such difficulties, and would have lived perhaps under worse training. If it be asked what becomes of the less hardy infants, the answer must be sought in the hospital or the graveyard.

I must here speak with high praise of the knitted clothes now so much used for children. They are very light, sufficiently warm, and so elastic as to fit very closely, and to be put on very easily. They are expensive if bought at shops, but are very cheap if made at home, and the making of them is hardly to be considered "work." A good knitter, of my acquaintance, tells me, that the occupation is actual rest from labour, and that, as all necessary apparatus can be carried about in the pocket, the employment can be taken up at any moment, and laid aside as easily, so that it only fills up spare minutes, which would otherwise be wasted. She says that the materials are so cheap, the scraps of time thus employed so little noticed, that in the hands of a skilful knitter, children's jackets, gaiters, etc. etc. almost seem to grow out of nothing.

## WASHING.

Besides many partial ablutions during the day, the child should be entirely washed night and morning: while still very young, that is, under six months, the water used should be warm; but as it gets older and stronger, the morning bath may be employed, not merely for the sake of cleanliness, but as a means of strengthening the child. The effect of cool, or even cold water upon the skin on first rising, is very beneficial, if the system be strong enough to bear it; but is injurious if the body be too weak. Now the water used for the summer bath may be generally cold; that used on winter mornings should be luke-warm. If however it be found, that after his bath the child, instead of breaking into a warm, healthy glow, remain cold and chilly, with bluish feet and hands, the temperature of the water must be higher, until the child have acquired more strength, and is able to bear the water quite cold. Never persist in giving the cold bath, if the child do not recover his warmth; but if he do so, he will soon learn to enjoy it, therefore do not make the water warmer than necessary, out of mistaken kindness.

The bath, which is used at night, should be warm, or rather tepid; because if the child be chilled, it may remain cold for several hours. Moreover, the infant's body, exhausted by the fatigues of the day, is much more liable to the injurious impressions of cold, than in the morning, when rest has refreshed and strengthened the frame.

## EXERCISE.

A child should be made to enjoy daily a certain amount of exercise in the open air. The age, at which this practice is to commence, varies in different circumstances. Thus, if a child be born in the summer, and the weather be fine and warm, it may be taken out-of-doors in from three to five days (care is to be taken not to expose its eyes to the sun); if the infant have been born in the winter, three weeks, or even more—a month, may be allowed to pass before it be taken out of the house. During the first three or four weeks, a strong child should not be carried in the sitting posture; and if he be feeble, he may attain the age even of three months without being placed in that position. When strong enough, the infant should sit on its nurse's arm, leaning on her bosom, and so be carried for its exercise. The perambulator is much too constantly used; it certainly saves a great deal of trouble and fatigue, to which fact it owes its popularity. Yet, when we behold infants in such carriages during the winter, lolling their heads from side to side, their muscles all at rest, their hands and faces blue with cold, we cannot help feeling, that they are not taking much benefit. On the arm of a vigorous nurse, who walks with a free step, the infant, swayed with every movement of its bearer's gait, is kept in healthy exercise. Moreover, the natural warmth of the bosom and arm helps to preserve the proper temperature of the infant's body. In hot weather, the perambu-

lated child lies in the sun, sleeps or drones in its smooth-going seat; no exercise is afforded, no play of muscle allowed, no interest excited; and thus the infant, if awake, is heavily stupid, and hopelessly dull. But a cheerful, kindly nurse, while carrying a child, talks frequently or chirps to her little burden, keeping its attention awake, dandling, or tossing it occasionally in her arms, till the lively infant crows and laughs in very exuberance of spirits. Thus, though the perambulator is a useful adjunct to nursery management, yet, when it is used constantly and continually, as is too often the case, it by no means contributes to the infant's well-being.

When children are old enough to walk, they usually toddle along, aided by the nurse holding them by one hand; they often trip their feet, and would fall, were they not held up by the nurse. Now the usual method of preventing such tumbles is, I observe, to give a sharp, quick jerk on their unhappy arms, and by such means frequently breaking their collar-bones. A more infallible mode of causing this breakage is, instead of pulling at once at the arm, to let the child, when it trips, swing round on the shoulder-joint, and then to hoist it on its feet. This plan is often practised by young girls, who have the care of infants; and among the poor, the children are generally trusted to others scarcely older than themselves. To whomsoever the child is entrusted it is right that the mother herself should observe whether or not it have received any injury during the day; and I

strongly recommend that when the infant is stripped in the evening, it should be placed on a blanket or rug upon the floor, and be there allowed to kick, and exercise its limbs freely, and untrammelled by clothing. Of course you will take care that the child be not exposed to draughts or sudden chills; and in the winter time you will let this plan be carried out before a sufficient fire. When these precautions are taken, great advantages are gained; thus, any tenderness or stiffness about a joint, any swelling in, or difficulty of moving a limb, any twist or crookedness of the trunk, are immediately and easily detected. Then the free circulation of air upon the skin is decidedly beneficial; moreover, the child has the advantage of vigorous and fatiguing exercise just before going to bed.

## TEETHING.

About the second or third month, a strong child will be able to hold its head up for some little time; about the fourth, it may sit up habitually on its nurse's arm; about the sixth, it will very probably be cutting its first tooth. The time of the appearance of the teeth, and the order in which they come forth, vary very much in different children; sometimes they do not begin even to press upon the gum till after the infant has attained its first year; sometimes they are above the surface at the fifth month. The two front, or middle, or incisor teeth of the lower jaw, should be cut first, and then, in three weeks or

a month, the same in the upper jaw. The two outer incisors of each side, and the corresponding upper ones, then the canine or eye teeth, lower and upper, should appear in their order; afterwards the double teeth should come forth. Thus they follow a regular plan, from the middle of the gums towards the outer portion, in each jaw alternately; but if they do not appear thus regularly, no harm will ensue from a mere alteration in the order. No definite period can be assigned for the completion of this process; but if healthily performed it appears to occupy about two years, from the appearance of the first tooth to that of the last. The mother will first be warned of the commencement of teeth-cutting by heat of the mouth, perceptible while suckling. She will then observe that saliva runs freely from the mouth; the infant dribbles, and shows a great desire to put everything, however large and unwieldy, into its mouth. Some children suffer very much from teething, particularly if they have been irregularly nursed; others give scarce any evidence of pain. The mother should frequently examine the mouth and, if possible, keep the child at the breast during the first part of these trials. The bowels should be kept properly open, and if they get out of order, particularly if the evacuations become slimy, green, or black, and very offensive, medical assistance should be sought. A warm bath* will be found of great avail in reducing a feverish con-

* Directions for the preparation of warm baths will be found in another part of this volume.

dition often brought on by teething. Lancing the gums is sometimes beneficial: it ought not to be practised too early, as is frequently done; but if the moment be judiciously chosen, it often relieves. It is usual to give the child a ring of ivory, or a piece of coral, to bite; these materials are, however, too hard. It is best to buy a penny square of India-rubber, and out of each corner thereof to cut a small square. The part thus left will be in the shape of a cross, and the infant can get one end of it more easily into the mouth than a ring, which is of an awkward form.

## WEANING—FRUITLESS SUCKING.

When the child has cut all its front or incisor teeth, it may, if in good health, be fed as well as suckled. It is well to begin feeding at night, with milk and water, as above described. In a little time oatmeal gruel,* instead of plain water, may be added to the milk; then a little baked flour, or biscuit powder may be used, taking care that the bowels be not constipated thereby. Thus the infant should be gradually accustomed to use foods composed of various bread-stuffs; but he must not by any means be over-fed with these materials, for, being thicker than milk, they are less easily vomited, and over-feeding will, therefore, be the more injurious. About this time weak broths may also be given, with or without milk.

* Cow's milk will not agree at all with some children, unless it be mixed with thin oatmeal gruel.

It is most important that the bottle from which the child sucks should be of such a construction that he can get at the food easily, and in sufficient mouthfuls. My friend, Dr. Thomas Ballard,* has pointed out that useless acts of sucking produce, as will be immediately shown, many of the evils usually attributed to teething. The great defect in most of the bottles lies in the very compressible nature of the false teat, so that when the infant sucks, the very pressure of the lips prevents the milk flowing into the mouth; then, in the intervals of the efforts, an unexpected gush takes place. It is true that most children learn to feed from these bottles, but never so satisfactorily as they do from a properly constructed one. The teat should be of solid cork or India-rubber, perforated by one opening, and sufficiently thick to offer resistance to the child's lips, tongue, and gums. Of course there must be sufficient communication between the teat and the bottle, also between the bottle and outward air; the latter, however, should be so small that the milk will not of itself flow, but only drop through the teat, and should require a slight force, like that of sucking, for instance, to produce its expulsion in a stream.

Sucking the thumb or the tongue is only another form of "fruitless sucking," and should never be permitted as a habit. The act of feeding (which in children is suction) excites the nerves of the gullet, stomach, &c., and produces a flow of gastric and other juices especially designed to meet and

* Dr. Ballard, "On Diseases Peculiar to Infants and Mothers."

digest the food; but if there be no food, these juices act on the coats of the stomach and bowels, producing irritation and diarrhœa, accompanied by eruptions and other symptoms frequently attributed to teething. These, continuing as long as the bad habit is permitted, cause in their turn constantly increasing debility, with all its frequent concomitants of ricketty limbs, congested brains, &c. I do not for a moment mean to affirm that all children who suck their thumbs will of necessity have crooked legs and water on the brain, nor that all cases of such disease are produced by fruitless sucking, but certainly the malady and the teething are found together so frequently in the relationship of cause and effect, that it is impossible to doubt the very frequent and very great injury produced by such useless excitation of the stomach and bowels, the most active and essential organs of infantile life.

## TEACHING TO WALK.

Somewhere between the fourth and eighth month, the child, if healthy, begins to exercise its limbs with some little force; it should be laid on a cushion, allowed to kick, to lift its head, and to struggle, until it cries for assistance. Soon it may be gently tied by the waist in a chair, and supplied with a toy, or some means of amusement; it may also be allowed to press its feet against the nurse's lap, but without bearing any actual weight. The infant's powers will gradually increase, it will learn

to crawl, to raise itself, by means of a chair or table, upon its feet. Watchfulness must be used at this time, otherwise the child will surely and naturally get into mischief, or injure himself by falls or fire. A child should never be induced to walk too early. Nature has given infants a great amount of instinct and caution; if they be allowed to follow these they will not do more than the strength of their flexible bones will bear; but if set upon their feet, and forced to walk too soon, the legs will certainly get crooked. The child should be held by the shoulders, and taught to put one foot before the other. It will be very awkward at first, and will entangle its two feet as much as if it had half-a-dozen, but after a time it will learn the action pretty well. As it gets stronger, a little more weight may fall upon its feet, till by degrees the bones are sufficiently well knit to sustain the body, when it may be put to stand for a little time by a chair, or holding to the leg of a table, and then it will soon learn to walk.

At some period between the ninth and the fourteenth month the child should be weaned. The exact time at which this is to take place can hardly be specified; it depends partly on the strength of the child, partly on that of the mother. Generally speaking, poor mothers delay this too long, and it is a process which they greatly dread; but if the child be healthy, if it have been well brought up, and if it have been fed for some time during the night, the breast may be suddenly withdrawn without any fear of ill consequences.

The mother must take care that she herself does not suffer. She should keep the bowels well open, restrain her desire for drink, and let her food be rather dry. It is well, if the breasts be painful and full, to sling them in the manner described in the next chapter. She should never knead or squeeze them, nor, except in certain very pressing circumstances, let milk be artificially drawn, for these manœuvres will only produce a fresh supply. She may experience comfort from bathing them in warm water, in poppy fomentation, or even from rubbing them gently with some stimulating embrocation, such as soap-liniment. I may be permitted to remark that we have an all but infallible, and perfectly harmless, method of checking the secretion of milk, but the application is of a nature not to be trusted out of professional hands.

We have examined into the most important points to be observed in the management of children at the breast, and it appears to me now, that instead of following further the history of a healthy life, it would be better to mention some facts about the diseases of children, which may be more or less useful to know. Infants are subject to disease from their earliest existence; even while yet unborn, they are frequently attacked, and are then brought forth with the marks of the malady upon them. Those unfortunates who are "cripples from birth," have nearly all suffered from some disease in the mother's womb. They are afflicted with "congenital deformities," as we call distortions with

which children have been born. Now many of these distortions are, from their very nature, incurable; such, for instance, as the absence of a limb: but many are to be perfectly restored by skilful and careful treatment. I have had a great deal to do with these sorts of distortion, and have been more and more convinced that the prevalent treatment by cutting tendons is a very great mistake, because such distortions as club-foot, claw-hand, and others, can be perfectly cured without such operation. If, however, these divisions were merely unnecessary, less could be said in their disfavour; but they are absolutely injurious, because the tendons cut unite only in a few instances, and therefore the operation itself produces a lameness more incurable than the original defect. For somewhat similar reasons the treatment by steel shoes, irons, and screws, of any sort of deformity, is open to very grave objections. I have invented carried into successful practice, and published* a mode of cure which is free from these great defects, and procures a much better limb than any method yet devised. It must be pointed out that all such cases are better and more easily curable, when they come early under treatment.

Again, those red or purple spots which are called "mother marks," "strawberry marks," "claret marks," &c. &c., and about which an extraordinary amount of superstitious nonsense has been talked,

* "On the Cure of Club-foot without cutting Tendons, and on Certain New Methods of treating other Deformities." By Richard Barwell, F.R.C.S.

are nearly always composed of large twisted blood-vessels, forming a dark-coloured mass under the skin. If attacked early enough, such things may be cured by cautious and judicious treatment; but they have a tendency to enlarge as the child grows older, and therefore to become, not only uglier, but more dangerous, for some of the vessels may burst, and bleed sufficiently to cause death. Hernia, or rupture, is another of the diseases that children, particularly boys, are frequently born with. In these cases it usually produces a swelling on the groin; but at the time of birth it may not have been actually present, so that the doctor does not perceive it. As soon, however, as such a malady is discovered, it should be attended to, for congenital ruptures may be completely cured, if a proper plan of treatment be laid down, and be carefully and conscientiously followed out. I have seen, in many instances, such treatment followed by complete success. Another form of rupture is that which is usually called "starting of the navel;" it sometimes is present at birth, but comes on more frequently about the time when the navel-string falls off; it should be immediately treated, for it may then be cured.

During the growth of an infant, even though it be born without deformity, there may arise maladies, which show that the child had within him the seed of disease, which grew more quickly than his growth, strengthened more quickly than his strength; so that, perhaps, before the end of the first year, it may overpower him. Such is

consumption, either lung or intestinal;* such is cancer, and many others. But I wish more particularly to direct attention to a disease which begins to show itself most decidedly about the end of the ninth month, and which should make great alteration in the treatment of a child. This disease is rickets, so retarding the deposit of hard earthy matter in the bones, that they remain soft and pliable to a far greater age than they would do in a healthy child. The tendency to rickets may be predicted by an unnatural size of the bones about the joints, and by some unusual curves and twists in the limbs. An infant thus affected must not be permitted to sit upright at the age when such position may be allowed to healthy children; he is not to be put upon his feet, nor is he in general to be exercised as though he were a strong child.

There are, of course, many degrees of this malady. In the worse forms, it will be necessary to keep the child backward in every way, to remove it, if possible, to the sea-side, and to submit it to certain medical treatment calculated to strengthen the system. The slighter forms of the complaint are occasionally overlooked by parents; children are often allowed to run about till their legs are crooked and bowed outwards, and till the little creatures

* Two forms of tubercular disease are common among children, one called tabes, the other phthisis. The two words, Latin and Greek, both mean the same thing, namely, consumption; but we confine the word tabes to this form of intestinal disease, and the word phthisis to tubercular lung disease. I find, that the average number of deaths in London from tabes, before the close of the first year, is 370; from phthisis, about 120.

walk with a coachman-like roll in their gait, after the manner of the elder Mr. Weller. Both these degrees of rickets should be carefully attended to. The crookedness of the legs beneath the knee—even some of the twists of the thigh, are ingeniously attributed by Dr. Ballard to the child sitting cross-legged. He sits, in fact, upon the soft bone of the leg, which becomes moulded to the rounded form of his bottom. This is in some cases a very probable cause; and the ordinary method of buckling the limbs of such unfortunates upon stiff wooden splints prevents the child sitting in that posture, and those particular cases may be benefited by such treatment; but it is a cruel and clumsy appliance, originally borrowed by André from the gardener's art, more than a hundred years ago, and unimproved since.* The knee is rendered stiff by these contrivances, and many children cannot walk with them; some tumble down, others become affected with other diseases. I have seen three broken limbs from falls in these splints, and two hip diseases attributable to the extra work thrown on that joint. My method of cure is† to fasten upon the limb a steel spring, which has a hinge at the knee permitting movement of that joint, and constantly exercising a straightening force on the whole limb.

I have alluded to squinting as one of the curable

* This author actually gives a woodcut of a crooked tree being bound to a straight pole, and confesses it the origin of his own unsurgical expedient.

† See Barwell, "On the Cure of Club-foot, and on Certain New Methods of curing other Deformities."

deformities, with which an infant may be born; but I must now speak of it again, because it more frequently begins some weeks after birth. The eyes of a newly-born infant scarcely seem obedient to will, or perhaps, there is, at so early a period, no will—at all events, they move hither and thither without any apparent aim. In about a fortnight they follow the light, or any bright object, gradually fix themselves on external things, and begin "to take notice" in about six weeks. Now continual carelessness may cause any child to squint: for instance, allowing the light to come always from one side, or permitting a bunch of ribbons to hang in such a way from its head as always to attract its attention in one direction. Even when no external object is thus misplaced with regard to the infant's sight, it may frequently be observed that the child squints, and when this occurs, the hand should be placed over the eyes, closing them for a time, and in the meanwhile some bright object should be placed straight before the child, and about two feet from his eyes. If when the hand be removed the infant, on looking at this object, squint, let it be moved from side to side to discover which eye is the weaker—then let one eye after the other be closed to find if the child with either alone looks obliquely at the object. If it be found that with one eye the child always squints, all objects with which his attention is attracted must be held in such position as shall cause that eye to be turned a little outward; also, in holding the infant to the light, care must be taken to oblige him to direct the squinting

eye in that manner. It may even be desirable, where the habit seems gaining ground, to prevent the use of the sound eye for some hours every day, that the other may gain strength from more constant exercise. I recommend this plan with the more confidence, because I have observed, in certain cases, that when the mother has been obliged to suckle only from one breast, the eye, which always comes next the bosom, is pretty sure to be the one that squints. That is, the unused eye is affected with the weakness; hence, by covering the other eye, so that the child is obliged to use the feeble one, a cure may be effected. In many cases, however, no such means will correct the deformity, and in most of these an operation will be advisable. At all events, no one should be permitted to grow up with a squint; it deforms and spoils even the prettiest face, and it disturbs vision. The operation is, in skilful hands, so simple, and so little dangerous, that no reasonable objection can be entertained to it. If so performed as to make the smallest possible wound in the outer membrane of the eye, it should leave no perceptible scar. A little time ago, an otherwise nice-looking patient came under my care, who squinted so frightfully with both eyes that they seemed half-buried in the nose. The operation on the first eye was perfectly successful, and in the following week I operated on the other. Within the month, the eyes were perfectly straight, and without any mark, or other deformity. Surely, while such easy cure is offered, no one should be allowed to squint.

Mothers are often unnecessarily alarmed by an idea that their infants are tongue-tied. This is, in reality, a rare circumstance, which, when it occurs, produces great difficulty in suckling, but such difficulty may be caused by some defect in the mother's nipple, either its being too small or too smooth. If the infant be tongue-tied, the defect may be easily remedied by a slight incision ; but if this be not the case, an operation is not always safe, and is always useless. When the nipple is too flat, the infant, if strong enough, will, after some time, draw it out ; but if he be too weak, some female relation or friend may be requested to do so. The smooth nipple will generally remedy itself after a short time.

The diseases hitherto mentioned have belonged to the lingering class ; children, however, are often attacked by very rapid disease—so rapid, indeed, that life frequently depends upon early and prompt assistance. It will be well that I should give a short account of some of those signs which show the commencement, or, perhaps, only the liability to such disease. But, however desirable may be such watchfulness, that any signs of approaching danger may be recognised and met, still we must guard against fidgetty, unnecessary anxiety, that, constantly imagining evils, would shield the vigorous child from the bracing roughness of the air, or sicken the healthy infant with needless physic. I do not mean to say that mothers may never give some slight and mild aperient, but the less thus given the better ; while drops, elixirs, or any other patent poisons, are highly objectionable. I am

even opposed to frequent use of peppermint, dill, and other distilled waters, which, by irritating the stomach, frequently add to the ills they are intended to alleviate.

The expression of disease in infants is often difficult to interpret. One must have studied children with that interest which can only arise from fondness for them, and with that power of observation only gained by experience. A child has no direct power of expressing what his sufferings are, but whenever in pain gives some signs, which I will endeavour to interpret.

An infant, when at rest, whether sleeping or not, should present an image of the most perfect calm, the attitude should be quite easy, and there should be no fold nor wrinkle on the face: the mouth should be closed, the breath unlaboured, coming and going through the nostrils without disturbing their position. The eyes of a waking child should not be widely open, and if he be very young, should have rather a vacant expression. The colour of the skin is pink and white, one or the other hue predominating as the infant is warmer or cooler, but the change should never be sudden. Alteration in any one of these conditions is a sign that there is something wrong. Such sign is called forth either by pain, discomfort, even by alarm, or by caution on the child's part in adapting itself to a diseased existence. It is, in the former case, generally produced by a modification in the infant's ordinary mode of expression; in the latter by a totally new, unchildlike action.

*The expression of the cry* is full of meaning. When it proceeds from impatience it is open, with a certain boldness and vigour in its tone; when it is caused by pain of a limb, or of the skin simply, the modification is slight, and there is usually, if the child be not very young, some twisting of the painful part. If, on the other hand, the pain be internal, as of one of the cavities, the cry is altered in tone, in duration, even in the mode of production; it becomes a moan, a wail, or a guttural note. I believe that each of these differences may, to a certain degree, indicate the position of the disease; but it will be enough if I here point out that such tones are always signs of illness. There are some cries which are symptomatic of certain maladies; the sudden, sharp cry breaking the calmness of sleep, is a nearly certain indication of brain disease. The hoarse breathing, ringing cough, and cry are well-known signs of croup; the double cry, that is, with both inspiration and expiration, has a third meaning, and the tremulous, wavy note a fourth. Moreover, be it remarked, that when a child cries from pain, tears usually accompany the sound; but there are some exceptions. Thus, in infants under six weeks or two months, tears are not formed, and in nearly all children they are checked by any violent internal inflammation or acute fever. Thus, in a sick child, the cessation of tears is a bad sign, their reappearance a good one.

*The Mouth.*—A mother is frequently able to form some opinion of the health of her child by the mode in which it sucks, and by the condition

of its mouth. I have already said that during teething the mouth is hot, but it is then also very moist; a hot and dry, or clammy mouth, indicates febrile or stomach disturbance. Very often this sensation of heat causes the mother to look, when she finds, perhaps, the little white specks of thrush, or simply a rather white tongue. Then, again, the vigour with which the child sucks is a sign of its healthy condition; but if it be labouring under a serious malady, it either sucks very feebly or not at all.

Let us now examine the symptoms which indicate more especially diseases of certain parts or organs. Thus a

### BRAIN DISEASE

May be feared if the child wear a heavy frown and shun even a moderate light; if he become very irritable, or, still more, if he become very dull, averse to play, or any brisk movement; if he be frequently supporting his head in the hand, or be constantly laying it down on tables, on chairs, or even on the floor; if he gradually get slower and more cautious in all movements, particularly in turning round; if he (this in very young children) occasionally have sudden passing flushes of the head and face. Now all these symptoms, if unchecked, will last a certain time, it may be only days, it may be weeks, and then one night will ring through the house a sudden, sharp and frightened cry; the child will be found sitting up either com-

plaining of pain in the head, or he will be still screaming, terrified, beating the air with clenched fist, and struggling apparently with some imagined horror, perhaps even begging his frightened mother to save him from the dog or tiger.

The malady is now present with all its dangers and terrors; but such forewarning signs, as I have mentioned, should have acted as a warning. If the medical attendant have been called in on their earliest appearance, he may probably by early watchfulness and treatment subdue the disease. Very often there are less definite forewarning signs and appearances than those above mentioned, which, nevertheless, should not be neglected. The child is, perhaps, precocious, wonderfully quick with his book, very thoughtful, sometimes looks old, and astonishes his parents with the shrewdness of his questions. His head is rather large,—perhaps it closed later than usual,—his forehead is a good deal bowed outward, and overhangs the brow, his limbs are thin, and the belly rather bulging. Such a child should be kept from his books, taught to amuse himself with infants' toys, given all possible fresh air and exercise, baths as cold as he can bear them, etc. etc.; but the great point is not to let him study; it does not matter if he be unable to read at seven, or even at nine years old. If he is to grow up a shrewd, clever man, he must be made a dunce of a boy, until quite strong. If he be forced into an infant phenomenon, he will either sink to an early grave, or grow up to be nearly an idiot.

## RESPIRATORY DISEASE.

If a child, having a cold, become hoarse, the parents should at once be on their guard, because hoarseness is not a common accompaniment of mere cold in young children. Such hoarseness is likely to increase in a day or two; the child will not remain lying down, but either sits up, holding to the sides of the bed, or insists on being carried, and then clings tightly to his nurse at each breath; or he squeezes the throat with both hands from side to side, with a wild, almost despairing gesture. The inspiration soon becomes noisy, the cough ringing, the cry hoarse. The disease is now developed; it is croup, and very dangerous; but, observe, the very first symptoms are to be counteracted. Thus, hoarseness, unaccompanied by difficulty of swallowing, particularly if it increase at night, should make the mother very watchful; and if there have been any cases of croup in the neighbourhood, medical advice should be sought immediately on the appearance of such symptoms.

If the child's breathing be difficult, the belly labouring, and, the chest remaining almost still; if he will only lie upon one side, and in preference to being carried, keep the arms and elbows pressed upon the ribs; if with each breath there come a heavy frown upon the forehead, while the nostrils open, and grasp, as it were, the air; if the expiration be accompanied by a wail, it is probable that the infant is affected with lung inflammation,

a serious disease, for which medical aid ought to be sought at once.

### INTESTINAL DISEASE.

The diseases of parts situated in the abdomen are more difficult to recognise, yet they have certain forewarning and accompanying signs, which are not to be slighted; for instance, a growing enlargement of the belly, an increasing sallowness of the skin, and a gradual thinning of the face; irregular action of the bowels, chiefly diarrhœa, and evidences of pain. Now the object is to recognise some signs, which will sufficiently surely indicate to the mother, when a dangerous, *i. e.* an inflammatory disease of the intestine is beginning. Well, in the first place colic will be present—there will be passing pain in the abdomen. When this comes on, the child will draw its thighs up close to the belly, twist its body, utter, perhaps, a cry; at all events, its expression will indicate suffering; in a little while these disturbances subside again, and all is as quiet as before, till the colic pain recur. If with this condition there be purging, the disease should be quickly checked, while it is as yet simple diarrhœa; for the symptoms frequently change, and may develop themselves into inflammation of the bowels. The change will be marked by the quality of the diarrhœa, from a yellowish colour to green and yellow, mixed with white clots in it. It is well not to wait for this sign; it may be too late to save life, and certainly will be too late to save very severe illness.

These are some of the signs of warning in acute disease, but there are certain appearances, alterations, or little awkwardnesses, that should cause attendants upon children, be they mothers or not, to examine thoroughly whether the child have received any hurt. Nothing is more common than that a mother or nurse brings a child to me, saying that for some time past it has been crying when it was lifted, and that I find the collar-bone broken; this having occurred a week or two ago, there is great difficulty, sometimes no possibility, in getting the bone straight.

I have recommended that every infant should daily be placed naked on a blanket before the fire, to kick and struggle according to its own will and pleasure. This is not merely for the sake of exercise; but also that its attendant should watch it, and be able to detect anything wrong—as crookedness of any bone, inability to use, or sluggishness in the use of a limb, evidence of pain if that limb be stirred, &c. &c. Such symptoms may be of slight consequence; but it is frequently most important, that such alterations be at once attended to. It is not possible for me to describe in this place what such or such symptoms indicate; the diagnosis is often very difficult, an apparent weakness in one leg may indicate spine disease, hip disease, or a functional paralysis, itself dependent upon one out of many causes. In all these cases immediate attention is of the highest necessity. In hip-joint disease, for example,—I select this out of the above-named set of maladies, because I have given very

minute and careful attention to that subject, and have, in several ways, modified and improved its treatment—in hip-joint disease, I say the loss of time at its commencement may make all the difference between a malady to be overcome in a few weeks without lameness, or a disease laying up the patient for months, and leaving him more or less a cripple at the end of the time.

All the signs of disease, which have been mentioned, are broad and simple; in fact, are such only as should direct attention to certain parts of the body, not such as should be accepted for conclusive evidence of this or the other disease. The aspects of certain maladies, as above detailed, do not in any one case make up the whole evidence of the disease; and to treat a child upon such symptoms only, would be, in most instances, more foolish than to leave him alone. Let not the information here given be abused; if it be used properly, it will save much suffering and illness; if it be improperly used, it will do harm, instead of helping to diminish the mortality among children.

## CHAPTER III.

Small Ailments and Accidents—In Greater Ones Necessity of Medical Advice—Burns and Scalds—Their Importance is according to their Depth and Size—Mode in which they may be Fatal—Signs of Approach of Fatal Condition—Three Degrees of Burn—Distinction—Treatment—Contraction of Scars, and Deformities after Burns—Wounds, Cut and Bruised—Bleeding—Dressing Cuts with Strapping—Bruised Wounds—Foul Wounds; their Danger and Treatment—Inflammation forming Matter.

THE ensuing chapter will be devoted chiefly to trifles—to the smaller illnesses or accidents of life. Such are often hardly bad enough to need a doctor, yet are sufficient to cause considerable pain, which may in great measure be relieved by judicious management. Probably the whole number of these little ailments, from which all people suffer, make up altogether a greater mass of uneasiness, than do the larger illnesses of humanity. It will be therefore advantageous to spend a little time in examining the methods of managing these maladies.

But if I speak of how to treat a slight wrench, no one it is hoped will therefore try to cure a bad sprain; if I describe what to do with a little cut, the management of a great gash must not be lightly undertaken. In fact, this is one of those

cases, in which a little knowledge is not a dangerous thing, if it be remembered that it is a little; very little indeed. I shall, therefore, in speaking of ailments and accidents (chiefly of the latter) point out when, under ordinary circumstances, Nature may be trusted; also when a properly educated medical man should be called in. Even if the case be beyond his or all human help, he will relieve the relation or friend from the dreadful thought of having tampered with a life that should carefully have been guarded.

## BURNS AND SCALDS.

Such cases are burns and scalds. Children will, when the mother is cutting bread and butter for tea, or is otherwise busy, pull down the kettle, or put their hands into the teapot, or smooth little sister's face with the hot flat-iron, or do something of a sort not to be imagined by any one unversed in infant nature. Well, it does not much matter whether the skin be burnt with hot water or with a hot iron; the important point is the size and depth of the injury. When much skin has been destroyed the accident impresses very deeply the whole frame. A person thus badly burnt, particularly if he be very young, may fall into a sort of stupor, from which it is difficult to arouse him, and which, after a time, becomes insensibility. This condition approaches insidiously, giving no sign, that would be visible to an unpractised eye, except great drowsiness coming on after pain and restless-

ness. The repose is regarded, therefore, by the inexperienced or untaught nurse, as a great blessing, but in an hour or two the sufferer may be found quite insensible, breathing heavily, and in a few hours more is dead. Burns may also end in a like fatal result, by producing at the outset, an opposite condition of body. At first the injured person scarcely appears to suffer; indeed, seems like one half stunned by a blow—scarce aware of pain, and with but a dreamy knowledge of the accident. After a time, however, he becomes restless, falls into agonies, then into delirium: soon come the convulsions and spasms, which foreshadow death. Neither of these states, when once fully established, is easily to be conquered; therefore, if the burn be at all large or deep, let a surgeon see it at once.

Now, whether the surface injured be large or small, the skin may be burnt in different degrees.

Firstly, so as only to redden it for some time.

Secondly, so as to cause bladders or blisters.

Thirdly, so as to strip the scarf-skin completely off, and to char, more or less, the true skin.

In the first case, our object is to keep on the scarf-skin, and prevent it forming into blisters. Some people use cold for this purpose; but I am sure that it is a great mistake to do so, and that a continued application of heat is the true mode of treatment. If the burn be on a part that can be put into a basin, it should be laid in hot water for about half an hour or more, and when removed may be covered with some unsalted grease, and wrapped in cotton-wool for five or six hours at

least, to keep up the warmth. If the burn be on the breast, back, or any part which cannot thus be put into hot water, another arrangement must be made. Salt, heated tolerably hot and put into a linen bag, may be laid on the part, previously greased; or several folds of soft rag may be wrung out of hot water, placed on the burn, and over them a piece of oiled-silk, to keep in the moisture. After either plan, cotton-wool may be bound on to preserve warmth.

If the scarf-skin get into bladders or blisters, a different sort of treatment is necessary. But, first, it may be as well to explain what is meant by true skin and scarf-skin. The true skin is a very delicate material, containing a large number of blood-vessels and nerves, and therefore is highly sensitive. When a portion of this web is destroyed, it is never re-made as before, but instead, a material called the scar is produced, which is both tougher and less yielding than true skin. Lying over this delicate structure, and protecting it from the air, is the scarf-skin, containing neither vessels nor nerves, and therefore without any sensation. It is generally very thin; but in those parts of the body, which are much subjected to pressure or to friction, it becomes thick, hard, and horny, as is the case in the palm of the hand and sole of the foot. It may be re-made in any quantities, unless so much be destroyed that the actual growth weaken the bodily powers. A blister is a puffing out of the scarf-skin by fluid between it and the true skin.

When such a blister is formed suddenly, as by a

burn or scald, it does not, I believe, matter whether or no the bladder be pricked and the fluid let out; but it is most important that air should be kept from the part. I think the pain is, in general, less if the blister be emptied; the scarf-skin must not be stripped from the surface. The fluid should simply be allowed to escape through a small opening or slit in that membrane, which will then lie closely upon the true skin again, aiding to guard it from the air. There are various applications used for this protective purpose. Cotton-wool is one of these; but although I recommended it in the first degree of burn, where the skin is reddened, but not blistered, I do not advise its use in the cases we are now considering. The fluid, which, after a blister is emptied, will still continue to flow from the part, wets the wool; its soaked threads find their way and stick to the injured surface, keeping up a great amount of irritation. When, in consequence of the pain complained of, or of a bad smell in the part, it is thought desirable to take off the cotton-wool, it will be found sticking to the edges of the wound, and its removal will cause much pain. Water penetrates the wool with such difficulty that it can hardly be soaked off.

Pure fine flour, sprinkled rather thickly but slowly over the burned part, and covered with a piece of soft rag, is one of the best possible applications. The fluid from the sore makes it into a paste, which sticks to the surface without irritating it, dries, and effectually keeps away the air. This application had better not be removed at all;

and when, after some time, it falls off of itself, the burn will be found to have healed beneath it. If, however, on account of pain or of an ill smell, it be thought advisable to remove this dressing, the patient need only to put the part into warm water; or if the position of the wound render this impossible, the paste must be well wetted, and it will come off without either pain or difficulty.

Another preparation, often used, is an equal mixture of linseed-oil and lime-water; it is rather a dirty material, and requires good management to prevent the linen or clothes becoming soiled with the grease. Lint, hardly larger than the burn, should be dipped in the lotion and laid smoothly over the place, then covered with oiled-silk, and the whole kept on with a bandage. If the discharge be slight, this piece of lint need not be removed for days, but the oiled-silk may just be lifted off and a little more of the lotion dropped on. In ordinary cases, and in hands not much accustomed to the management of wounds, I would recommend the flour treatment.

That sort of burn, in which the true skin is burnt or indeed completely charred, is, as already stated, the most dangerous; no unprofessional person, therefore, should undertake such a case, unless the injury be a mere speck. Either application (linseed-oil and lime-water, or flour) may be used; but when the discharge becomes yellow and thick, evidently what is called "matter," a bread poultice may at first be employed, and then lint, soaked in warm water, is the best application.

The local management is as easy in these cases as in slighter ones; but constitutional remedies are generally necessary, and they require the watching of a practised eye.

It was said a short time ago that true skin was never restored, and it is for this reason that burns, which destroy that part, often leave such terrible scars. The wound in healing, as it cannot make true skin, must borrow that structure from all the neighbouring parts. A large burn on the breast will gather skin from the neck, from the edge of the armpit and arm itself, till it draws down the chin, pulls in the arms, and ties them by red, fleshy bands to the chest, making the sufferer a miserable cripple, and a dreadful object to behold. Sometimes these misfortunes can be relieved by a painful, tedious, and somewhat uncertain operation. I mention these peculiarities in the effects of a burn and of its scar, that you may not be led into error about the slow action of the healing process.

I had under my care, some time ago, a child, about seven years old, who had been severely burnt on the front of each arm, about the bend of the elbow. When the first irritation had gone off, so that the child was in no danger, it seemed to me advisable to forestal that tendency to contract, which I have just mentioned, by keeping the arms stretched on a couple of straight splints. This certainly retarded the healing process very considerably, and caused, no doubt, some little pain; but the wound was progressing very favourably, when the parents insisted on taking the child away,

promising to keep on the splints. In about a fortnight I received a highly abusive letter (which I kept for some time as a remarkable composition), in which I was accused of intentional cruelty, and was told, that the splints having been discontinued, the wound had healed. I am sorry to add, that when last I saw that child, the scars had drawn up each elbow, so as to tie the hands to the shoulders. Let this be a warning never to hasten the healing of such burns by any particular posture; present pain is better than the constant misery such a deformity must produce, as is proved by the readiness with which such sufferers go through any painful operation for the sake of being partially relieved.

## WOUNDS.

Let us now pass on to wounds; such, namely, as may be made with instruments more or less sharp. These injuries generally cause some amount of bleeding; and, of course, if this be sufficient to appear at all alarming, surgical assistance will be summoned; this will also be done when the wound goes so deep beneath the skin that important parts may be injured. Surgical aid should not be neglected when any part near the eye is wounded, when the lip is deeply cut, almost divided, or when the hairy scalp is hurt; in the former two cases certain ugly deformities are apt to occur; in the latter, erysipelas is a danger to be guarded against.

Wounds may be divided into simple cuts, made

with a sharp knife, and into wounds, jagged and bruised, from having been inflicted with a blunt instrument. Again, both these may be produced by a clean weapon or by a foul one. Let us first consider the simple case, that, namely, of a cut-wound, made by a sharp and clean knife. Such injuries are followed by a flow of blood. When this is sufficient to be alarming, a surgeon should be sent for; but the mere oozing, which comes from a slight cut, may in general be stopped by soaking it in cold water, and then the wound may be closed and dressed with plaister.

There are several kinds of plaister, which may be used for this purpose. The cheaper sorts are called Soap or Dressing Plaister, and Sticking or Strapping Plaister. The former of these is less irritating, but sticks less firmly than the latter: both of them are made to adhere by heat. Court Plaister is made of a gummy material spread on black waterproof silk. A newer invention than any of these is the Isinglass Plaister, made of gelatine and gum spread upon muslin; it is less expensive than court plaister, and has the additional advantage of being transparent. Both these latter sorts must be made to adhere by damping slightly their gummy surface with warm water. Except in this slight difference, of warming some and moistening other sorts of plaister, their application is precisely similar, and a slip or slips must be cut off, of the size and quantity required. For small wounds the breadth of the strip should be about an eighth, or, what is the same, half a

quarter of an inch, and the length may vary from an inch to an inch and a half. And now, the several slips having been cut, and either moistened or warmed, as the case may be, are to be applied to the wound. The object of this process is simply to adapt the edges of the wound, and to place across it strips of plaister, that shall keep those edges in close contact. To do this, the finger and thumb of the left hand are placed on opposite sides of the cut, and are employed in holding its lips sufficiently firmly together. Under the thumb is placed one end of a strip of plaister, the other end of which the right hand retains, draws sufficiently tight, and then lays down smoothly and tightly across the wound, until it sticks so securely that it still keeps the edges of the cut in their proper situation, when the pressure of the left hand is removed. The distance to which the plaister should extend on either side of the wound must vary according to its depth and situation; but a small one will not require more than half or three-quarters of an inch. If the cut be long enough to render necessary the use of several strips of plaister, each should just overlap the edge of the one before applied, so as completely to cover the wound and to keep it from the air.

Whatever the sort of plaister of which it is composed, the dressing, as above described, may remain on the wound for several days, unless there be pain and throbbing, or unless the part begin to have an offensive smell, or, again, unless the plaisters change in appearance, as follows.—Those

described as soap and dressing plaisters, may become of a peculiar brown colour: the isinglass plaister will, by its transparency, allow the wound to be seen discharging and gaping a little. All these symptoms and appearances must equally be taken as signs that the wound, instead of healing at once, "by the first intention," as surgeons call it, is discharging, and that the matter must have a free passage out.

In removing the plaister, whether or no there be the above signs of discharge, one end is not simply to be dragged from the skin; for thus the edges of the cut will be separated, and what may have been done towards healing will so be undone. The plaister should be detached from the skin at both ends towards the wound; and when it only adheres by a narrow piece at each edge of the cut, one may take hold of the side of the strip, and draw it off along, and in the direction of, the wound. By this means we run no risk of injuring the still unfinished work of Nature. If the wound be closing, or already just closed, it may be strapped up again in the same way. If any part of it be not united to the opposite side, but is discharging; that part ought not to be covered again with plaister; but should be left open, only protected from the air by a little piece of lint. If, on the contrary, no part be properly united, but the whole wound be discharging, more particularly if it have red edges, the plaister should not be reapplied; the part should, on the contrary, be well bathed in hot water, and then a bread-poultice applied. After

some time, when the redness at the edges and around the wound has quite disappeared, it may be wrapped in wet lint, and the whole covered with oiled silk to keep in the moisture.

Those wounds, which are made with a blunt instrument, and are jagged and bruised, do not in general bleed; neither do they heal at once, or, "by the first intention." The flesh, which, besides being cut, is injured by the rude blow of a blunt implement, is not in a condition to unite by that process, but must undergo another, of which one essential part is a certain amount of discharge. The treatment to be adopted in such cases is, then, to encourage this discharge, which is best done by bathing the part with warm water, and by the use of a bread or linseed-meal poultice.

If the instrument, sharp or blunt, with which the injury was done be foul, the part should be well soaked with hot water, and sponged, so as to clean the actual cut surface as much as possible. Any dirt in a wound is apt to do mischief; but more particularly so if it be composed of either animal or vegetable matter. Thus, a butcher's or skin-dresser's knife leaves behind dangerous wounds; for the bits of dead matter sticking to those blades will act as a poison in the living flesh. When, therefore, a part be thus injured, every means should be taken to get rid of the poison in the wound; thus, for the washing above described, hot water must be used, because, besides the mere mechanical action, it will tend to promote bleeding, which aids in carrying away intruding matters;

afterwards, a poultice should be applied to promote discharge.

To prevent wounds, particularly old ones, getting foul and poisoning themselves, it is necessary to keep them very clean. I do not mean that it is desirable to wash the surface of the wound itself—for the discharge is intended as a mild, protecting fluid, which is not to be sponged away; but the skin round these places is apt to get dirty, partly from the matter flowing upon it and drying there, partly from the dressings used. Thus it is very necessary to cleanse frequently the skin around old wounds, otherwise they will spread, and are apt to fall into "gangrene." That hospital gangrene and those spreading foul wounds, which we read of in the annals of army sickness, when in each regiment the number of sick and wounded exceeded its medical strength, arose in great measure from the dirt accumulated in old cases, and which no one had the time to wash away.

Very often, if a wound be poisoned, or if a person be a little out of health, and when there is a peculiar depressing state of the atmosphere, a cut may, even after healing, take on a fresh inflammation, which will spread and form matter beneath the surface. If the wound be on the hand, red lines will run from the inflamed spot up the arm; lumps will even form on the inside of the elbow and in the armpit. I have observed that the tendency to this peculiar inflammation is greater at certain times than at others. When cholera was with us, or chiefly just before and just after its

outbreak, there was a great deal of this tendency: also in the early part of 1856 (February, 1856), again in the whole year of 1863; whenever there is much fever, it is always very prevalent. I can only say that in these cases the sooner surgical aid be procured the better; they do not get well of themselves; in fact, they must nearly always be cut to let out the matter. Do not refuse to allow this to be done, as is too much the habit with patients at the hospital and elsewhere, who have therefore to go through an additional amount of suffering, and are obliged to submit after all. As long as the matter is confined in the part, the inflammation only gets worse; it spreads, and may destroy some of the tendons or "leaders," and so injure the use of the limb. Moreover, confined matter produces great throbbing and pain, which is relieved by opening the part; so that those who have been thus afflicted always say, that they have slept better after such an operation, than since the disease began. Having once myself suffered severely from this affection, I can speak strongly to the truth of this statement. Let me add a few words of warning against a practice I find rather common among the class of people from which hospital patients come, namely, the rubbing of these swellings with tar, resin, sugar, soap, or other sticky substance. One object in our treatment is to keep the pores of the skin well open—an object which such appliances as these by no means effect.

When any member of a family or household has a wound or other disease producing discharge,

great care must be taken, that no towels, or other linen which can be soiled therewith, touch his own or any other person's eye. Certain species of such matter or discharge are so virulent, that the slightest speck of it coming in contact with that delicate part may cause inflammation of so bad a character, that it is apt to produce in a few hours total and hopeless blindness.

## CHAPTER IV.

Milk Abscess—Caution against too long and too frequent Suckling —The Part to be left at Rest—Mode of supporting it—Sore Nipples — Causes — Treatment — Convulsions — Epilepsy—Hysterics — Distinction of Symptoms—Their Future Contrasted—Fainting—Effect of Position also in other Cases, as Burst Veins of Leg, in Choking, Bleeding at Nose.

At the end of the last chapter some mention was made of a certain inflammation, which occasionally arises about a wound, and causes a formation of matter. It was said, that this affection was particularly frequent in certain unhealthy states of the atmosphere, called depressing. I must now add a little to that statement, and go on to say, that if by any means a person have been weakened, and if, at the same time, a part be called on to act more strongly than usual, there is apt to arise in that part an inflammation, which leads very quickly to the formation of matter. Thus, women, while suckling, are subject to such a disease in the breast, which, from the period of its attack, is termed "Milk Abscess." This malady may arise quite early in suckling, from the milk fever, as it is called, combined with constitutional weakness, or it may arise later in the process. A promise has been given to mention some of the modes in which mothers fre-

quently injure themselves by too constant suckling: this is one of them. When the child is kept almost without intermission at the breast, the continued drain weakens the part so greatly that the slightest amount of inflammation tends to end in abscess. The same condition and same effect is produced by the extravagant length of time during which some, in fact most poor women, nurse their children. They do this from a mistaken idea, that they are not likely to fall in the family way while suckling. From eight to ten months is usually quite long enough to keep an infant at the breast; to do so longer than a year is nearly always injurious; is of no benefit to the child, or mother; and does not exercise the protective influence above mentioned. Mothers, however, frequently suckle children of eighteen months. I have, indeed, often seen a woman nursing a strong boy of two years and a half old, and such long drain upon the system weakens it very much.

Milk abscess, whether produced by these errors, or whether it come on early from no apparent cause, may, I am sure, be often cut short, more frequently rendered much milder, by proper management. And proper management in this case consists simply in giving the part as much rest as possible. When a mother, who is nursing, feels a heavy aching and throbbing in one of her breasts, she should entirely leave off nursing from that one, even before any redness or other external sign is present. She should not knead nor squeeze it, but leave it perfectly and entirely at rest, for then the

milk will not gather in it so much, as if she excite its flow by pressure. A child, when the supply of milk does not meet his desires, raises his fist and pommels the breast with it: the calf butts at the cow's udder when the milk is scanty; both are instinctive actions for increasing the flow of milk. Thus that squeezing and handling of the breast, which people call emptying it, will only excite it to fill rapidly again, causing much blood to rush into the part. The breast however, filled with milk, is heavy, and when hanging, by its own weight, produces into itself a considerable flow and fulness of blood; it should therefore be supported, just as an inflamed hand is kept in a sling. Under the painful breast is to be placed the middle of a soft silk handkerchief folded cornerwise; one end thereof passes under the arm of the painful side, across the back to the opposite shoulder, the other end crosses the chest over the sound shoulder, and is tied to its fellow at the same point. The sling thus made must of course be kept of such a length, as to raise the breast slightly against the chest, without causing disagreeable pressure. Sometimes however, and particularly when the arms have to be much used, it will be found that this species of sling will not succeed, for the breast will slip away from it. The following contrivance is then to be adopted:—Take a piece of soft linen, about eight or ten inches long, and from six to eight broad. Across one of its shorter sides sew a bandage of two or three inches' breadth, and to each of the two unoccupied corners fasten a bit of broad tape. Now the oblong piece

of linen is to be placed on the breast, with the side to which the bandage is sewn below that organ ;— the bandage passing round the waist may be fastened by a hook and eye. One piece of tape runs under the arm of the affected side ; the other across the chest, in the same way as the handkerchief just described, and may be fastened by a hook and eye, with sufficient tightness to suspend or sling the breast. Next the part should be placed a fold or two of soft linen or of lint, and outside this a piece of oiled silk, to keep the clothes dry.

It is beneficial to bathe the breast, two or three times a day, with warm water, or with poppy fomentation; but it is on the means of giving the part rest and support that I wish to lay particular stress. This may seem a trifle, but experience has shown me that, if this plan be resorted to sufficiently early, abscesses may often be prevented. Even, when from a blow or other cause, inflammation of an empty breast comes on, the part should be supported, and indeed with rather more pressure than is advisable in the other case.

It has been said that milk abscess generally arises from weakness ; and, therefore, the large doses of salts, or other purgative and weakening medicines so frequently taken, are injurious. Nothing is more common than this habit, and nothing can be more unreasonable. If the bowels have been regular, and sufficiently active, nothing can be gained by weakening in a malady, which, like every matter-producing inflammation, arises from debility. In my practice, I find it more usually

necessary especially among the poor at the hospital, to use strengthening medicines, such as steel and quinine; and, if possible, also a more nourishing diet. During last winter I saw one of these cases. The patient, imagining that "the inflammation had to be cleared out of the blood," had greatly weakened herself by purges, and was in a somewhat dangerous condition. Great care was at first necessary; but as soon as it was safe for her to take quinine and steel, also wine and porter, the abscess began to heal. I do not intend to recommend the constant use of such diet, for sometimes it would be highly unsuitable; but I wish very much to condemn the opposite fault.

### THE SORE NIPPLE

is another of those maladies common to the breast of mothers, which is very troublesome, indeed painful, and which is often produced by that too constant suckling, against which I spoke in a previous part of this volume. It is also frequently caused by a sore condition of the infant's tongue, and may not unfrequently be prevented by care and cleanliness on the mother's part. Thus, as soon as the child's mouth is known to be sore, or the nipple gets the least irritated, the mother should always, after nursing, sponge her breast well with hot water, to wash away the moisture of the child's mouth. Afterwards may be applied, on a piece of soft rag or camel-hair brush, some honey and

borax, or, still better, some honey just whitened by stirring a little carbonate of soda into it (a teaspoonful of soda to half a wineglassful of honey). A cleaner application perhaps, though not generally so beneficial, is the Glycerine lotion, which can be got at any chemist's. In the meantime it is also essential to attend to the child's health; for the bad state of its mouth, which frequently produces sore nipples, is caused by a wrong condition of the stomach. It is not my intention to give any recommendations or receipts for medicines, and especially none for children, whose health is so easily and frequently injured by dosing; but I do not think any harm can result from giving a sore-mouthed infant, just before suckling it, a piece of honey and borax about the size of a pea. When the nipple is deeply cracked—which, with all care, does occasionally, though rarely, happen—a little fine flour, sprinkled well into the places, will be a great comfort, and may often prevent them opening still further, particularly if a little pure glycerine be dropped on the part as soon as the flour has formed into a paste.

Many contrivances of wood, glass, India-rubber, etc., have been invented to cover and protect the nipple while the child is at the breast, but I do not know of any that can be easily used, and when they are not well managed, they are of course worse than useless.[1] The kind of shield that answers best has somewhat the shape of a funnel, possessing a broad, slightly hollow portion, which

[1] See p. 36, "Fruitless Sucking."

fits the breast, from the middle of which projects a short tube destined to receive the nipple. Round the outside of this tube a heifer's teat, which can be obtained at any druggist's, is to be tightly sewn to certain holes made for that purpose. The whole machine is to be filled with warm milk, and applied, thus full, over the painful nipple, while the heifer's teat is put into the child's mouth. Now the sewing must be air-tight, and the shield be kept sufficiently tight upon the breast to prevent air finding its way between the skin and the instrument. If this be properly arranged, and if the child will suck, it certainly draws the breast; but the arrangement is not easy, and if the child be either impatient, fretful, or weak, the instrument will fail. It should be mentioned that the heifer's teats are kept by druggists in spirit and water; therefore, before using them, they should be well soaked in warm water. In conclusion, it may then be said of this instrument, that when it can be managed, it will save the mother a good deal of pain; but that it is rather unmanageable, and that its use is not essential to recovery from sore nipple.

## CONVULSIVE FITS.

Children are—as many a mother but too well knows—subject to convulsions, which are serious or not, according to the severity and the time at which they commence. Indeed, we will take a wider view of the subject; for all ages are liable to fits, as they are called, in which a short convul-

sive struggling takes place. It would be simply ridiculous were I to enter deeply into this most complicated subject, and to attempt to mention the various causes and treatment of these maladies; I may, however, be able to draw a useful distinction between those that are serious and those that are trifling, enabling my readers to tell one from the other. We will take the most usual convulsive maladies, viz.—1, Infantile Convulsions; 2, Epilepsy; 3, Hysteria. Let us examine their peculiarities, and look into the history and probable future of all three. Infantile convulsions begin in some children very early indeed; sometimes, even before birth, the infant is convulsed, and from these fits result a certain class of deformity, such as the club-foot, and others that I have already mentioned under the name of "Congenital." If, however, an infant, soon after birth, be frequently convulsed, it is a bad sign; yet the medical man may find sufficient cause for these fits in some evil state of the stomach or bowels; in the presence of worms; in some illness of the mother affecting the milk, or other unimportant cause. If the convulsions come on at the time of teething, they probably arise from this passing and slight disturbance; so that if the doctor and the child between them overcome the irritation, the health will not have been injured by the attack. If, on the other hand, the fits occur frequently during the time of teething, and for some time after, it is to be feared that the brain or other part of the nervous mechanism is affected, that the convulsions are the sign of

a grave disease, which may end in death, or that they will deepen into Epilepsy.

Now Epilepsy is a very distressing evil—often, I am sorry to say, incurable; and the longer it has continued, the less manageable it becomes. Moreover the fits grow more frequent and violent, and, as time goes on, they begin to affect the mind, rendering it weak, forgetful, even idiotic. Therefore let a medical man be consulted at the very outset of the disease. It is, of course, impossible that I should give any directions about the treatment of this terrible malady. I mention it only to point out, on the one hand, to what neglected infantile convulsions may lead; and, on the other, to draw a distinction, which would in general be easily recognised, between the epileptic and hysteric fit, so that a parent may not be needlessly frightened in the one case, nor over-careless in the other. The epileptic fit, though occasionally commencing with infantile convulsions, and continuing throughout child-life, begins generally at some period between the fourteenth and the eighteenth year, and it is at this age also that the hysteric tendency first shows itself; therefore no distinction can be drawn from their time of commencement. A person in an epileptic fit has the hands clenched, the skin cold, and the face dark-purple. In the hysteric fit the hands are open, the fingers spread out, usually clutching at whatever comes in the way; the skin is moist and warm; the face is either pale or red, *light red.* In the epileptic fit there is usually foaming at the mouth, the muscles

of the throat are hard and rigid, and there is no attempt at swallowing. A person in the hysteric seizure does not foam at the mouth, but keeps up a constantly repeated action of swallowing: that part in the throat known as the Adam's apple, rising and falling very rapidly, and each of these attempts to swallow is accompanied with a sort of sob. The epileptic fit ends with deep insensibility: the hysteric, with a seizure of causeless crying and laughing.

With such broad distinctions as these, any one would of course be able to distinguish the two diseases; but they are not always so well defined, this or that mark being absent; still, in nearly all cases there is difference enough to enable an observant person to come to a conclusion.

If any woman is in the habit of going into hysterics, the mode of management in her home is of the greatest importance. It must be remembered that this, though perhaps a real disease, is essentially under the patient's control, unless she have allowed it to become confirmed. Such self-indulgence is much increased by the pity and soft feeling of those about her. The often-repeated "Poor dear!" and "Ah, poor thing! I know what her feelings are!" with other similar phrases, are just the best means of setting her off into another fit. An apparent hardness of heart towards all such doings—only just enough attention to prevent the girl's injuring herself—and no notice of the past when she comes to herself again—will often greatly aid in cutting short the attacks and preventing their

recurrence. Let all be particularly careful of what is said in the presence of a girl with an hysteric fit; for, although apparently insensible, she hears everything perfectly well; indeed one may sometimes take advantage of this, as once a young woman recovered with remarkable quickness, when I proposed that all her hair should be cut quite close. It is often necessary to treat a person, liable to the hysteric fit, with actual severity, because if she be one among a number of women, the malady is very apt to spread. Thus in a hospital ward, where perhaps a good many of the patients are convalescent, or in a girls' school, if one inmate have an attack, another and another take the fit, till nothing but the most rigid measures can stop the contagion. It is, certainly, a most mistaken kindness to show pity or great consideration to persons who "give way to hysterics." Let me now run over again the peculiarities of these three diseases.

1st. *Infantile Convulsions;* Serious or not, according to their severity, to the period of their commencement, and to the length of time during which they continue.

2d. *The Epileptic Fit;* Always a grave disease, less curable the longer it has lasted, and therefore the sooner should medical advice be sought.

3d. *The Hysteric Seizure;* Serious or not, according as the will of the sufferer is, or is not, strong enough to combat with and overcome the disease. Hysterics will not kill ; but if a woman lets them conquer her, she becomes a burden to herself and to all about her.

## FAINTING.

If from any cause, whether a sudden shock of grief or fright, or from loss of blood, a person faint, lay her flat on her back, and do not raise her head. Fainting comes from the blood not passing to the brain, and is of course more likely to continue while she is in the upright position, and while the head is high. I say *she*, because fainting occurs more readily in women than it does in men, and because I am reminded of a severe case of this sort in a girl. Facts impress themselves more strongly on the mind than directions, and therefore I cannot do better than relate the circumstances of the case. Some time ago I was staying with a medical gentleman in the country, when he was sent for, very hurriedly, to see a young lady, who was said to be dying. As my friend was absent, I went in his stead, but it seemed too late. The face was deadly pale, the eye turned up under the lid, there was no pulse at the wrist, nor do I think the heart could be felt to beat: it was not desirable to waste time in ascertaining whether it did beat or not, for minutes even were of value. I had her taken from the chair, laid down flat on the floor, and in a very little time the pulse began to revive. She had been deluged with cold water to no avail; but now hot flannels to the bosom, over the heart, in the armpits, and heat to the feet, brought her partially round, and I was able to leave for a short time, assuring her friends that if she were not disturbed

till visited again, she was safe. She got so much better, that in my absence they tried to remove her upstairs. On raising her head she again fainted. In the end, a bed had to be brought into the room, and she remained for some days in a horizontal position, before it was considered safe to move her. Of course such extreme cases of fainting are rare, nor is it advisable that I should relate the distressing circumstances which led to so great weakness, and as nearly to death as can be imagined; but the instance will serve to impress upon the memory the very important point of keeping the head low in all severe cases of fainting. Such attacks must not be confounded with apoplexy. In these the face is red or purple, and they arise from too large a quantity of blood in the brain; therefore when a person becomes insensible, with the face pale, keep the head low; when with the face red, keep the head high. There is another point with regard to fainting, which should be observed. Whenever a woman falls into this state, it is the common practice to sprinkle her with cold water, and it is a very good plan if it be not carried too far. If, however, the face, bosom, and hands become cold, that very condition will prevent her recovering; therefore, when this occurs, the cold should be changed for hot applications, such as heated flannels, etc., for sudden changes of temperature will have the proper effect much better than the continued application of either one or the other.

The subject of position may lead us to consider

some other occurrences in which it is of importance.

When a person is choked from drawing a morsel of food or other solid matter into the windpipe, he will more readily be relieved of this substance if, instead of remaining upright, he get into a horizontal position. The best plan is to kneel upon the ground, and let the chest and body lie on the seat of a chair; the head, however, must not hang down, but should be held by somebody in a straight line with the back. In this posture the substance is more likely to be coughed out of the windpipe, than when the body remains upright.

Many people, particularly women who are getting into years, are subject to an enlargement of the veins of the leg, and it occasionally happens that one of these vessels will burst, causing a great escape of blood. As this blood comes from a vein, and the direction of the stream in that tube is upwards from the leg towards the body, it is worse than useless to tie a string or garter round the leg above the injury. The sufferer should lie on the back, with the foot raised high above the body, and this simple change in position is generally sufficient to make the blood flow along the vein instead of out at the opening. The dark purple colour of the blood, and its even flow, will indicate that it comes from a vein. When the blood comes from an artery, it spirts forth in a jerky manner, and is of a bright scarlet colour. The bleeding from veins is generally less dangerous than that from arteries; but nevertheless, when such an

accident as I have just mentioned occurs, a surgeon should be sent for, that he may close the wound: the position will, in the meantime, prevent a great loss of blood.

When the nose bleeds, the blood generally comes from very fine arteries, and such occurrences, if frequent, are very weakening, even dangerous; therefore a medical man should be consulted, that he may find the cause and check this tendency. Danger may also arise from a single attack continuing so long as to cause great loss of blood, therefore it is right to have medical assistance. But, in the meantime, the following means will be found very powerful in stopping the flow of blood. Let the sufferer sit on the ground, with the head thrown back and resting on the seat of a chair, while some one, standing on another chair, or on a table, pours, from as great a height as he can reach, a fine stream of very cold water on the patient's face and brow. It is not, however, to be imagined that bleeding has stopped because, while the head is in this position, the blood does not come out of the nostril to the lip; for under these circumstances, it is apt to flow the other way, namely through the back nostrils into the throat.

## CHAPTER V.

Leeches—Caution against Indiscriminate Use—Mode of Applying—Preserving them—Stopping the Bleeding—Blisters—Mode and Time of Applying—Action on the Urinary Organs—Dressing a Blister in Two Modes — Hot Dry Applications — When useful—How made — Baths — Different Sorts — Their Action — Half-drowned Persons—Artificial Breathing—Frozen Persons—Frost-bites—Chilblains—Bruises—Sprains.

IT is necessary that every one, undertaking to nurse a sick person, should know how to use certain applications, which medical men are in the habit of ordering: I mean such external remedies as leeches, blisters, etc. etc. The doctor cannot afford the time to see that these things are properly done; but must trust them to the attendants or friends of the patient, and they are therefore matters which every woman should understand something about.

### APPLICATION OF LEECHES.

Leeches are in many cases an extremely valuable remedy; but, while describing their application, I am far from sanctioning their use without proper authority. There are several sorts of inflammation, in which leeches would do incalculable injury: in certain constitutions they would be hurtful. Indeed, there are conditions of atmosphere, shown by

the prevalence of peculiar diseases, when the application of leeches is likely to be dangerous. When this remedy has been prescribed, it is desirable that it should be used with as little fatigue and discomfort to the patient as possible; and the first thing necessary for this purpose, is to overcome all fear of the animals themselves—an easy matter, as there is nothing to be afraid of. When the number ordered comes from the druggist in the wooden box, in which they are usually sent, they should be shaken into a glass or mug of cold water, to refresh them a little; but they must be watched, that none may crawl over the sides of the vessel and get away. After a few minutes they may be taken out of the water, put upon, and softly dried between two folds of, a towel; they should not be touched by the hand; but are to be shaken into a dry part of the napkin, so held in the hand as to form a cup-like hollow, in which the leeches can lie. This must be turned over upon the part to be treated, so that the leeches are enclosed between the patient and a fold of the linen; and are kept there until they bite, by gently pressing the edges of this cup-like hollow upon the skin. Holding them in the hand, or touching them more than necessary is to be avoided, for the contact of the fingers seems often to annoy them and to prevent their biting. This method of managing leeches is very rapid; thirty or forty can be thus applied as soon as two or three; but it is only available in the case of a flat or round even surface, such as a joint, the chest, or stomach. If the leech is to bite on one

particular point of skin, such as the edge of the nostril, or the corner of the eye, a leech-glass should be used. This is a tube of glass open at both ends, but larger at one than the other. To use it successfully, the nurse must observe which is the head, and which is the tail of the animal. Place the creature on a dry towel, and let him crawl about, till it be found which end he advances with ; observe that he draws up his tail till his body is thick, and bent like a hoop ; he fixes it on the towel by a sort of sucker, and then he advances the head, moving it from side to side. When he has stretched his body till it is quite thin and small, he fastens on the towel with his head, and pulls the tail after it. When the difference between the two ends of the animal has been made out, take hold of him with a little bit of rag, between the finger and thumb, put him head foremost into the large end of the leech-glass; and when by a little management he has been got entirely into the tube, place the small end of it on the spot where he is to bite. When he has fixed himself, the tube may be withdrawn ; but if, as sometimes happens, he hold the glass with his sucker-like tail, let it not be dragged forcibly away, for he may thereby be pulled from the patient's skin. Twist the tube a little, and draw it gently at the same time ; but if he will not leave it, let it hang down by its own weight ; the inconvenience thereof will soon cause him to let the glass fall, which of course must be caught by the nurse, that it may not break. Leech-bites in children frequently bleed very freely, so much so, as almost to cause death ;

therefore, in applying them to infants, be careful that they fix over a bone or some hard part that will bear the pressure necessary to stop the flow of blood: if for the neck, they must be put on the top of the breast-bone; if for a higher part of the throat, on the angle of the lower jaw; if on the head, be particularly careful that they do not fix on that part which is still remaining open for some time after birth. Occasionally leeches will not come away after having filled themselves, but fall into a sort of sleepy state; they are not to be pulled off, lest they leave the teeth in the wound, to the subsequent annoyance of the patient. A grain or two of salt dropped on them, as near the head as possible, or if this do not suffice, touching them near the head with a bit of rag wetted in spirits of wine or eau-de-Cologne or strong vinegar will make them come away. When the leeches are removed, it is usual to encourage a little more bleeding by putting on a warm poultice of bran or linseed-meal. If the bleeding is to be stopped when the leeches come away, it may be done by exposing the surface to the air, or by pressure; if this do not suffice, by putting a piece of sticking-plaister over the bites, or, still better, by covering them with a little of that woolly stuff which may be plucked from one side of a piece of lint. Small pieces of German tinder placed on them will also generally stop the bleeding.

It is commonly believed that leeches will only bite once, but this is not the fact. They certainly are better if they have not been previously used,

but as they are very expensive, poor people should not kill them, for they may be wanted again. To preserve them, they should be made to disgorge with only a very little salt, then be thrown into cold water, which must be frequently changed. They may be kept in a bottle, with a piece of muslin tied over the mouth, but the bottle must not be more than half-full of water.

## APPLICATION OF BLISTERS.

Blisters are prescribed for slower forms of disease than leeches, being intended to produce such an action on the skin, as shall check a deeper-seated and more lingering inflammation. The time necessary for this purpose varies very much, because the irritability of the skin differs in different persons; but chiefly because all blistering plaister is not equally strong. It will, in general, be found that from six to eight hours is sufficient; but some blisters are made of a weaker material, and require twelve. The action of the plaister is much quickened, and rendered surer, by moistening its surface, before applying it, with oil. When a blister has been on about six hours, lifting a corner of it will show whether it is acting at all; and when the scarf-skin has risen over the chief part of the surface, the plaister should be altogether removed. There are two modes in which the scarf-skin may rise—either in great bladders, two or three covering all the surface, or in little blisters, about the size of millet-seed, closely set together over the whole part. When the surface is thus covered, the

plaister should be removed; for these small blisters will probably soon rise into one bladder, and this kind of millet-seed blister will be found much more irritable than those which rise at once in larger surfaces.

In certain constitutions a blister will produce great pain and irritation, together with some unpleasant action on the urinary organs. Sprinkling the surface of the plaister, before its application, with finely-powdered camphor greatly diminishes these inconveniences; and they are almost always prevented by placing, between the blistering plaister and the skin, a piece of thin tissue-paper soaked in oil. The violent effect, which the application of a blister sometimes has on the bladder, forms a strong objection to their use with children; even when the above precautions are taken. It is also to be remembered that during, and after, any eruptive fever (more particularly measles and scarlatina) blisters are often productive of great evil, even of danger, by actually killing the skin over which they are applied.

The mode, in which the blistered surface is afterwards to be treated, depends on the surgeon's directions; for he may either deem it desirable that it shall be kept open for some time, and that the discharge be considerably promoted, or he may advise it to be healed at once. In the former case, he will order some kind of ointment or cerate for this purpose. Before using the application the blister should be pricked; and, that the salve may come in direct contact with the true skin, the loose scarf-

skin must be removed in the following manner: Being held with the finger and thumb of the left hand at the part pricked, it must be raised gently from the surface, and cut, with a small pair of sharp scissors, all round the loose portion, as close as possible to where it becomes attached to the true skin at the edge of the blister; let the surface of the blister be tenderly dabbed with a soft, clean sponge and warm water, then dried gently with a piece of lint; and after this the ointment can be applied.

If, on the contrary, it be deemed advisable to heal the blister at once, it may be treated much like a burn. The pain is usually less if the scarf-skin be pricked and the fluid allowed to escape; then the surface should be carefully washed and covered with lint, on which some simple cerate is spread, or, after removing the scarf-skin, the surface may be sprinkled over with some fine flour, and may be treated like a burn.

## HOT DRY APPLICATIONS.

Of all external remedies nothing is more commonly in use among the profession and the public than various sorts of hot applications, either wet or dry. Of the hot wet ones something will be said in the sequel, when the making or cooking of various articles will be spoken of: we will now consider hot dry applications. These may be used for several different purposes; either for keeping or restoring warmth throughout, or in some part of the

body, or for the sake of relieving nervous pain with or without swelling.

We shall shortly have to consider some cases in which it is desirable to apply heat to different parts of the surface as quickly as possible. Every one knows that bottles of hot water wrapped in flannel, bricks heated in the oven and similarly clothed, then placed close to the patient, are very useful for this purpose. Some small bottles (phials) may likewise be thus employed for other parts of the body. The places where the application of external heat is most beneficial in restoring circulation and general warmth to the body, are the pit of the stomach and the armpits and the spine. It is for this latter place that small bottles or phials are desirable ; while, for the pit of the stomach, nothing so heavy as water can be used. The best mode of applying heat to that part is by the salt-bag. Put some salt into the hot oven, or, if none be heated, into a frying-pan over the fire, and, while it is getting hot, make a closely-stitched bag of flannel, or, if inconvenient, of linen or calico ; and when the salt is very hot, fill the bag half full, sew it up, and lay it on over the place named. The action of dry heat, thus applied over a large part of the body, is very great. It is used in certain cases of exhaustion, where—either from long-continued and excessive excitement, from enduring muscular action, from long exposure to cold, or from other causes—the nervous force is, for the time, completely worn away. Remark, that this is altogether different to exhaustion from loss of blood ; the symptoms are

not even the same; the causes are perfectly distinct, and the management must be different. Do not therefore, on any account, use these hot applications when a person is fainting from loss of blood; but, in the above-mentioned cases, hot-water bottles may be put to the feet and between the thighs, phials of hot water or hot bricks to the armpits and sides of the chest, and a bag of hot salt over the heart and to the pit of the stomach. Care will of course be taken to wrap all the bottles, etc. in flannel if possible, if not, in linen or calico; that all the corks are sufficiently tight, and that none of the things are hot enough to scorch the skin. Bags filled with hot sand are not unfrequently used as a means of warmth. Sand-bags retain the heat a little longer than those filled with salt; but they are much heavier, and therefore cannot be so comfortably used in the same situations.

In certain sorts of pain, such as I would call "nervous," the application of dry heat to the spot is very soothing. The pain that I speak of is such as may be exemplified by ear-ache, or that uneasy flickering in the lower eyelid, which often leads to a settled pain in the part. Observe, that in these cases there is no swelling, no redness, in fact, no external symptoms to mark that there is an unusual flow of blood to the part; in these instances dry heat is useful, but when there is swelling or redness, moist heat is preferable. Persons who suffer much from tooth-ache or ear-ache have usually a quantity of especially favourite remedies, which they apply to the part according as the fancy seizes them; such

for instance, as a burnt fig, a scorched onion, etc. What is wanted is merely dry heat; and I do not imagine, that a more convenient mode of applying it will easily be found than the hot salt-bag. It can, of course, be made of any size or shape, according to the part, and may be fastened on the head with tapes sewn to the bag at the points best suited to its shape and intended position. It will hereafter be necessary to make a few observations on the modes of fastening applications to the head and face, and I will therefore not enter on the subject here.

## BATHS.

I believe that most persons have very indistinct ideas attached to the phrase "warm bath." It is of course known to consist of some vessel containing a quantity of warm water, into which some person is to be put: but how hot the water is to be; how long the individual is to be kept in it, and why he is put there at all, remain very indefinite indeed. I cannot, in a short space, pretend to enumerate the modes in which baths of various temperatures act on the body; but I may describe those actions, and how far they may, in different conditions, be carried; I can also speak of the mode of preparing baths, and of the heat at which, for different purposes, they should be used.

Baths are variously named, according to their temperature; thus we call them cold, tepid, warm, and hot. The cold bath is hardly employed as a part of medical treatment, at least not of that treat-

ment with which a nurse has anything to do. The habit of taking a cold bath, winter and summer, on first rising in the morning, is, I am glad to say, very much increasing. It not only preserves the skin pure, and keeps the circulation therein vigorous; but it also tends to guard the person so habituated against colds. The tepid bath is made of water, from which the chill has been taken, and is of no medical value, except for those persons whose strength is not sufficient to bear actual cold water.

The warm bath is extremely useful in many diseases, and particularly so in children; it ought also to be taken more frequently by healthy persons, who cannot, or will not, use the cold water every morning. The temperature of this bath should be between 98 and 90 degrees of the thermometer;* that is, from the actual heat of the blood to eight degrees below it. Never trust to the hand, or to the sensation of the patient, as an index of the warmth of the water; for nothing can be more deceptive than such a test; and by making the bath over-hot a different effect to the one intended will be produced.

The warm bath is to soothe irritation, or to restore after fatigue. When infants are suffering pain, say from teething, and become restless, the warm bath soothes and quiets them, diminishing the irritable fever; even when the continued pain shall have produced its effects on the whole nervous system, giving rise to convulsions, the warm bath often checks them, and restores quiet action. In

* Fahrenheit's thermometer.

grown-up persons similar results are produced, less strongly, of course, than in the more sensitive frames of children; and we find the over-tired man is refreshed by the bath,—that one bruised by a fall, or strained by an over-violent exertion, is soothed, and that the pain is lessened.

There can be very little difficulty in preparing a bath of this sort for a child; a small tub and a kettle of hot water being all that is necessary. Let the heat of the bath mount only to 90 or 95 degrees, and do not let the child remain in it longer than from five to ten minutes, according to the age. Of course, on taking the infant out of the water, he must be dried well and quickly, without exposure to cold. The great difficulty with a grown-up person is the size of the vessel in which the bath must be made. In many towns, slipper and other baths are let out for a small expense, at different tinmen's shops. In many other towns there are baths and washhouses: but I fear that these are not made use of as fully as they ought to be; because there is a general idea that people catch cold after a warm bath, unless they go immediately into a warmed bed. Now this notion is not true; indeed, it is the direct opposite to truth; for it is extremely unlikely that a person just out of a warm bath should catch cold. No healthy man would be the worse for using such a bath in the depth of winter, and then, with his usual clothing, walking briskly home. The grown-up person, if of tolerably robust frame, should take his warm bath between the degrees of 94 and 98, rather

avoiding the higher verge of heat; and a quarter of an hour is long enough to remain in the water, for both a higher temperature and a longer time will tend to weaken.

By the establishment of baths and wash-houses, warm bathing has been lately placed much more at the service of the public; it has therefore seemed advisable that I should enter at some length into its use and value. Now let me say a few words of what may be its abuse. When the water in a bath exceeds 98 degrees in temperature, it is called hot, and its effects are rather different to those of the warm water. The first effect of the hot bath is to excite; the pulse beats quicker, and the limbs swell, so that rings, which may have remained on the fingers, become too tight. Then comes a slight fulness, and giddiness of head, a sensation of languor, and if the person still remain in the water, he will faint. Such a bodily state as this should never be produced, except for some especial medical reason; and it is to guard against it that I have mentioned it, and have disapproved the preparation of baths without using the thermometer.

Another sort of bath is the vapour bath; but the difficulty of preparing this in a private house renders it scarcely advisable to give any particular description of it.

### THE HOT-AIR, OR TURKISH BATH,

Is hardly to be prepared in one's own house, and it would not be mentioned here but that, when first introduced among us, the most ridiculous and

extravagant notions were entertained as to its effects; notions which were, I am sorry to say, fostered by some of the medical profession, certain of whom, in their anxiety to attract notice, published lectures on the "*heat cure;*" as though an agent had been suddenly introduced among us, which was to do away with disease, and thus constitute the first step in the millennium. Under these circumstances, it seems advisable that a sober and unbiassed judgment should describe what the heated air can do, and what it cannot do.

In the first place, it does not, and cannot, heat the solids or the fluids of the body up to a point sufficient to kill or decompose any germs of organic or malarious poison. The temperature of the blood can only be raised by a very small number of degrees without causing death, and any considerable quantity of the solid constituents cannot, of course, be heated without also heating the blood; thus the temperature necessary to destroy any organic poison, as that of fever, or scarlatina, or any other disease, would inevitably prove fatal.* I should be very loth to affirm that hot air can of itself cure any one malady; though it can sometimes nip a cold in the bud, if it be taken as soon as the first symptoms are detected, and if during the bath a good deal of cold water be drank.

It would, however, be false to understand me as denying the value of the hot air as a very considerable aid in many diseases; especially in those of

* In certain forms of parasitic skin disease, the parasitic life, if close to the surface, may be destroyed by the heated air.

gouty and rheumatic origin, or any other which, like the above, owe their existence in great measure to want of action on the skin. The whole truth lies in a nut-shell—the hot-air bath is a very powerful diaphoretic, or producer of perspiration; whenever that action is beneficial, then the hot-air bath (unless circumstances forbid its use) is valuable, but it has no specific action.

## TREATMENT OF DROWNED PERSONS.

Let us pass on to consider one of those cases where the life of a fellow-creature may depend on the vigorous and properly directed use of some of the applications we have been considering. It may happen, that on some occasion, the recovery of a half-drowned person — of, to all appearance, a corpse—will depend on the prompt action of one not much used to deal with such affairs. Now the old plan used to be, to hold the person up by the feet, that the water might run out of the mouth; this was done under the mistaken idea that the water would kill him, while in truth it is not the water itself, but the want of air, which is the cause of death. Such a person is, in fact, smothered, but by water, instead of with a pillow. When a person is dying from smothering or want of air, the veins of the brain are very much filled with blood; and therefore hanging him up by the feet is perhaps the most rapid possible method of extinguishing what little life may remain.

To preserve life, he should be laid down before a

fire, and stripped as quickly and gently as possible. As each garment is removed, the part should be covered up with a blanket, while some one, with the hand beneath it, should rub the skin quite dry with a woollen cloth. The sufferer should then be got to bed, with hot-water bottles to the feet and to the armpits; a bag of hot salt should, as soon as possible, be placed over the pit of the stomach and heart. The room in which the patient is laid should be warm, but airy: let me therefore here record a warning against allowing a quantity of curious neighbours to crowd round the bed, keeping away the fresh air; let just enough people remain in the room to be of use; every superfluous person is worse than useless. When once the patient is in bed, two assistants will be all-sufficient; in order to get him to bed, perhaps as many as four persons may be wanted. If the various hot applications be not quickly successful, and if in a few minutes medical assistance have not arrived, what is next to be done? There are two means of producing breathing — artificial breathing — which certainly ought to be tried, as they frequently restore life; but unless they be thoroughly understood and well performed, they will do more harm than good.

When a person breathes, his chest rises and falls, —rises, namely, when air passes into it, falls when the air passes out. There must, therefore, be a position of the chest between emptiness and fulness, which we call a state of rest. Artificial breathing consists in pressing the chest smaller than it is in

this state of rest, then leaving it free again to expand to this state, and thereby to draw in a certain quantity of air,—again squeezing it, leaving it free, and so on. This, then, is simply an imitation of the mechanical part of breathing, viz. the admission and expulsion of air to and from the lungs.

In small children this may be done by two people, simply with the hands. One person must grasp the chest and squeeze it, while the other presses the belly at the same time, and the pressure on both parts of the body must cease at the same moment. These actions ought to be repeated about twenty or thirty times in a minute. With grown-up people there would be more difficulty, because of their greater size, and of the greater hardness and strength of the ribs; it is better, therefore, to adopt quite other means.

In the first edition of this book I explained a somewhat elaborate method of inducing air to enter the chest by compression of the ribs. But, between its appearance and the publishing of a second edition, Dr. Marshall Hall had shown why that method often failed; and he also pointed out another proceeding, so rational and so simple, that he deserves great honour for its invention; even although since then Dr. Sylvester has devised still another means, which the united opinion of the profession has stamped as the best. I will describe both processes.

In the first place, Dr. M. Hall explained that when an individual, half-drowned and insensible, is placed upon his back, the tongue, with any fluids

which are in the mouth, fall backward over the orifice of the windpipe, and prevent air from finding its way into the lungs; also, that in conveying the person to a dwelling, the time lost is often life lost. Moreover, that there is an easy method of imitating respiratory movements. He advises the following plan:—

Treat the patient on the spot, without loss of time, and in the open air, freely exposing, except in severe weather, the face and neck (rubbed as dry as possible) to the breeze. Send instantly for medical aid, and for blankets, clothes, etc. Place the patient gently on the face, with the left arm under the forehead, so that any fluids may flow from the throat and mouth, and that the tongue may fall forward. Then, to excite respiration, turn the patient on his side, and apply snuff or other irritant to his nostrils. Dash cold water on the face, which has previously been rubbed warm. If breathing does not immediately follow, it is to be thus imitated, and without loss of time.

Replace the patient on the face as before, with his left arm under his forehead. Press gently upon the back, along the spine; then, standing at the patient's left side, take hold with one hand of his right shoulder, with the other of his right hip. Turn him on the left side, and *a little beyond;* keep him in that position a second or two, then roll him upon the face again, let him rest thus about the same period, then lift him again upon the left side. These measures are to be repeated deliberately, efficiently, and perseveringly, *fifteen times a minute only.*

Now this action is of itself sufficient to move in and out of the lungs a considerable quantity of air. When a person, insensible from partial drowning, or even dead, be thus placed on his face, the weight of the body falling chiefly on the ribs, presses out of the lungs about twenty cubic inches of air; a little additional pressure upon the back expels about ten more. When the patient is turned upon the side, *and a little beyond*, the weight of the body no longer falls upon the chest; the elasticity of its various parts causes this cavity to expand, and thus draw into the lungs twenty or thirty cubic inches of fresh air.

Dr. Sylvester's plan does not make any alteration in the suggestions for drying the patient's body and restoring its temperature, but his mode of artificial breathing is certainly more easily effected. Thus the patient is lying on the back, his arms lying straight down by his side; these are now to be grasped and brought up along the ground, or couch, till they meet above the head. Being kept in that position about two seconds, they are again to be returned to the sides, and, after a similar interval, are again to be raised, and so on alternately about fifteen times in the minute. In these actions the arms are simply used as handles wherewith to lift the shoulders to their highest point, a movement which cannot take place without raising the ribs, especially the upper ones, and thus air is drawn into the lungs,—becomes expelled again as the arms are placed by the side—and so on. By either of these actions air may be pumped in and

out of the chest even of a corpse; but if the patient have any spark of life remaining, the breathing thus imitated will probably set the heart in motion again; in the meantime, however, circulation and warmth should be encouraged by rubbing the limbs briskly upwards with firm pressure, using handkerchiefs, or anything in the way of towels.

## EFFECTS OF COLD.

In this climate it is unusual, but still occasionally happens, that persons are frozen to death; indeed, during the coldest part of the winter of 1854-55, several persons, much exposed to night air, viz. one or two policemen and others, were thus killed. It does not appear to be a painful sort of death, for after a time the sensation of cold ceases, and the individual only seems aware of the most intense sleepiness: but if he slumber, it is for ever. Any one, who is with a person thus attacked, must strive by every possible means to prevent his sleeping: walking him along, shaking, pommelling him—in fact, everything must be tried, for keeping him awake is keeping him alive.

If a man, not quite so far gone as this, come to a house, he will, at first sight, appear to the inmates as though he were wretchedly and stupidly drunk. The glazed eyes stare and swim in the head, and are either fixed or wander unmeaningly; the head hangs, and if he attempt to speak, the voice comes from the throat thick and indistinct. One should be careful, in very cold weather, not to turn such

a person from the door merely on suspicion of drunkenness; it would be better to err on the side of mercy. If he be admitted, finding that he is frozen, he is not to be put in a well-warmed room, nor close to a fire, for the sudden change would be torture, perhaps death. To him a cold room is pleasant; such a chamber as would feel like a vault to one coming from the fireside, is to him of the most agreeable temperature. A little weak brandy-and-water may be given him, and some broth, if it can be got ready; by degrees he may be brought into a warmer room and prepared for bed. The garments must be very carefully removed, particularly from the feet, because if any of the toes are frost-bitten, violence may actually drag them off in the boot. Those parts in which the blood does not yet flow freely, which are benumbed, and have a white dead look, may be chafed and rubbed gently with the hand, or with snow, but must not be held to the fire or put in hot water. The bed in which the man is put must, of course, be aired, but not warmed; he may be covered thickly and warmly.

Cold is very exhausting, and the frozen person must be fed, but very carefully; in fact, as people are seldom thus attacked by cold unless also partially starved, and as the mode of feeding will be the same in both instances, one description will suffice. The food must be very sparingly given, but pretty frequently, for the stomach, weakened by long fast, would reject a heavy quantity. Thus, also, it is better if the nourishment be liquid. A

table-spoonful or two of bread and milk, or of broth, every ten minutes; a glass of sherry, or a little brandy-and-water may be given by tea-spoonfuls in the intervals. In a short time, when sufficient food has been taken, the sufferer will fall asleep, and may be permitted to slumber for about two hours, and then more food may be given, still with a sparing hand, until the stomach has accustomed itself, and then the man may be left to his own governance.

Besides this general effect of severe cold, there is a partial injury, known by the name of frost-bite. It is caused by a gradual stopping of the circulation, and therefore begins in those parts furthest from the heart, viz. the tips of the toes or fingers. The ears are also a choice locality for the attack. These injuries are, in their appearance and mode of action, remarkably like burns; they go through the same stages and have the same degrees. In burns of the first class, we must endeavour to keep on the scarf-skin, by bringing the burnt part, by slow degrees, into the usual temperature. In frost-bites we try to recall life to the part by slowly leading it through slightly greater and increasing warmth, to bear the general heat of a living room. In either case we should greatly injure by a sudden change from heat to cold, or from cold to heat; a great deal more skin would be thus destroyed than when we slowly recall the usual degree of warmth; thus, as the burnt limb was put into warm water, which, however, was not nearly so hot as the temperature which burnt; so a frost-bitten part must

be put into cold water, or snow, which is, however, not nearly so cold as the air which froze. The person must not, of course, be brought into a well-warmed room ; in fact, all sudden changes must be carefully avoided. If, after this, the skin come away from a frozen part, it may be treated just like a burn, with linseed-oil and lime-water, or with flour. Among sailors, who have been far northward, either in trading whalers, or as searchers for that highly useful North-west Passage, frost-bites of a more severe kind have taken place—so severe as entirely to kill the limb attacked, as the hand or foot, and to cause it afterwards to separate from the sound parts, leaving a stump, as though a surgical operation had been performed.

A less violent effect of cold, or rather of irregular changes between cold and heat, is chilblain. This troublesome state arises mostly in children, and in those of a feeble constitution and circulation ; in such persons, namely, as suffer much from cold hands and feet, and in whom these parts look blue under a very small degree of cold. These inflammations begin with a tingling hot sensation about some spot of skin in the hand or foot; the part soon gets red, and the burning sensation increases until it is almost unbearable.

There can be no doubt, that if we are to cure the chilblain at all, we must attack it at once in this early stage ; and a vast number of remedies have been tried, such as camphor-liniment, soap-liniment, and so on. The great principle, however, in their treatment appears to be to provide some means

of keeping up an equal temperature and dryness. Thus, if the chilblain be on the hand, a wash-leather glove should be worn; if it be on the foot, either a sock or a piece of such leather worn next the foot; and besides this, either the hot or cold plan may be used. The hot plan is one that is not unfrequently successful, and consists simply in dipping the chilblain for a few minutes into hot vinegar, if it is on such a part as can be put into a glass or jar, such as on a finger or toe, or on the heel. When removed, it must be well dried, rubbed, and again put into the leather sock. The cold plan is that more frequently used on the Continent, and differs from the other inasmuch as instead of dipping the chilblain into hot vinegar, it is put into ice-cold water for two or three minutes, or is rubbed with snow. The choice between these two opposite methods of treatment depends chiefly on the power of the patient's circulation, and the general state of constitution. I should not recommend the cold plan for young children, nor for persons of a particularly weak habit, whose hands and feet are very frequently cold or blue. Certain applications, as a strong solution of nitrate of silver, or somewhat dilute nitric acid, are occasionally useful.

When chilblains run on, as is not unfrequently the case, particularly in persons inclined to scrofula, they become more red and swelled, producing a very distressing feeling of heat; then on the top of the swelling something like a blister is formed, the scarf-skin being puffed out with fluid, not a clear, but a dark-coloured one, often mixed with

blood. When this breaks there is some relief from the pain for a little time, but only for a little; it soon comes on again, and in the meanwhile a regular open sore has been set up, which almost lames the limb. In this condition a medical man should always be consulted, for that form of chilblain may end in permanent lameness; while the pain and inconvenience which it produces are very great indeed.

## BRUISES.

Blows upon the body are apt to make on the part struck a dark blot, called a bruise, which arises from a little blood having been forced out of the small veins and remaining beneath the skin. They are, if not very large, of no importance, unless about the face, where they are ugly and disfiguring. I do not intend to mention any modes of making medicines and lotions, as such directions are often mistaken, and therefore dangerous; but I may observe that there are some washes which have the reputation of removing bruises. One of these is the Arnica lotion, which can be procured at any chemist's; another, which is safer and perhaps more useful, is made of nitre dissolved in water, and the stronger this is, the better. I fear however that, under all circumstances, a bruise will remain some days—in fact, until the blood that was squeezed out of the vessels by the blow be absorbed. If in some part of the bruise the skin have been broken by the extreme violence of the blow, a poultice should be applied; when, after a few days, the

part becomes still more swollen, particularly if the surrounding skin be red, medical aid should be sought, as these may be signs that erysipelas is about to set in.

### SPRAINS.

Another result of violence is a sprain. This happens chiefly to the ankle or wrist, and may, or may not, be a serious accident according to the part injured and to the careful adaptation of the treatment to the form of accident. All sprains are by no means alike; there are different parts in and around the joint, any one of which may be hurt. Indeed, the distinctions between various sorts of sprains are not yet sufficiently recognised, and I shall not be able, nor do I wish, to explain here the symptoms of the different injuries.* I may however observe, that if very soon after such an accident the part swells into a soft, pulpy state, the tendons or leaders are hurt, and that the best immediate treatment will be to put the limb into water, so hot as to produce a sensation only just short of pain. Herein the limb must remain for an hour, while the temperature of the bath is kept as high as bearable by the constant addition of more boiling water. When the limb is taken out of the water, the heat must be preserved by wrapping it in a poultice, in spongeo-pileine† wrung out of hot water, or flannel, or cotton-wool. This plan of treatment is called the opera-dancer's cure; a

* Sprains, their Differences and Treatment, form a separate chapter in Barwell, "On Diseases of the Joints."

† An artificial material, described under the head of Poultices.

woman of this profession is, of course, much subject to sprains, while even a temporary lameness would be a great injury to her; but by this method such a person may be so quickly cured as to enable her to dance on the following night. I will by no means promise in all cases so rapid a cure, for only one particular form of sprain can be thus quickly got rid of; besides, opera-dancers' legs and ankles are somewhat of the toughest; yet I have not unfrequently seen in delicate ladies the lameness quite disappear in eighteen hours. In other cases the effects of the injury continue for a long time. I will not pretend to give here the various reasons of these differences; in every case of bad sprain a surgeon should be consulted, because it may in reality be another form of injury, such as only a surgeon can detect and treat. Some years ago a lady came from the West of England, and consulted me about an old sprain; I found that the small bone of the leg had been broken. Again, since then a man came to me at the hospital, in consequence, he said, of still suffering lameness from a sprain he had received in his childhood. On examination, I found that he had not merely sprained the ankle, as he had imagined; but that the foot had been dislocated, and that, as the injury was now so old, any hope of restoration was vain. Thus, on no account, should bad sprains or other hurts about the joint be neglected. A surgeon, either at his own house, at an hospital, or dispensary, according to the means of the person injured, must be consulted.

## CHAPTER VI.

Bandages—Their Value—Leg Bandage—Hand Bandage—Double-Headed and Two-Tailed Bandage—T-Bandage.

PERHAPS of all surgical appliances the most frequently used is the bandage. It is valuable in sprains, for instance, in the swelling of the legs produced by large (varicose) veins, useful to keep various applications—poultices, blisters, &c.—on the body; in fact, there are so many ways in which a bandage comes into daily, almost domestic use, that I believe I am right in attempting to describe some of the modes of its employment. At the same time I must say that there is no charm or magic in wrapping a piece of calico or linen round a limb. The value of a bandage consists simply and entirely in its exercising an even and equable pressure; if, however, it be so applied that the pressure is unequal, it is infinitely worse than useless.

### BANDAGES.

There are several materials from which bandages may be made. Stout linen, which has been used and washed pretty frequently, is excellent—old sheeting for instance. A stout sort of unbleached calico makes very good bandages, and is inexpensive, as the stuff is sold for threepence-halfpenny or

fourpence a yard.* There is, moreover, a material woven specially for the purpose, called elastic bandages; I recommend the calico and linen ones, because they are unyielding, and must lie on the limb as they have been applied, whereas the yielding of the elastic bandage prevents its sitting smoothly. Any one can convince himself of this, by stretching an elastic bandage, when it will be found that the middle portion becomes hard and tight like a cord, while the sides are loose and wavy. A bandage must set *even* upon the limb, and to do this it must be equally tight at sides and middle, which can only occur when it is made of an inelastic, unyielding material.

Bandages must be of different lengths or breadths, according to the use to be made of them; that for the leg of a full-grown man must be about three, or three and a half inches wide, and two and a half or three yards long; for a child or small-footed woman, it must be somewhat narrower. To prepare it for use, wind it smoothly upon itself as tightly as possible, from one end to the other, and clear away all the loose threads, which are apt, particularly if it be calico, to hang about the edges. Thus prepared, the bandage is named also a roller, and its rolled portion the head.

The whole limb, from the root of the toes to the knee, is to be covered completely, with the exception of the heel, by this narrow strip of linen, and as it winds round and round the leg, it must press

* There is a temporary disturbance in the relative price of linen and cotton hardly worth notice in the text.

equally on all parts of the skin ; that is to say, that not only must each such turn be as tight as the one just above and below it, but also, that at each turn the upper and lower edge of the bandage must lie equally close. This latter condition depends upon the way in which the bandage is held, as will be seen by a simple example. Take a slip of paper and wind it once round a finger, letting it lie quite smoothly, and still holding the projecting end in the other hand ; now, by moving this end nearer to the point, or nearer to the root of the finger, either the upper or lower edge of the strip of paper will be loosened, and will project. This example is the great key of successful bandaging, if it be observed and remembered that, after having begun at a certain angle to the skin, we must continue our bandage at the same ; we cannot choose where the roller shall go, but must follow its lead along the different curves and various surfaces of the limb. Beginners must both look and feel carefully at the edges of the bandage, each time they wind it round, to ensure its lying perfectly smooth ; but afterwards, the head of the roller will, when both edges are equally tight, give to the hand a certain sensation of equable resistance, which will be an infallible and sufficient guide. Whichever method is followed, the bandage must, I repeat, take that direction into which the curves of the limb will throw it.

The easiest arrangement for bandaging the leg is to let the patient sit upon one chair, and place his limb on another, upon which the bandager can also sit. The patient's foot should rest only on the

heel, leaving the rest of the limb perfectly free for manipulation. The description which I am about to give will be dull and uninteresting in the extreme, and the reader must be warned that it is useless simply to read straight through the following instructions: to make out and profit by the directions, he must take a bandage in his hand, procure for a few minutes the loan of a leg, and then steadily follow out the descriptions as ladies do with the receipts for fancy knitting and crochet work. Hold the head of the bandage in your right hand, and place its end round some sharp curve in the foot, near the toes, in such a position as will allow it to pass round the foot nearly to the same place, but a little nearer to the instep. While with the left hand the end of the bandage is held in this situation, the right must pass the bandage once round the foot. I say place the *end* of the bandage round "some sharp curve of the foot," such as is found where the outer or inner side passes to the sole; for if it should merely be laid flatly on the back or sole, the next turn of the roller would not confine it to its place, as is now the case; but it would slip away over the skin. The position in which this end is placed, or, in other words, the angle at which the bandaging is commenced, must be such as to allow the roller to run smoothly twice round the foot; and it must be thus wound round by passing the head of the bandage in a circle from the right hand to the left, and *vice versâ*, letting more and more unroll from the head as it is required. When the bandage comes for the second time upon the instep,

it naturally inclines from one side of the foot to the other side of the ankle (Fig. 1); then it will pass round the ankle, and from its side across the instep

Fig. 1.

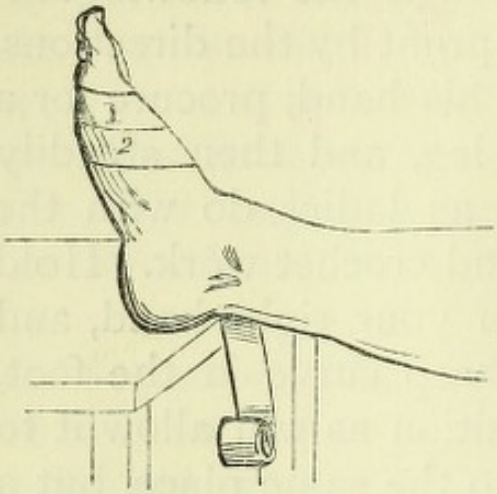
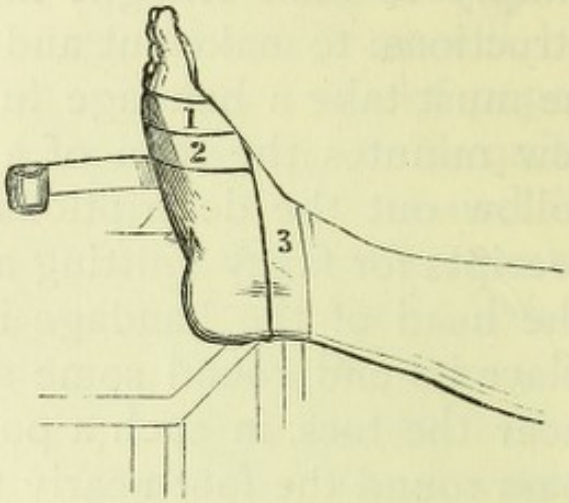
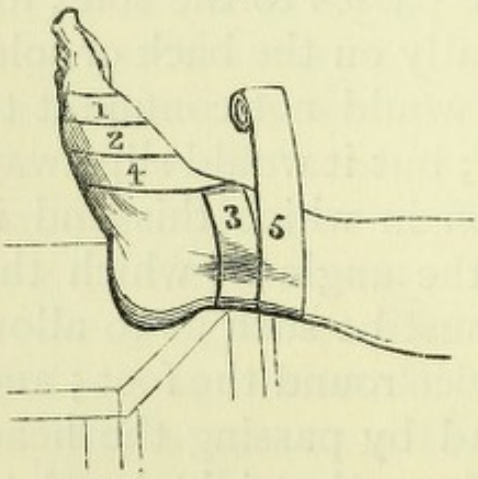



Fig. 2.




to the opposite side of the foot, and then under the sole of the foot. Thus will have been completed a sort of figure of 8 (Fig. 2), one loop of that figure encircling the foot, the other the ankle. This same direction must again be followed, except that the bandage will be on the foot a little further back, and on the ankle a little higher (Fig. 3). The directions and positions of the separate turns will be these:* from inside of the foot across the instep, to outside of the ankle, round to the back, and inside of the

Fig. 3.




* If on the same leg the contrary direction of bandaging be followed, it will only be necessary to change in the text the word "outside" for inside, and *vice versâ*.

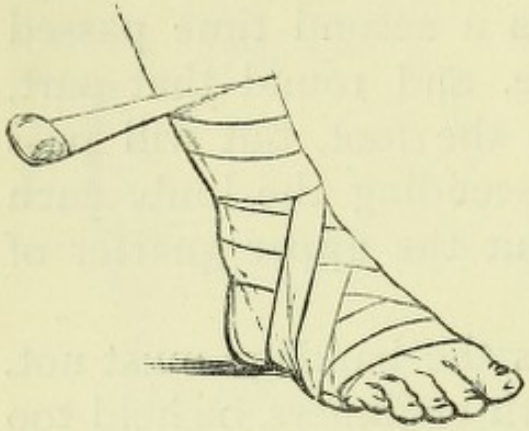
ankle, across the instep, and the former turn to the outside of the foot, under the sole to the inside of the foot; then the same again, except that after the bandage has a second time passed from the foot to the ankle, and round that part, it will not again incline to the foot, but will pass round the leg, gradually ascending the limb, each fresh turn overlapping about the upper quarter of the one just preceding it.

During these manœuvres the bandage must not, as is commonly the case with beginners, be held too long: I mean, with too long a portion between the limb and the head of the roller; from three to five inches is quite sufficient.

When the bandage has ascended some distance from the ankle, and just as it gets to the swelling of the calf, some new manœuvre is necessary. In consequence of this change of direction in the surface of the limb, the bandage will run, if both edges be kept tight, not at the side of, and overlapping the former turn, but a good deal away from it, so as to leave an angular gap. Therefore, to meet this alteration in the surface of the limb, a compensating change in the direction of the bandage must be made by a fold called a half-turn. When the bandage begins to leave a gap, as above described, which will happen in the front of the leg, the learner must carry the head of the roller in the left hand, unwinding it a little, to some distance from the limb: place the forefinger of the right hand on the lower edge of the bandage, to keep the part already done tight. Loosen the free part of the bandage

with a sudden movement of the left hand; turning that hand over, and at the same time bringing it, with the head of the roller, down towards the patient's foot.* By this means the bandage will have been folded or turned half over (Fig. 4), and the hand having been brought at the same time down to the foot, will have rendered this fold very short and abrupt, but also smooth and even. By raising the hand again towards the knee, the half-turn can be lengthened out till the roller follows the desirable direction. When this half-turn has been duly completed, the bandage can be drawn tight, and the finger of the right hand removed. This half-turn will have to be repeated several times; more or fewer, according as the swell of the calf is greater or less. The folds should take place in the same part of the bandage, so that one may always immediately lie above the other; and this can be easily managed by placing each time the finger of the right hand on the lower edge of the roller, immediately above the former half-turn. In the whole process there is no difficulty; it only requires patience, a hand gifted with some amount of fine sensation, and practice. The two different directions of bandaging must be distinguished from one another; for in certain cases

Fig. 4.



* If bandaging be done in the contrary direction, the word "left," in the text, must be altered to "right," the word "right" to "left."

it is necessary to roll in one direction, and in the contrary in certain other cases; but as these are not likely to fall under other than surgical care, it is not desirable to take up space with their consideration, although I should recommend every one wishing to acquire some knowledge of the bandage to practise both methods of using it.

## FINGER BANDAGE.

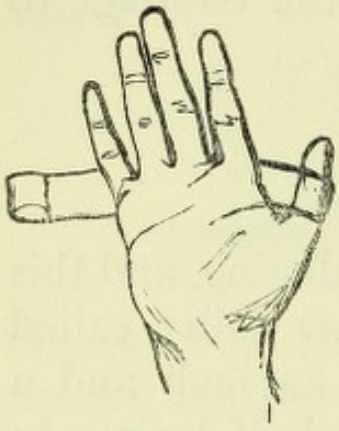
The hand sometimes requires bandaging, and this is to be done by means of a narrow roller called the finger bandage. This is only an inch and a half broad, a yard or a yard and a half long. In its use it is unnecessary to make any half-turns whatever, as choice of direction among the different surfaces of the limb is, in truth, unlimited. Observe the shape of the hand: it is broadest at the palm, becomes narrower at the root of the fingers, and also where it joins the wrist; thus if the bandage be brought to the inner side of the hand, to the base of the little finger, it will thence run up towards the wrist; and if it is to go again towards the fingers, it can first be brought just above the ball of the thumb, or of the little finger, when it will naturally take that direction.

It may be that the bandage is wanted to press upon, or to keep an application on, the back of the hand, when it need not include the thumb; and this method of bandaging is so simple that no directions more special than the above need be given. When pressure is to be made on the palm,

it is only requisite to observe, that as the part is hollow, it is necessary to place a pad in it, as the bandage alone will not fulfil this office.

If the thumb must be included in the turns of the bandage, and the hand kept *open*, it is best to begin by winding the roller round the thumb, in the following direction: namely, from the inner side (that which lies next the hand) to the back; then to the outer side, to the front, and so on. When it has passed the second time from the outer side to the front, it should pass between the forefinger and thumb to the back of the hand; and this, when tightened, will draw back the thumb, and keep the palm flat. There are many such contrivances for placing the hand in different positions; they are not frequently wanted, and can be more readily supplied by the reader's own ingenuity, assisted by a broad guide as above, than by any description pretending to great exactness of detail.

Fig. 5.

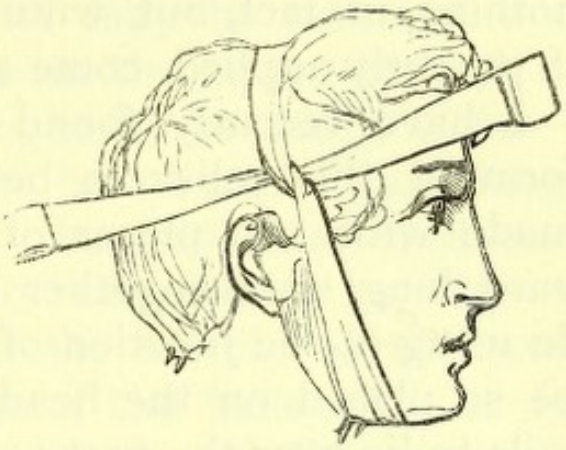


## BANDAGES FOR THE HEAD.

A nice way of keeping a plaister or a poultice on the cheek, in front of the ear, under the chin, on the forehead, top, or back of the head, is by the double-headed roller. This is simply a bandage about the size of a leg-bandage, rolled from both ends to the middle. In applying it, place the

centre thereof under the chin; one portion will run over the cheek, to just above the left ear; the other will take the same course on the opposite side, and moreover must pass over the top of the head till it reach the left ear, where it will meet its fellow of the opposite side. Pull the two ends as tight as desirable, and then twist them half round each other, so that they form a cross, and that one end will pass round the forehead, the other round the back of the head, till they meet again near the right temple. Here they may be tied or sewn together, and it will be better to do so if the object of the bandage be merely to keep a poultice on some part of the head or face. If, on the other hand, some degree of pressure be wanted, it will be advisable to continue the bandaging a little longer; therefore, when the ends of the bandage meet again at the right side, they may be strained tight, twisted half round as before directed, led under the chin and over the head, and again be brought to meet. Thus twisting the ends of the roller half round each other, whenever they come together, so that the direction is changing each time, the bandaging may be continued as long as necessary; but it must be remembered, that the more the head is thus covered, the greater amount of oppression and heat will be produced.

Fig. 6.



In applying this bandage, care must be taken not to place it so far back on the chin as to press unpleasantly on the throat; and if it be twisted more than twice, one such turn must not be made immediately over the other; for, if this be done, very painful pressure on the temple will be produced. The advantage of the bandage is, that the patient cannot rub it off against the pillow; nothing, in fact, but wilful mischief can make it, if properly applied, come away.

I have recently found a slight change in the form of this roller to be very convenient; it is made with two pieces of bandage, each about a yard long, sewn together crosswise in the middle. In using it, the junction of the two bandages must be so placed on the head as to allow one of the tails to lie over the part to which an application is to be made. No turn of the bandage must interfere with the organs of the face, unless they be the parts to be treated, and the four tails of the bandage are to be pinned or otherwise fastened together at the point opposite to that on which the original junction has been affixed. When properly applied, this bandage is cool and light, at the same time very firm and reliable.

Another useful contrivance is the two-tailed bandage. This is not so good for most purposes as the last, but it is better adapted for keeping an application on the tip or sides of the chin. Take a bandage a yard long, and from three to four inches broad; cut a slit about an inch long in the centre of it, and then tear the bandage down its

middle, from each end to within about three inches of this hole. The tip of the chin is to come through this slit; one tail of the left and one of the right end of the bandage are to pass under the ear on either side, and must be tied together at the back of the head, where it joins the neck; the other two tails, passing each in front of the right and left ear, are to be tied on the top of the head.

A bandage of this sort may be reversed, and used to keep applications on the crown or back of the head, but then it ought to be much wider—from six inches to a foot broad, and a yard long. It must be torn along the middle at each end to within half a foot of the centre, leaving, of course, twelve inches in the middle of the stuff untorn. Now the centre of the bandage is to be put on the crown of the head, and the two tails must hang down by each ear; the two which on either side are furthest back, should be brought forward under the other two and tied at the forehead, the others are to be tied under the chin.

## SHADING THE EYE.

Both grown-up people and children are subject to inflamed eyes, and in all such cases it is useful to keep away the light; but when this has been recommended for a child, it is often very annoying to find that people do so by tying a handkerchief over the forehead and upper part of the face. This is a very bad plan; it heats the inflamed part, and thus does, at the least, as much mischief as the

light could do. The proper method is to use what is called a shade, made of a piece of cardboard, large enough to hang over the eye, covered with some dark-coloured stuff, and tied over the brow by a piece of tape or narrow ribbon. A shade, thus arranged, will keep the light sufficiently away, and, as it merely hangs over the eye, will not heat the part.

Let no unprofessional person attempt to undertake the treatment of an inflamed eye; for it is, in many instances, utterly impossible for a person not medically educated, to say, whether the disease may not be in a part that is very delicate, most essential to sight, and, therefore, whether the disease may be dangerous or not. Yet I may say, that when a child or other person has merely a slight cold in the eye, it will often be relieved by bathing it in hot water—so hot indeed as to be only just short of pain—and by shading it from the light.

### THE T-BANDAGE.

A useful form of bandage for keeping an application to the lower part of the body is called, from its shape, the T-bandage. It is made of a piece of roller about a yard long, to the centre of which is sewn another piece of about the same length, so as to make the whole in shape like a capital T. The first piece mentioned is intended to go round the waist; the second will then hang down behind; but it is to be passed beneath the body, brought up, and fastened in front. Perhaps, however, this

bandage is made more wearable by splitting the centre piece and so making it two-tailed, either in front or behind, or both, as the case may be, and sewing these tails at some distance from each other to the waist-piece. In fat persons it may also be necessary to sew upon the waist-piece two other strips of bandage, which are to pass over the shoulders and act like braces.

Upon the foundations now given, many sorts of bandages may be constructed, and an ingenious person will often contrive some that are very convenient for any special case. Indeed, the trade of bandage-maker has become a separate business, for if India-rubber and springs are called into aid, there is no limit to the different forms of bandage that may be made.

## CHAPTER VII.

On Nursing Severe Rapid Sickness—Qualification of Nurse—Value of Disease—Different Mental and Bodily States in Sickness—Fever taken as Type—Ventilation of Sick-room—Arrangement of Furniture, etc.—First Condition—Cleanliness—Bed-pan—Draw-sheet—Mode of Holding a Patient or Limb—Of Changing Linen—Of Washing—Bed Sores; how avoided—Circular Cushion—Water and Air Cushions or Beds—Patient's Difficulty in Drinking—Lifting the Head—Bent Tube—Second Condition—Dependence on Nurse—Quiet—Flies to be kept away—Watchfulness—Third Condition—Pillows—Save Strength—Amusement without Fatigue—Rapid Recovery.

WE now come to what may be more particularly call "nursing;" that is, the watching beside the bed of serious sickness, ministering tenderly and skilfully to all its wants.

It has been said again and again, that women make better nurses than men, and such is undoubtedly true; but the woman, who supposes that she is born a good nurse, will never become one. Vanity is the most unfitting passion at the side of the sick-bed, whether it be in doctor or in nurse; for vanity is in its very nature selfish, and in the sick-room self must be forgotten. All one's attention must be fixed upon the patient: to learn how to aid in his recovery, or to diminish his sufferings, must be to the nurse a far dearer object than to

show how much she happens to know of the disease, and how valuable her services may be to the invalid, or to his friends.

A good nurse must possess the most untiring patience, the calmest temper, joined with a rapid perception, great power of undergoing fatigue, a strong but well-directed will, and a firm but tender hand. The woman, lucky enough to be gifted with all these qualities, must have some training, some knowledge of the sick-room, and of the management of disease; she also must love and honour her occupation, before she can become a first-rate nurse, a model of a nurse.

She must learn to look upon all, even upon the most hideous and dangerous diseases, with neither disgust nor fear; she must teach herself, too, to consider illness not as an unmixed evil, nor as a punishment sent upon the particular sufferer under her charge. I think that all people do not sufficiently and properly consider the value of disease. When in 1848–49 cholera came to this town and hurried away its thousands, did not its visit produce good out of the very evil? Men's minds, ay, and women's too, were awakened to the horrors that were crowding thickly around them. The rich heard of courts and alleys, in which poverty and misery, unholiness and unhealthiness, had reached a height of which they had no conception. The careless and well-fed man thought, perhaps with some prickings of conscience, on the hard fate of his poorer brother, and may have given to Lazarus more than the mere crumbs that fell from his table.

The drainage of London, chiefly of such courts and alleys, has been improved; the lodging-houses are bound by law to provide better accommodation; the water, supplied by the various companies, has been examined, and they are now legally obliged to furnish it of a purer sort. Shall we suppose the faults of drainage and water supply are the only vices which this disease has cured, or at least diminished? It seems to me that a greater amount of thought is now constantly being turned to the condition of the poor, and to the means of helping them. More time is spent by private persons and by the Government in procuring them proper lodging, proper water, and, as far as can be done at present, sufficient food. Perchance this malady may have made many of us better Christians. It may not have attacked those most in fault: the tower of Siloam did not fall on the greatest sinners in Jerusalem.

In the family alone, sickness works marvels. The strong man, confident in his health, following daily his worldly occupation, is too apt to give all the power and vigour of his mind to business matters; but when sick unto death, such cares and pursuits look to him small and trivial, and he perhaps feels, that his life has been wasted rather than employed. If he recover, he may endeavour to pass his time better, and to purify his heart with thoughts of something higher than his mere business task.

Among the healthy of the family, his sickness will call forth the most unselfish feelings of human nature. The gayest and most thoughtless son or

daughter will give up a long-cherished scheme of pleasure to sit by his bedside, trying to soothe away his pain, and feel themselves rewarded by a grateful smile. Let us look then upon disease as a good thing, not to be welcomed nor indulged, for such yielding would be a cowardice and selfishness, but a holy thing, when it summons the noblest part of us to rise against, to fight with, and if possible to beat it down. The good nurse must consider the sick-room as her appointed field of sacrifice; she must not labour there coldly and heartlessly, as at a necessary but unpleasant task; she must enter it, knowing that there is her sacred duty, which she had better leave undone, than do it carelessly, and heartlessly.

It is not for the sake of introducing a taking subject, nor of rounding off what I have to say with an appeal to popular feeling, nor indeed of adding my small word of praise to all that has been so nobly won by Miss Nightingale, that I here make mention of her name. I bring it forward simply to show, how, gifted by Nature, she yet worked at and practised a vocation which she chose from love. Years before she was known to the public she was studying the art of nursing among the sick poor; she then left her home to practice it in the Institution for Sick Ladies in King William Street; and I am sure she would acknowledge, that, in spite of her love for the occupation, she would have been unfit for the labours she at last imposed upon herself, had she not learned its details by hard experience. It is not

to be supposed, that, by anything taught verbally in these pages, a woman can become a good and able nurse; but perhaps, having her eyes opened to what is necessary, she will learn much more quickly than by experience alone, how to make herself useful in the sick-room. A nurse has to undertake many disagreeable, many hard tasks. I shall not attempt to disguise them. The duties of the sick-room are not pleasant; unless the consciousness of being useful, of diminishing the sufferings and adding to the comforts of the sufferer, may give a pleasure even to the most disagreeable parts of the occupation. In speaking of the work a nurse has to do, it is, then, impossible to gild or slur over the unpleasantnesses of those things kept usually hidden. I must write as a medical man would talk to an uninstructed nurse, who may not, if he would be well aided in his duty, omit to mention any, even the lowest and most servile tasks.

Rapid disease, of which I am now speaking, may, and generally does, alter more or less, and in different ways, the condition of the patient's mind; and it is well that the nurse should be aware of this, that she may regulate her conduct accordingly. One patient will be calm under great suffering, desirous of giving as little trouble as possible; and here kindness will be taxed to find out, and do even before it is asked, anything that may make him more at ease. Another will be heavy, almost unconscious; and then quickness of perception must be used, that anything, the want of which the invalid scarce feels, but which is really required,

may not be omitted. A third person may be rendered extremely fretful and irritable, constantly desiring something new, or different, and never pleased, continually complaining of inattention, awkwardness, etc. Such a patient is to be looked on as a good test of a nurse's temper; more particularly, if the complaints are, as often happens, groundless and unreasonable. It will help all persons having to do with such a patient to keep their tempers, if they will consider his fretfulness as a part of the disease, to be nursed, to be pitied, but never resented. A fourth invalid may be delirious, though not violent when properly managed: the courage and firmness must be unbending, the mind active, the hand steady and unshaken.

The bodily conditions of disease also change. At first there may be violent fever, when the greatest care and quiet are necessary, and when the arrangements of the sick-room may make a great difference in the chances of life and death. By-and-by, if the fever abate, there may come a time of great weakness and depression, when the management of food and drink, with other matters to be spoken of, become of the utmost importance. There may be a state in which the bodily conditions are constantly fluctuating between these two, and when the judgment of the nurse will be severely tried. Thus, different cases will require different modes of nursing, which the directions of the doctor will in general, and certainly ought to, point out. But in speaking of the subject broadly and as a whole, I shall be able to make myself more

easily understood, by supposing a certain case, and giving directions as to the mode of doing what is necessary in its various circumstances.

Fever is a disease which runs through different stages, and all of them depend in part for cure upon good nursing; and as such a case gives ample room for mentioning some of those differences spoken of above, we will suppose at once, that I am going to give directions to a woman about, for the first time in her life, to nurse a fever-patient.

Let me, however, first observe, that the particular poison which produces this disease, appears to affect young persons more readily, than those who are approaching middle-life, and that therefore the nurse for such a case should not be very young. Remember also, that when the poison of fever, like every other poison, is mixed with a certain amount of fresh air, it becomes more and more harmless; but in a close place, or unventilated room, this poison gathers strength, and the disease spreads. The room therefore of such a patient should be, if possible, large, and, unless the weather be very hot, it should have a fire, which will act as a ventilator, causing a draught through the room into the chimney. At all events, even if there be not a fire, the chimney-board should not be placed before the opening. The air should be constantly changed, by having a door, or a window, or both, according to the weather, always open; the bed-curtains should be taken down, or only that one which shades the patient's eyes from the light should

remain; carpets should be removed; in fact, all unnecessary woollen cloth or linen furniture must be carried away, because they not only prevent free currents of air, but are apt to hold, and then to spread, the poison. No unnecessary visits should be paid or allowed by relations and friends; and those who only occasionally enter the sick-room should never do so fasting, for an empty stomach renders the body liable to take disease. Great diligence will be necessary to keep the patient clean, and therefore the bed must not stand with a side to the wall; the nurse should be able to pass freely on both sides: indeed, much trouble is saved by allowing free passage all round the bed. All soiled linen should be immediately put into water, and taken out of the room; all discharges from the patient's body must be at once carried away. These are matters which a practised and careful medical man will order for his patient's sake, and partly for that of the family, and partly for that of the nurse. He will also probably order that chloride of lime or Burnett's disinfecting fluid be used; these are, however, not to supply the place of perfect cleanliness and ventilation, but only to assist them. So surely as too much faith is put in these disinfectants, so soon as they be thought to render the greatest care in cleanliness and fresh air unnecessary, so surely and so soon will harm follow.

And now I must confess, that I have only trifles to speak about; mere trifles make up the life of man, or may produce his death, and a string of

mere trifles may make a patient comfortable and aid his recovery, or may cause his discomfort, prolong his sickness, or render it fatal.

During the first week of fever, the patient is not insensible, but heavy and indifferent ; delirium does not usually come on till quite the end of this period. The patient lies on his back,—this is to be remembered ; the position of sufferers from different diseases is important. In fever, then, the patient lies on his back without moving much, snatching short moments of uneasy sleep ; and sometimes, even at this early part of the disease, the weakness, or the stupor and indifference, is such, that everything is passed under him as he lies. It is in great measure for this reason that cleanliness is so necessary ; for on the lower part of the back, sores are apt to arise, caused by pressure from the weight of the body upon the bed, and therefore called " bed-sores ; " the patient will not, perhaps, feel them, and even if he do, will most likely not complain ; but when he is getting better, they will tend to diminish his chances of life, they will cause great suffering, and are to be avoided as much as possible, by cleanliness. A practised and observant nurse will often see, by certain uneasy movements of the body, when this unmarked passage is about to happen, and will have a bed-pan ready. Care is to be taken in using this instrument, to warm it first with a little hot water, and to place it beneath the patient without violently rubbing it against the skin. First the nurse must well press down the bed about the loins, so as to make a hollow passage ; place the

hand (left or right, according to the side of the bed she stands on—that namely, which is nearest to the head) beneath the loins; lift him a little, and push in the pan between the bed and her hand, so as to press it against her own limb, and not against the patient. Before removing her hand, she must ascertain that all linen, &c., is well arranged. In withdrawing the bed-pan, she must not drag it away by main force, but again lift the patient gently.

Besides this, I should recommend a contrivance, known under the name of "draw-sheet." This is simply a sheet folded so as to be broad enough to reach from the loins to mid-thigh, laid smoothly over the bottom sheet, and which can be removed without the necessity of shifting all the linen. When it is desirable to change this, two persons should be employed. The clean linen had better be tacked to one end of that to be removed, and while one nurse lifts the patient a little from the bed, the other draws the free end of the soiled draw-sheet away, and by that very action pulls the clean one into its place. Strict personal cleanliness must at the same time be observed.

Let me here say a few words upon the way in which the hand should be placed upon a patient, particularly if it be intended to bear any weight. A patient should never be grasped, nor should any part of the body be supported with the tips of the fingers; but with the whole breadth of the hand laid smoothly on the skin. If the finger-ends be used for holding any weight, they will press and dig into the patient's flesh, causing him great dis-

comfort, particularly if the part be at all inflamed; but if the whole hand, with the fingers a little spread out, divide the weight over its surface, no discomfort, or as little as possible, is produced. These latter remarks apply not merely, nor indeed chiefly, to persons in fever; an inflamed limb, a broken or bruised leg, must all be handled in this way, or much pain will be caused.

The bed-clothes of a fever-patient must very frequently be changed; more frequently than in most other diseases. It may appear very absurd for me to tell you how to manage so common a thing as changing bed-linen; but having often seen patients lying uncovered and shivering, then hoisted about during a badly arranged shifting of bed-linen, I have been led to think a little on the matter, believing that nothing, which can render a sick person more comfortable, is beneath a surgeon's consideration. The following plan will be easiest and least fatiguing for the patient; but two persons must be employed in its performance. The sufferer must be got on one edge of the bed, if strong enough to lie on his side, by simply aiding him to turn on it; if not, by gentle lifting. The lower sheet, which is to be removed, should be rolled from that side of the bed on which he is not lying, close to his body, into a long roll extending from the top to the bottom of the bed. The blanket, and other bed-furniture now uncovered by the removal of the sheet can be shaken and smoothed. One side of the clean sheet must be rolled up nearly to its half, where there is a seam,

and the roll is to be laid close to the folded part of the soiled sheet, the two rolls lying side by side, making a ridge near the middle of the bed. When the patient has sufficiently rested, he can be lifted over this ridge, and placed upon the newly-arranged sheet; the other may be removed, the clean one unrolled and laid smoothly. Thus the under-sheet may be changed without exposing the patient to cold, and without causing him any great amount of fatigue. To change the upper-sheet without uncovering the sick person, is easier. The clothes must all be loosened from the sides and foot of the bed; each nurse, standing opposite her companion near the foot, can take the upper corner of the clean sheet in one hand,* while with the other she can hold the lower corner of the used linen. By pulling the clean sheet upwards, from the foot of the bed towards its head, under the soiled sheet and over the patient, while the used linen is held in its place, the change can be made without any difficulty. It is scarcely necessary for me to say, that the fresh linen ought to be slightly warmed, nor perhaps, that it is often unadvisable to do all this shifting at once, for fear of fatiguing the patient, but to change one sheet one day, another the next.

Even in such a common and easy task as washing a patient, there are wrong ways and right ways. Although in certain diseases it may be desirable, that the surface should be pretty frequently sponged, yet nothing could be more injurious than over-

* That which is nearer to the head of the bed.

fatiguing the sufferer by attempting too much, terrifying him by roughness or awkwardness, or causing him to catch cold by carelessness. In general this washing should be done bit by bit; and the weaker the patient, the less at a time. Let first an arm, and after some time the other, be sponged, and that may be enough for the day; on the next, one leg after another; on another day, the chest and front of the body; on a fourth, the back, while the patient is lying on his side: even if he be too weak to keep himself in this position, one nurse must support him on the side, while the other washes the back; for it is very important that this should be done, as much for cleanliness' sake, as for the prevention of bed-sores. Sometimes the patient's skin is very tender and irritable; the sponge ought not to be rubbed backwards and forwards upon it, but should be passed only in one direction, and that downwards. The sensation of upward and downward rubbing is very different, the one irritating, the other soothing; also in wiping the surface dry again, care must be taken not to hurt the skin by hard or careless rubbing. Was I not right in saying that I should speak of trifles? I have known these little things make all the difference between the patient liking the nurse, and hardly bearing her hand to approach him. Care will of course be taken in washing a patient, to keep the bed-clothes dry, by putting a towel or some water-proof material under the part being sponged.

I have spoken of bed-sores, describing them as caused by the lasting pressure of one part of the

body upon the bed. A patient who has been long ill becomes very thin, falls into that state when the bones look sharp and hard through the skin, stretched tightly over them like parchment. At the lower part of the back, the spine-bones project considerably, and bear a goodly portion of the body's weight; the skin over them begins after a time to get red, the patient complains, perhaps, of pain, and if care be not taken, these red spots will break out into sores, and cause very considerable discomfort and pain. It is often recommended that these places should be washed with brandy and water, brandy and salt, etc.; and these washes may perhaps be of some assistance in hardening the skin; but, if the pressure on the part be continued, the sores will surely break forth, therefore the only mode of preventing them is to cause the weight of the body to fall elsewhere.

A linen bag, about half a yard square, should be stuffed rather full of horse-hair, and then, by pressing the fingers from each side into the middle, and rubbing the linen together round and round, the horse-hair can be driven into the edges; thus will be left a place in the middle of the cushion free from stuffing. Where the two sides of the bag touch they may be sewn together, and the linen in the centre cut away; thus will be made a square pillow, with a hole in the middle. The patient must be so placed upon this cushion, that the sore or inflamed part of the back lies over the hole therein, and that the pressure, instead of being on that spot, falls on the back all round it. By these

means, and by attention to cleanliness, one may prevent the formation of the sore, or, if it be already formed, its healing may be procured.

Ingenuity should be able to adapt this sort of pillow to several other valuable uses. A lady, whom I attended some time ago, had an illness, obliging her to keep her bed a very long time, and to lie very constantly on the side. The right ear became sore from the pressure, and caused her intense pain; one of these little pillows gave great relief. Many such instances might be given; but, as fresh uses for such cushions will often occur, it is not worth while relating them. I will therefore only say, that the horse-hair is apt, from use, to get squeezed together, so that the pillow becomes hard and thin; and that it will be necessary therefore to have several such cushions, and to re-make them pretty frequently. Most manufacturers of water-proofs and India-rubber wares sell circular air or water-cushions for the purpose of relieving pressure; they are, of course, more expensive than those just described, but do not require re-making. Those which are intended to be filled with water are the best, but most patients complain of both kinds, that they are too unsteady. I mean, that if a person lying on such a cushion throw his weight at all more upon one side thereof than on the other, the water or air rushes from that side, and the patient is tipped over much more than he intended. Thus he has to be careful and timid in his movements, like a person on shipboard, who has not yet found his sea-legs.

India-rubber has been successfully employed for a great many conveniences in the sick-room. The water-bed is one of the most useful of these, especially in cases where the patient is very thin and weak, and where the pressure of an ordinary bed produces much uneasiness. Lately, too, has been made a set of water-mattresses, of different sizes, covering half, three-quarters, or all the bed; by which means the great pressure on any part can be in a measure relieved. These are of course expensive to purchase, but can now be hired; care must be taken not to allow these beds to become damp. The perspiration, which in health or disease is always passing from the skin, finds in an ordinary bed means of evaporation; but these mattresses or beds are of course waterproof, and the perspiration gathers upon their surface, and in the blanket immediately covering it. Thus, with all these contrivances, two sheets of waterproofing, to lie over the bed, should be sent. Upon this are to be placed the under-blankets, etc.; and in two or three days all these, namely, the under bed-clothing and the waterproof sheet, will be found wet, and must be changed. This is by no means an easy task, and is a great drawback on the value of such beds. Perhaps it is best to put two or more blankets between the bed and the waterproof sheet, also a blanket, and the under-sheet over this; for thus there will be less to change, as those under the India-rubber sheeting remain dry. The expense of all these contrivances will prevent their coming into general use; they have many very

great advantages, and it is well that the above disadvantages should be known.

When the patient wants to drink, it is necessary that, under ordinary circumstances, the head should be lifted; it is unavoidable, even with that contrivance called a "boat." This is an earthenware jar or mug with a straight spout, which is put into the patient's mouth, so that the fluid may be poured in without danger of spilling it about the body or bed-clothes; yet with this even it is necessary that the head should be lifted. The nurse carefully slides down her hand between the pillow and the head, as far as the ear, where the weight can be supported; but, if the patient be a woman with a frilled nightcap, this is rather a difficult matter. If she be without a cap, as from headache frequently happens, but with long loose hair lying abroad and somewhat tangled on the pillow, this lifting the head can scarcely be done without catching the hand in loops and meshes of the hair, pulling it, and so giving the patient much unnecessary pain. I would recommend a small pillow, only large enough to let the head lie comfortably upon it, and when the head is to be raised, the hand should be slid beneath this little cushion, and the head and the pillow lifted together. A couple of cushions of this sort are often very useful in another way, for when the patient is feverish with a hot aching head, a cool pillow will often be a great comfort. That is merely an observation by the way; let us return to the subject of aiding patients to drink in the easiest way. Very frequent

lifting of the head becomes, after a time, painful to the patient, and may be avoided by procuring a glass tube, about as thick and rather longer than a pencil, and bending it at about a right angle, near the middle. A patient, while lying down, can with this tube suck any fluid out of a tumbler, without the slightest exertion.

In the first stage of fever, however, when the patient, without being unconscious, is quite indifferent, this contrivance is useless, and one is obliged every half-hour or oftener to give some sort of fluid with a spoon; he will not ask for anything, nor will he perhaps drink, unless the liquid be actually put into the mouth. Frequently, if the fluid be grateful to him, the patient will pout out the lips for more, or will open them a little with greater alacrity; if, on the contrary, the fluid be unpleasant, or if he have had enough, he will turn away the head or clench the lips more tightly, when they are again touched with the spoon. It is very rare that in these diseases the doctor prescribes forcing food on the patient absolutely against his will. The first few drops of the liquid must, I say, be put into the mouth before the patient's attention can be attracted thereto; and this may be done by gently drawing down the lower lip with the forefinger sufficiently to allow the end of the bowl to pass.

When the first few days, from five to ten, are over, there commences, unless the case be very slight, an increase and alteration in all the symptoms. The patient becomes even more indifferent; the senses begin to be blunted, so that he seems deaf, or is

actually so; in certain of the worst cases there is partial blindness, real or apparent. The common sensation of the skin is so far deadened, that he will allow flies to crawl over the face, even over the lips, without appearing aware of their presence. At this time, also, delirium usually sets in; not a furious raving, but a low muttering, and a wandering of the mind into other places and to bygone times.

"Fumble the sheet and play with flowers,
And smile upon his finger-ends with babble of greenfields."

Under these circumstances, the nurse must increase her watchfulness; the patient depends, for nourishment, cleanliness, medicine, for very life itself upon her conscientious care.

In other cases, and often later in fever, the senses will appear quickened, more irritable than natural, the delirium is more active; a very small amount of light will even hurt the eyes, and all sound is distressing. It is evident that in a chamber, where lies a patient affected with this form of illness, the utmost quiet is necessary. It is, however, extraordinary how many persons, unused to the sick-room, mistake certain noises for quiet. When such people have to walk across a room, they do so with a balancing sort of movement, that makes every plank creak uneasily. Their very dress rustles in a way, that would do great credit to a rattlesnake. If anything has to be said, it is spoken in a loud whirring whisper, that nearly conceals the words; but makes the most irritating

of noises. Now, the silence of a sick-room must not be laboured, it must be natural. Shoes which do not creak must be worn, and in walking the foot must be put down, carefully of course, but with a firm step, that comes gently, yet steadily on the floor. This will not make the creaking sound caused by the toe-pointed, balancing mode of moving so much adopted by those whose experience of sick-room frailties is small. The dress must be made of some noiseless material, wool or cotton; silk must be avoided, for it squeaks and rustles with every movement.

In speaking either to the patient or to a third person, the pitch of the voice should be raised, and the words, instead of being hissed, as in whispering, should be clipped short and cut distinctly, by which means the utmost precision of pronunciation can be produced, with the least possible sound. It is a very cruel practice for two or more persons to gather in a sick-room, and to whisper. Some few seem to be aware of this, and when they have more to say to each other than the first dozen or so whispered words will convey, they retire just outside the door, keep it open, and there begin whispering louder than ever. The patient will be troubled by the belief that all this talk is about him, will torment himself by trying to hear it, will perhaps catch a few words that will alarm him, or, at all events, will be annoyed by that most irritating of all noises—a hissing conversation, whose sense cannot be followed. Any subject to be concealed from the patient must be talked of quite out of hearing; any indifferent topic

can be deferred either in place or time, or both. Also, it will be indispensable to abolish all crinoline, or stiff petticoats, that take up more space in the sick-room than can be spared, and that must either knock over something with a crash, just at the moment when the greatest silence is required; or else, to prevent such accident, will occupy so intensely the owner's thoughts, that she can hardly look after her charge. When we visit a patient late in the evening, we generally find our professional nurse becomingly clothed in some soft, noiseless, not too spreading a garment, a close-fitting cap, without streamers or dangles to hang into the patient's eyes, whenever she stoops over him. When, however, we come in the afternoon, the war-paint has been put on. The crinoline and the silk dress are all over the place; there are dangling ribbons at the throat and flying ribbons on the cap; there is a loose chain or a rolling string of beads round the neck; in fact the nurse has put on all the impediments she possesses to bother herself and to trouble her patient.

In order that silence may be more easily preserved, the table on which the necessary spoons, etc. are placed, should be covered with a thick cloth, or rather towel, several times folded, so that such utensils may be lifted up or put down again without rattling. The spoons should all be laid with the hollow part downward, that they may not rock backward and forward, and jingle together.

I suppose all medical men, when they first enter the sick-room, cast round them a rapid look, that

embraces all the arrangements, all the good and mis-deeds of the nurse. One can see at once whether such a person is used to nursing, and to paying real attention to her patient; or we can tell by the position of an easy chair, or by other signs, whether she may not be thinking too much of her own comforts. Again, whether, though used to nursing, and kindly in her intentions, she be not of a bluntness of brain, that renders all her experience vain. Thus, for example, when quiet has been most strictly ordered, a nurse so constituted, with every desire to obey, will arrange all things for the night; then, perhaps, in order to time the medicines, she will put her watch on the table, where it ticks loudly all night, each stroke beating on the sufferer's brain like the blows of a sledge-hammer; while every woman of common perception knows that if she hang up the watch, or places it on some soft material, the patient does not hear it. Such mistakes, and many others, too numerous to mention, occur again and again; but are to my mind almost unpardonable.

I have said that patients in the indifferent state will allow flies to crawl about the face; but when the time of quickened sensation comes, these animals are intensely troublesome, often waking him from sleep with a most painful start, or keeping him in a state of injurious irritability. A piece of net laid over the face will, of course, keep them away; but it is necessary first to drive them off, for if one of the flies be caught inside, the plague will be worse than ever. By tying strings across the

bed, in convenient positions, the gauze may be supported away from the patient's face.

The third period of fever will show little but extreme weakness, against which we must now struggle. The cooking talents of the nurse must be exercised, also her patience and perseverance in giving food every half-hour or so, as long as the patient is awake. Of this cooking business we shall have to speak in our next chapter, as well as of the sort of food necessary in different conditions of illness.

All possible contrivances must now be employed to save the patient's strength; pillows of different forms and sizes should be made, to prop the body in any posture most comfortable at the time to the worn frame. If attention and perseverance have overcome the tendency to bed-sores, it is now that the nurse will see cause to congratulate herself. Such a wound would certainly cause great pain to the patient, and much trouble to the attendant; indeed, it may at this particular time press very heavily on the side of death, and make the life-scale kick the beam. Strength will be much saved by the use of the bent-glass tube in drinking; all fluids, broths, medicines, etc. may be taken with this, and therefore several may be provided. When solid food is allowed, it may be minced, and taken with a spoon; and generally the patient should be fed. All means, too, should be taken to amuse the sufferer, and it is astonishing to see how easily a person recovering from a severe disease can be amused. The brain is so easily tired that the slightest matter is enough

to occupy, and then fatigue. The man who works constantly twelve hours out of the twenty-four, on the hardest and most brain-wearing employments, will find, after a fortnight of illness, that the trying to recollect a nursery rhyme is too fatiguing to his mind.

But when little by little departs that sense of utter weariness and sinking, then comes the delightful sense of returning health. The blood no longer burns in the veins, but runs coolly, deliciously, through the frame. The hand has cast off its sullen heat, but is moist and light; he lifts it, and wonders that he can almost see through it, so delicate, and white, and weak it is. Then, by-and-by, the appetite—that enormous gulf for food, that seems to be within him—is in itself a pleasure. In fact, the feelings of recovery are wondrous pleasant; and when a kind-hearted nurse sees them, she almost shares them, and revels with the patient in his growing power.

## CHAPTER VIII.

Poultices—Various kinds—How made—Applied—When different sorts are suitable — Spongeo-pileine — Mustard Poultice — The Dietary part of Nursing—Adapting Food to Condition—Distinction between different Bodily conditions—Distinction in Articles of Food—Both these classified.

My task is now nearly done: this chapter will conclude what I have to say upon the subject of nursing, or management of sickness. It must have been evident that my object has not been to produce a high-sounding dictionary of diseases, with a classified cabinet of cures; but rather to make people acquainted with those duties, which every woman may have to perform at the sick bed of relation, friend, or even stranger. My wish has been to render these as simple, and as easily understood, as possible; to speak of them as plainly and as practically as they must be performed. I have tried also, by avoiding all mystery, to show how far the province of the nurse extends, and where it ceases; to point out the boundary over which she cannot venture without danger to life or limb. In considering the different ailments and little accidents in which she may be helpful, it has been impossible to avoid a certain amount of disconnectedness. But in order to render the small facts more easily remembered, I have caught at any

link which might serve to connect them, without considering it necessary that such connexion should be scientific; as a traveller, wishing to carry his valuables about him, might tie them together with the commonest cord.

The subject, however, would be incomplete unless a few words were said upon the method of making certain applications, such as poultices, etc. And this incompleteness would be still more evident unless some directions were given as to the cookery necessary for the sick.

## POULTICES.

Nothing can be much more simple than the making of poultices; and yet, although they are so constantly used, they are made badly more frequently than well. They are of many different sorts —bread and water, bread and milk, linseed meal, half linseed, half bread, etc. etc. As to our first consideration, the quantity of bread or meal that is to be mixed with a certain amount of water, I can give no very certain rules. A poultice should be more or less wet, more or less dry, according to the circumstances of the case in which it has to be used. If it be intended to go upon the inflamed but unwounded skin, it should be rather more wet than when it is to lie upon a discharging wound. The discharge keeps the poultice moist; whereas the heat from the unbroken skin tends to dry it. Again, a poultice may be ordered to lie on some tender part, and it will cause an amount of pressure

thereon, as may happen where a joint, or some part of the hollow of the belly, is inflamed. Under these circumstances it will be necessary, so that the pressure may be as slight as possible, that the poultice be light, therefore it must be spread thin. A thin poultice will of course dry more quickly than a thick one, and therefore it must be the more moist.

All poultices, made of bread or linseed-meal and water alone, should be boiled. First determine the size of the poultice, then pour into a small saucepan the quantity of water necessary for that size, and before it quite boils, crumble slowly into it some two-days old bread. During this time the bread and water must be frequently stirred together, occasionally the saucepan taken off, and the contents mashed up with a spoon. If the poultice be large enough, but still too moist, squeeze out some of the water and pour it away; or if, on the other hand, it be too dry, add a little water, a few drops at a time, stirring and mixing it up well with a spoon. If a bread-grater or bread-rasp be at hand, the smoothness of the poultice can be improved by grating the bread, instead of crumbling it with the fingers.

A linseed-meal poultice is made in the same way. The meal must be strewn by the hand into the water, not plunged in by spoonfuls; thus it will be smooth and even: but by throwing in quantities at a time it will be unevenly mixed, and knotty.

When buying linseed-meal, its quality can be tried by pinching up a little, and rubbing it on the back of the hand; if it feel smooth, it is good; if,

on the contrary, it be gritty, there is sand in it. Another and surer way—but then it must have been bought—is to sprinkle a little very thinly on a glass of cold water; if in a short time it all float, it is good; any sand that is in it will sink to the bottom.

The poultice should be spread on a piece of rag rather larger than the part to be treated. It is not to be spread over the whole rag, but must leave a clear margin all round, which is to be turned up over the edge of the bread or linseed-meal, keeping it in its place, and not allowing it to be squeezed out so as to soil the dress or bed-clothes. In applying the poultice, take care that it be not too hot; remember that a wound, or inflamed skin, will feel the heat more than one's own healthy finger. Do not slap it on suddenly and rudely; but, beginning at one edge, lay it gradually and gently down. It may be kept on by a handkerchief or a bandage, according to the form of the part where it is applied; the bandage is the safer and the neater means.

Linseed-meal is generally used for old wounds, for inflammations of the unbroken skin, and for abscesses, both before and after opening, when they occur about the body. Bread is used for fresher wounds, which are nevertheless discharging, or about to discharge, and in nearly all cases where a poultice is to be applied to the head or face, more particularly to the eyes.

A short time ago, carrots, yeast, and other matters were frequently used as poultices; but they have been driven out of fashion, or nearly so, by a plan of making up bread and linseed-meal with certain

lotions. A new material, however, namely, powdered charcoal, has been used of late, with much benefit to old wounds which are spreading, dark in colour, or which have a very offensive smell. It is scarcely advisable to give directions as to the making of these lotions, nor as to the particular sort of wound in which one or the other of them would be advantageous, since it requires practice, much more than precept, to distinguish them; but I may describe how to make up this new form of poultice, and how to manage with any lotions that may be ordered.

The powdered charcoal is not to be used alone as a poultice; but is first to be mixed with about twice the quantity of grated bread or linseed-meal, and the mixture made up as an ordinary poultice.

When a lotion instead of water is to be used, it must not, as a rule, be boiled; but may be heated by putting the necessary quantity into a mug or jar, which must be covered pretty closely, and placed in a saucepan of boiling water. When the liquid is hot enough, it is to be mixed with the bread or linseed-meal, gradually and smoothly, as already described.

An artificial poultice, the spongeo-pileine, is very useful in treating persons who are still walking about, following their usual business. More particularly is it of service when the part to be treated is at the bend of a limb, or other place subject to much movement and friction. It may be bought at any respectable druggist's, at a certain price per foot, according to its thickness. The outer side is smooth, and made of a waterproof material; the

inner side has a woolly, irregular surface, and is made of some sort of hair, mixed with little bits of sponge. To use this, cut off a piece of the required size, put it in hot water, squeezing and letting it fill again, as one does a sponge, till it is completely soaked; then squeeze it to the proper amount of dryness. As the waterproof side will be equal in size to the woolly side, some of the water will during its use be pressed out of the edge, and will wet the clothes. The whole poultice therefore, when placed upon the skin, should be covered with a piece of oil-skin, or with a cheaper material—gutta-percha tissue. This spongeo-pileine is rather too drawing for a painful wound or highly inflamed skin, and therefore it is advisable to put between it and the part a piece of wet lint. When spongeo-pileine is employed, two pieces should be kept, and each used alternately. When one is removed it must be well washed by squeezing it out again and again in hot water; then it should be left in clean water till it is wanted, and then must be again rinsed in fresh water. Even with all these precautions, the same piece must not be used very often; the length of time during which it is applied, also the nature and amount of discharge from the wound, must decide how frequently the same piece can be employed. The spongeo-pileine is a more expensive poultice than bread or linseed-meal; but during daily work it can be kept on more easily, it takes up less room beneath the clothes, and is more cleanly.

## MUSTARD POULTICES.

The mustard poultice is different in purpose to the above soothing remedies. It is intended to cause some amount of irritation on the skin, and thereby to counteract pain or deeply-seated inflammation. Hence it is called a counter-irritant. This remedy is often used by mothers for their children in a very indiscriminate manner, and it may be as well to mention certain bodily conditions in which it is not advisable. The chief of these are feverishness, and a certain nervous irritability. Thus it will be undesirable to use one when the skin is hot and dry, and when the person is in a more restless and irritable state than can be accounted for merely by the pain. When the poultice is to be applied to the chest or throat, on account of irritation about the air-passages, great care must be taken to cover it with some rather thick material; because the smell and pungency of mustard, drawn into the wind-pipe, will cause more irritation there than the poultice can remove.

In preparing this poultice, the mustard must not be boiled; strew the powder into some hot water in a basin, stirring and mixing it well with a spoon, until it is considerably thicker than the mustard used for eating—until, in fact, it is a rather soft paste. The poultice may be made of mustard alone, or of mustard mixed with flour or crumbled bread; the proportions of each to be regulated by the biting or stinging power required. It may be mixed simply with water or with vinegar (the latter is the

weaker preparation), or with both mixed. Cayenne or other pepper should under no circumstances be added, for reasons that will presently be apparent. I need hardly say, that the milder preparations are used for children, the stronger for men with sluggish skins. The skins of fair people are usually more irritable than those of dark. Mustard poultices are to be spread thin, as they are only kept on a short time; an eighth, or what is the same thing, half a quarter of an inch, is quite thick enough. It may be spread either on rag or brown paper: the paper is better when the part on which it is to lie is tolerably flat, as, for instance, the chest or stomach; but if it be round, as the knee or shoulder, brown paper will not bend and lie closely to the form; rag therefore should be used.

This poultice, like all such applications, must be applied with a gentle hand; carefully and tenderly pressed on the skin until it touches in all parts. Let me, however, strongly recommend that a piece of coarse muslin be placed between the mustard and the skin. When the surface has been irritated by the poultice, washing away any of it which adheres causes a great deal of pain. The muslin prevents the mustard sticking to the flesh, and makes it come away entirely, so that the inflamed surface need only be lightly sponged with warm water. The reason of the above caution against cayenne, or any other sort of pepper, is now evident, for the small grains are apt to get through the muslin, to remain on the skin, and to cause pain, perhaps even small sores.

## THE DIET OF THE SICK.

We now come to the cooking duties of a nurse, which part of her work is by no means the least important. Invalid cookery is not in general such as to tempt even a hungry man, and is often of a sort to disgust a squeamish one. How greatly does it add to the comfort of a sick room if the nurse know how to make such dishes as are suited to the taste of an invalid; and how greatly to its safety, if she have some knowledge of various bodily states, in which different sorts of food may be given. The art of feeding a person in the manner best adapted to his condition at the time,—the art of dietetics, as it is called,—depends in great measure upon making a proper distinction, between two opposite states of the system, between fever and weakness, and adapting the food to each. The fever here spoken of is not that species so often mentioned in the last chapter. The word is commonly used to designate so many different states of system, that some little definition, of what I here intend to express by it, becomes necessary.

In its broadest sense, Fever means the resentment of the constitution against the attack of a disease. Whether the malady be mechanical, as from severe injury, or whether it be from actual disease, as smallpox, the system feels its first invasion, and rises up against it with violence and excitement; the strength of the body is as yet unimpaired, and the action bears with it the stamp of power. If the injury be mechanical, as a badly

broken leg or ankle, there arises, within twelve hours of the accident, this fever in its purest form. If the case be a morbid poison, as cholera, small-pox, or scarlatina, the simple action of the system is altered and complicated by the special action of the poison itself; and thus the different types and varying symptoms of fevers are produced. In certain cases, as typhus, the bodily strength is very soon muffled and oppressed by the overmastering force of the disease; and such a fever is apt to pass over at once, or with slight transition, into a great state of weakness or exhaustion. Exhaustion is always produced when the bodily strength is quite overcome by the accident or disease, either at once or after a short time.

Between these two opposed states of system, there are stages which occur when a lengthened struggle has gone on between the powers of health and of disease, which struggle is keeping down the patient's strength, flushing his cheek and brightening his eye. The appearances will vary as the strength or the disease gets the upper hand; but the unmistakable signs, called hectic, will always be present.

Be it then understood, that the word Fever, when used alone, is here intended to designate that strong action, which sets the pulse throbbing and the head aching. It is totally distinct on the one hand from the oppressed or exhausted stage of typhus, and on the other from that fluttering, fretful yielding to a disease, which produces hectic. The strong fever has its origin in the violent resistance of a body capable of trying its strength against that

of a disease: Exhaustion is the sudden rout and destruction of the bodily powers. Hectic, the irritable after-skirmishing of scattered, but not yet beaten forces.

In classifying the conditions of body according to the amount of fever and debility, we may, of course, advantageously take, as the opposite extremes of our divisions, those states of system which mark, one, the greatest amount of strong fever, and the other, the greatest amount of weakness without fever, or complete exhaustion. If these two be taken as the poles, we may divide all between them into a certain number of conditions, distinguished from each other by the relative proportions of the weakness and of the fever. To do this, we will not examine the amount of actual fever (a very difficult task), but will rather produce the desirable proportions by allowing the strength to decrease, and thus we will make the proper number of distinctions. It must however, be observed, that between the various conditions there are no sharp divisions, like the boundary of a parish; but they slope gradually and gently into one another, as meadow-land slants downward to the river, and becomes morass; without our being able to fix upon a line where the pasture ceases, or where the marsh begins. Thus the *strong fever*, by its very power, tends to exhaust, and may gradually lead to the various stages of *hectic fever*. If the disease still continue, the patient may get during some part of the twenty-four hours, chiefly at night, into a weak irritable excitement of the

whole system. This enfeebles every time it attacks, for the body is not strong enough either to support or control it; and the morning finds the patient wet with perspiration, weary with sleeplessness, and weaker than on the night before. If, however, by power of constitution, judicious medicine, and careful diet, the strength, in spite of these attacks, increase, it will gradually control the fever, (shows itself, indeed, chiefly by its power of such control), until it subdues the false action altogether, and so leads back again to health. These changes will hardly be found in one patient; but by observing the course of events in a great many, such a general outline as given above may be pretty accurately fixed upon.

Now the management of food consists in regulating the amount of nourishment by the strength of the patient, and the quantity of stimulus by the quantity of excitement. Let me explain this more fully. Some forms of food contain less nourishment in a certain bulk than others, and more especially less stimulating and exciting qualities, and these are at the same time more easily digested by an enfeebled stomach. Such foods, for instance, are arrowroot and sago, in comparison to eggs and fish, and these again in comparison to the meat of fowls, and these to brown meats, and so on. Then among drinks, water, with fruit juices, are less exciting than milk, and milk less so than malt liquor, etc.

From this groundwork we may construct a table, one side of which shall contain our divisions of the bodily states, the other the same number of

divisions of different sorts of food adapted to each.

| BODILY CONDITIONS. | FOOD ADAPTED TO THE CONDITIONS. |
|---|---|
| 1. Strong fever*. . . | Breadstuffs, made with water; fruit drinks, and soda-water. |
| 2. Fever, with weakness | Breadstuffs, with milk; jellies, without wine; occasionally an egg; weak white broths. *Drinks*—Milk and water; milk and soda-water. |
| 3. More weakness with hectic fever † | Breadstuffs, with milk, and made into puddings; jellies, eggs, fish, white meat and weak brown meat broths. *Drinks*—Soda-water, with milk; perhaps wine wey, etc. |
| 4. Great weakness with hectic fever. | Strong broths; fish, eggs, wine, jellies; meat jellies; meat minced; egg puddings. *Drinks*—Eggs, with milk, wine, etc.; white broths; wine and water, etc. |
| 5. Exhaustion . . . | Strongest broths; essence of meat, with or without wine; strong meat jellies; eggs, with wine or brandy; meat minced, etc. etc. |

This is the broad characteristic plan of a diet-system, which I would set up; let me however once more observe, that no sharp line or boundary exists; also, that in the weak states of fever, it will often be advisable to make more variety in the food by mingling two classes of diet. It has been said, that the irritable excitement of a hectic-like fever comes on at night; the less exciting form of food should therefore be given in the evening, the more nourishing material in the morning, that as

* Heaviness; headache; full, quick pulse; loss of appetite; coated tongue; hot, dry skin, etc.

† Weak, quick, small pulse; white tongue; hot skin, with night sweating; irregular chills, and flushes of heat, etc.

much strength as possible may be gained, with the least possible chance of exciting the night fever. In order to assist further in dieting the sick, I have arranged a quantity of receipts under the heads of the above table; the receipts themselves have been kindly furnished me by a lady, who assures me, that all are practical and tolerably easy.

## QUACKERY.

Lastly, before closing this subject, I will beg a consideration of the general subject and tendency of these discourses. It then will be perceived that besides the mere general truth of illness, and of the kindly desire to aid, there is also insisted on a necessity of adapting the one to the other, namely, the sort of help to the species of disease. Let me recall attention to a few instances; to the different positions, in which a person, suddenly attacked with insensibility, is to be placed, according as the cause is a want or an excess of blood in the brain; to the distinction between a nervous pain and a pain produced by inflammation; and it will be remembered that I said hot dry heat was applicable in the one case, but not in the other. Lastly, think of the broad, but still careful classification of different bodily states, and of the distinctions between the kinds of food adapted to each condition.

Let the reader carefully consider this necessity of adapting the sort and mode of help to the kind of disease, and let him try in his own mind whether such necessity be true, be a fact in nature.

Then let him make to himself the opposite assertion, "that help in disease is as useful, when not adapted to the species and cause of the illness, as when it is so adapted." If these propositions be carefully compared, and the probability of truth or falsity be examined, it will be seen that one must be true; but that both cannot be true, because they are opposite to, and contradict one another. As, however, in daily life, in household work, in the labours of carpenters, builders, and other workmen, in the growth of grass, of corn, in the passage of the winds, in the rise of the great sea, and in all other works, divine or human, this adaptation of the means to the end, this fitness of causes to the effects is evident; so there is but one conclusion, namely, that diseases have their causes, to which the remedy must be adapted, and that, to lessen pain or aid in the cure of disease, the means of relief must be fitted to each particular illness.

Now contrast this conclusion with the advertisements of quack medicines which meet our eyes in every direction; observe, that by means of a pill, powder, or ointment, they promise to cure all kinds of disease, to heal every sort of wound. If these statements be true, what becomes of our belief in the relation of cause to effect? Such advertisements, in every form, that can attract attention, fill the sides of newspapers, the covers of periodicals, teem upon dead walls, crowd into omnibuses, and perambulate our streets on men's backs. Yet many people, with the constant evidence before their eyes that the infinite effects of nature arise from

different causes, that the sorts of disease in the human body are almost innumerable, and that the remedy must be adapted to each; I say, with these plain facts constantly before their eyes, a large number of people run to these advertisers, open-mouthed, ready to swallow both their trash and their lies. The public have lately learned much of the adulterations of food: they are, in that case, unwilling victims of dishonest traders; but in buying advertised medicines, they are willing victims —they seek their own injury, and they find it.

There is another branch of this system more completely carried out, less rough and gross in its outline, which appeals more entirely to that love of the wonderful and unaccountable, innate in mankind; it sets up rules of a supposed system, marvellous, because directly contrary to all natural laws, so contrary indeed as to place the whole matter beyond the very region of reason, or of argument, and to leave nought of the mind but the love of wonder to appreciate it. It sets out by declaring, that whatever produces a certain effect, will also produce the opposite; that is to say, that medicines, which cause wakefulness, will produce sleep; medicines, which cause convulsions, will restore repose; medicines producing a difficulty of breathing, will cause easy respiration; or, as I have already said in other words, the same cause will produce two exactly opposite effects. So will a foolish mother beat her child till it cries, and then slap it till it is quiet again; but nature is not a foolish mother, and does not use her children so.

There would however be some danger in the above theory, when carried into practice; and a person oppressed with blood in the brain, and with heavy sleepiness, would be greatly injured by opium, it therefore becomes necessary to render the practice in itself harmless; and the most obvious way to do this is to make the medicines powerless by using them in very small quantities. To conceal the object of this manœuvre, another theoretical maxim is invented, which, to be a fit companion for the former, must also be unnatural and strange. The following is hit upon,—"that the smaller the cause, the greater the effect." This is the dodge which render it safe to entrust all persons with little bottles containing little sugar-plums, labelled arsenic, strychnia, opium, &c. &c., with which they can play in pleasing recklessness; and moreover the maxim so completely contradicts every law of nature and every principle of science, that knowledge herself has nothing to say on the subject.

These maxims are not, however, spoken in English, but in Latin; the first, namely, "whatever produces a certain effect will produce its opposite," is the proper translation of the words "Similia similibus curantur." The next, "that the smaller the cause, the greater the effect," is intended to account and apologise for infinitesimal doses;* and the whole concern is called Homœopathy: a word,

* This infinitesimal dose is a fraction of a grain. The numerator of this fraction is one, the denominator infinity. It is with regard to substance what we might imagine of time, if it were possible to divide a moment by eternity.

which is meant, I believe, to express, that the remedy is like the disease.

I need perhaps scarcely tell you, that Homœopathy, applied in its own characteristically small doses, is in itself harmless; but it becomes dangerous, when, in a case of real sickness, it keeps efficient aid away; and still more so, when under its apparent protection, a large dose of medicine is given, as is sometimes done, by persons ignorant of its true action.

A very short time ago I was sent for to see the last of a relative in scarlatina who had been given over by a homœopath in large practice. She had had no food, no wine for some hours because the homœopath said she could not swallow; the case was hopeless, and it was a pity to trouble her. I saw at once that the case was by no means one to be given up, and feeding with plenty of stimulants brought her round. Such instances of guilty trifling with life are common; and, it is to be observed, that the patients always have the very worst sort of disorders that flesh is heir to. Thus the death is, as it were, permissible while recovery redounds very much to the credit of the homœopath; therefore, with him, every cold is a bronchitis, every cough a pneumonia, every fever malignant. A lady, of my acquaintance, having great faith in homœopathy was, as well as her children, attacked by diphtheria at least once (generally two or three times) a year, they always got well without any of those evils, which that disease nearly invariably leaves behind when it does not kill. One day she

was attacked by a sore throat, which the homœopath (one of the men in most practice) pronounced to be diphtheria of so bad a nature that the issue of the case was doubtful. It happened, that shortly after the homœopath's departure, a friend called, knowing nothing of her illness; he was a well-educated and honest physician on whose unprofessional friendship the lady placed a high value; he heard from the servants that she was probably dying, and, at her request, went to her room. The shutters were closed, it was very hot, a large fire was burning, some fumigation or means of disinfecting had been employed, the air was oppressive and heavy. The gentleman was much grieved—nay, much shocked, at these signs of such severe illness. He approached the bed, spoke gently, took the lady's hand, put his finger on the pulse, with tones of surprise asked for a candle to look in the throat, when, bursting out laughing, he told her to get up, dress, and come into the drawing-room. She was wise enough to obey; and though rather subject to relaxation of the throat, has never suffered from anything called diphtheria since ceasing to have faith in homœopathy.

In medicine as in science, as in the every day intercourse of life, that invaluable quality, called common sense, should guide us; the nurse must also possess that quality, together with a certain quick power of perception. The rules and instructions given in the preceding chapters will not of themselves make any one a good nurse any more than hundreds of lectures and thousand of books

will make a good astronomist unless he also practise among the stars. The object, however, of these chapters will have been gained if they enable those persons, who have work to do among the sick, to perform that work more easily and with less painful blundering.

# APPENDIX.

## RECEIPTS FOR SICK COOKERY,

### ARRANGED ACCORDING TO THE FIVE DIVISIONS OF THE BODILY CONDITION.

## FIRST DIVISION.

### STRONG FEVER.

Breadstuffs made up with water; drinks prepared with water and fruit. These breadstuffs are principally flour made into bread and biscuit, oatmeal, barley, arrowroot, sago, tapioca, maccaroni, rice, ground rice, semolina. For all preparations of plain food, there is one general direction to be always observed, namely, to mix them smoothly in the first instance, breaking all knots and small lumps. This must always be done by mixing a small quantity of fluid *at first* with the powder, flour, or grains, and then adding by degrees the rest of the fluid, stirring all the time.

#### SOPPED BREAD OR BISCUIT.

Put a biscuit, or part of one, or a crust of bread, in a saucer, and pour upon it a small quantity of boiling

water; cover it down close with a teacup, or small basin. In about ten minutes you will find it swelled, and perfectly soaked; you may then beat it up, and add more water, tea, or coffee, and sweeten. This makes a more agreeable kind of sop than by merely breaking a biscuit into water or tea.

### OATMEAL GRUEL.

This is the commonest form of low diet, yet very rarely made well. It only requires attention. Put the groats or oatmeal into a saucepan, pour a little cold water on it and mix it well; add the cold water and stir it occasionally; boil it slowly, and never neglect to stir it. Strain it, and put sugar or salt, as best suits the taste. About a pint of water to an ounce of groats is the proportion, and this quantity requires slow boiling for about three-quarters of an hour.

### ARROWROOT.

A dessert-spoonful of arrowroot will thicken about half a pint of water. Put a small quantity of cold water to the arrowroot, and mix it well; then add by degrees the half-pint of boiling water, stirring it all the time, and until it is of a pleasant thickness, and clear. It may be sweetened, and flavoured with lemon or orange juice, or eaten plain.

### TAPIOCA, SAGO, AND SEMOLINA.

These should be soaked in cold water for five or six hours, then simmered in the same until the grains become quite clear, and something like a thick jelly. It may be sweetened slightly; a little lemon or orange juice will give a flavour.

### RICE CAUDLE.

Rub a table-spoonful of ground rice into a little cold water. Have about half a pint of water boiling in a saucepan; pour in the rice, and boil it till of a pleasant thickness; add sugar, lemon, powdered cinnamon, or nutmeg, as may be desirable. Boil it till it is quite smooth.

### PEARL-BARLEY WATER.

Wash an ounce of pearl-barley in cold water three or four times, throwing away the water each time, as it will be very dirty; or you may boil for a few minutes, and then pour the water away. Then add about a pint and a half of water, a bit of lemon-peel, and a little sugar. Let it simmer, stirring it constantly, till of a nice thickness; strain, and add lemon-juice. If a very slight flavour of lemon be preferred, with very little acid, put a slice of lemon with the barley and the water. Sweeten to your taste. A few sweet almonds, beaten to a paste, gives a pleasant flavour to this drink; and to the preparations of arrowroot, rice, &c. where acid is not allowed, almonds may be substituted. Apples may also be sliced into pearl-barley water when hot. Apples, boiled to a pulp, may be mixed with pearl-barley drink, or plain water.

### LINSEED TEA.

Put an ounce of linseed and one pint of boiling water into a jug or jar; cover it down, and let it stand for four hours near the fire; strain it. Liquorice-root, sugar, lemon or orange juice, may be added to the seeds, to give a flavour to the tea. It will not keep.

### APPLE TEA.

Slice apples, and pour boiling water over them; let this stand for two or three hours, well covered, and then sweeten. The juiciness of the apples must regulate the quantity of water. Pears may be also used.

### LEMON WATER.

Put two or three slices of lemon, thinly pared, into a teapot, with a bit of peel and some sugar; pour in a pint of boiling water, and cover it close for two hours.

### LEMONADE.

Peel one lemon, or more, according to the quantity required, and the size of the fruit. Pour a small quantity of boiling water over the peel, and cover it close. Squeeze the lemon, and remove the pips. Pour some boiling water upon sugar, in a separate jar, or jug, or basin. When the sugar is perfectly melted, put the juice to it; add cold water, tasting as you proceed, till you find the drink does not taste too strongly of the juice; then put in enough of the peel—flavouring as is agreeable. Lemons differ so much in the quantity of juice they yield, and even in the strength of the acid, that accurate directions as to quantities are useless: you must be guided by taste. Be careful to melt the sugar in water before you add juice. Oranges may be used with, or instead of, lemons.

### IMPERIAL WATER.

This is a cheaper kind of lemonade, very cooling and refreshing, and easily made.

Put half an ounce of cream of tartar, the juice of one lemon and a little peel, in a large jug; pour on them about three pints of boiling water; stir, and cover close till cold: sweeten to your taste.

### TO MAKE COFFEE.

Take an ounce of ground coffee, put it in a jug with a lid, and let it stand by the fire till it is quite hot; but you must turn it, to prevent its burning. Or you may put the coffee in a saucepan or tin coffee-pot over the fire till it is quite hot; then pour over it a quart of boiling water; close the pan or jug; keep it near the fire. When you pour it out, be careful not to shake it. Tea, heated before the water is poured upon it, has much more flavour, and goes further than when made in the usual way.

### TOAST AND WATER.

Toast a slice, or small lump of bread, till it is very brown, but not burnt black; then put it into a jug of cold water; cover it, and let it stand an hour.

### FRUIT-DRINKS OF

Fresh Currants, Raspberries, or Cherries.—Put the fruit into a jar, and set it in the oven, or into a saucepan of water over the fire, till the fruit bursts and gives out its juice. Pour this off through a piece of muslin, or strainer, slightly pressing the fruit. This juice, sweetened, and mixed with water, makes a pleasant drink; or it may be used with arrowroot, sago, &c. to flavour them.

The fruit, which is left, if not squeezed dry, will make a family pudding by mixing it with batter, rice, or bread-crumbs, and baking or boiling it.

Cranberries may be similarly used in the winter.

### HOW TO BOIL RICE.

Wash a quarter of a pound of rice, and throw it into a pint of boiling water; boil for ten minutes, or longer, till each grain of rice is soft and separate. Drain it in a sieve, or on a clean cloth; put it in a pot, and set it near the fire; it will continue to swell. It may be eaten with a little butter or sugar, or with salt; or may be sweetened with treacle. It may have fresh fruit or a little preserve mixed with it. It will also be ready to put into broth.

## SECOND DIVISION.

### FEVER WITH WEAKNESS.

Breadstuffs are to be prepared as in the former receipts, except that they may be mixed with milk and water, or with milk alone.

### WEAK BROTHS, ESPECIALLY CHICKEN OR VEAL BROTH.

This may be made of the legs, head, neck, feet, and bones of a chicken, or the knuckle-bone of veal; being merely boiled slowly, for two or three hours, in water. It is possible to purchase the remains of fowls and joints; and a little knowledge of cookery will enable you to boil

such parts down into good broth. You have only to take care, that your saucepan is clean, that there is as little fat as possible upon the meat, and then to cover the vessel close, and boil it very slowly, occasionally removing any scum that may rise to the surface.

### ORANGE JELLY.

This may be prepared with gelatine or isinglass. Squeeze the juice from the fruit and remove the pips, and put some of the rind into it; melt the sugar perfectly in some hot water, and pour it on the juice. Six oranges will require about a quarter of a pound of sugar. Taste the fruit and sugar, and if very rich a little water may be added. Having melted the isinglass or gelatine (about an ounce) in a very small quantity of water, add it to the syrup, and just boil for a minute: take out the rind. This jelly is not intended to look clear, and therefore need not be strained, as straining diminishes the strength.

### EGGS.

The yolk of an egg beaten up in tea, or in cold milk, is nourishing. The white may be beaten up with thin arrowroot or sago; or the whole egg mixed with milk, and sweetened.

### FLOUR CAUDLE, OR THICK MILK.

Rub a large spoonful of flour into about five of cold water; heat five spoonfuls of new milk slightly sweetened, and when boiling, pour it gradually over the flour and water: put it on the fire and boil twenty minutes, stirring all the time. Another mode is as follows:—

Tie a handful of dry flour lightly in a cloth, and boil as if it were a dumpling, for an hour; rub off the outer hard skin and grate the flour, mix in milk as above. Baked flour may also be used in a similar way. This is good food for infants whose bowels are weak.

### COFFEE MILK, CHOCOLATE, COCOA.

Boil a dessert-spoonful of ground coffee in nearly a pint of milk, for a quarter of an hour; then put into it a shaving or two of isinglass; let it boil a few minutes, and set it on the side of the fire; the coffee will sink to the bottom, and it will be desirable not to shake it: sweeten slightly.

Fine mixed tea used instead of coffee is very pleasant, and requires no isinglass; but it should be boiled longer.

Cocoa and chocolate are sold so prepared, that only hot water or milk need be poured on them to make them ready for use. Chocolate cakes are very cheap.

### PLAIN BOILED BREAD AND MILK.

An old-fashioned dish rarely well made. Put stale bread into a basin, the pieces of equal size, the shape of dice, but larger; make the milk boil, and the moment it rises, pour it over the bread; cover the basin close with a plate for ten minutes; the bread will then be perfectly and equally soaked.

### MILK PORRIDGE.

Take some very thick smooth gruel, and when strained, and still hot, thin it with boiling milk.

## THIRD DIVISION.

### MORE WEAKNESS WITH IRRITABLE* FEVER.

#### ORANGE JELLY, WITH WINE.

Made as before, with the addition of white wine: the quantity of isinglass or gelatine to be increased in proportion to the fruit and wine.

#### CALF'S-FOOT JELLY.

Two calves'-feet, or a cow-heel, the latter being much cheaper and equally nourishing. Buy the feet with the hair on, because when ready-prepared a great deal of the substance, which makes jelly, has been boiled away. In order to get the hair off, have ready a saucepan of boiling water; hold the foot in the fingers, so that the water just covers the hair; from five to ten minutes is long enough: the hair will scrape off easily with a knife. Put the feet into about five pints of water, and boil them till half the water is wasted; strain it, and when cold take off the fat; put it into a saucepan with sugar, lemon-juice, some lemon-peel, according to taste. If wine be permitted, put in it as much as is judicious. In order to clear the jelly, the whites of five eggs, well beaten to a froth, and the shells broken up, must be added. Set the jelly on the fire, but do not stir it after it begins to warm; when it rises to a head let

* I have used this adjective instead of hectic, which is only applicable to the worst forms of irritable fever.

it boil for twenty minutes; prepare a bag of coarse flannel shaped like a V, with two strings on the broad part, by which to tie it to the backs of two chairs; a coarse huckaback towel, which may be tacked together, making one corner the point, is even a better jelly-bag; dip the bag in hot water and squeeze it dry. Having placed a basin or shape under the point of the bag, pour the contents of the saucepan carefully into the bag, and they will run slowly through into the shape; do not press the bag, or the jelly will be cloudy; great clearness is not important, since this quality is more to please the eye than the palate. Calf's-foot jelly may be made without wine.

### BEEF TEA.

So called, because it used to be made in an earthen teapot. Take some lean but juicy beef, say a pound of it cut into slices or dice. Put it in a jar with a lid, and pour a pint of hot water on it, and place the jar in a saucepan of water over the fire. It should stand heating and simmering till the raw flavour is gone. It will be found to become a watery fluid, with brown particles in it; these sink to the bottom, and it must therefore be stirred before use. Beef tea, when well made, forms a pleasant and valuable nourishment.

### MACCARONI.

This is a light nourishing food, and not dear; for it weighs little, and goes a very long way. Soak it in water for a short time; boil it in salt and water (be careful not to make it too salt) till it is swelled to three

times its original size, and till it is perfectly tender. It may be eaten quite plain, or with a little butter, or it may be added to weak broth.*

Maccaroni may be boiled in milk and sweetened. It is very good in a pudding; after it has been simmered in milk till tender, put it into a baking-dish with sugar, an egg beaten up in more milk, and bake.

### COMMON RICE PUDDING.

Butter a baking-dish; put in a small teacupful of rice, a little sugar, and a bit of butter; fill the dish with milk, and grate a little nutmeg over the whole: bake slowly till the rice is swelled and soft. Some persons like the rice to be first boiled, and an egg or two well beaten with the milk.

### SWISS PUDDING.

Butter a baking-dish; put in a layer of bread-crumbs, then a layer of apples peeled and sliced, then a thin

* The value of maccaroni is not understood in England. M. Soyer has observed upon this, and his remarks are well worth attention. He says maccaroni may be bought in London at fivepence per pound, and that one pound makes four pounds of food when boiled. His receipt for boiling it is as follows:—

"Put in an iron pot or stewpan two quarts of water; let it boil: add two teaspoonfuls of salt, one ounce of butter; then add one pound of maccaroni; boil till tender; let it be rather firm to the touch: it is then ready for use.

"It is excellent with a little cheese grated over it, or added to broth, put into hot milk; thus it will be good either as sweet or savoury. It will be found a good substitute for potatoes, making a pleasant change of diet: it is nutritious and wholesome. It requires no different utensils, and no more fire than to boil potatoes. At the season when old potatoes are bad, and new potatoes unripe and dear, it will be found a very valuable article of food."

layer of brown sugar; repeat this till the dish is full; and bake slowly.

Puddings may be made with arrowroot, sago, tapioca, semolina, ground rice, first prepared as directed when given with milk. Add eggs, well beaten, and butter; then bake. The richness of the pudding is increased by the quantity of eggs and butter.

### BREAD PUDDING.

Grate old bread, or take stale pieces of bread, and pour boiling milk over them; cover down till perfectly soaked; beat them quite smooth; add sugar, eggs well beaten, and milk; grate nutmeg on the top, and bake; or put into a basin, and boil. Broken stale biscuits may be used instead of bread.

### BREAD-AND-BUTTER PUDDING, FROM SOYER'S RECEIPT.

Cut some bread and butter very thin; place it in a pie-dish as lightly as possible till three-parts full; break into a basin one egg, add two teaspoonfuls of flour, three of brown sugar; mix all well together; add to it by degrees a pint of milk, a little salt; pour over the bread; bake for about half an hour. These puddings are good when cold, or will bear to be warmed up again.

### PLAIN BATTER PUDDING, BOILED OR BAKED.

Beat up one or two eggs, according to the size of the pudding to be made: one will be enough if intended for an invalid. Having beaten it well, add milk, then take a little flour and a pinch of salt; pour some of the milk

and egg upon it, and mix perfectly smooth ; add flour till the batter is slightly stiff. If it is to be boiled, flour a cloth and tie it tight over the cup or basin, and boil for twenty minutes ; if to be baked, butter a small dish, pour in the batter, and bake lightly : watch its rising, as it ought to be very light.

### VEGETABLE SOUP WITHOUT MEAT.

This may be made of turnips, vegetable marrow, or pumpkins. Take about two pounds of the vegetable, peeled and cut into slices or large dice ; put them into a saucepan on the fire with a quarter of a pound of salt butter or fat ; add two teaspoonfuls of salt, one of sugar, and one quarter of a spoonful of pepper, a gill of water, and one sliced onion ; stew gently until the vegetable is a pulp ; then moisten, and stir round two tablespoonfuls of flour, with three pints of either milk, skimmed milk, or water : boil ten minutes, and serve. Vegetables are dear in London, but when thus dressed they give more nourishment and a more satisfying meal.

A lettuce cut into slices, a few old green peas, a carrot and turnip, prepared as above, make an excellent vegetable soup. Weak broth may be substituted for milk and water. A shank-bone of mutton boiled slowly will produce enough broth for vegetable soup ; a pork shank-bone, or the pig's foot, or two sheep's trotters, are also very suitable. The bones of a sheep's head, after the meat has been eaten, will make a good supply of broth for vegetable soup.

Dried white or grey peas, or dried kidney-beans, make good soup, either with water only, or with weak

broth. Soak the beans and peas twelve hours in cold water and strain them; add a little onion, celery, salt, and either water or broth, and stew till the beans are quite soft. A pint of beans or peas require about three pints of water.

## FOURTH DIVISION.

### GREAT WEAKNESS WITH HECTIC FEVER.

#### STRONG BROTHS.

The best parts for broth are those which contain the least fat and the most tendon: such as the shanks of mutton and pork, the shin of beef, the scrag end of the neck of mutton or veal, the bones of fresh meat, and the necks and feet of fowls. The proportion of meat and water for strong broth is about half a pound to a pint. The meat should be placed at the bottom of a stewpan, which has a tightly fitting lid, with a small quantity of salt, and a few peppercorns; pour a quarter of a pint of hot water on these, and let them stew, stirring to prevent burning, till they are of a nice brown colour, when add the quantity of cold water, and remove the scum as it rises; then cover it close and let it simmer very slowly for several hours, according to the quantity. Strain the broth from the meat; let it stand till cold, when all the fat and grease will have risen to the top, and can be easily removed. Broth or soup should be made the day before it is wanted, because great waste is caused by haste: the goodness of the meat and bones is never extracted

when there is fast boiling. A small fire will always keep up the slow simmer broth requires.

Veal and beef together make excellent broth; or cow-heel instead of veal.

A cow-heel, plain boiled, will give a very good meat dinner for an invalid in one day, and the bones will then help to make broth. The water, in which it has been boiled, should be set aside, and the bones boiled in it instead of in plain water. When there is perfect cleanliness, the water in which the meat has been boiled may always be saved to help to make broth.

Let the bones for broth be cut and chopped up, and the meat scored across both ways, to allow the juices to escape.

Some butchers sell the bones after they have cut off the meat for steaks; and these are cheaper than a piece from a joint, and, with careful cooking, make excellent broth.

Broths should be made strong, because it is very easy when necessary to dilute them with a little water. The stronger and stiffer the jelly, which it should form on cooling, the longer it will keep.

### EGGS,

Beat up with wine, are very strengthening; and a little wine goes a good way when mixed with eggs or water, arrowroot, sago, tapioca, etc.

### TO POACH AN EGG.

Have ready a saucepan of boiling water; break an egg carefully into a teacup, so that the yolk is not

burst, and put the teacup into the saucepan. By this plan it takes rather a longer time to poach an egg, but it is done to a nicety and in the most cleanly way. A piece of bread and butter, or bread toasted lightly, should be placed on the dish or plate, and the egg slipped upon it from the cup without bursting it.

## FIFTH DIVISION.

### EXHAUSTION.

#### MUTTON BROTH QUICKLY MADE.

In these cases it is sometimes of the greatest importance to prepare strong nourishment very quickly, and also to give a large quantity of nourishment in a small bulk.

Take two or three ribs out of the middle of a neck or loin of mutton. Take away the fat, chop the bones across, and score the meat across after having beaten it ; cut in small pieces ; add pepper, if allowed, and salt ; put a little hot water upon the meat, and let it warm through ; then add about three-quarters of a pint of water and boil quickly ; if scum rises, remove it ; cover the pan close, and the broth will be ready in half an hour, perhaps less. When this is poured off, a better broth may be slowly made from the meat and bones.

#### ESSENCE OF MEAT.

For the strongest sort take one pound of knuckle of veal, ditto of mutton, ditto of beef, cut small, and

without fat. Put these in a jar without any water. Put the jar in a saucepan of water, and boil for three hours; take out the meat and bruise it in a mortar; return to the jar, and boil it for two hours more. Strain through a sieve, add salt and pepper, and, if allowed, wine; a tablespoonful of the broth at a time is enough.

For a weaker sort take the same materials; put them, with a little salt, into a jar with about a pint of water. Place the jar in a saucepan of cold water, and boil slowly for two hours; then pour off the soup, and add another pint of water, and boil in the same way. Port-wine may be added to the broth, if desirable.

A very strong soup may be obtained by putting a piece of meat, cut and scored, in a baking dish or tin with a very little water, and set in an oven not hot enough to bake the meat. The parts, which best yield these strong juices, are those about the neck and loin's end—any part which is full of these juices. The meat will afterwards be very good beaten fine in a mortar, and adding butter, salt, and pepper. A little potted meat is often easily digested. Cold beef-steak is excellent when thus potted.

### A MEANS OF GIVING WINE.

Toast lightly a piece of bread, rather more than an inch in thickness; lay it in a soup-plate or large saucer; put sugar upon it, either fine brown or powdered white; pour the wine (usually port) upon it, and see that the toast is soaked; grate nutmeg over it. The size of the toast must of course depend upon

the quantity of wine to be taken. Strong ale may be given in the same way, where it is desirable.

### TO SCALD WINE.

A glass of wine, a tablespoonful of water, two lumps of sugar, six allspice berries, and two cloves; put these in a saucepan, and just scald, *not* boil: a thin piece of toasted bread may be put into it, or eaten dry. This is sometimes a good restorative in depression from cold or diarrhœa.

### TO MULL WINE.

Beat up the yolk of one or more eggs perfectly; scald a glass or more, as required, of port or white wine, and melt it in a lump or two of sugar. Stir the egg rapidly one way, never changing the direction of the spoon, and keep stirring while you pour in the wine very gradually. Have another glass or basin ready, and pour the mixture quickly, two or three times, from one vessel to the other, which process makes it froth.

### WHITE-WINE WHEY.

Put half a pint of new milk, slightly sweetened, into a saucepan, and boil it; the moment it rises, while still on the fire, pour in a small glass of white wine. The weak wines, such as Cape or Marsala, or common Lisbon, are best. Let it boil up again, and set the saucepan on the side till the curd forms one lump; be careful not to stir it: the whey will pour off free from the curd. If too strong, add a little water. A little vinegar added to wine will economise the latter.

New milk, with brandy or rum, is sometimes given, a teaspoonful at a time, in cases of great exhaustion. Where the patient has not strength enough to do more than swallow, these nourishing and stimulating fluids can be sucked through a bent tube with very little fatigue.

### TO BOIL FISH.

For all kinds of fish put two teaspoonfuls of salt to every quart of water; put the fish in with the water cold; remove the cover, and only let the water simmer. Try with a skewer, whether the flesh of the fish stick to the bone; if so, it is not enough; if the flesh drop off, it is too much cooked. A mackerel will take from fifteen to twenty minutes, a haddock a little longer; a pound of fish takes from fifteen to twenty minutes.

### TO BAKE FISH IN A TIN DISH.

Scale and clean the fish, dry it well; put an ounce of butter or dripping in the dish and sprinkle a little chopped parsley and onions at the bottom; lay in the fish, season with pepper and salt, and lay over the rest of the chopped onions and parsley, with some bread-crumbs, and a little bit of butter or fat, and a little water or broth over all; put the dish in the oven or before the fire until done; a large sole will take about an hour.

### TO FRY FISH.

The art of frying fish consists in having plenty of grease in the pan and making it boil to the utmost before putting in the fish, which should have been

laid to dry for some time in a cloth, and then rubbed with egg, and dipped in bread-crumbs ; the grease should be so hot that it browns the fish, not *burns* it ; the fish should be turned once. A fish *well* fried is not an economical dish, because it requires a great deal of fat to fry it in.

### TO GRILL FISH.

Mackerel, herrings, and sprats, when not boiled, should be baked or grilled, not fried. Clean the fish, rub a little salt over them, and, if it be allowed, pepper. Lay them on the gridiron over a clear fire of cinders or coke. A mackerel is best split open and laid flat. Steaks of any large fish are very good grilled.

## GENERAL HINTS.

There is one point very worthy of observation and care, namely, economy. Sickness is attended with large additional expense : food, fuel, washing, all are increased. On the nurse, whether one of the family, a friend, or a paid attendant, much depends. She must not be careless, or indifferent as to expense or waste.

Whatever is bought or made, should be bought or made with regard to the quantity that is likely to be used while it will keep good. The season of the year must therefore be taken into account. Everything made with milk changes rapidly ; vegetable broths soon become sour in hot weather ; fruit decays or ferments—jelly turns mouldy—poultices become sour.

In making broth, gruel, puddings,—in short, all the diet of the sick,—the directions of the medical man,

and the state of the invalid's appetite, should be kept in view. A patient has frequently cravings, which it is injurious and foolish to indulge. Even the proper food soon becomes distasteful, and the thing he has most longed for will scarcely be touched, or perhaps rejected the moment the eye beholds it. The nurse must therefore distinguish, and regulate accordingly what quantity she orders or prepares. There are certain things that can be made ready to receive various flavours, such as plain boiled rice, maccaroni, arrowroot with water, sago, etc. ; in short, all the breadstuffs. The arrowroot flavoured with lemon in the morning may be distasteful at night, and positively uneatable next day. Nevertheless, the arrowroot may be equally important and palatable to the patient, with a change of flavour. Let everything, therefore, that can be used as stock, be prepared simply ; the quantity made ready for the patient's immediate use can be then proportioned and flavoured to his probable appetite.

All articles should be emptied from the papers, in which they are bought, into jars or canisters, and tied down. Rice, sago, spice, tea, etc., when kept in the paper, lose something of their flavour, or take one not their own. There is also the certain waste of grains spilled and scattered about. Great waste may be caused in making poultices, by preparing more than is needed. The over-quantity is left drying in the saucepan till it hardens, and the saucepan is cleaned at the cost of much time and labour. If the right quantity be made, and water poured at once into the vessel, it will be quickly cleaned. The habit of leaving a sauce-

pan on the hob, with a small quantity of the cookery left in it to harden and burn, is one cause of that kind of cooking which makes all things taste alike; broth looking as if it were milky, or tasting of burnt grease; and milk tasting of broth.

Cleanliness, attention, handiness, and economy, will enable a woman to make wholesome cookery. When once she knows what she has to do, and how to do it, the rest depends upon her own qualities, more than upon the number of her utensils, or the size of her stove. Soyer, who deserves our respect for many good services to the sick and wounded, says, that with a gridiron, a frying-pan, and baking-pan, nearly one-half of the receipts in his "Shilling Cookery for the People" may be done; certain it is, that a great variety of utensils are unnecessary.

The rich, who in health accustom themselves to many luxuries, often require in sickness rich soups and jellies; poorer people may console themselves with the knowledge, that, as they are not accustomed to these things in health, so in sickness are they often unnecessary, occasionally injurious.

# INDEX.

*The simple Name of any application or article of food refers to the mode of making it.*

THE END.

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