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ON

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AND

HOME NURSING.

BY

A. Weatherly, M.D.

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LECTURES

ON

DOMESTIC HYGIENE

AND

HOME NURSING.

BY

LIONEL A. WEATHERLY, M.D.,

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LONDON: GRIFFITH AND FARRAN,
CORNER OF ST. PAUL'S CHURCHYARD.
BRISTOL: J. W. ARROWSMITH, 11 QUAY STREET

TO

JOHN MILNER FOTHERGILL, M.D.,

FOR WHOSE PROFESSIONAL ABILITY I HAVE
THE GREATEST RESPECT
AND WHOSE FRIENDSHIP I ESTEEM,

I dedicate this little Book.

CONTENTS.

PREFACE.

NUMEROUS good and excellent books have been written upon the important subject of Nursing; some devoted entirely to Hospital Nursing and others to Fever Nursing, whilst some few and recent ones have treated with the subject of Home Nursing. One or two of the latter are on account of their price beyond the reach of the lower classes, for whom such information is most important, whilst others, although in price suitable, go out of the province of Home Nursing into that of Home Doctoring, which I cannot but think a somewhat dangerous proceeding; and I hope this little work, written as it is in the plainest possible language, and dealing as it does, with only those subjects that are requisite for any person, acting in the capacity of nurse, to know, may find readers among the classes for which it is especially written and that good may result from its perusal.

I have written these Lectures according to the Syllabus drawn up by the Sub-Committee of the Lecturers to the St. John Ambulance Association, for their advanced classes for instruction in Home Nursing and Hygiene, and I hope they may prove useful to all attending those classes.

The Lecture on "The Application of Local Remedies" is almost entirely taken from my book "Ambulance Lectures," as I did not know how differently to describe the details of this than as expressed in my former book.

I have to thank Dr. George Wilson, not only for allowing me to make extracts from his well known and admirable "Handbook of Hygiene" but also for so kindly permitting me to take many useful hints from that, as well as from his "Guide to Personal and Domestic Hygiene," a book that I feel sure ought to be in every household.

L. A. W.

Nov. 21*st*, 1880,
Portishead, Somerset.

LECTURE I.

The Sick Room.

Introductory Remarks. Selection, Preparation and Cleaning of Room. Bed and Bedding. Furnishing. Warming and Ventilation.

INTRODUCTORY REMARKS.—Of all occupations, the one that women are undoubtedly the most suited for is nursing. Their natural sympathy and kindliness of heart, their ability to endure the fatigue of watching through the night the sufferer, forgetting for the time that sleep for themselves is necessary, their quiet and noiseless way of doing the various things that are requisite in a sick room, all show how wonderfully fitted by nature they are for nurses. But the nurse of the present is not the ignorant nurse of the past. She may have been kind and gentle and according to her power have done much, but she was not cognisant of the numerous details, the knowledge of which has become an absolute necessity now-a-days, before a person

can justly call herself a nurse. But though this is a much better state of things, yet I feel sure that all persons who take up nursing as an occupation, whether in a professional or amateur capacity, whether by necessity or choice, must bear in mind that the nurse must be entirely subservient to the medical man; she is simply the instrument by which his instructions are carried out, and any presumptive officiousness on her part will be enough to sink all her individual good qualities and capabilities. We have had this recently so well demonstrated in the late sad state of things at a large London hospital, that I need say no more about it, I am sure.

Now when a medical man gives his instructions about the patient and his surroundings, he naturally expects that the person acting as nurse should be able in the majority of instances to carry out these instructions properly, without being shown how to do this or that, and thus it is absolutely necessary that she should have a thorough knowledge of all that at any moment may be required of her.

With these few introductory remarks I will at once begin to describe in detail the most usual things that any person acting as nurse must know before she can lay claim to consider herself competent for her post.

SELECTION, PREPARATION AND CLEANING OF ROOM.—It is not always practicable that the household arrangements can be so entirely disturbed as to choose the most fitting room for the sick person to in-

habit, and although in books we find exhaustive accounts of what the sick room ought to be, it is in the large majority of cases utterly impossible to obtain exactly the most suitable. If practicable, however, the room ought to have a south or south-west aspect, ought to be well lighted (for we know what a depressing effect a dreary room has upon a patient), ought to admit of ready and efficient ventilation, and have a fireplace in it. A quiet room is also essential, and hence if a choice of room is able to be made, choose one away from the noisy street, the kitchen or the nursery. In infectious cases it is almost absolutely necessary for the welfare of the rest of the household, that the room should be as isolated as possible. And now with regard to the preparation of it: the first important thing is to see that it is thoroughly cleaned and afterwards thoroughly dried—a damp room is most dangerous for even a healthy person, how much more so for one already ill? You must remove all heavy curtains from the windows, but small lace ones are quite admissible, and help to make the room cheery, and to give it an air of comfort. Strips of carpet or matting can be laid down on either side of the bed, before the fireplace and leading from the doorway, and are in every way much better than one piece of carpet, as they can be readily taken up, shaken and cleaned each day.

BED AND BEDDING.—Try, and if possible avoid having to nurse a patient in a four-poster. I know well it cannot always be

avoided, but you will soon find the difficulties that arise from it. If however you have no choice in the matter, then be sure that no curtains or valance remain on the bedstead. The best kind of bedstead is an iron one, of just sufficient width to allow you to easily reach across it, and of a nice height from the ground, to save bending and consequent back-aching. And now what is the best place for a bedstead? Certainly not with one of its sides against a wall, as you ought to be always able to attend the patient as well from one side as the other. Let the head of the bedstead be against the wall and between the door and the fireplace if possible. By no chance let it be pushed up in one corner of the room, by so doing you make it impossible to properly attend to your patient and you place him in the worst ventilated part of the room.

With regard to the bedding, you may rest assured that feather beds are not only unhealthy but are also most uncomfortable for sick persons to lie upon, on account of the great difficulty they have in preventing themselves from sinking into hollows. A good horsehair mattress with a straw paillasse underneath it is the best for a sick-room bed. In summer the use of the under blanket is not necessary and is not recommended, and therefore a sheet need only be spread over the mattress; the under blanket however may be used in the winter.

Let the bolster be free at the head of the bed, do not attempt to confine it by covering the under sheet over it. With regard to pillows, you must suit them to each individual case,

your patient will soon tell you how the pillows are best placed to make him comfortable. Some persons have a most happy knack of being able to place pillows very quickly and very comfortably, and one of the great features in a nice position of pillows is undoubtedly so placing them that the patient lies on as it were an inclined plane, and thus has plenty of support to the back of the neck and shoulders. The upper clothing should consist of a sheet, one or more blankets, according to the weather or the doctor's orders, and a thin counterpane; avoid quilted ones, they keep in the perspiration given off by the patient, and are consequently very unhealthy.

A draw sheet in certain cases is a necessity, more particularly in long illnesses or severe accidents; it should when folded up be smaller than the ordinary sheet, reaching from the middle of the back to the knees of the patient, and should be put in this position while he was slightly raised at the buttocks. It is a wise thing to place a piece of waterproof sheeting between it and the under sheet.

FURNISHING.—The furniture of a sick room should be as simple as possible, so as to admit of easy and ready cleaning. Let there only be in the sick room those articles of furniture that are absolutely required. Two tables, one or two chairs, a washstand, a chest of drawers and a sofa, and armchair during convalescence, are really all the articles of furniture that are necessary. Pictures on the wall help to make the room comfortable and cheery, and hence are admissible. With regard to flowers

in a sick-room much has been said and written, but I must confess that, to my mind, the admission of flowers, to of course a certain extent, into the sick-room need not give rise to the slightest alarm of pollution of the atmosphere thereby, while on the other hand their presence exerts a most beneficial effect upon the poor suffering patient, and in many cases is most grateful to them. Chairs with cane bottoms are the best kind. Avoid all kinds of woollen draperies and let the curtains of the windows be the simple white net ones. Of course you should endeavour to make the room bright and cheerful, therefore be sure and have the windows well cleaned, so as to admit plenty of light, which can always be subdued if wished by the window blind. Never let slop pails, &c., be seen standing in the room and always be sure and empty all other vessels as soon as possible, but do not do this in the room, and after being emptied have them well rinsed out, and thus keep your sick room not only sweet, but wholesome.

WARMING AND VENTILATION.—This is most important, and all nurses should not only know how to warm and ventilate a sick room, but also the reasons for the wisdom of such methods. There can be no doubt if the system of ventilation were only properly carried out in all households, whether of the rich or poor, much sickness would be avoided and many deaths averted. It has often been a marvel to me how some of our poor get through the severe illnesses they do; for the usual at-

mosphere of their sick-room is closeness itself, and yet, how difficult it is to make them understand that by opening their windows a little and allowing thereby some pure air to enter and the poisonous atmosphere to go out, they are only doing what is most conducive to the health of the sick person! If ventilation be a necessity in the rooms of the healthy, how much more so does it become an absolute and imperative duty to see that it is properly carried out in the sick-room; for we know that in the case of the sick, not only are the exhalations of the body increased, but the atmosphere of the room is still more vitiated by the effluvia from discharged excretions. Of course, in certain kinds of weather, such as fog or extreme cold and damp, or in case of the patient being the subject of some form of chest disease, you will have to ventilate by means of the door, rather than the windows, and you must then be careful to have the air in the passages as fresh and pure as possible. You must all know that it is necessary that we should breathe into our lungs pure air; now the air we expel from our lungs is charged with a poisonous gas, carbonic acid gas, and the great secret of ventilation is to get rid of this impure and vitiated atmosphere, and have its place taken by pure air with plenty of that life-giving gas, oxygen. How then is this best done? The principal agents for ventilating a room are the door, the windows and the chimney. As the door is constantly being opened during the day fresh air is continually admitted by it, but as far as possible you must be careful not to have the door and

window open together for long, and thus cause a most dangerous draught. The chimney is a capital ventilator when there is a fire in the grate, for no fire will burn without plenty of air, and as the warm air is constantly ascending a fresh supply is as constantly being drawn in to take its place. All windows ought to admit of being opened at the top. It is to the top of the room that the impure air rises, for the air that has gone through the lungs is warmed, and we know that warm air ascends, being much lighter than cold. A very good way of ventilating by means of the windows and without causing a draught, is to get a carpenter to cut out a piece of wood about three inches deep and the width of the window frame, and by placing this so that the lower sash will shut down upon it instead of upon the window sill, you allow the outer air to come in, and the impure air of the room to go out, through the space at the middle of the window, between the upper and the lower sashes. Before leaving this subject of ventilation let me say a few words about the admission of night air into the sleeping rooms, not only of the healthy but also of the sick. There is a pecnliar dread prevalent in this country of night air, and consequently many persons, I may truthfully say the large majority of persons, sleep in rooms the atmosphere of which is made close and stuffy, not to say poisonous, by the want of allowing proper ventilation, when by simply having their windows lowered a few inches from the top, they might wake in the morning refreshed, instead of feeling as they do, unfit to go about their day's

work. This is therefore of great importance in the sick-room, and the nurse must understand that it is essential that her patient should breathe during the night as pure air as in the day time, and this good cannot certainly be gained by having the doors and windows tightly closed.

Always try and keep up an even temperature in the room. To do this you must have a thermometer placed in the room, not too near the fireplace, and constantly watch it, not allowing yourself to be guided by your own sensation of heat or cold, which cannot be relied upon. A temperature of about 60 degrees Fahrenheit will, as a rule, be found generally suitable; but the medical man will in all probability, tell you at what temperature he would like the room kept. Never let your fire get too low and thus necessitate the annoyance to your patient of having to remake it. The early morning is the time when the cold is most felt, and unless you look to your fire you will be likely to find your thermometer registering too low. In replenishing it, and more especially during the night or when your patient is asleep, be careful to put the knobs of coal on with your hands one by one, a pair of old gloves being kept at hand for this purpose. You had better dispense with a poker; a piece of stick will answer the purpose admirably and make much less noise. All these little details must be thought of and thereby you will be greatly enabled to enhance the comfort of your patient and possibly be most helpful towards the recovery, which is, of course, the much to be desired end and object of your work.

LECTURE II.

Infection and Disinfection.

Infectious Diseases. Precautionary and Preventive Measures. Disinfecting and Disinfectants.

INFECTIOUS DISEASES are those which are communicable from one person to another, either by actual contact, or through the agency of certain media, such as air or water. All parasitic diseases of the skin are infectious by actual contact, but of these I shall not speak. The infectious diseases which I am going to consider belong to a class termed zymotic, and include small-pox, scarlet fever, measles, typhoid fever, typhus fever, cholera, diphtheria and others. All these vary greatly in degree with regard to their infective powers, small-pox and scarlet fever being most highly infectious, whereas typhoid fever has only a limited power of propagating itself, unless the sanitary arrangements are so bad as to greatly favour its spread.

In all these infectious cases no doubt personal susceptibility plays a prominent part; but who is to tell whether he or she is, or is not, susceptible to a certain infectious disease, and hence proper precautionary measures must by all, and at all times, be taken. No doubt sanitary improvements have already done much to decrease, both in frequency and in degree, epidemics, and a good supply of pure water, the free circulation of pure air in houses, and wholesome food in sufficient quantity, are all principal factors in the preventive measures of epidemics.

I shall now speak briefly of the different modes of propagation of these infectious diseases, at the same time telling you the precautionary measures that are indicated in each individual case.

SMALL-POX.—Sir Thomas Watson, in writing of this disease, says, "There is no contagion so strong and sure as that of small-pox; none that operates at so great a distance." I well remember the outbreak of a severe epidemic of this disease in my district, which was clearly traced to a box of clothes belonging to a poor woman who had ten years before died of small-pox, and which had been brought into the district by the widower and opened for the first time since his wife's death. The poisonous material of this disease is contained not only in the vesicles, pustules and scabs, but also is given off in the exhalations and the excretions. It not only contaminates the air of the sick-room, but also attaches itself to every-

thing in the room. As I have before said, it is of great vitality, and if protected from the air, as in the case I just now mentioned, it will remain active for a number of years.

The great precautionary measure of this disease is, as you all know, vaccination and re-vaccination, and how persons gifted with ordinary human intellect can have the absolute stupidity to object to this measure being fully carried out, is to me extraordinary. Nothing was ever shown so clearly by actual recorded facts, than the wonderful efficacy of vaccination as a precautionary and preventive measure against this terrible disease. I well know the epidemic that raged in my district was solely and wholly arrested by immediate re-vaccination, and all the deaths that took place were those of unvaccinated persons. The preventive measures besides this are, of course, the proper quarantine of the patient and the perfect carrying out of disinfection, of which I shall presently speak.

SCARLET FEVER.—This disease is more prone to attack children than adults, and the infective poison is very powerful indeed, and is contained, not only in the scales given off during desquamation or peeling, although more especially in these, but also in everything that proceeds from the patient. These scales from the skin are by the air conveyed to all parts of the room and to everything in it, and preserve their infecting powers for very long periods. How common it is to hear of a case of scarlet fever being caused by the person having in-

habited a room which possibly some weeks or even months previously had been occupied by some one suffering from this disease, and which had not been properly disinfected. Clothes, books, papers, letters, have all been the means of spreading this most infectious disease. Absolute isolation and proper disinfection are the great precautionary measures to be adopted. The greatest care must be taken during convalescence; the mildest cases are often those that are most frequently attacked with the sequence of this disease, probably on account of the proper want of care.

How often has a slight cold during convalescence either caused an abrupt fatal termination of the case, or at least left the patient an invalid for life.

MEASLES.—This like the preceding disease is very infectious. During the last few years measles seem to have been extremely prevalent among adults, and in many cases have been of a severe type. It has an infecting power at its commencement, but this is strongest when the rash is fully developed. In nursing cases of measles great care must be taken to guard against the patient catching cold, as the bronchial tubes are always more or less attacked, and a severe cold to supervene would of course greatly increase the danger of the attack. Isolation and disinfection are the safeguards against further spread. As a rule it rages through a district as an epidemic, and you cannot trace at all how it started or how one case has been infected from another, nevertheless it behoves

us to always properly carry out the rules that will be presently laid down with regard to disinfection.

Before leaving these two diseases I cannot refrain from quoting what Dr. George Wilson, in his excellent book on "Hygiene," says with regard to one of the great causes of the spreading of scarlet fever and measles:—"The prevalence of these two diseases is in a great measure attributable to the culpable neglect, arising from the popular belief, amounting almost to fatalism, that children must contract them sometime, and that there is therefore little use endeavouring to take any protective steps when either disease is epidemic. The consequence is that the epidemic continues to spread, so long as susceptible victims are to be found in the community, and only dies out for a time, when almost all these have been attacked. How far the medical profession are to blame in allowing this popular delusion to retain its hold on the public mind, it would be difficult to say, but until they unite in striving to get rid of the listless apathy which it engenders, the prevalence of such epidemic diseases will continue to be an opprobium to sanitary science."

CHOLERA.—The great precautionary measures to be used for the prevention of the spread of this most direful disease are readily gleaned from Mr. Simon's exhaustive report concerning it, in his eighth report as Medical Officer of the Privy Council, and may be briefly summed up as follows:—"All matters that are

discharged by the patient, either by purging or vomiting, should be immediately disinfected before being taken away and buried in the earth; all clothing or bedding which have been tainted, must be also carefully disinfected, or better still, where practicable, burnt. The drains and water supply must, of course, be at once looked to, and any infecting cause at once removed. It is a wise thing to attend to these rules, even in cases of so called choleraic diarrhœa."

TYPHOID OR ENTERIC FEVER.—There is a great difference of opinion with regard to the origin of cases of this disease; the late Dr. Budd maintained that it could only originate and be propagated from a previous existing case; while others, like Sir William Jenner, see from the constantly increasing evidence, that it is often caused by polluted water, sewer gas or foul air from cess-pools, entirely independent of any previous case. Whichever of these two theories be true, the same precautionary measures hold good. I, myself, am firmly convinced of the truth of the latter theory, as I have seen several isolated typical cases occurring not only at long distances, but also at long intervals of time, and in places where no previous case had been known, but where the cause was clearly traced to simple polluted water.

We all know how often it has lately been proved that epidemics of this disease have been caused by the milk supply, from some special dairies having been contaminated by the addi-

tion of polluted water, and no praise can be too much for those men who have, on so many occasions, traced the beginning of epidemics to this source and have by so doing stopped the further spread of this fatal disease.

It is not in the province of this lecture for me to go into the different methods of good drainage, etc., but I may say that the great preventive measures of typhoid fever, as of so many other infectious fevers, may be summed up as follows:—Properly constructed, ventilated and disconnected house-drains; properly constructed, ventilated and flushed sewers; good and pure water supply; and in country districts all wells to be looked to and guarded against any possible pollution from near locality of cess-pools, pigstyes or leaky drains. The precautionary measures are exactly the same as those mentioned just now as imperative in cholera cases.

TYPHUS FEVER.—As you all know, this disease is far more fatal than the one I have just been speaking about, and attacks almost solely the unhappy beings who live, in squalor and want, in over-crowded dwellings with deficient ventilation.

It is highly contagious, and cases are recorded in which it has been communicated to persons who have been cleaning the room occupied by a typhus fever patient some time since. Dr. Murchison and Dr. Russell, the medical officer of health for the city of Glasgow, have observed that the contagion of this fever does not appear to travel far, and that if

the sick-room of a typhus fever case is kept well and thoroughly ventilated, and the other precautionary measures adopted, not only do the other occupants of the house incur slight risk, but also the attendants themselves. Let your sick patient be therefore at once isolated; let your sick room be thoroughly and constantly kept well ventilated; let the furniture of the room be reduced to a minimum; use disinfectants constantly, and adopt all the other measures of which I have spoken and which are applicable to all other infectious diseases.

DIPHTHERIA.—This disease originates from bad water, foul air, etc., and is most infectious. The same precautionary measures as in scarlet fever cases must be exercised, and great and especial care must be taken to avoid the disease being communicated by the breath of the patient, a highly infecting source; for it has been proved beyond a doubt that this disease is often disseminated through a household by kissing or bending over the patient and thus inhaling the breath.

DISINFECTION AND DISINFECTANTS.—In all infectious diseases the first thing to be done is to place your patient at once in quarantine by isolation. I know this is not always practicable, but that it is one of the most essential precautionary measures there can, I think, be little doubt. What a common occurrence it is, that when the atmosphere of the sick-room begins to be impure and the sense of smell is offended, recourse is at once

had to the different forms of deodorising disinfectants, and the question of allowing the foul air to pass out of the room by sufficient ventilation is entirely overlooked. Disinfectants are most necessary as precautionary and preventive measures against the spread of disease, but they stand distinctly second to that great measure, namely, a proper supply of pure air by means of efficient ventilation, and this must never be overlooked.

And now let us consider in the first place what are disinfectants, and, secondly, what are the best and most important of them. Dr. George Wilson defines the term disinfectants as follows:—"Disinfectants may be described as agents which are intended to destroy the infective power of so called disease-germs, or indeed of any decomposing matter, whether existing in air, water, or other substances, which tend to produce disease. Some of them act as deodorants by arresting decomposition, or as destructives by their direct chemical action; and the most efficient of them are endowed with all these properties, though in varying degrees."

And now, with regard to the different disinfectants, I shall only mention those that are generally considered as most useful and practicable.

Heat and Cold act as disinfectants, the first if extreme by destroying all organic matter and the latter by preventing putrefaction.

Carbolic Acid is now a most popular disinfectant, but it is most useful for steeping in-

fected clothing in, for disinfecting closets, drains, etc. Its odour is somewhat disagreeable and to some persons very irritating, and consequently it is not used for sprinkling about the sick-room.

Condy's Fluid is, as you all know, perfectly odourless, and, being so, it is of frequent use in the sick-room, and is very efficacious.

Chloride of Lime is principally useful for disinfecting drains, etc. It is a very powerful disinfectant, but on account of its pungent odour it has lately gone out of use except for out-door disinfecting purposes.

Sanitas is now a very fashionable and good disinfectant, and is very highly recommended. Unlike the majority of these agents it has quite an agreeable odour and does not stain, and is consequently well adapted for use in the sick-room.

Terebene is another new and most useful disinfectant. It owes its origin to Dr. Bond of Gloucester, and is prepared from spirits of turpentine. Its odour somewhat resembles that of pine-wood and is decidedly agreeable. It mixes very readily with sweet oil, but it is not very soluble in water. It is decidedly one of the most efficacious of the deodorants, and at the Royal Victoria Hospital at Netley has been used with excellent effect.

Chloralum is inodorous and, what is of consequence in many cases, it is extremely cheap. Of this agent Professor Franklyn states that it is one of the most powerful and available dis-

infectants we have for removing fœtor and effluvia. It is however not volatile, and consequently cannot be used as an aerial disinfectant. For washing infected clothing or for cleansing rooms it is second to none.

Now let us consider the question of disinfection under the following headings, viz., the disinfection of the sick-room—the disinfection of room after having been inhabited by an infectious case—the disinfection of clothing, bedding, etc.—the disinfection of drains, water-closets and sinks—and, lastly, the disinfection of the dead body.

Disinfection of Sick-room.—Let me again repeat what I said before that the great danger that arises from the use of disinfectants in a sick-room is that they disguise the signs of insufficient ventilation, and thereby tend to create inattention to this most essential point. They are capital adjuncts to a sufficient supply of good and pure air in the sick-room, but without it are of most doubtful efficacy. You may then sprinkle one of the odourless disinfectants about the room, and keep a few saucers filled with the fluid in certain parts of the room. A sheet sprinkled with a strong solution of Chloralum, Condy's fluid, or Sanitas, may with great advantage be hung outside the door of the sick-room, and thus complete the isolation of the patient.

It is more especially necessary in the sick-room of infectious cases that all needless drapery should be removed, and that the utmost cleanliness of room should be observed. The

bed-pan, the chamber utensil and all vessels which have to receive the discharges from the patient ought to be constantly kept charged with a disinfectant, and immediately after use be taken out of the room, emptied and well rinsed out with some disinfecting solution before being brought back again into the sick-room. In infectious cases, too, it is better to use instead of regular pocket handkerchiefs, pieces of fine linen, which can be burnt after use, but this is of course not imperative. In scarlet fever cases, as also in small-pox cases, when the skin begins to peel off some disinfecting substance should be freely applied all over the patient's body. For this purpose you may use a mixture of terebene and sweet oil, or a weak solution of glycerine and carbolic acid, or the body may be washed with Wright's coal tar soap. By these means you not only materially prevent the scales of dry skin from disseminating themselves in the air and thus spreading infection, but you actually by the use of these disinfectants rob these scales, to at least a great extent, of their infective power.

Disinfecting of room that has been inhabited by an infectious case.—The complete disinfection of the sick-room is only possible when it is no longer inhabited, for the measures that are to be used for this purpose would render it impossible for any person to remain in the room. The room then must in the first place be thoroughly cleaned and washed with a strong solution of chloralum (about three or four ounces to a gallon of water); the furniture being dealt with

in the same way. The wall paper should now be removed, and the room thoroughly emptied; all things, previous to their being moved, being properly and thoroughly disinfected. Now, after seeing that doors, windows and all other openings are able to be closed, sulphurous acid gas should be generated in large quantities by the following plan: you burn sulphur (about 1 lb. of sulphur for every thousand cubic feet of space being the proper quantity) in an iron dish supported over a bucket of water, and by this means you have your sulphurous acid gas generated. During this time all openings in the room must be kept tightly closed, and for some hours after; when, after a few days, you may throw open all doors and windows, have the ceiling washed and whitened, walls re-papered and the other parts of the room well washed with plenty of water and disinfecting soap.

Disinfection of clothing, bedding, etc.—If it is possible by far the best way of disinfecting these articles is by exposing them for about an hour to a dry heat of from 240°—250° Fahrenheit. A great many of our towns have a chamber provided for this purpose. If this is however not possible, then the best method of disinfecting them is by hanging them up in a room, in which you generate, by the method of which I spoke just now, sulphurous acid gas; or any article which cannot be injured by being washed should be steeped in a solution of chloralum and carbolic acid and boiled.

Disinfection of drains, waterclosets and sinks, etc.—This is of great consequence, and ought

most rigidly to be seen to, and if necessary enforced, in any district in which an epidemic prevails or even threatens. To be of proper effect, it should be carried out in a systematic way. Dr. George Wilson gives the following direction with regard to this:—"The disinfection of all waterclosets, etc., should be carried out, either with solutions of chloride of lime, chloralum, cupralum, carbolic acid, copperas, or Burnett's fluid. Cooper's salts might be used for the streets, lanes and open courts. Any manure heaps or other accumulations of filth, which it is inexpedient to disturb or impossible to remove, should be covered with powdered vegetable charcoal to the depth of two or three inches, or with a layer of fresh dry earth, or with freshly burnt lime, if charcoal cannot be obtained. Cess-pits and midden-heaps may be disinfected with solutions of copperas (3 lbs. to the gallon of water), or with cupralum or chloralum (1 lb. to the gallon of water)."

Disinfection of the dead body.—If the infectious case has ended fatally, it behoves the relatives, for the sake of the public health and for the prevention of possible further loss of life, not to allow unhealthy sentiment to interfere with their obvious duty, and they should therefore, without any dissentient voice, permit the medical man's wishes with regard to what ought to be done, to be strictly carried out. The body should be washed with a strong solution of carbolic acid or some other disinfectant, be enveloped in a sheet soaked in some strong disinfecting solution, placed in the coffin as

soon as possible and the lid be screwed down. The burial should be allowed to take place without any delay. The clothes worn by the patient at death should be burned by fire or saturated with quick lime and buried.

All these instructions which I have laid down are undoubtedly necessary if we aim at the prevention of the spread of infectious diseases, and should, as far as possible, be carried out. In some cases it is, I know, impossible to rigidly carry out the minute details of proper disinfection and quarantine by isolation, but one and all should do their utmost, and they will then at least have the satisfaction of feeling that nothing within their power has been left undone. Now-a-days disinfectants are so efficacious and so cheap that their use must be looked upon as imperative in all infectious cases, and the medical man must be strictly attended to in all his orders concerning this most important subject.

LECTURE III.

Details of Nursing.

The Nurse. Management of Nurses' Own Health. Regulation of Visitors. Washing of Patients. Changing Sheets. Lifting Helpless Patients. Administration of Food, Stimulants and Medicines.

THE NURSE.—Anyone may at any time be called upon to act in the capacity of nurse, the mother to her child, the daughter to her parent, the sister to her brother, and she must try her best to do whatever is necessary for the welfare of her patient; and this necessitates the knowledge of those details of nursing which I am trying to teach you in these lectures. But before anyone takes up nursing as an actual occupation, she must be sure that she is possessed of all those qualities, which are necessary for that profession. The life of a nurse is by no means an easy one, for is it not essentially a life of self sacrifice? Her duties are often not only almost unbearable, but

at times absolutely disagreeable, and necessitate her being truly devoted to her work, patient, and, what is also most important, of good health and constitution. As nurse, she must be clean, tidy and neat, both in her appearance and her work; she must have tact and judgment, and be able quickly to discern the temperament of her patient; she must be firm, yet not domineering, gentle and kind, yet at no time giving way; she must be punctual in all things, and be most attentive to the medical man's instructions, and watch carefully all the different symptoms of her patient, so as to be able to answer all the doctor's questions at his next visit. Let me here mention one thing that I always try and impress upon those who may have the charge of patients in severe and critical illness.—Many persons have good memories, and many have, I am afraid, exceedingly bad ones; but even those who pride themselves upon their ability to retain what is told them, so often forget, that it is a good rule for a nurse always to put down on paper, or on a slate, all the directions of the medical man with regard to medicines, nourishment, and other things, as also to make notes of all that has happened since his last visit, such as how long and how often the patient has slept, whether on awaking he has appeared refreshed, what time he has taken his nourishment, and in what quantities, and numerous other details, which will not only save cross questioning, but also the medical man much time, and give him a clearer account of his patient's condition since his last visit; in fact he sees it all at a glance. I myself have

found this wonderfully helpful in many serious illnesses.

The dress of a nurse is important and should in all cases be attended to. It must be neat and quiet, and of such material as not only to admit of being washed, but also of such texture that no rustling noise is made by it on moving, and it must not be long. A nice, neat pair of leather slippers are the best suited for the sick room, and high-heeled boots must never be worn while on duty, as they cannot but be noisy. Let a nurse be careful with regard to personal cleanliness, and always try and keep her hair simply and neatly arranged, and a nice white apron and cap always gives a clean and tidy appearance to a nurse. A pair of scissors suspended from the waist belt, as also a pin-cushion, well stocked, are always most useful. A nurse must be careful that the name of a gossip be not assigned to her. Let her show by the way she does her work that she has skill and experience, rather than by recounting to her patients all she has done in this case or that; and above all things, let her remember that, as she is often taken into the confidence of her patient, she must be especially reserved in her conversation as to her individual experiences.

MANAGEMENT OF NURSES' OWN HEALTH.—It is impossible for a nurse to do her duty and justice to her patient unless she keeps herself in good health, and so do not for one moment suppose that she can be thought guilty of selfishness because she is particular concerning those things that effect her own

bodily well-being. Be careful therefore, if you ever have to act in this capacity, that you take your meals regularly, choosing for your diet those things that you know by experience agree with you, and eschewing all that may have at any time upset your system. Sleep you must have, and this is more especially important when nursing cases of illness that may last for some time. Of course there are some cases of emergencies, when for some hours you will find it impossible to get that rest to which your body and mind have been accustomed; but always try, if possible, to get at least six hours undisturbed rest during the twenty-four hours, and by this means keep your health good, and be enabled to carry out your work properly. It is one of the rules of all nursing institutions that a regular fixed period each day shall be allowed for sleep. Remember, too, that in nursing infectious cases it is of the utmost importance that you keep in good health, and so render yourself less liable to be laid low with that complaint from which your patient is suffering. Always try and get out for a little walking exercise in the open air every day, and be sure and let your patient know you are going out, for by attempting to get out unawares you will, in all probability, cause much worry to the invalid, who will be continually wondering where you are. Before leaving this part of my lecture, let me say a word about the use of stimulants. Unless really ordered by the medical man, no nurse should ever take spirits; a glass of beer or porter, whichever she has been accustomed to, there is no objection to

whatever, but remember that either of these be taken only at a regular meal time.

REGULATION OF VISITORS.—During convalescence especially does it behove the nurse to be on guard as to the admission of visitors to the sick room. It is during this period that friends and relations are so anxious to see the patient, and this is more the case among the poor, Sunday being the great day for crowding into the sick room; and yet how often is this supposed kindness the means of causing a dangerous relapse in a case that has up to that time been going on most favourably. In acute cases the medical man will give you his instructions about visitors, and I need not tell you that these must be strictly enforced, difficult as the task sometimes may be. In infectious cases visitors ought to be strictly forbidden, for not only do they themselves rush into unnecessary danger, but are also at the risk of conveying the disease to their families, and so to the community at large, and for public health's sake therefore this rule must be strictly enforced.

If a few visitors are allowed by the medical attendant to see your patient, be sure that only one or two are admitted at a time, and that they do not stay too long and thus fatigue the invalid. Over fatigue, whether of body or mind, is to be avoided by healthy persons, how much more necessary is it to enforce this rule in those who are out of health.

WASHING OF PATIENTS.—There is a

popular idea that persons who are ill and in bed can do without the same amount of washing and personal cleanliness that is necessary for health when they are well and about, and yet what an utterly false idea this is. In India it amounts to superstition, and the moment one of the lower orders of East Indians has anything the matter with him, washing is a thing at once to be dreaded. I was greatly amused when going through the out-patient department of the large hospital at Calcutta, to see that the first things that the doctor called for when seeing a patient were hot water, soap and flannel, and the limb or other part of the body that had to be examined was assiduously washed before the doctor attempted a diagnosis. I asked the reason of this want of cleanliness on the part of these patients, and was then told of the superstition that attaches to washing when once a person is taken ill.

The hands, arms, armpits, face and neck, should be washed every morning regularly with soap and water, and nicely dried with a soft warm towel. In eruptive fevers, however, you need only use the sponge, excepting during the period of peeling, when some disinfecting soap, such as Wright's coal tar soap, or carbolic acid soap, can be with great advantage used, as I mentioned in my last lecture. During a long illness you ought to wash the whole of the patients' body once a week, unless ordered not to do so by the medical man. In doing this be careful not to expose more than one portion of the body at a time, and have your patient's clean linen ready and well aired before you

commence operations. As each part of the body is washed, you must rapidly dry it with a warm towel, or piece of flannel, and during the process of drying be sure and rub the part well. Nothing is so refreshing to an invalid as this thorough washing, and often is a comfortable sleep the result of it, after restless hours have been passed. You must see that the hair of your patient is carefully combed out every morning and evening, not only for comfort and appearance sake, but also for the sake of health, as by so doing you allow a proper circulation of air about the roots of the hair, and thus help to keep the head cool, and we all know what a grateful boon this is when laid on a bed of sickness.

CHANGING SHEETS.—By this I mean only the under sheets, as there can be no need of telling you how to change the upper ones. These, then, can be changed in two different ways, which I will now describe. You must be sure and have your clean sheets ready and well aired before you commence your work, for nothing is so irritating to a sick person as the nurse having to run out of the room, in the middle of doing anything, for things which she ought to have at hand. The one method is as follows:—You roll up lengthways the soiled sheet one side of the patient, and push it as far as possible under his side; now roll up the clean sheet and place the roll next to the other, and by gently turning your patient over both rolls, and taking away the dirty sheet, and unfolding the clean one, you have only to turn

your patient back again, and the otherwise tedious business is accomplished. The other method is this:—You raise your patient into a sitting posture, if possible, and roll the soiled sheet from the head of the bed downwards, as far as possible; you now roll up the clean one crosswise, and placing it next to the other roll you lay your patient down again, and by raising the lower extremities you are enabled to pull down both sheets. The dirty one is removed and the clean one spread out and neatly tucked under the mattress, and your patient is soon again comfortable. If the sick person be too weak to sit up and allow this to be done, you must follow out the same plan by simply raising the head and shoulders gently, and sliding your two rolls of sheets under the back, and then again gently raising the hips, and lastly the legs, and so get the soiled sheet away and the clean one down and in its place.

LIFTING HELPLESS PATIENTS.—You may often want to lift some poor helpless invalid, who has been rendered utterly unable to help himself, through paralysis, accident, or prostration, and it is therefore necessary that you should know how you can best and most easily accomplish this. One person can quite comfortably carry a child, but when the patient is an adult it becomes a different thing, unless he is very light and the nurse strong. Two persons can manage this in the following way:—They take their stand at each side of the bed, about opposite the buttocks of the patients and stooping down they join their hands that are

towards the foot of the bed under the middle part of the thighs, and their other hands behind the back of the patient, and in this way he can be easily lifted, carried, and put down again. If he is able he can render great help, by putting his arms round the necks of the two who are lifting him. Of course if a limb be injured, there ought to be a third person to take charge of it during the lifting process. Four persons can lift a patient with great ease and comfort in the following way:—Two poles are placed one on each side of the patient, and the under sheet and blanket are firmly rolled round them. The four persons now stand, two on each side, facing the patient, and each one catches hold with one hand the end of the pole surrounded by the sheet, and with the other the pole near its centre. The patient in this way can be carried on to another bed or couch, which should be got nicely and comfortably ready for his reception. If you have two beds in the room of exactly the same height, by putting them close togother the patient can easily roll from the one to the other.

ADMINISTRATION OF FOOD, STIMULANTS AND MEDICINE. With Regard to Food.—In the large majority of cases which you may have to nurse, the doctor will tell you what food he wishes the patient to make use of, and the carrying out of his instructions will have very much to do with the recovery of the invalid. Remember, never ask your patient whether he fancies this or that; if you do, you will in all probability find, that

by the time you have got what he fancied, his appetite for it will have vanished. You must simply bring to the bedside what has been ordered, and tell him firmly that you have brought something for him to take, and see that he takes it, just as he would have to take his medicine. Nurses so often, I am afraid, allow the patient to refuse his nourishment, and yet will not hear of his not wishing to take the medicine, and yet the former, in many cases, is more important than the latter. Once give way, and listen to his likes and dislikes, for this or that, and endless difficulties will surround you; this is especially the case with sick children. Be sure and see that whatever you bring the invalid to take is served up in as nice a manner as possible, having all cups, plates, etc., most scrupulously clean. Never allow your fire in the sick room to be used for cooking purposes, for by so doing not only do you get the atmosphere of the room impure, but you also run the risk of entirely de-appetising the patient. If he is able to take solid food, you will find that he need not be fed more than once every three or four hours, but if, on the contrary, the diet consists of liquid nourishment, then it will have to be given more frequently, never letting more than two hours go by without something being given, and in some severe cases you may be required to feed him every half hour. Common sense will tell you that in ninety-nine cases out of every hundred, it is radically wrong to wake a patient out of a sound sleep to take nourishment; now and then cases may require constant feeding, and consequent waking, but the medical

man will in such a case give his especial directions. Supposing your patient is unable to sit up in bed to take his nourishment, you will have to administer it by means of a feeding cup, and before using this pin a clean and well aired towel round the neck, so as to ensure cleanliness and comfort. Where in many cases it is impossible for the invalid to take even a moderate quantity of nourishment without vomiting, he can often keep down very small quantities given at frequent intervals. If, however, the stomach be very irritable, the best way is to withold everything for an hour or two, and then begin with a very small quantity of iced soda-water and milk. In fever and other severe cases, be sure and see that your patient has nourishment through the night as frequently as through the day, for it is at this time, as a rule, that they feel more especially prostrate.

WITH REGARD TO STIMULANTS.—You must always be careful to get from the medical man the exact amount of stimulant and the kind he wishes given to the patient, and be sure and carry out these instructions most strictly, using a measure glass, so that the exact amount is given at the stated times. Always see, too, that the stimulants used are of the best quality.

WITH REGARD TO MEDICINES.—It is a wise rule, and one I always try to impress upon those who are looking after the sick person, that instead of trusting to a table-spoon, a dessert-spoon, or a tea-spoon, to measure the dose of medicine in, they should alway be provided with a marked measure-glass for that

purpose. It is of the utmost importance in giving many medicines that the exact quantity ordered be given, and this is not possible unless a measure-glass be used. Be sure and keep the glass from which the patient takes his medicine thoroughly cleaned, for it is essential that everything should be done to render medicine not only as agreeable as possible to take, but also to look at, and a dirty glass certainly does not add to this effect. If you have to give cod liver oil or castor oil, besides other medicines, take care that you have especial measure-glasses for them, as well as especial glasses for them to be taken from. To take the taste of nasty medicines from the mouth many things are used, but nothing answers this purpose so well as chewing a piece of bread or ship's biscuit, and spitting it out; it is much more effectual than rinsing the mouth out with water. Always take care that the medicines are given at the exact invervals that are ordered, but of course the patient should not be awakened from sleep for the adminstration of medicine any more than for nourishment, excepting in especial cases. In gettiug children to take medicine, it is of the utmost importance that you make them from the first understand that they must take what is given them; never, therefore, attempt to get them to take their dose of medicine or their powder by saying that it is nice, and they will taste nothing, etc., for by so doing, although you may succeed in getting them to take the first dose, you will have ten-fold trouble when the time comes for the second to be given. Not only must you be careful about

the exact dose to be taken, but you must be sure and give the medicine at the time it is ordered. I give you a table arranged as to the hours at which medicine may be given, except especially ordered otherwise by the medical man, for some medicines from their nature and effect upon the stomach require to be taken directly after meals, and harm might result by their being given at any other time.

When ordered every four hours.	When ordered three times a day.	When ordered twice a day.	When ordered night and morning.	When ordered daily.
10 o'clock Forenoon.	10 o'clock Forenoon.	10 o'clock Forenoon.	9 o'clock Forenoon.	Either in the Morning at 9 o'clock or at Bedtime.
2 o'clock Afternon.	2 o'clock Afternoon.	6 o'clock Evening.	At Bedtime.	
6 o'clock Evening.	6 o'clock Evening.			
10 o'clock. Night.				
2 o'clock Morning.				
6 o'clock Morning.				

If drops should be ordered to be given, do not trust to dropping them yourself from the bottle, but use a measure for this purpose. In nursing, accuracy in all things is often of essential and vital importance to your patient.

If the medicines ordered be of an effervescing character, you must give them to your patient in a tumbler, and it is a wise plan to always pour into the tumbler the acid part of the mixture first and to add the alkaline part,

for in so doing you not only ensure a more perfect mixture, but you also render the draught more agreeable.

If a nurse finds that the medicine is producing some marked symptom, such as vomiting, great pain in the stomach, heaviness or convulsions, it is wise to refrain from giving it, and let the medical attendant at once know.

Medicines are given in three principal forms; either in the liquid state, as mixtures, or in powders, or in pills. With regard to mixtures I have already spoken. Pills are things that although the easiest of all medicines to take, are in some cases a form of medicine that a patient finds impossible to manage. If any difficulty be experienced in taking a pill, it can be put with a piece of bread, or covered up with a little jam, and a draught of water be taken to wash it down. The method used by the French is as follow:—"Put a small piece of damped rice paper into a table-spoon and then fold it round the pill. The spoon is then filled with water and placed by the nurse well back in the throat of the patient, who swallows the mass without difficulty."* Another good method is one that is given in an excellent manual for the use of the Hospital Army Corps, and is as follows:—"Make the patient take a mouthful of some fluid and lean back his head, then drop the pill into his mouth and direct him to swallow the fluid with a gulp. But it may happen that he is so impressed with the difficulty, that he will still separate the pill from the fluid. In such a case make him shut

* From Handbook for Hospital Nurses, by Florence S. Rees.

his eyes while the pill is dropped in, after deceiving him a few times by pretending to drop it in and by directing him to swallow."

Powders are certainly not an agreeable form of methods, but often have to be ordered. They are best given in a little preserve, but are sometimes ordered to be taken dispensed in water, and in some cases to be put upon the patient's tongue in the dry state. In giving powders, it is best to find out from the medical man how he wishes them to be taken. Quinine when given in the form of powders is best taken mixed with a little milk, which has the effect of greatly disguising the taste.

LECTURE IV.

Details of Nursing.

(CONTINUED).

Observation of the Sick. Rigors. Sleep. Pain. Posture. The Skin. Appetite. The Pulse. Respiration. The Tongue. Vomiting. Cough. Expectoration. The Bowels. The Urine. Effects of Remedies. Delirium. Bedsores. Temperature Taking.

OBSERVATION OF THE SICK.—One of the great characteristics of a good nurse is her power of observation. To some this comes almost naturally, and they soon are enabled to note and compare the different symptoms of a case, and to logically argue them out in their own minds as to their being favourable or otherwise; whilst to others it is only gained by dint of careful study, watching and training. A nurse must, however, not be only capable of observing; she must also be well able to describe

her observations to the medical man, and thus help him materially, not only in his treatment of the case, but also in his judgment of the probable end and issue of the disease. A medical man only sees the patient for a certain few minutes, either once or more times during the twenty-four hours; a nurse is constantly with the patient, and hence it is easy to understand how important it must be that she has the power of observation. Never let a nurse trust to her memory in these things; she should never *think* what has happened, but *know*, and therefore let her note down from time to time all she may have observed with regard to the different symptoms as they have occurred, and so be enabled to give the medical attendant a clear history of all that has taken place since his last visit. And now I will describe to you, one by one, some of the points of observation that have always to be noted.

RIGORS or shivering fits are met with in some cases, and are often the commencing symptoms of a serious illness, whereas in some diseases, such as ague and fevers of this character, they occur with regularity. It is important to note the time of the commencement of the shivering fit, as also the duration of it, and to observe what effect it has for the time upon the patient, such as, whether it caused a livid appearance of the countenance and purple condition of the lips; again, you should be careful to note the amount of exhaustion that the fit left, and in the rigors of intermittent and remittent fevers it is important that you should

notice how long the hot or fever stage lasted and at what time the sweating stage began and how long that went on, as well as to take careful observation of the mental condition of the patient during this time; whether the head kept clear and questions were answered rationally, or on the other hand, whether a half unconscious state was the consequence. All these things are great guides to a medical man in his treatment, and must of necessity come under the head of imperative observation.

SLEEP.—We all know how utterly depressed and miserable an effect a restless sleepless night has upon us, even when we are about and able to follow our usual avocation, and in a serious illness a good sound sleep is hailed as one of the signs of a favourable issue taking place. There are many things to be observed by the nurse with regard to sleep; she must note the exact length of each nap of sleep, and be able to describe the kind of sleep that had taken place, whether it had been quiet and natural, or whether the patient had started in his sleep or awakened as if frightened and been for a time unable to collect his thoughts: here again she must find out whether her patient has seemed refreshed after his sleep, or has awoke in a state of exhaustion. As with other symptoms it is by far the safest rule to adopt, that the nurse should note down on a slate or piece of paper the exact time at which the sleep commenced, and the time when the patient woke up; and thus she will be able to show the medical man at a glance what sort of

a night his patient has had. If no sleep has taken place, she must try and find out the reason of it. Is the sleeplessness due to worry, excitement, discomfort, or pain, or is the patient actually afraid to go to sleep? If any medicine has been given to cause sleep, the nurse must carefully watch its effect and let the medical man know at once if any unnatural symptoms are the consequence.

PAIN.—With regard to pain the nurse has to notice several things: there is the situation of the pain, whether it be in the leg, the arm, the back, the side, or any other part of the body; then there is the duration of the pain, whether it lasts for a few minutes or longer, or is persistent; then again, there is the character of the pain, whether of a dull, aching, throbbing, or lancinating character, or a mere smarting and burning sensation. The nurse must also notice whether if the patient's attention be for a time distracted, the pain is not complained of; as also whether the medicines or applications ordered by the medical man have had the desired soothing effect. I may therefore say that the nurse must note carefully the time of the attack, the duration, the cessation, the degree and the character of the pain.

POSTURE.—This may seem a trivial thing to notice, and yet in how many cases does the position of the patient lead the medical man to a right conclusion. You see a child lying with the knees drawn up and in this position it seems easier, and you at once know that the situa-

tion of the pain is in the abdomen; then again, in certain injuries and diseases of the bones and joints, it is of great use to the medical man to know in what position the patient found most rest.

In cases of pleurisy the position the patient sleeps in, whether on one side or the other, helps the medical man greatly as to what stage the disease is in, for if there be simple inflammation of the covering of the lung without any effusion of fluid, you will find that the patient lies on the sound side, but when any fluid is poured out, he at once finds himself only able to be comfortable on the affected side.

THE SKIN.—Always watch the condition of the skin, more especially in fever cases, and notice whether it be moist, hot or cold, pale or red, or whether it be covered with any rash. Great perspiration at night, which is so often met with in consumptive cases, is a sure sign of weakness and debility. In taking notice of the appearance of a rash, the nurse must be careful to observe in what part of the body it at first came, and also whether it be raised above the surface of the skin or not. The exact temperature of the skin has often to be taken by the nurse, by means of the thermometer, and I shall presently describe to you the way to use this little instrument. Sometimes the skin from being quite cold becomes hot, and then perspiring: if such is the case, you must be sure and note the hours at which these changes take place.

THE APPETITE.—This is another thing that the nurse has particularly to observe. It often happens that a patient tells a medical man that he has no appetite whatever, when the nurse by careful observation is able to tell a different tale and to assure one that food has been taken with apparent relish. There may be a complaint of heaviness and discomfort after food, or nausea, and these symptoms must all be told to the medical man. Patients often take a dislike to some article of food, and their wishes in this respect should be consulted by the nurse as far as possible. Thirst is a common symptom in all illnesses, and should be gratified, care being taken to give that form of liquid ordered by the doctor.

THE PULSE.—It is better for a nurse not to attempt to give her opinion upon the condition of the pulse of her patient, for a great amount of practice and experience is required before a pulse can be at all properly described, and this therefore must be left to the medical man. I may, however, tell you that 70 to 75 beats a minute is the average pulse of a person lying in a horizontal position and unexcited.

RESPIRATION.—The different kinds of respiration are symptoms of great importance and must not be overlooked, and as the nurse is often cross-examined about them by the doctor, I will try and explain to you the different varieties met with. In the first place let me tell you that about 18 to 20 respirations a

minute is the average rate of breathing. Each respiration is made up of two acts, the act of inspiration and the act of expiration. Now the first thing to notice is the number of respirations that take place in the minute, and you should never allow your patient to know that you are counting these; simply note carefully the heaving of the chest, with your watch in hand and see and count how many times the chest moves in the course of the minute. The breathing may be laboured, or it may be accompanied with a noise, such as snoring, or a blowing of the lips, or again, there may be wheezy sounds, denoting some affection of the bronchial tubes. A dangerous kind of breathing is what is called "stertorous breathing," and is accompanied with a loud snoring inspiration and blowing out of the cheeks: be careful if this kind of breathing comes on in any case of which you may have the charge to let the medical attendant at once know of it, for it is a grave symptom and requires immediate attention. Last, but not least, you must note whether the breathing be accompanied with any pain; if so, whether the pain follows each inspiration, or only when a deep one is taken, as also the situation of the pain so caused.

THE TONGUE.—The condition of the tongue is an indication of the state of the stomach, and must be noted. If furred, observe whether it be coated with a brown, black, yellow or white fur, and whether it is becoming cleaner round the edges. If there be any ulcers or pimples on the tongue or about the mouth, be

sure and call the doctor's attention to it at his next visit. The tongue again may be dry or moist; but I shall not say anything about what may be learnt from the state of the tongue, as that belongs essentially and entirely to the medical man's province.

VOMITING.—It is better for a nurse always to save whatever has been vomited by the patient for the doctor to see, and not trust to her descriptive powers; but she should be able to give information as to what time the vomiting took place, whether directly after food or liquid had been taken, or at some interval after that period: then again, she should be careful to notice whether there was much straining or retching before actual vomiting occurred, as also if it was preceded by pain, and if so, the situation of the pain. Always remove the vomit from the room immediately and keep it in some other room if it is necessary to save it for the doctor to see.

COUGH.—With regard to the cough, you must observe whether it comes on in paroxysms, or is incessant; whether it is a dry hard cough, or moist and accompanied with expectoration; whether it is worse at any part of the day or night, and if so at what time; and lastly, whether it is attended with any pain.

EXPECTORATION.—If the cough be moist and there is expectoration, you must be careful to let your patient expectorate into a spitting cup, and this should be kept for the

medical man's inspection. If blood is brought up, you must be sure and note whether the patient coughs it up, vomits it, or brings it up from the back of throat or mouth, or whether the expectoration is only streaked with blood. When cleaning out the spitting cup, you must observe whether the expectoration adheres to the side of the cup, or flows from it regularly and easily.

THE BOWELS.—Several things have to be observed with regard to the bowels, and you will find the medical man will often cross-examine you upon your observation. In all cases where there is anything not natural about the patient's motion, it should be saved for the medical man to see, unless he especially orders you at once to throw it away, as he probably would in all infectious cases. The number of times the bowels move in the twenty-four hours must be noted, and if the motion is attended with pain, straining, or griping. The colour of the motion must be noted; in jaundice, for instance, you will find it is of a clay colour. If the patient passes worms, you must observe whether they are the round worms, or the flat tape worms, or the small thread-like ones. If any blood pass by the bowels, you must be able to tell the doctor whether it came by itself, either before, or after the motion, or whether the motion was streaked with blood.

THE URINE.—If the medical man wants this saved, he will doubtless let you know, if not, you must observe in what quantities it is

passed, and how often in the twenty-four hours; if with any discomfort or pain, either before or after passing it; the colour of it, as also the consistence; if there be any deposit, and if so what is the colour of it.

EFFECTS OF REMEDIES.—These must be carefully watched and noted down by the nurse, as it is of the highest importance that the doctor should have a clear account of the effects of the medicines ordered by him. Some persons are exceedingly susceptible to the influence of certain medicines, and strange symptoms may arise after taking the remedies ordered, of which the doctor should at once be made aware. Coldness of the extremities, vomiting, severe griping pains, an overpowering feeling of weariness, actual unconsciousness, twitching of muscles of limbs, great dryness of the throat, a certain confusion of ideas, or actual delirium, may all be the effect of remedies upon some persons other than that desired by the medical man, and the nurse must therefore consider it her duty to let nothing of this sort escape her notice.

DELIRIUM.—It may fall to your lot to have to nurse delirious cases, and I can assure you they require an enormous amount of both tact and patience. Delirium may come on in many cases of severe illness, and varies immensely in degree; sometimes being only a condition of light headedness, whilst at others it really amounts to mania. You must never attempt to contradict what a person in delirium

may say, as it only irritates the mind and makes matters worse. Be watchful and careful that no dangerous things such as knives, razors, fire-arms, etc., be in the patient's reach; see that the windows are not able to be widely opened; and in fact be always on your guard, for in these cases the life of the patient really depends upon your care and vigilance. In some cases it is necessary that restraint should be used, and the method adopted for this will be doubtless fully explained to you by the medical attendant. It is a wise precaution that a nurse should always have another person near at hand in delirium cases so as to be available at a moment's notice.

BEDSORES.—In all cases of long illness a nurse will find that one great difficulty presents itself in her many duties, and that is the prevention of bedsores. Often, in spite of every effort on her part, a bedsore will come, and then it will be her duty to carry out every detail of treatment ordered by the doctor, so as to prevent the nasty complication of a case from becoming worse, and help towards its absolute healing, if such be possible.

Now as to their prevention, there are several things to notice. Always keep the parts of the body that are exposed to pressure scrupulously clean; be careful that the sheet on which the patient lies is kept smooth, and that no wrinkles or bed crumbs be allowed; remove the clean sheet from under the patient directly it is soiled; try and harden the skin by bathing it with a little brandy and water, eau de cologne,

or spirits of wine; apply violet powder or powdered starch after the daily washing, and keep the skin dry; vary the position of the patient as much as possible; remove your patient if bedsores are likely to result, and if it be possible on to a water or air bed, as by so doing you relieve all pressure and so materially lessen the probability of bedsores taking place.

If, however, a sore be established in spite of all care, the doctor should at once he told of it and he will give you all directions with regard to its treatment; and I shall therefore say nothing about this.

TAKING TEMPERATURE.—It is essential that the temperature of a patient be taken at a certain hour night and morning, or oftener, as directed by the medical man, and as he cannot be seeing his patient always at a certain time, it becomes part of the nurse's duty to be able to take accurately the temperature of the patient. For this purpose an instrument called the thermometer is used. This is a glass tube, with a graduated scale marked on it, and at one end a ball, in which is the mercury, and it is the rise and fall of this mercury that indicates the amount of heat of the body. These little instruments can be read off, after being removed from the position against the skin of the patient, by means of an index, which is a little piece of mercury detached from the column in the stem of the thermometer, and which rises with the column of mercury and remains at the height, indicating the temperature of the skin. Such a thermometer before

use, therefore, requires to have this index set, and this is accomplished by taking the tube firmly in the hand, and by a rapid swing of the arm the index is shaken down a little, and this process you should repeat until you have the index in the part of the stem below the lines, which indicate the degrees of temperature. The armpit is the usual and best part of the body to apply the thermometer, and in so doing be careful to apply the ball next to the patient's skin, seeing that no part of the clothing intervenes. It should be retained in this position for about five minutes, and directly it is withdrawn, the degree of temperature should be read off, and noted down for the doctor's inspection. In taking the morning temperature it is a rule to take it before the patient is washed.

LECTURE V.

Application of Local Remedies.

Baths. Poultices. Fomentations. Blisters. Leeches. Bandages.

BATHS.—When a bath is ordered for your patient be sure and find out what sort of bath the doctor wants given; whether hot, warm, tepid or cold; for each has its average temperature and you should always use a thermometer, to see whether it be the right heat before allowing your patient to get into it; care should be taken to keep the bath the proper temperature during the time the patient is in it.

The Hot Bath ought to have a temperature of from ...	}	98°	to	105° Fahr.
The Warm Bath ditto		92°	"	98° "
The Tepid Bath ditto		85°	"	92° "
The Cold Bath ditto		56°	"	65° "

Before allowing your patient to get into the bath, see that you have all his clean linen ready and well aired, and have the towels nice and warm and plenty of them. If the least sign of exhaustion or faintness come on, you should at once get your patient out of the bath and inform the medical man of this fact at his next visit; if, however, exhaustion be very marked, you had better send for him at once.

The average time you should allow your patient to remain in the bath is as follows, unless especially otherwise ordered by the doctor:—

Hot Bath	10	to 15	minutes.
Warm Bath	14	" 20	"
Tepid Bath	14	" 20	"
Cold Bath	5	" 6	"

In using the cold bath be sure and notice whether your patient feels cold and chilly on coming out, and whether the skin remains cold after being well dried and rubbed, for if so you may be sure that the bath is doing harm and must be discontinued.

MEDICATED BATHS.—I need not tell you anything about these, as the medical man will give his exact directions, and all you will have to do will be to carry them out to the letter.

VAPOUR BATHS are often ordered, and when the patient is able to sit out of bed, a vapour bath may be given in the following manner:—Place a bucket almost full of boiling water under a cane-bottomed chair, then let your patient sit down on the chair enveloped in two

thick blankets reaching to the ground. In a very short time the skin will begin freely to perspire, and you can now rub your patient well dry and get him as quickly as possible back to bed, taking care that he lies between blankets and not sheets. If the patient is unable to leave the bed, and it be deemed necessary to get the skin to perspire very quickly and thoroughly, the plan advised by Sir James Simpson is a most excellent one, for it is easy to construct and capital in its action. For it you only want a few soda water bottles filled with hot water and tightly corked down, and these are wrapped round with pieces of flannel or worsted stockings, wrung out in hot water. They are then placed round the patient in bed and he is well covered up. In about half an hour you will find a thoroughly free perspiration. The bottles can now be taken away and the patient wrapped up in a flannel blanket for another half hour. If the bed during this process has got at all wet, you must remove him to another bed, which has of course been thoroughly well aired and warmed. In case no soda water bottles are at hand hot bricks will answer very well. In cases of croup, as also in certain cases of bronchitis, a medical man often wishes the patient to be kept, for at least some time, in an atmosphere of steam, and it is often difficult to know how to do this in the quickest and easiest way, unless you have a regular steam bed and appliances. In the case of children a very good way is to put them in a cradle under a fairly sized table, then, covering this over on all sides with sheets, to

place under it at the foot of the cradle a vessel with boiling water, which is of course to be continually replenished. By this means you can always readily carry out what often appears a difficulty.

POULTICES.—In making poultices you should remember to have all your things at hand ready for use and placed before a nice fire to be thoroughly warmed. Method and rapidity of action are essential to the proper making and application of poultices. In re-applying poultices always remember not to remove the old poultice until you have the new one quite ready to replace it. In order that the poultice should retain its heat it ought to be spread at least an inch thick; but in some cases where a heavy poultice cannot well be borne then you can make it thinner, and cover it externally with a layer of cotton wool. Poultices are simply local baths applied to the skin, and are usually made of linseed meal, mustard and linseed meal, bread, carrots, charcoal, etc. Of these undoubtedly the commonest is a

LINSEED MEAL POULTICE.—This is best made by pouring boiling water into a bowl or basin and then sprinkling quickly the meal into it, at the same time stirring the mixture constantly until a thin smooth dough is formed. The poultice should always be made with boiling water and as rapidly as possible, to prevent its cooling. If the water be added to the meal, instead of the meal to the water, you will find it most difficult and almost impossible to

prevent your poultice from being lumpy, and consequently not at all agreeable to your patient. Having your linen cut to the requisite size and warmed, you now spread the dough quickly and evenly over its surface, leaving about an inch of free edge of linen all the way round, and this free edge you turn over the meal, and by so doing ensure a neat poultice, readily applied and easily removed.

BREAD POULTICE.—Slices of bread are put into a basin and boiling water poured over them, and this placed by the fire. After a few minutes you pour the water off, replacing it again by more boiling water. You now pour this off, and after pressing the bread with a fork until it is of a proper consistence you spread this on the linen as before described.

MUSTARD AND LINSEED MEAL POULTICE.—For this you want three things besides your linen, viz., mustard, linseed meal and boiling water. Equal parts of mustard and linseed meal are frequently used, but of course this is not imperative, and the medical man will tell you how much mustard he wants used in the poultice. You mix the linseed meal and mustard well together dry, and then, when thoroughly mixed, you sprinkle this into the boiling water, constantly stirring as before described. The spreading and applying, is the same as in other poultices.

CHARCOAL POULTICE.—This is used frequently for preventing offensive smells from bad sores, as also for promoting a more healthy

action of the part. The charcoal mixed with bread and boiling water is the best form, but the surface of the poultice should always be sprinkled with charcoal as well, before it is applied.

CARROT POULTICE.—This a very popular form of poultice and is supposed to make wounds cleaner, and consequently to help the healing process. You simply boil some carrots till they are quite soft, and after having mashed them well with a fork, you spread the pulp on linen in the ordinary way.

A substance called SPONGIO PILINE is an excellent substitute for a poultice. It is made of sponge and wool, felted together, and backed by indiarubber or some other impermeable substance. By moistening the soft part with boiling water and quickly applying it to the part it answers very well, though I should myself prefer a good well-made linseed meal poultice, as being much more soothing. This spongio piline is particularly useful however if a poultice is required to be worn by a person who is able to be about, as it retaines its heat very well and is a very clean application.

COTTON WOOL thoroughly warmed and applied quickly to the part also answers remarkably well, and is an admirable application after the removal of a linseed meal poultice, but of course would not do for any wounded surface.

MUSTARD PLAISTERS are often ordered, as a quick counter-irritant. The mustard for this purpose should be always mixed with *cold* water,

and care should be taken that it is fresh and good. This may be known by the pungent fumes that are given off whilst you are mixing it with the water. The mustard, having been well mixed with the water into the consistence of a paste, should be spread on a piece of brown paper, and over this a sheet of thin tissue paper or fine muslin may be laid, so as to intervene between the mustard and the skin. In making mustard plaisters always remember that boiling water or vinegar should not be used, as they destroy the active property of the mustard.

FOMENTATIONS are applications of hot water, and these may be simple or medicated by the addition of any drug. After dipping a piece of flannel into boiling water, you next proceed to wring it nearly dry, and this is best done by means of a wringer made of stout towelling attached to two pieces of stick: the flannel is put in this, and the wringer is twisted round until the water is thoroughly squeezed out. If you have no wringer at hand, a common towel will answer the purpose. When wrung thoroughly dry, these fomentations may be used very hot indeed, without any fear of blistering or scalding the skin. After having applied it over the part, it is best to cover it outside with a piece of mackintosh, by which means it retains the heat much longer. After you remove the flannel be sure and wipe the skin dry, and then cover the part over with some more flannel or cotton wool, otherwise there might be danger of catching cold. *Turpentine Fomentations* are applied in exactly the same manner, with the

simple addition of a little of the oil of turpentine sprinkled over the flannel after it has been wrung out. Laudanum or any other drug, by the direction of the medical man, can be sprinkled over the flannel in the same way.

BLISTERS are often ordered, and are either in the form of a liquid to be painted over the part, or of a plaister already spread. If in liquid form it should be applied with a camel's hair brush over the part, care being taken not to have the brush too wet. After it has dried a small layer of cotton wool may be placed over the surface. To apply a blister in the plaister form, it should be warmed for a moment before a fire and quickly applied. Unless other directions are given, you need not remove it for twelve hours, when it should be dressed. The plaister is then raised from one side and removed, and the blebs are opened with a pair of scissors. After this has been done some simple ointment spread upon lint should be applied, and renewed twice or three times daily. A very popular application after a blister has been removed, is a cabbage leaf dipped in warm water. Sometimes when a blister is removed you will find that the blebs have not risen at all well, and then you should apply a soft linseed meal poultice, which soon has the effect of making them rise. Occasionally the raw surface caused by the blister is ordered not to be healed up, and this is done by removing all the old skin and then dressing it with some other forms of ointment according to the doctor's directions.

LEECHES.—The application of these useful little animals requires some little skill and attention, as also often much patience. They are employed, as you must all know, to draw blood from the part to which they are applied. The skin must be always first washed thoroughly clean with soap and hot water, and the soap then washed off with cold, and the skin wiped nice and dry. A very good way to apply leeches is as follows:—Take a wine glass, and over the mouth spread lightly a handkerchief, and put the leeches into the hollow and apply to the part; by straining the linen and keeping the wine glass applied to the skin, the leeches soon bite. Another way is to put them in a small box, and by inverting it over the part they often readily take. Again, you may take them between your finger and thumb and direct the head to the part. Leech glasses are often used but are seldom necessary, except you have to apply them to the mouth. The glasses are tubes of the size of the leech, and the animal is inserted with the head towards the small end of the tube, and so applied. When the leeches are full they soon drop off. It is more or less dangerous to attempt to pull them off, as sometimes the teeth might be left behind and set up inflammation. If the temperature of the part to which you wish to apply them is high, it is wise to put them into tepid water first. After the leeches have dropped off, the part should be well bathed with warm water, and if more blood is required to be taken, a nice hot poultice should be applied. Sometimes leech bites bleed very freely; usually pressure with the fingers

or a small compress will stop the hæmorrhage; should this fail, however, you had better send for a medical man. You may want to use leeches a second time, and if so, the best way to preserve them is to sprinkle some salt over them, which proceeding makes them empty themselves of the blood, and after having washed them in cold water a few times, you had best put them in a vessel half full of water and covered with a piece of perforated cardboard.

BANDAGING.—There is nothing more difficult to attempt clearly to describe than the way, or rather many ways of applying a bandage. A practical lesson will do more in half-an-hour than a very lengthy description occupying much time; but as I have been told that these lectures would not contain what was requisite, unless this subject were introduced, I must get to my difficult task; and must ask you to excuse, under the circumstances, all shortcomings on my part to make this matter clear.

Bandages are generally made of unbleached calico, of flannel, linen, &c., and are used for different purposes. Sometimes they are used as supports to the different parts of the body; again, we use them in order to apply pressure; also for fixing splints, dressing, etc.; and lastly, for the purpose of allaying muscular action.

The chief kinds of bandages are the ROLLER and the TRIANGULAR BANDAGES.

THE ROLLER BANDAGE.—Now what are the usual sizes and lengths of these bandages?

I cannot do better than arrange this in a table, where you will be able to see at a glance what is required.

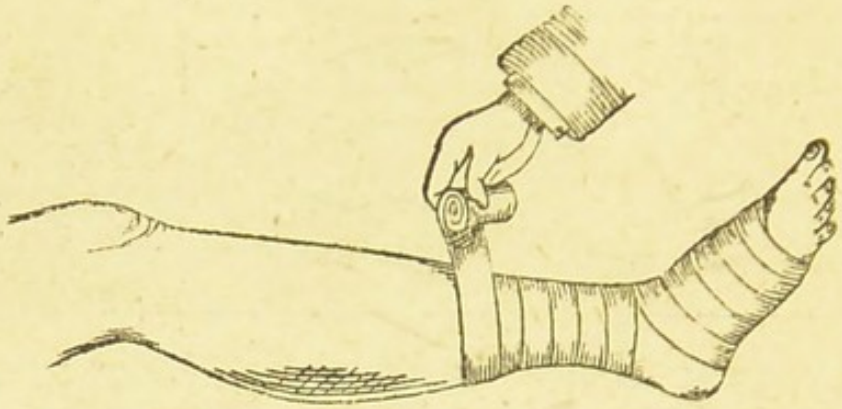
	Width.	*Length.*
Finger bandages	$\frac{3}{4}$ inch.	1 yard.
Arm "	$2\frac{1}{2}$ inches.	3 to 6 yards.
Leg "	3 "	6 " 8 "
Chest "	4 to 5 "	8 " 12 "
Head "	$2\frac{1}{2}$ "	4 " 6 "

The next thing to know is, *How to roll a Bandage?* You first fold one end of your bandage two or three times, as tightly as you can, thus making it into a small roll. You now take hold of this by the fingers of both hands, both thumbs being placed on the top of it, the rest of the bandage being, if possible, held by another person, who keeps it moderately strained. The thumbs now by an alternate movement make the roll revolve on its own axis, the fingers at the same time holding it in position between the two hands. When it is all rolled up, and if not wanted for use at once, the end should be fastened by a stitch or pin, to prevent unrolling.

How to Apply a Roller Bandage.—We may apply a roller bandage in three different ways, and these are as follow :—1, *a simple spiral bandage ; 2, a reverse or recurrent bandage ; 3, a crucial or figure-of-8 bandage.* Let me now describe these separately. It is a wise plan in all these three ways of using a roller bandage, when first applying it, to leave the end a little long,

and then when the first turn is made, by turning this end over, and bandaging over this again, it is kept firm and prevented from slipping.

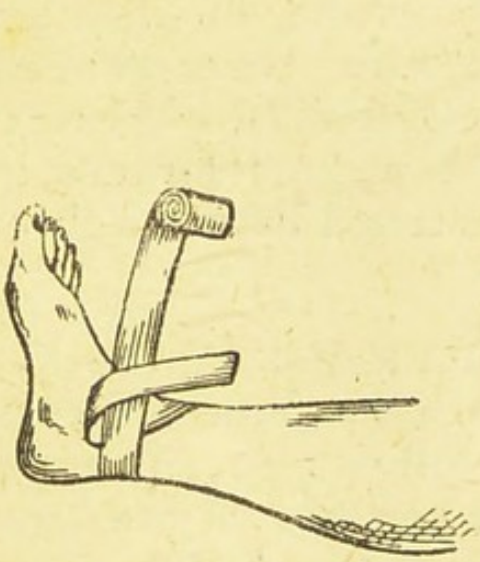
THE SIMPLE SPIRAL BANDAGE.—The appli-



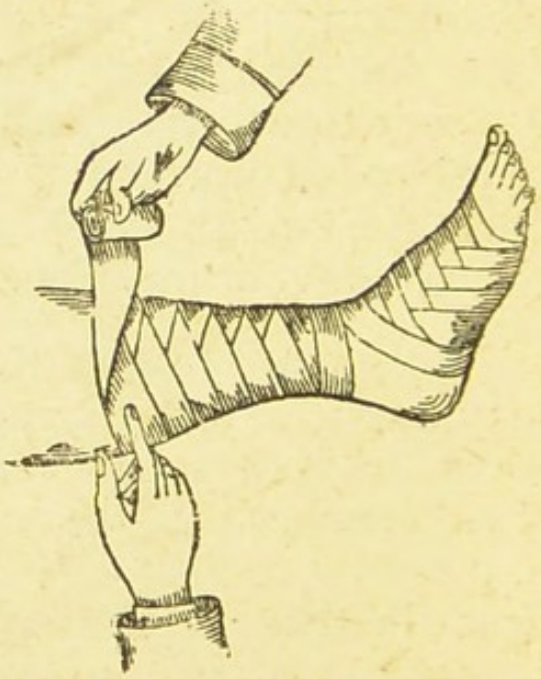
Simple Spiral Bandage.

cation of this bandage consists in simple spiral turns as shown, each turn overlapping the preceding one to the extent of about two-thirds of the width of the bandage. It is, however, so apt to slip, that we usually have resource to

THE REVERSE SPIRAL.—This is applied like



First application of a Roller Bandage.



Reverse Spiral Bandage.

the former, except that the bandage is turned back upon itself each time it is carried round the limb, as shown. This form of applying a bandage is one that is not at first easily learnt, and requires a good deal of practice before it can be neatly and nicely done. The thumb or forefinger of the hand *not* holding the bandage should be placed upon the bandage at the part where the turn is to be commenced, while the other hand turns the bandage back upon itself.

THE CRUCIAL OR FIGURE-OF-8 BANDAGE.—This form of applying a bandage is usually used at the joints, and it is always used when you apply a bandage over the ankle-joint in bandaging from the foot up the leg. You carry the bandage over the upper part of the joint, then down, under, and across the lower part, and then up over the upper part again, thus forming a regular figure-of-8.

I will now give you a few rules that always ought to be observed in using the roller bandage.

1.—Bandage from within outwards.

2.—Commence bandaging from below, and work upwards.

3.—Take care that the pressure is evenly and uniformly applied, but not too lightly.

4.—Avoid all wrinkles in your bandage.

5.—In reversing, or turning a bandage over, always do so on the fleshy side, and not over the sharp edge of a bone.

HOW DO YOU FASTEN A BANDAGE AFTER IT IS APPLIED? You can do this in three different

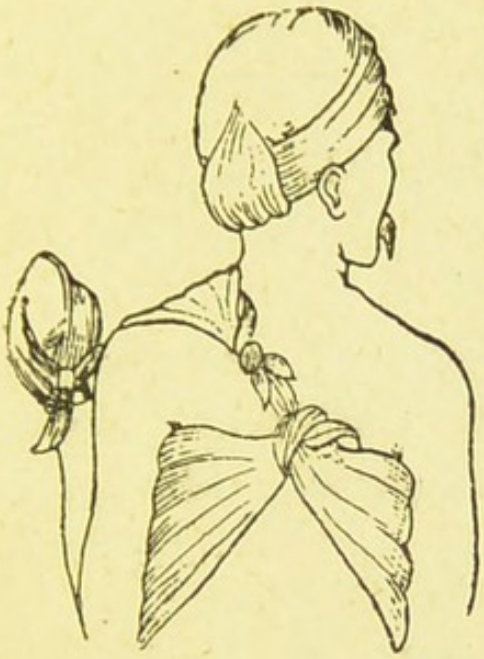
ways—firstly, by putting a stitch in it; secondly, by pinning it; and thirdly, by tearing the bandage down the centre for a little distance, and then turning one end round one way and the other in the opposite direction, and tying these two ends. This last is an untidy and clumsy way of doing things, and should not be resorted to unless no pin is at hand. The stitch is by far the best and neatest way of fastening a bandage.

We are now come to the consideration of the

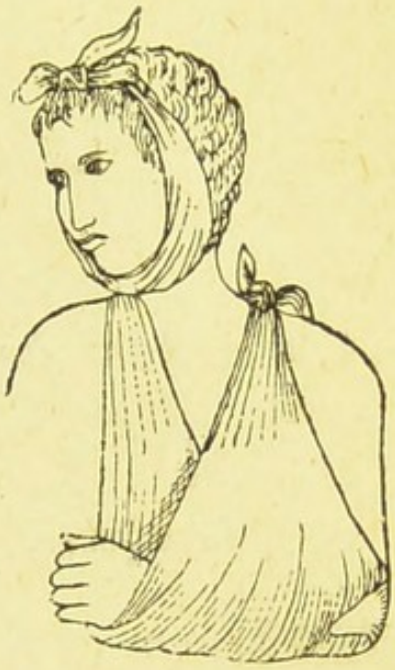
TRIANGULAR BANDAGES.— Professor Esmarch has introduced this form of bandage, and its usefulness will be readily acknowledged when I tell you that it can be applied in no less than thirty-two different ways. The dimensions of this bandage are as follow:—Its lower border measures four feet, and the two side borders two feet ten inches each. If this bandage is not at hand, a large sized pocket-handkerchief, folded from corner to corner, or cut across in the direction, will answer the purpose.

A triangular bandage, with figures, illustrating the different modes of applying it, can be obtained from the Ambulance Department of the order of St. John at a trifling cost. It is applied either folded, like a neck-handkerchief, or unfolded; and in folding it as a neck-handkerchief, it may be made narrow or broad, as required. I have given a few diagrams of some of the modes of applying this bandage, but time will not permit my describing all the different ways it can be used.

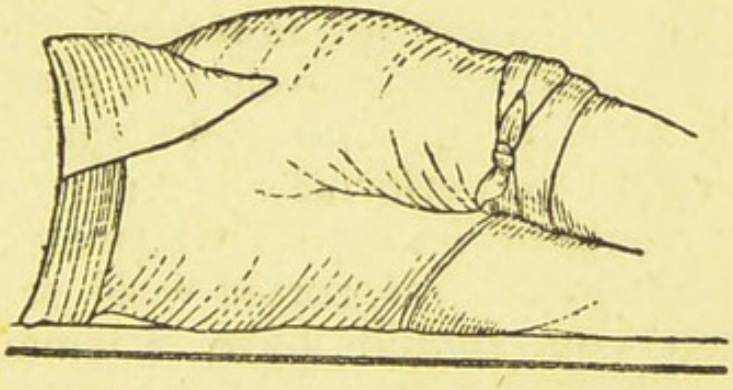
TRIANGULAR BANDAGES AND THEIR APPLICATIONS.



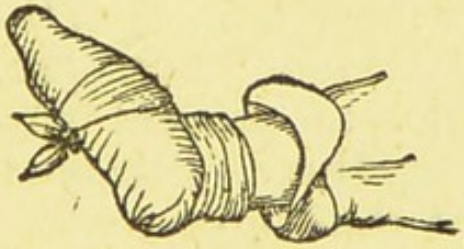
To Head, to Chest and to Hand.



To Head and Face, and to Arm as a Sling.



To Hip—one going round Waist and the other round Hip.



To Foot.

LECTURE VI.

What to prepare for Physician's and Surgeon's visit. Nursing Sick Children. Personal Hygiene. Family Hygiene. Management of Convalescents.

WHAT TO PREPARE FOR PHYSICIAN'S AND SURGEON'S VISIT.—A nurse must see that every thing that the medical man may want, when he visits his patient, is at hand. In every case clean water, clean towels and soap should be ready, as also pen, ink and paper. If an operation is to be performed you must see that you have plenty of water, new and well softened sponges, bandages, lint, cotton wool, strapping, etc.: then you should have a small table covered with a smooth towel in one corner of the room for the surgeon to place all the necessary instruments on. If the patient is to have chloroform, you must be careful that no food be taken for at least four hours previous to the operation, so as to prevent sickness supervening. I may say that in all cases of operations it is the duty of the nurse to find out all the surgeon may want and see when the time arrives that nothing is missing.

NURSING SICK CHILDREN.—It is not everyone that is fitted for nursing sick children, for it not only requires the knowledge of all details of nursing but also that the nurse should be actually fond of children; for without this quality, she will find herself continually beset with innumerable difficulties. The temperament of the child must be carefully studied and the little one's affection gained as soon as possible. It is most important in nursing sick children that all symptoms should be most carefully observed, and the rationale of them worked out. If the child cries and keeps its legs drawn up, you may be almost sure that the pain is in the bowels, whereas, if the child moans and there is an anxious expression of the face, with quick and shallow breathing, you must look to the throat and chest as being the part affected. All the points of observation that I spoke of in Lecture IV. must be most carefully noted in nursing sick children. Be sure and never allow the child to take liberties with you; let him clearly understand from the first that he has to implicitly obey you; once give way to a child and you will find a great trouble in store for you every hour of the day. In giving medicine to children, you must be especially careful not to attempt to deceive them by saying that it is nice, for by so doing you make the next dose of medicine doubly difficult of administration. If the child is old enough you should try and make him understand that it must be taken, if he wishes to get better quickly, and by using gentleness and firmness you will soon find that the struggle of taking the first dose or two is not repeated, and a great thing will have been gained.

If a child appears likely to vomit after a dose of medicine, rather try and quiet the efforts to retch and make him forget what he has taken by attracting his attention, unless of course the medicine be an emetic; for if once the feeling of sickness be encouraged by handing a basin for the child, etc., you will probably find that no dose of medicine is kept down, from the stomach having got into the habit of rejecting it. Always try and teach children cleanly habits; even babies can be taught cleanliness by taking a slight amount of trouble from the first.

PERSONAL HYGIENE.—With regard to this I feel how impossible it is to give you anything like the necessary information in part of a lecture, for have not books been written entirely devoted to this important subject? Still I will try my best to give you the principal laws of health which are necessary for keeping your bodies in that condition to best fit them for the battle of life.

CLEANLINESS.—Without this good health cannot exist. The great function of the skin is to remove through its pores certain waste materials, whose presence in the body would be detrimental to good health, and unless the skin be kept perfectly clean these pores will soon be unable to act as they should, and ill-health will be the result. There can be no excuse for want of cleanliness in this country, where water is abundant and the slight trouble incurred by the bath is amply repaid by the beneficial results. The subject of cleanliness cannot be too strongly impressed upon the poor: numberless illnesses and diseases are the result of

the want of this most natural habit. I may here state that you may accept it as a rule that if after a cold bath the person feels chilly and the skin fails to glow after being well rubbed dry, it ought not to be continued, but a tepid bath should be substituted. Young children should be always bathed in warm water, and as they grow older and stronger and the cold bath becomes advisable, be careful that the temperature of the bath is lowered gradually every day, and be sure and never begin this change excepting during the summer months. Not only does the skin of the body require to be kept in a clean and thereby healthy condition, but the teeth, also, must be well attended to. Without they are in good order we cannot masticate our food properly, and this is often the beginning of a chronic condition of indigestion most difficult to get rid of. It is a wise plan to rinse the mouth out after each meal and to well clean the teeth on both surfaces each night and morning. This will effectually keep them from becoming encrusted with tartar and will be the best preventive of that common bane toothache.

CLOTHING.—Much has been written and said on this subject, and there can be no doubt that it is a most important one. It is, I am well aware, a most difficult thing in this incessantly changing climate of ours, where one day is so seldom like the next, to always be clothed accordingly, and yet difficult as it may be we should always try our best to equally maintain our body temperature; and this has, to a great extent, to be done by our clothing. How often

does it happen that severe colds are caught and the seeds of life-long illnesses sown, through incautiously leaving off our warm winter garments too soon! The food we take is the great means by which heat in our bodies is generated, and proper clothing is necessary to enable the body to retain this heat and not allow its too rapid departure from the body.

Persons who are delicate on the chest, rheumatic, or have a tendency to intestinal troubles, should always wear flannel next to the skin, and more particularly on the part of the body affected. The wearing of a flannel bandage round the bowels in the autumn will often save a person from the common diarrhœal attacks of that season. Be sure and never let personal appearance stand in the way of health. Tight lacing, high-heeled and narrow made boots, tight garters below the knee, are all things to be avoided if health and comfort are wished for. Practical experience and common sense tell you clearly how detrimental these things are, and I need say no more about their harmful influence.

I cannot but think that the continually changing fashions with regard to bonnets is most condusive to all sorts of throat affections, neuralgic attacks, etc.: one year we find small bonnets hardly covering the head and with no strings worn, and the next, the fashion is to wear a large warm head gear, with possibly wide ribbons tied under the chin; the latter probably being fashionable in the summer and the former in the winter—I suppose as a fair specimen of the perverseness of human nature. Be careful that when putting on clean clothes they are well aired; many a cold is caught by

wearing damp under linen, and this is a rule that never should be neglected. Clothes that are worn in the day time should never be kept on during the night, for it is an uncleanly and unhealthy habit. Rheumatic persons would act wisely if they were to sleep in flannel garments and between blankets, and by so doing they would materially help to lessen the severity and frequency of their rheumatic attacks. Waterproof cloaks and coats are necessities in very wet weather, but care should be taken that they do not fit too tightly and so confine the perspiration. Nothing can be better than the Inverness shaped waterproofs both for women and men, and I know myself that since I have worn one of these, I have never had that weary and languid feeling that always came over me when I used to wear the ordinary waterproof coat.

Last and not least: if ever you get wet either thoroughly or partially, be sure and delay no time in changing your damp things and rubbing your skin well dry. Nothing is so dangerous as remaining in damp and wet clothes, more especially if you have been exerting yourself, and this is a golden rule that cannot with impunity be broken by any single individual.

EXERCISE.—By this I mean especially exercise in the open air. When spoken to about exercise being necessary for health, many persons and especially the female poor will tell you that they have plenty of exercise, what with running about the house, looking after their children, and keeping the place clean and tidy; but this is not the only exercise that is essential to good health. A walk should by all be taken

in the open air every day, unless the weather be unpropitious; and I feel sure that our poorer classes would be far healthier if they made this a regular rule. They generally seem to me to find time to talk over all the gossip of the neighbourhood, and yet when one suggests a half hour's walk every day in the open air they jump down one's throat with all sorts of reasons as to the utter impossibility of such a thing.

I could enumerate several cases of health restored, by only having enforced this rule among those, who have confessed, that from week's end to week's end they have not gone many yards from their house door.

One great thing with regard to execise of any kind is this, that it is not a wise plan to go beyond fatigue point, for by so doing you are overdrawing upon your natural strength, and if this be long practised the evil consequences will soon become apparent. One often hears a person priding himself upon an occasional long walk, which has produced over fatigue, when by taking a shorter walk every day, actual benefit to his health would have been the result.

FOOD.—Simplicity of diet, moderation in both eating and drinking, and regularity of meals may be said to be the chief factors in the proper feeding of us all. Time will not allow my going into this wide and important subject as I should have wished, but I cannot pass this portion of my lecture over without a few remarks on the

FEEDING OF INFANTS.

That this is a most vital and important matter, no one for a moment will deny, and I

cannot but think that all sanitary committees should have rules with regard to these points printed and circulated in their different districts; for there can be no doubt that the enormous mortality among infants is to a great extent due to the utter want of knowledge about this most necessary subject.

Nature clearly shows us that milk should form the absolute diet of babies, and mothers cannot be too strongly impressed, with the baneful effect of feeding infants on anything else but this, for at least the first few months. Unless there is a good reason for weaning babies I cannot but think that a mother should consider it her imperative duty to suckle her infant, both for her own sake and that of her child. I know that unfortunately it is becoming the fashion, I can use no other word, for women to dry nurse their children; for what reason, unless it be a purely selfish one, I for one cannot see; and I must say that medical men as a body should cry out against this increasing evil, and as far as possible insist upon nature having its own way. Never let babies have farinaceous foods or boiled bread, until the teeth have begun to appear, for physiological research has proved, that until this period, the saliva of the infant has not the proper chemical constituents, necessary to act upon the starchy parts of the food, so as to render them capable of being digested by the stomach. I cannot do better than give you word for word the rules that are given away at the out-patient department of the London Children's Hospital, and which are in every way most admirable. They are as follow:—

HOW TO BRING UP BABIES.

1.—Keep them warm. Let the clothing be warm but not tight. Give them plenty of air. Send them out whenever the weather is fine. Open the windows at least twice every day. Wash the child all over with warm water daily.

FOOD.—*Under Seven Months.*

2.—If the mother has plenty of milk, let her give the child nothing else until it is seven months old. Three out of four children brought up by hand die. If the mother has only a little milk, let the child have it as well as the food of the sort stated in rule 3. Begin to wean the baby when it is seven months old.

3.—If the child must be brought up by the hand, it should be fed with warm milk and water out of a bottle. It should have at first equal parts of milk and water. When it is about a month old, two parts of milk should be put and one of water. If the milk should disagree it may be boiled before it is put into the bottle. Each bottleful should have a little sugar put into it, a small lump or half a tea-spoonful. Give the baby no other kind of food whatever. While the baby is under a month old do not give more than a sixth of a pint of milk and water for one meal. The bottle should draw easily. It should be rinsed out with water every time it is used. It is a good plan to keep the tube and cork in clean water. If the bottle is not quite clean the milk will turn sour and the child will be made ill.

4.—Whether you suckle the child or bring it up by hand, feed it at regular times, every two, three or four hours according to its age.

FOOD.—*Over Seven Months.*

5.—When it has reached the age of seven months, the child should have one or two meals a day of milk thickened with Robb's biscuits, Hard's farinaceous food, Liebeg's food, baked flour, or good well baked bread. This should be given out of a bottle and should be thin enough to pass through a seive or strainer. The child should have besides this plenty of warm milk, slightly sweetened. When the child is eight or nine months old, it should be completely weaned. At ten months it should have a little thin broth or beef-tea every day. At a year and a half give it a little meat every day, cut up very fine or pounded.

FAMILY HYGIENE.—By this I mean the laws of health concerning the house and its surroundings, in contra distinction to the laws of personal hygiene just given.

We are all creatures of circumstances, and it is not given to everyone to choose either the locality, or the house in which to take up their abode, but whenever that opportunity does occur it should be profited by, and as healthy a situation, and as healthily arranged house as possible, should be procured. There are many things to be thought over and looked at with regard to this choice, and especially with regard to the situation, that must to a great extent depend upon the constitutions of the persons for whom the choice is made. Is it a bracing atmosphere that is required, or should the the house be situated in a mild and sheltered part of the neighbourhood? Many places, and

more especially those situated in the hilly country on the sea coast, have two or three distinct kinds of atmosphere within a small radius. There is the bracing air on the hill top; there is the mild and relaxing air in the valley; or the happy medium half way up the hillside, with shelter from the north and east winds; and persons of critical constitutions will find by experience which of these airs is best suited for them.

And with regard to the locality and the house to be chosen, let me point out to you first of all those things that should be avoided if possible. They are these: all low lying parts where water can easily accumulate and with difficulty be drained off; all neighbourhoods near sluggish streams, where the air is moist and fogs are frequent; houses built on made ground, which probably consists to a great extent of decomposing rubbish; houses whose walls do not appear dry; houses where the drainage is not perfectly satisfactory; houses without a proper and sufficient water supply; houses built so close to others, that proper and adequate ventilation is impossible. Try therefore and choose a house situated on a dry and well drained soil, of either gravel, chalk or marl, in not too crowded a neighbourhood, with a good water supply, and if possible with an east or south-east aspect, so that the rooms in front get the morning sun and those at the back that of the afternoon.

With regard to the detailed sanitary arrangements of the house, I shall describe these under the following headings:—Drainage, Water Supply and Ventilation, but as my time is necessarily limited, I must only touch upon

a few of the most important matters concerning these subjects.

DRAINAGE.—A faulty drainage is the beginning of all sanitary evils, and is a most difficult thing to remedy, on account of the intricacies connected with it. The main points to be seen with regard to these are, firstly, the free and easy exit for refuse matters; and secondly, the prevention of the escape of sewer gas back into the house.

The first of these is accomplished by proper and adequate fall of drains, with sufficient flushing, and the making of drains with pipes instead of rubble stones, whereby rats gain access, and so cause the escape of sewer gas into the house and sewage under all parts of it.

The second of these is accomplished by having a proper trap between the house and main drain, and by having an escape pipe between the trap and house for all sewer gas to ascend into the open by means of an air pipe, at least two inches in diameter, carried up above the roof of the house.

Where the drains of a house empty into a cess-pool, there should be a trap between it and the house, and no cess-pool should be without an overflow and should be regularly and thoroughly emptied at certain periods, and in this case a ventilating pipe should be carried up above the house as before mentioned. All overflow pipes from water cisterns, as also all sink pipes, pipes from lavatories or baths, and scullery pipes should be disconnected from house drains, by allowing them to discharge in the open or on to trapped gratings communi-

cating with the house drains, and by this method the possibility of foul air escaping through these pipes into the house is stopped.

Dr. George Wilson advises all persons who are about choosing a house to try the following plan in order to discover whether the air of the house is pure and uncontaminated by sewage or other effluvia:—Have good fires lighted in all the rooms, and at the same time have all doors and windows closed. After a sufficient interval when the fires begin to die out, the rooms should be entered one by one, first those on the basement or ground floor, and afterwards those in the upper stories. If there is any escape of sewer gas from drains, or any foul smells from dry rot or dead rats, the disagreeable odour will in all likelihood be detected, and steps should at once be taken to discover the cause.

Be sure before taking a house that you have a full plan of the drains, and if you find they are only stone and rubble drains, have them all up, and proper glazed pipes put down, with adequate ventilating pipes from house drains, before inhabiting the house. I now come to the question of the

WATER SUPPLY.—To impure water we can trace the origin of many diseases, among which are typhoid fever, cholera, dysentry, diphtheria, diarrhœa, ulcerated throat, etc., and hence it is easy to see the absolute necessity in having a good and pure water supply.

If the water is obtained from a company, it is either regulated on the constant or the intermittent system, the former of which is by far the most preferable, for by the intermittent sys-

tem there is great danger of water becoming contaminated, owing to the unclean condition of the water cisterns. Never allow the overflow pipes of water cisterns to discharge into the house drain; see that your cistern is situated so as to be easy of access and so readily cleaned; and see that it is properly constructed either of slate or iron, as leaden ones are always dangerous.

In rural districts, where there are no water companies, the water is procured either from wells, streams, springs, or may be the rain water collected from the roof is used. In these cases the utmost caution must be exercised that the water is not polluted. If from wells, be sure and see that no drains, cess-pools, pigstys, rubbish heaps, manure heaps, are anywhere near, for depend upon it if this is the case, sooner or later your well will become contaminated, and some outbreak of fever be the result. Good water should be perfectly clear with no colour, free from taste, odourless and free from any dirty deposit, and if it has not these characteristics, you should at once deem it suspicious and have it analysed before further use. There can be no excuse in these days of sanitary reform for not taking the proper precautions in these matters, for if anyone suspects anything wrong, either with regard to the drains or the water supply and the Sanitary Officer is told of it, he will soon see that it is put to rights and the person liable, be made pay for such work done, and he will at any time have the water analysed if deemed suspicious. Filters are capital things and there are numerous good and useful ones, but they cannot be depended upon to purify water, that is polluted either with sewage or

actual germs of disease. If the water you have to use for drinking purposes should appear at all tainted, and no other is to be got for a time, take at least the precaution of having it always boiled before being used. Rain water is not agreeable for drinking purposes, but if it could be collected as it falls it is quite pure, but as it always has to be collected from the roofs and gutters of houses, and these cannot be kept clean from dirt and filth, it stands to reason that in the majority of cases it must be unwholesome and should not be used, except for washing or flushing purposes.

VENTILATION.—Sufficient and good air is a necessity in every house if the inmates are to remain in good health, and the bedroom is the one of all others in the house where proper ventilation is absolutely necessary. I need not dwell upon this subject now as I have already discussed it in one of my former lectures; its great importance no one can for one moment deny.

In leaving these questions of hygiene I most strongly recommend all my hearers to make themselves thoroughly conversant with the laws of health both as regards themselves and their dwellings, and I cannot do better than advise you all to read two excellent books on this subject, the one by Dr. George Wilson, entitled, *Healthy Life and Healthy Dwellings*, and published by Messrs. Churchill; the other, *The Laws of Health*, by Professor Corfield, and published by Messrs. Longmans & Co. They are both written especially for lay readers and are wonderfully clear and explicit. Dr. George Wilson's being much the larger of the two goes

in thoroughly into all the important questions of personal hygiene, and amply repays a study.

MANAGEMENT OF CONVALESCENTS.—You will often, I am afraid, find this almost your most difficult task. The patient feels so much better, the friends see such an improvement, that it is most hard for you to carry out the instructions given by the medical man and to prevent your patient from overdoing himself in many ways and so tending to bring about a relapse, which may probably be worse than the first attack from which he was recovering. The great thing to be avoided in convalescing from some diseases is catching cold; for instance, after scarlet fever a slight cold is quite sufficient to bring on general dropsy, which if it does not cause a fatal termination of the case will in all probability make your patient a more or less confirmed invalid. You have to be immensely careful, too, on this point of catching cold with patients recovering from all diseases of the chest, from rheumatic fever, measles, diphtheria, etc.

Be contented with a gradual progress towards absolute recovery, and let everything the patient does, be done by degrees. In getting up after a severe illness, or even after being in bed for a few days, be sure the evening is chosen for the venture; never let your patient get up for the first time in the morning, for if you do you will find by the afternoon he is quite tired out, and will probably go to sleep from pure fatigue, and will consequently have a bad night after his afternoon's sleep. The visits of friends at this time, too, must be limited, and especially

does it behove you to attend to this rule in nursing convalescent cases among the poor, who directly a patient is getting better from a serious illness, will persist in crowding into the sick room in spite of all remonstrances, and you will have to be very firm indeed to prevent their apparent kindness of heart from injuring thereby your patient's prospects of a good and speedy recovery.

The question of change of air during convalescence I shall not go into, as I do not consider that at all belongs to the subject of nursing, the medical attendant will advise as to this and it must be left entirely in his hands.

I have now finished these lectures and I can only hope that what you have heard will prove to be of some use to you should you ever be called upon to act in the capacity of nurse. I have tried my best to make these lectures as plain and clear as possible, taking care at all points of them to impress upon you the subservient position of the nurse to the medical man; for although a nurse has often a great deal indeed to do with the favourable or unfavourable issue of a case, still it must be according to her obedience to the medical man's orders, aided doubtless by her ability in, and love of that most highly to be prized profession, that she is successful in her calling.

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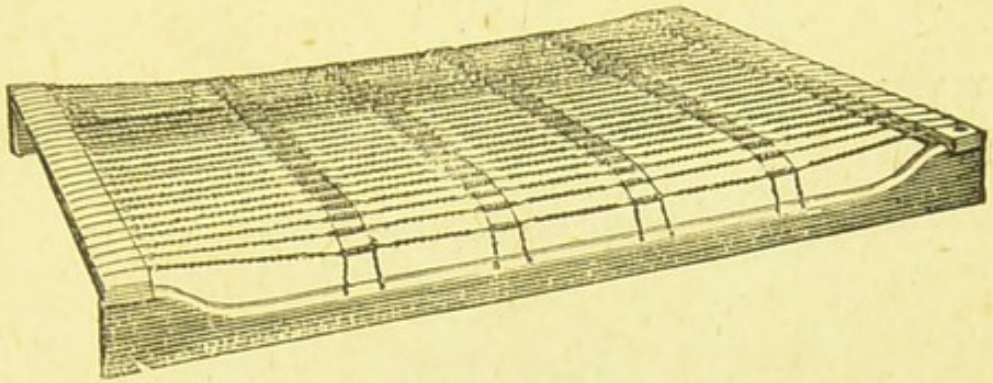

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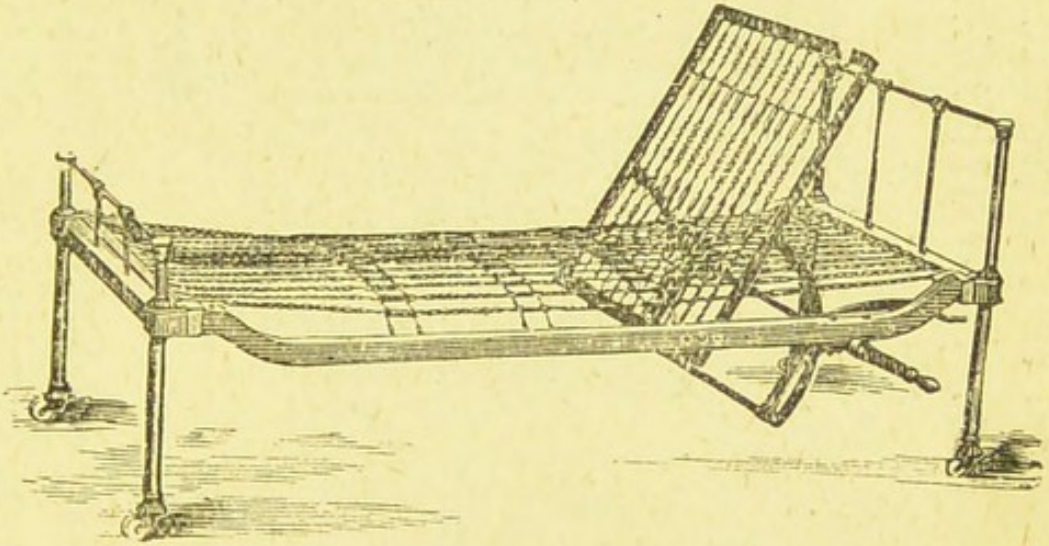

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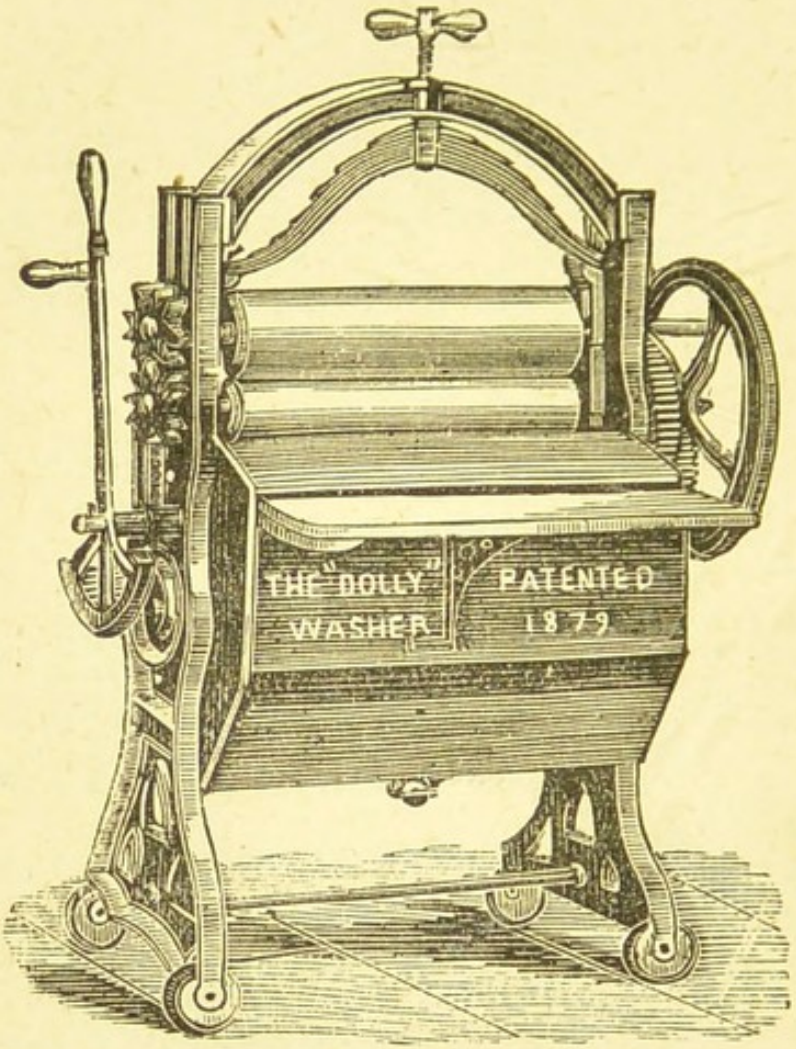

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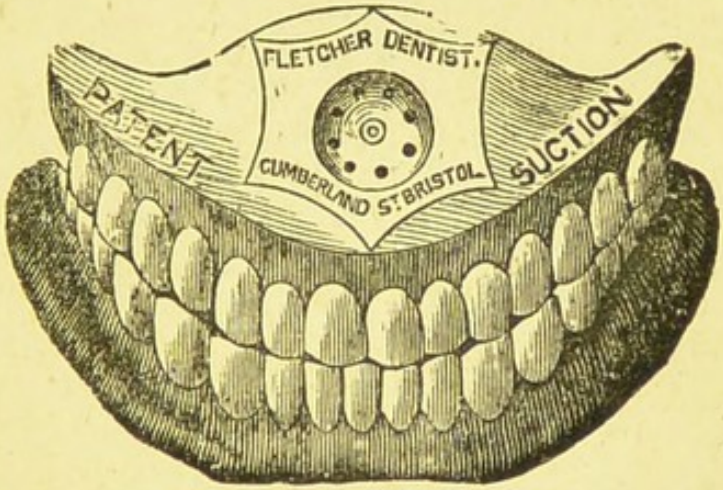

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