Home nursing / by E. Margery Homersham.

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HOME NURSING.

BY

E. MARGERY HOMERSHAM.

FOURTH EDITION.

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HOME NURSING.

BY

E. MARGERY HOMERSHAM,

MEMBER OF THE GENERAL COUNCIL OF THE ROYAL BRITISH NURSES' ASSOCIATION,

LECTURER FOR THE NATIONAL HEALTH SOCIETY, LADIES' SANITARY ASSOCIATION, GLASGOW SOCIAL UNION, ETC.

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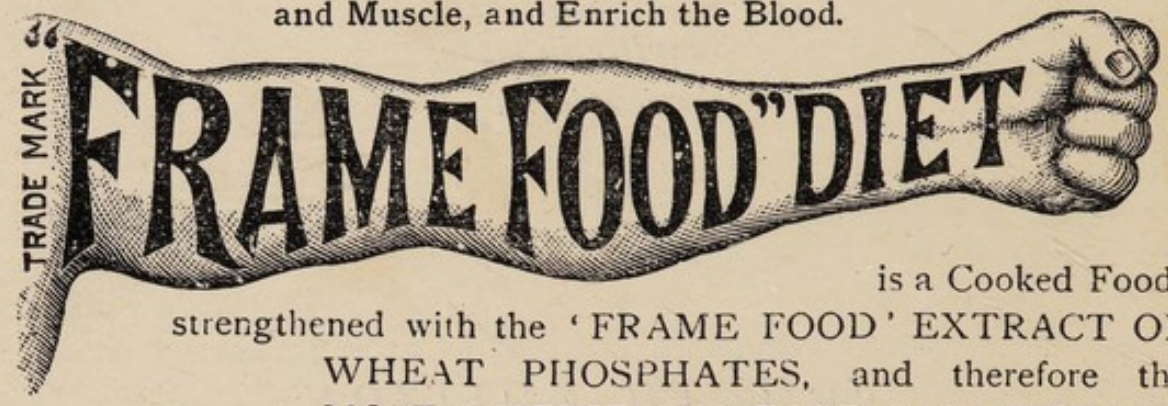

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PREFACE.

At the request of the National Health Society and of many who have attended my Lectures on Nursing, I have attempted to express with the pen the outlines of a subject which lends itself more readily to demonstration and oral explanation. As in my lectures so in the following pages, I have endeavoured to adapt the excellent regulations of hospital practice to the conditions of nursing at home. If cleanliness, method, punctuality, and firmness—the physical and mental aspects of nursing—are delineated rather than sentimental phases, it is not because I agree with an authoress who writes, 'The genuine love of her "case," and not of the individual patient, seems to me the sign of true nursing instinct,' but because experience has taught me that, when amateur nurses are inefficient, their deficiency is, as a rule, *want of knowledge*, not lack of sympathy or womanly tact. The best of knowledge can only be reaped by observant personal experience, but any *precise* information may prove valuable; and my aim is to impart, in language easily understood, such merely elementary instruction

in practical nursing as every woman can and should acquire.

No reference will be found to the nursing of young children and of women before and after confinement, as these are subjects too complex to be treated adequately in one or two chapters of a pamphlet.

E. M. H.

May 1*st*, 1888.

In publishing the present edition of HOME NURSING I desire most cordially to acknowledge the kind manner in which the previous editions have been received. In deference to the repeated suggestions of some who have attended my lectures, Diagrams of a thermometer and chart, in their simplest forms, have been added in the hope of removing one stumbling-block from the path of future home nurses.

To those who may desire to form classes for lectures on Home Nursing, I shall be glad at any time to give the necessary information.

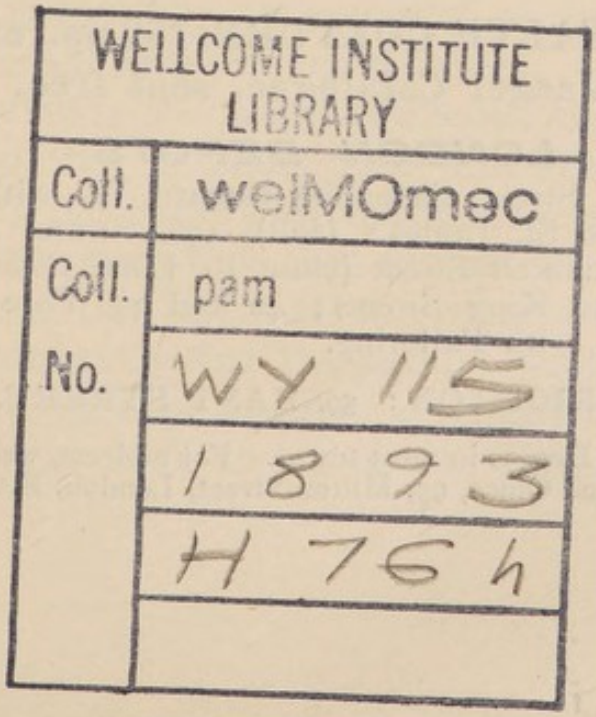
127, MERCERS ROAD,
TUFNELL PARK, N.
May 1*st*, 1893.

CHAPTER VI.

CHAPTER VII.

CHAPTER VIII.

CHAPTER IX.



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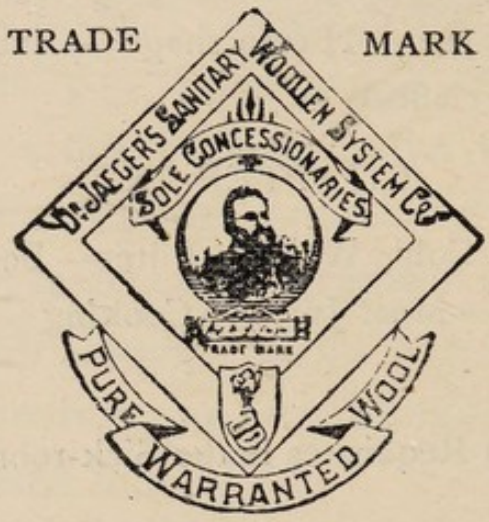

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HOME NURSING.

CHAPTER I.

THE NURSE.—THE SICK-ROOM: ITS VENTILATION AND TEMPERATURE.—THE BED AND BED-CLOTHES.

TENDING the sick has but recently been recognised as an art to be patiently learnt under systematic instruction. Not long ago any elderly female, incapable of other work, took to nursing; thus ignorance and prejudice reigned supreme in the sick-room, rigorously excluding the most important elements of recovery, assiduous but unobtrusive attention, fresh air and cleanliness. Now, however, it is generally acknowledged that skilful nursing is as essential as sound medical advice to prompt and perfect recovery. A really good nurse will always regard implicit obedience to the doctor as foremost of her qualifications, but kindness to and sympathy with her patient are hardly of less importance. The key to the position is that the art of nursing is the handmaid, not the rival, of the science of medicine. A nurse is constantly with the patient, whereas a doctor sees him but once or twice a day for a few minutes, during which time the nurse learns what treatment is

prescribed, accepting the responsibility of faithfully carrying it out.

TREATMENT consists, in medical nursing, in placing the patient in such conditions that the disease shall run a favourable course devoid of complications; in surgical nursing, that the wounded part shall heal in such a manner that its normal functions may not be permanently impaired. These conditions are brought about by rest, mental as well as physical, by keeping the blood pure through the aid of fresh air, cleanliness and light, by nourishing food, and, generally, by aiding Nature in her efforts to renew strength and vitality in the injured part or deranged organ, and for this purpose medicine and external applications when prescribed must be administered with unfailing punctuality.

THE NURSE.—The necessary qualifications of a nurse, besides intelligent, conscientious obedience to the doctor, are unselfishness, gentleness, scrupulous cleanliness, punctuality, tidiness, cheerfulness, good temper, firmness and self-reliance. She must do everything for her patient that he would do for himself in health, and guard him from all unpleasant or unnecessary interference, being quite firm when needful, but always yielding to the patient's whims in matters of no real consequence. A good nurse gains her patient's confidence readily, and, even in long and querulous convalescence, imbues him with her own patience by cheerful alacrity in satisfying his reasonable wishes, by judicious excuses where denials must be given, and even at times by a little gentle flattery. For the sake of her patient, as well as for her own health, she should have seven hours' sleep, consecutively if possible, and at least one hour in the fresh air during each day. She will find the early morning

the best time for her daily walk, and from 2 p.m. to 9 p.m. the time during which her attendance on the patient can with the least disadvantage be delegated to less experienced hands. When absent she should leave written detailed instructions, by preference in the form of a time-table, of all that is to be done for her patient up to the time of her return; but in very critical cases requiring unremitting attention, owing to constantly varying conditions of the patient, as in certain stages of fevers, the nursing should be undertaken alternately by two persons. A methodical nurse will so arrange that she will hardly be missed from 2 p.m. to 9 p.m., while sound sleep will enable her to return with fresh vigour to the duties of the night. An overtired nurse will unwittingly deprive her patient of the *mental* rest all invalids require.

A properly trained nurse will during the doctor's visit avoid standing between him and the light, and speaking or moving while he is observing the pulse and respiration or sounding the chest. She will wash his thermometer, using cold water containing disinfectant, wipe it with a soft old table-napkin, and, without shaking down the index, replace it in its case. She will clean all steel and silver instruments by washing them in warm water containing disinfectant, using several waters if necessary, drying them and carefully polishing them with a wash-leather. She will meet the doctor on his arrival outside the patient's room, in an adjoining room if possible, to give him her report. First she will answer his questions, then give any necessary particulars not contained in those answers, and finally will ask for any instructions or further information she may need to enable her to carry out the treatment effectually and intelligently. A nurse should never under any circumstances suggest treat-

ment to the doctor. She must, however, tell him everything of importance, such as any omissions or variations from the prescribed treatment, and the circumstances which necessitated a departure from instructions, and also of any tendency to diarrhœa, constipation, vomiting, palpitation of the heart, cold perspirations, fever, despondency or delirium.

THE SICK-ROOM should be large and airy, with a south or south-west aspect, a fireplace that does not smoke, and windows that open at the top. In preparing an invalid's room the walls and ceiling must be as carefully dusted as the floor and furniture. No unnecessary furniture should remain in the room, but curtains and carpets need not be removed unless the case is infectious. The hinges and locks of the door should be well oiled, and the window cords soaped that they may work noiselessly. Fireirons and register should be removed, an old walking-stick be substituted for the poker, and all coals be packed in small paper bags, each containing about two pounds weight, so that the fire may be quietly renewed. A fire helps to make the room cheerful, and assists ventilation. It should always be lighted if the temperature falls below 58° Fahr. When a fire is not needed a lamp kept burning in the stove will assist ventilation by drawing the vitiated atmosphere into the chimney. Really fresh air can only be admitted by the window, which except in foggy weather should be kept open two or three inches at the top, both by night and by day. Popular opinion on the subject of night air has been considerably modified since the date of Miss Nightingale's pertinent query: What air can we breathe at night except night air? Of course there are times during the night, as in the day, when the outside atmosphere is so keen, damp or foggy that its ingress

must be most carefully regulated, if not altogether prevented; but such times, even in winter, are few and far between. In most houses open windows are now the rule, not the exception. "Doors are made to shut, windows to open," is the golden rule of ventilation. A costless ventilator may be provided by fitting below the bottom sash of the window a piece of wood six inches wide, so shaped as to fill the whole space between the frame. The bottom sash is raised for the insertion of the wood, then lowered until they come in contact. The two sashes overlap each other in the middle of the window and allow free passage of air from outside upwards into the room. There is no appreciable draught from this form of ventilator. Admittance of air, when the atmosphere is keen or foggy, may be advantageously controlled by filtration through some woollen material. Thus when a window is open at the top a piece of flannel may be nailed over the aperture.

In fine weather it is a good plan to cover the patient's head and body with an extra blanket, and throw the window wide open for a few minutes three or four times a day. Care must be taken not to remove the extra covering till the air of the room has regained its normal temperature. Every sick-room should be provided with an ordinary thermometer, hung on the head of the bed, or on a level with and as close to the patient's head as can be conveniently arranged. From 60° to 70° Fahr. is the usual temperature ordered for the sick-room, and a good nurse will endeavour to avoid more than one or two degrees of variation in the twenty-four hours.

THE BED should be placed between the door and the fireplace or towards the middle of the room. The foot should never be towards the window, and if the

size of the room admits, no part of the bedstead should be less than 2 feet from the wall. The bedstead should be of iron, 6 feet 6 inches long and 3 feet wide; a wider bedstead gives the nurse needless trouble, and causes the patient unnecessary fatigue, for he should lie in the middle of the bed, and if the bed is wide all moving and arranging of pillows must be done at arm's length. The bedding should consist of two hair mattresses and plenty of pillows, woollen or cotton sheets, and new light blankets. Feather beds and counterpanes are unhealthy, and a bolster is unnecessary if there is a sufficient provision of pillows. Down quilts are much used, but many doctors disapprove of them, not without reason; only those made with ventilating buttons should be allowed in the sick-room. In making a bed for long occupation no under blanket should be used, the mattress being covered with an under sheet only. The draw sheet, a large cotton sheet folded lengthways into four placed *across* the bed, should be laid under the lower part of the patient's body, and should be drawn two or three times a day, or changed as soon as soiled, Double-faced mackintosh is most suitable for placing between the draw sheet and under sheet, when, from the nature of the case, the bedding requires protection, for it does not absorb moisture and may be easily wiped dry. It should be firmly fastened at each side of the bed by safety pins, and the draw sheet should be folded so as to be at least six inches wider than the mackintosh.

To CHANGE SHEETS under a helpless patient a nurse needs assistance. Clean sheets having been well aired and warmed, the bottom one, which is to cover the mattress, should be rolled from one side to half its width before disturbing the patient. The mackin-

tosh should be unpinned, and by means of it and the draw sheet the patient be gently turned on to one side. Both mackintosh and draw sheet should be held by an assistant in such a manner as to support the patient firmly but comfortably, while the nurse should with dexterity and expedition remove all the pillows, save that on which the patient's head rests, and fold back the upper clothes, sheet, and blankets to half their normal width, taking especial care that the patient's body is thoroughly covered all the time. The patient's back being then towards the nurse, she will roll the dirty sheet lengthways to the middle of the bed, when the rolled clean sheet will be laid alongside. The mackintosh should next be slipped from the assistant's hand and pinned firmly down over the clean sheet. The draw sheet, unless it be soiled, should be replaced temporarily and the patient be turned gently first on to his back (when both rolls of sheet will be under him), then on to his other side, whereby the rolls will be freed again. The nurse will then support the patient by means of the mackintosh and draw sheet in the same way as the assistant had previously held him, while the assistant will remove the dirty sheet, straighten the clean one, and secure the mackintosh.

To change the upper sheet, the topmost blanket should be taken off, the rest of the upper clothes untucked, and a clean sheet spread over the bed, and covered with the blanket that has been removed. An assistant standing behind the head of the bed must hold the top corners of the clean sheet and blanket firmly with both hands, while the nurse will draw out the dirty sheet and other upper clothes from the bottom of the bed; this must be done carefully, so that the patient may not be chilled. Should the

bedstead have a high footboard, upper sheets will be most easily changed from the sides. The clean sheet will be covered with a blanket and held on one side of the bed, while on the other side the soiled sheet will be drawn from under it.

DRAW SHEETS are most easily changed by pinning the edges of the clean and dirty ones together; while the nurse raises the middle of the patient's body, the assistant draws the dirty sheet through till only the clean one is under the patient. If the patient is too heavy to lift, the draw sheet must be changed in the same way as the under sheet; but if the head and shoulders, feet and legs, rest on the bed, the nurse should be able without undue exertion to lift even a heavy patient sufficiently to have the sheet drawn. When a draw sheet is replaced, enough only to tuck comfortably in should be drawn through at first; a fresh portion may with great advantage be drawn under the patient two or three times a day, getting rid of any crumbs in the bed, and giving the feverish patient a sense of coolness and comfort with very slight exertion on his part.

CHANGING THE NIGHTSHIRT.—When a patient is able to sit up in bed, the nightshirt in wear should be freed from the weight of the patient's body—that is, he should not sit or rest on any part of it—all fastenings should be undone and the arm nearest to the nurse be slipped out of the sleeve; the nurse, having well aired, warmed, and unfastened the clean nightshirt, will place it round her forearms by passing her hands and wrists *downwards* through the collar and front and out at the bottom; she will then pass her hands *upwards* through the bottom of the soiled nightgown to its collar, slipping it away from her off the patient's head, and at the same time slipping the

clean gown over. A patient's liability to chill while his nightshirt is being changed renders essential such precautions as that no draught be permitted, that the room be not below its normal temperature, and that the patient be not kept waiting while sitting up in bed.

When the patient cannot sit up, the nightshirt should be split up the back as far as the collar, put over the head and folded down on each side. Unless the doctor orders that the patient shall be as little disturbed as possible, the nightshirt should be changed night and morning, even if a clean one is not required. All nightdresses and bed jackets should be provided with a breast pocket to hold the handkerchief, and when they are made of wool (Jaeger) the risk of chill is reduced to a minimum, while the elasticity of the material allows a change to be easily effected.

CHAPTER II.

DETAILS OF NURSING.

TEMPERATURE.—The clinical thermometer is an instrument used to indicate the heat of the body, and, in ordinary construction, is a glass tube, four or six inches long, having an extremely small internal diameter enlarged to a bulb at one end. It is filled with mercury, or other liquid of great thermal sensitiveness, at a given temperature, and hermetically sealed. As a rule, in England, clinical thermometers register from about 90° to 110° Fahr., and their indices are marked off in fifths or tenths of degrees. Assuming a thermometer to have been filled with mercury heated slightly above 110° Fahr., that temperature will be the maximum reading on the index; if placed in hot water or otherwise heated materially above its maximum, it will burst. At the ordinary atmospheric temperature its mercury will shrink so as to be entirely contained in the bulb (with the exception of a small quantity for registering, as will be explained). As the temperature rises the mercury expands, filling the bulb at about 90°, and after that forcing itself into the tube or index. When the caloric influence is removed, the mercury again contracts to its normal area in the bulb. By placing, in the course of manufacture, a tiny air-bubble between the bulk of the mercury and

the last small drop, the latter, which is the register or indicator, is cut off so as never to come in contact with the main body of mercury, which, as it expands, forces the air-bubble along, the bubble in turn pushing on the indicator. When, the temperature being lowered, the main body of mercury runs back into the bulb, the registering mercury or indicator does not move, as it has no cohesive attraction to the main body. It thus, by remaining in the place to which it has been pushed, records the highest temperature to which the instrument has been subjected. It can be easily shaken down for re-use, but care must be taken not to agitate it so violently as to displace the air-bubble, or the thermometer will cease to register. Other forms of instruments are now made in which *all* the mercury forced into the column remains till shaken down.

BLOOD-HEAT, the normal temperature of the body, varies slightly in different persons, but averages, and may be taken to be, 98·4° Fahr. A rise of temperature above normal is indicative of fever, and a fall below normal of exhaustion. To ascertain or 'take' a patient's temperature, the bulb of the thermometer is placed either under the tongue with the lips firmly closed over its stem, or under the arm in the axilla or armpit, the arm then resting against the body. It should remain in the mouth three minutes or under the arm five minutes. The register of the thermometer should be shaken down to 95° Fahr. before being used, and should be used always in the same place, as the temperature of the mouth is four-fifths of a degree higher than that of the axilla. The usual practice is to take the temperature night and morning at 8 a.m. and 8 p.m., but in some cases the doctor will require it to be taken more frequently. In the case of

young children it is safer to put the thermometer in the armpit, as when put in the mouth they are liable to break it with their teeth. It is also kinder, as they are less restrained when they can move the lips and speak.

A very high temperature, say 105° Fahr., is dangerous under any circumstances, but becomes alarming as the climax of a gradual rise during several days. A sudden fall from a high temperature to below normal indicates great weakness and immediate need of stimulant and warming applications, which should be administered while waiting for the doctor, who should be summoned at once. One degree below normal is indicative of worse condition than two and a half degrees above. Temperature may be reduced by cold sponging, cold packs, and cold baths, but such treatment must not be undertaken except by the express orders of the doctor, when it should be carried out with judicious management to avoid shock and to husband the patient's strength in every possible way.

There is, perhaps, no instrument of modern invention of more widespread use in the detection and treatment of disease, both medical and surgical, than the clinical thermometer. It is the constant and reliable assistant of every careful practitioner; by its use he is helped to make his diagnosis, the course of disease is noted by its aid, and the treatment continued or varied according to its significance. It is accurate, sensitive, invariable, and acts as readily when used by a child as in the hands of the most experienced physician. No nurse of the present day can fulfil her duty till she has mastered the little operation of taking and recording accurately the temperature. This is required of her, not because there is to be the slightest attempt at treatment on her part, but because the medical man

in charge of the case can give explicit instructions, based on the alterations in temperature which may occur in a certain number of hours : *e.g.*, he may order the amount of stimulant or medicine to be varied if a change takes place ; again, he may live at a distance, and be able to visit his patient but once in twenty-four hours, at the same time it may be of great importance to have the temperature recorded each morning and evening.

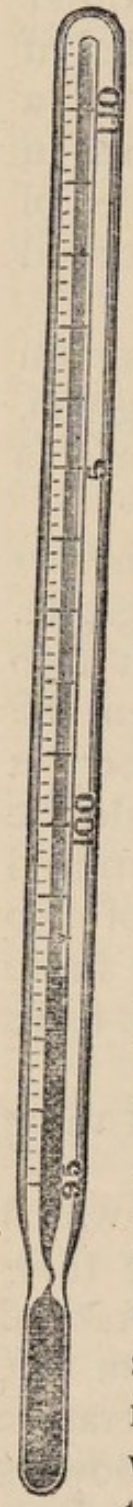
To afford some assistance to beginners a diagram of a thermometer, with its markings indicated, is given, as well as a chart on which the record of a case is noted by way of illustration.

In reading the scale, the *long* lines mark the *degrees* of heat, and some of these are numbered as a guide. Between every degree four *short* lines divide it into fifths, equal to two decimal points : *e.g.*, when the mercury reaches the first short line above 100°, it indicates a hundred and one-fifth, but it would be more usually expressed decimally 100·2 (a hundred point two), every short line being of the value of two decimal points. Suppose the mercury rises one more *short* line, it would then read a hundred and two-fifths or 100·4 (a hundred point four).

Having ascertained the temperature, the next thing is to record it.

The chart is ruled in thick and dotted lines, which correspond with the long and short lines on the thermometer, crossed by others dividing one day's record from the next, and the morning record from the evening. A case is given in which the temperature was recorded morning and evening in the following manner. The date having been entered in the little space above the letters M E (which signify morning and evening), the first entry is made after running the eye down the column below the date and time of observation (M) until it came to the line correspond-

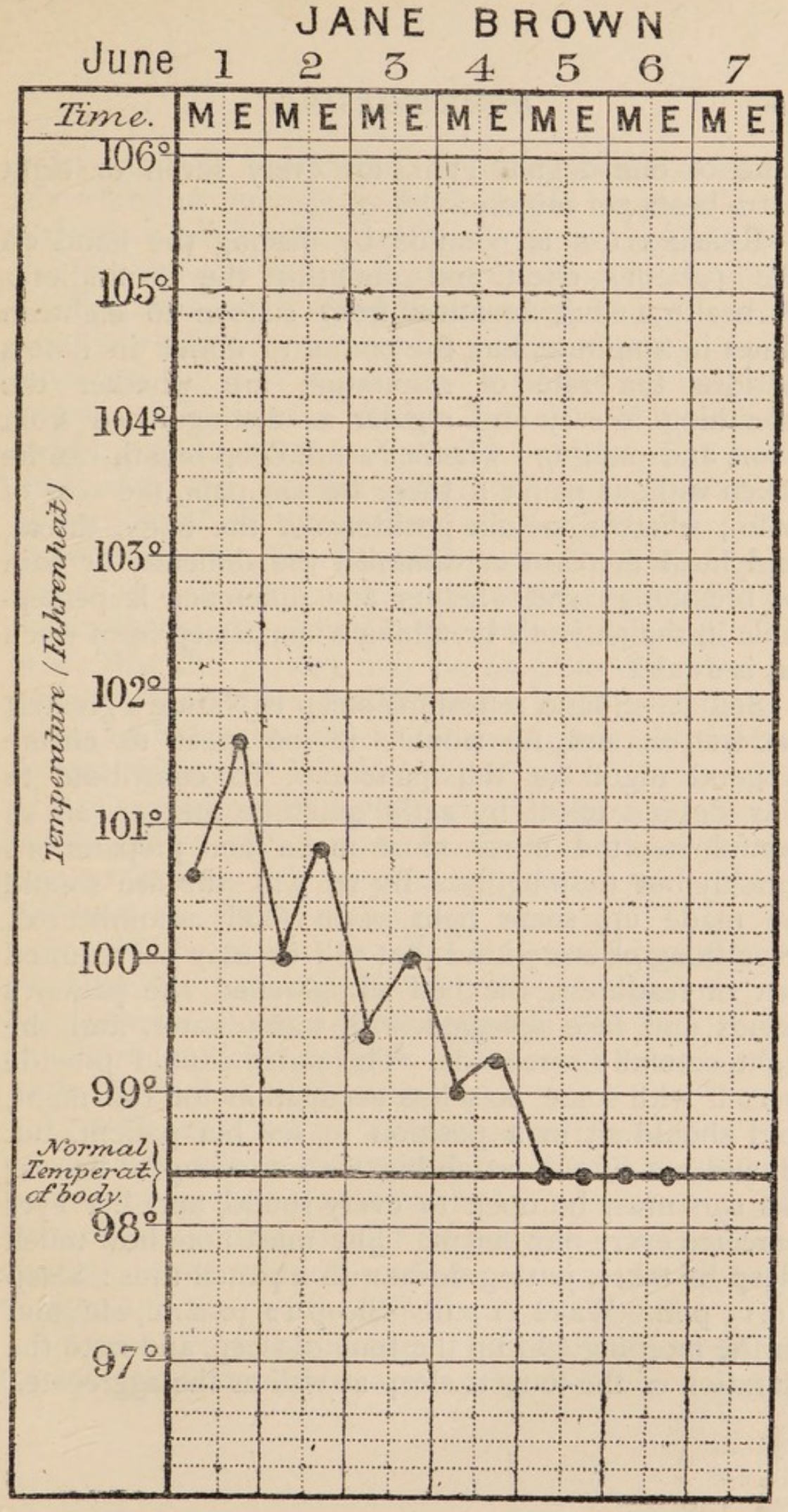
ing with the reading on the thermometer—in this instance 100·6° Fahr.—where a distinct round dot is made, *i.e.*, on the third dotted line above the thick line marked 100·. In the evening the same process was gone through, and the observation recorded in the column marked E. The temperature having risen exactly one degree, the dot was placed on the third dotted line above the thick line indicating 101·. On the morning of the second day the reading was exactly 100·, so the dot was placed on the line marked 100·; evening, 100·8.



3rd day	Morning	...	99·4°	
	Evening	...	100·	
4th day	Morning	...	99·	
	Evening	...	99·2	
5th day	Morning	...	98·4	normal
	Evening	...	98·4	
6th day	Morning	...	98·4	normal
	Evening	...	98·4	

To COUNT THE PULSE, three fingers are placed on one of the main arteries, that at the wrist above the thumb being usually felt. The fingers should press the artery firmly but lightly. A healthy pulse beats from sixty to eighty times in a minute. The pulse is described as *full* when the artery appears to be dilated and full of blood; as *small* when the artery seems to strike but a small part of the fingers; *hard* if in spite of firm pressure the blood forces its way under the fingers; and *soft* when the pulsations are feeble and easily stopped by pressure.

In the febrile state as the pulsations of the heart accelerate, the temperature of the blood rises in the


JANE BROWN
June 1 2 3 4 5 6 7
Time.
M E M E M E M E M E M E M E
106°
105°
104°
103°
102°
101°
100°
99°
Normal Temperat. of body.
98°
97°
Temperature (Fahrenheit)

ratio of one degree Fahr. for every seven or eight extra beats per minute.

RESPIRATION is counted by placing the hand on the patient's chest and counting the inspirations. A healthy adult breathes from sixteen to eighteen times in a minute, but the points to notice in illness besides the rate of respiration are whether the breathing is easy and regular as distinguished from short and panting; whether a full deep breath can be taken without pain; if there be any pain, the seat of pain; whether certain positions of the body, throat, and head increase or diminish the difficulty or pain of breathing; and whether any difference is perceptible in the patient's breathing when asleep from when he is awake.

SLEEP.—Sound refreshing sleep is Nature's greatest restorative, and no trouble is too great to ensure a good night for the patient. To contribute to this desired effect by early quietude and an air of restfulness, the nurse must make her preparations quickly but thoroughly. By 10 p.m. the fire should be made up, some light warm food administered, everything of every kind that will or may be required put in readiness, the bed straightened, the patient's hands and face sponged with warm water, and the light carefully screened. The nurse should provide herself with some noiseless occupation for the night, and should sit in a position to see her patient, but should not sit and watch him with unoccupied hands; her ears must be open to every sound, and her eyes perceive every movement. She must note how much sleep he takes, jotting down with a pencil thus: Sleep 10.15 p.m. Wake 11 p.m. Sleep 12.30 a.m., etc., and in the morning add up the time of sleep, and note the duration of the longest sleep as well as the aggregate.

In cases of prostration or other extreme illness some food or nourishing drink should be given every time the patient wakes, and medicine be administered the first time he wakes after it has become due, unless his sleep has lasted many hours, when it may be more necessary to give some nourishment and postpone the medicine till it is again due. Gently rubbing the limbs and back of a restless patient will sometimes soothe him to sleep, and should be continued some time after the desired effect has been apparently accomplished or the patient will wake again. The same remark applies to reading aloud. There is no objection to a nurse reading the patient to sleep if he wishes it, but she should never propose it herself. In order that the patient may be as little disturbed as possible, the nurse should have a good meal before taking up her night duties. She will generally find her patient willing to join her, say at 5 a.m., in an early cup of tea with bread-and-butter, or toast, or even a lightly boiled egg, or one beaten and added to the tea; so far from having a waking effect, most patients will sleep on better for this early breakfast.

Should the patient slumber late, the nurse should summon her assistant about 7 a.m. in summer, or 8.30 a.m. in winter, and, leaving her in charge, take an hour's outdoor exercise in the early morning air while the patient is yet asleep.

THE EVACUATIONS.—The nature and amount of the evacuations will in some cases need to be specially noted; and, when they have to be submitted to the doctor's inspection, should be put aside in a clean, closely-covered utensil, and on no account be kept or shown to the doctor in the patient's room.

URINE.—When a specimen of the urine is required for analysis, it should be sent to the doctor in a clean,

tightly-corked bottle, with the patient's name and date when passed written clearly on the label. That which is passed in the early morning is most satisfactory for this purpose, being less affected by food and stimulant than that which is passed later in the day.

THE SKIN.—The condition of the skin requires careful observation. In some cases of fever a dry, hot state of the skin will alternate with severe sweats. Bathing with tepid water containing a little vinegar will be grateful to the parched skin, and, followed by gentle rubbing with warm towels and change of night-gown and sheets, will go far to re-establish a healthy action after profuse perspiration. Cold sweats at night indicate great weakness of the skin, and are in themselves very trying to a patient's stamina. In such cases feather beds must on no account be occupied, and the use of down quilts must be rigorously discarded. Perseverance in sponging night and morning becomes an imperative necessity. Toilet vinegar will be found more efficacious than common vinegar in acidulating the water for sponging the relaxed skin.

BEDSORES.—The prevention of bedsores is one of a nurse's most anxious duties. In almost every instance they are preventible, but, once formed, their cure is tedious even in the most favourable subjects. The base of the spine, the hips, shoulder-blades, calves and heels, in fact every part of the body that presses on the bed, should be examined daily and washed frequently. The least sign of redness should be treated at once by being washed night and morning with soap-and-water, thoroughly dried, and rubbed with a teaspoonful of eau-de-Cologne or other spirit till quite dry again. In some cases of profuse sweating the further precaution of powdering the parts with oxide

of zinc and starch, in equal parts, may be resorted to with advantage. A square air-pillow, having a hole in its centre, must be provided for the lower part of the back to rest on, and should be placed under the draw sheet after being half filled with air, or the patient must lie on an air-bed. Air-beds and pillows have two distinct advantages over water beds and pillows ; first, that no accident that may happen to them can interfere with the patient's comfort, and, secondly, that they do not occasion that sense of uneasiness some patients experience when lying on a water-bed owing to the displacement of the water.

Should the skin break despite the nurse's care, she must call the doctor's attention to the sore at once, when he will prescribe the proper treatment. If it is but a mere crack, painting with collodion and removal of all pressure may prevent a real bedsore supervening. Washing and rubbing the surrounding parts must be continued, and great care taken that the spirit does not touch the broken skin.

The usual way to treat bedsores when once formed is to apply some stimulating dressing the exact size of the wound, covering it with a larger piece of lint spread with vaseline. The whole dressing is firmly secured with strips of plaster, and all pressure removed by the intervention of an air pillow or pad, provided with a hole in its centre. Patients suffering from paralysis or extreme prostration are peculiarly liable to bedsores, and when there is not complete control over the evacuations, nothing but constant care can avert their formation.

Similar sores found in some severe cases on parts where no undue pressure exists, *e.g.*, the front of the thigh, are due to loss of the nerve force controlling the circulation in the bloodvessels of the skin. In

these cases the daily application of cold and heat successively is most efficacious.

A block of ice covered with thin flannel should be held to the part until the surrounding skin is thoroughly blanched—say for eight or ten minutes—when sponges wrung out of very hot water should be applied until the skin becomes quite red and hot. The part should then be carefully dried with absorbent cotton-wool and dusted with powdered boracic acid.

CHAPTER III.

MEDICINE AND INTERNAL APPLICATIONS.

A NURSE should be well acquainted with the following table of weights and measures, and should accustom herself to invariably read the label on the medicine, shake the bottle and measure the dose in a properly marked glass. She should never trust to marks on bottles.

APOTHECARIES' WEIGHT.

20 grains (gr.)	=	1 scruple	℈ j
3 scruples (60 grs.)	=	1 drachm	℥j
8 drachms (480 grs.)	=	1 ounce	℥j
12 ounces (5,760 grs.)	=	1 pound	1 lb.

All drugs are now *sold*, under Act of Parliament, by the pound avoirdupois of 7,000 grs. divided into 16 ounces of 437½ grs. each. The apothecaries' table of weights is used all over the world for *dispensing* prescriptions.

FLUID MEASURE.

60 minims (m.)	=	1 fluid drachm	fl.℥j
8 fluid drachms	=	1 fluid ounce	fl.℥j
20 fluid ounces	=	1 pint	Oj
8 pints	=	1 gallon	Cj

MEDICINE GLASSES are usually marked:

60 minims	=	1 teaspoonful (or fl. drachm)
2 teaspoonfuls	=	1 dessertspoonful (2 fl.drachms)
2 dessertspoonfuls	=	1 tablespoonful (fl.ʒss, or ½ oz.)
2 tablespoonfuls	=	1 fluid ounce (fl.ʒj, or 1 oz).

MEDICINE ordered to be taken three times a day should be given at

10 a.m.
2 p.m.
6 p.m.

When ordered every four hours, at

8 a.m.
12 noon.
4 p.m.
8 p.m.

and not during the night unless expressly so ordered.

Medicine ordered to be taken every two hours is administered during the night as well as the day.

A little firmness in giving medicine will in the end spare the patient's strength. There is often more difficulty in persuading a grown-up person to take medicine than in giving it to a child. A nurse should never argue, but tell the patient to repeat any objections to the doctor and ask him to change the medicine. Medicine well compounded is flavoured to be as little disagreeable as possible, but before giving it to feverish patients, the mouth should be moistened with a piece of ice or a drink of cold water. When nauseous medicine has been swallowed the lips should be wiped before closing, and a piece of ice placed in the mouth will effectually cleanse the palate and dissipate the objectionable after-taste.

CASTOR OIL may be *mixed* in very strong milkless coffee, or be taken with a small quantity of brandy, say half a teaspoonful. The inside of the glass should be thoroughly moistened with the brandy before the oil is measured into it, and a few drops be added after. A teaspoonful of oil will usually be found quite as efficacious as a larger dose, and when, as is sometimes the case, the aperient medicine is left to the nurse's discretion, a larger dose should not be given.

Tasteless castor oil may be taken *floating* on coffee, lemon juice, or brandy, or, the best way of all for children, be shaken up in four times the quantity of hot milk in a half-filled bottle and swallowed immediately.

The saline and acidulatory parts of effervescing medicine should be brought to the bedside in separate glasses, and be mixed after the larger glass is in the patient's hand, by pouring in the contents of the smaller.

POWDERS may be mixed with gruel, sugar, honey, treacle, glycerine, the fluid portion of marmalade, or condensed milk, be sprinkled between two thin slices of bread-and-butter, or, when soluble, be given in a little milk. A quick and thorough method is to put the powder on a plate or porcelain slab and rub it with a thin spatula or knife into a sufficient quantity of honey or glycerine; when incorporated it should be transferred to a silver spoon.

COD-LIVER OIL may be taken in orange wine, with orange bitters, or from a spoon with merely a little salt on each end. It is usually ordered to be taken after meals, but if it creates nausea it may be taken last thing at night. The 'perfected' cod-liver oil of Messrs. Allen and Hanburys' is much less antagonistic to many palates than the ordinary refined oil. Kepler's

cod-liver oil in malt is so prepared that the oil is both imperceptible and easily assimilated.

Aperient medicines operate most satisfactorily if taken early in the morning, fasting. Medicines containing strong poison, such as arsenic, should never be taken without a doctor's advice, and should never be resumed without consulting him again; for the strength of doses of these medicines is often increased after the patient has been under treatment some time, and a quantity that might be taken with impunity at the end of a course might have fatal effect at the beginning of another course.

ENEMATA are ordered for the purpose of relieving the bowels, controlling diarrhœa, or nourishing the body.

A simple enema to relieve the bowels consists of about a pint of soap-and-water, or thin gruel, and should be administered by means of an enema syringe, of either Higginson's or Ingram's make. The patient should lie, on the right or left side, a short distance from the edge of the bed, with knees drawn up. A mackintosh or folded sheet having been placed under the hips, a basin containing the enema should be put behind the patient's knees. The syringe, having been fully charged by being worked a few times in the fluid, should have its point, previously lubricated, carefully introduced into the rectum, in a direction upwards and *backwards*. The metal (valvular) end of the syringe must be *kept* at the bottom of the basin, to avoid any air being injected with the fluid. The ball should be worked continuously, but very slowly; the longer the time taken, the less discomfort will be experienced.

When castor or olive oil is prescribed with the enema, it should not be mixed with the whole of it,

but should be added to a small (say an equal) part of soap-and-water or gruel, and be passed in before the rest of the enema is injected. The patient's capacity of retention, without serious discomfort, must be the sole guide as to the maximum quantity given. Most persons can retain a pint during the time necessary—*i.e.*, fifteen minutes. The desire to discharge the enema too early may be allayed by supporting the orifice of the bowel with a folded towel.

GLYCERINE ENEMATA are ordered for the purpose of stimulating the bowels to action. The glycerine is injected from a syringe made for the purpose; one or two drachms are usually administered, but sometimes a larger quantity is ordered. The injection should be retained as long as possible.

STARCH ENEMATA, consisting of two ounces (four tablespoonfuls) of thin cold boiled starch, control diarrhœa, and should be ultimately retained and absorbed, if possible. Opium and other drugs should be mixed in starch when they are intended for retention, as distinct from temporary application. An indiarubber ball syringe, furnished with a long tube, capable of holding the exact quantity to be used, is most suitable for injecting starch, as well as nutrient enemata.

NUTRIENT ENEMATA are only ordered when, from any cause, the patient is unable to take food by the mouth and retain it in the stomach. Strong beef-tea, beef juice, eggs, cream, brandy, port wine, and other nourishing food or stimulant, may be given. The following is an excellent sample of the composition of a nutrient enema: two ounces (four tablespoonfuls) strong beef-tea, one egg, and half an ounce (one tablespoonful) of brandy. The beef-tea should be peptonized (see Chapter IX.), and thickened with

a small teaspoonful of arrowroot. Half this mixture should be given at a time, after being warmed to a temperature of 90° Fahr. It is found more satisfactory to give a small quantity every two hours, than larger quantities at longer intervals, which may excite the bowel to expulsive effort.

NUTRIENT AND OTHER SUPPOSITORIES.—Suppositories are commonly employed when sedative enemata cannot be retained. The rectum having been thoroughly lubricated, the suppository, after being dipped in oil, is introduced therein, and gently guided as far as the length of the finger, which is also oiled, permits. Suppositories are also occasionally used for administering or applying other than sedative drugs, and for rectal feeding; their basis is either cocao-butter or gelatine. Nutrient suppositories consist of zyminized (digested or peptonized) milk, or meat, in combination with cocao-butter. They are invaluable in critical cases of fever, peritonitis, severe operations, and prostration, when neither food nor enemata can be retained.

INHALATIONS are breathing in air prepared for application to the throat or absorption in the lungs. Inhalations are of two forms—dry and moist. In the former, when the inhalation is to be of long duration, a piece of lint, tow, sponge, or cotton-wool, soaked in the medicator (usually oil of eucalyptus, or some terebene preparation), should be inserted in an ordinary metallic respirator, to be worn by the patient constantly, or for a stated time. The lint, or other material, must be replaced periodically by a fresh piece, and on no account be re-wetted.

Another form of dry inhaler most useful in chronic cases has been brought out by the Sanitas Company. It requires no preparation, and is used in the same

way as the steam inhalers, the difference being that medicated air instead of steam is inhaled.

Short moist inhalations are given by means of a properly-made inhaler, half filled with boiling water, charged, if required, with a medicating agent. The patient should breathe the steam at a temperature of about 150° Fahr.

BRONCHITIS KETTLES are employed to impregnate the atmosphere with steam, pure or medicated, when it is desired that moist air shall be constantly inhaled. When the steam is to be medicated, a sponge saturated with the medicament to be vaporized is inserted in the mouth of the spout. In severe cases, the patient having been laid in a tent bed, the bronchitis kettle should be placed on its stove, opposite the aperture, and so that the steam will rise towards the patient's head, which therefore must rest above the level of the spout. Allen's invention, whereby moistened air in place of steam is emitted, is a valuable improvement on the ordinary kettle.

A TENT BED is easily formed by tying four broomsticks to the corners of the bedstead, and covering in the top, after stretching one or more sheets round them, so as to leave an opening about three feet wide on the side nearest the fire.

CHAPTER IV.

EXTERNAL APPLICATIONS.

THE preparation, as well as application, of many external remedies is usually entrusted entirely to the nurse; and exactitude, such as is necessary in compounding and giving medicine for internal use, should be shown in the proportion and admixture of ingredients, temperature, and length and manner of application of outward medicaments.

POULTICES are ordered to relieve pain, hasten suppuration, subdue inflammation, and cleanse wounds. Medical poultices should be hot, light, soft, and about half an inch thick, while surgical poultices should be as thin as can be spread satisfactorily. Poultices may be composed of bread, crushed cereals, and other seeds, certain roots, and other things; but the most ordinary and useful constituent is crushed linseed. Linseed meal—that is, linseed meal of commerce—is not suitable for poultice-making, as it is merely ground oilcake, from which all the valuable oil has been extracted, whereas crushed linseed contains all the oil natural to the seed, therefore crushed linseed should always be used when it can be obtained.

LINSEED POULTICES.—The requisites for making a poultice are:

1. Crushed linseed.
2. A metal bowl.
3. A basin.
4. A spatula or strong knife.
5. A board on which to spread the poultice.
6. A piece of unbleached calico an inch larger each way than the size of the intended poultice.
7. A kettle of *boiling* water.

In making a poultice the bowl and spatula are first heated; boiling water is then poured into the basin, and the spatula left in it till required for use. Sufficient boiling water to make the poultice is then poured into the bowl (about one-third of a pint will make a fairly large poultice for medical purposes, and about half that quantity will suffice for a surgical poultice of equal surface); the linseed is next sprinkled on the water, which, being rapidly stirred with the spatula, absorbs it until there is sufficient in suspension, when the linseed ceases to sink. No more is then added; and, after being thoroughly stirred for a few seconds, it is turned out on a cloth previously placed smoothly on the board, is spread evenly (dipping the spatula in hot water assists the spreading); the edges of the cloth are turned up about half an inch; and, finally, if the poultice is for a child or nervous person, a small quantity of vaseline is smeared lightly over its surface before it is applied. The best effects of a poultice are obtained when the meal comes in contact with the skin; the intervention of muslin diminishes its utility and is but a refuge for the unskilful.

When a compound mustard and linseed poultice is required, two tablespoonfuls of mustard are put in the bowl, and mixed smoothly with the boiling water as it is being poured in; the linseed is then added as for

a linseed poultice. Charcoal is incorporated in a similar manner, except that, in addition to that mixed with the water, a small quantitity is sprinkled on the surface of the poultice; it acts as a deodorant when the discharge is fœtid.

Bread poultices are made by stirring breadcrumbs into boiling water, and placing the bowl over a sauce-pan of boiling water to allow the mixture to swell. Spread in the same way as a linseed poultice, its surface must under all circumstances be smeared with oil or vaseline, to prevent hardening and adhesion to the skin.

A bread poultice for a wound that discharges pus freely should be made by pouring boiling water upon a slice of bread three-quarters of an inch thick. When sufficiently soaked and carefully drained, it should be put on without being broken up into a pulp or smeared with oil or other emollient. Pus will be drawn up into the substance of the bread as into a sponge.

MUSTARD PLASTERS are employed when irritation of the surface is desired, and are prepared by spreading mustard, as mixed for table use, thinly on brown paper, and covering its surface with tissue paper. The ready-made plasters known as mustard-leaves merely require to be thoroughly moistened to be fit for use; but when applied to the front of the neck or throat or the skin of young children, they should invariably have their surfaces guarded by muslin, also moistened, lest they be thrown off immediately, owing to intense pain. Neither mustard-leaves nor mustard plasters should on any account be allowed to remain on long enough to blister the skin. Twenty minutes generally suffice to produce the desired effect, which becomes apparent in the redness of the skin;

but if a further caloric irritation is necessary, a hot linseed poultice, substituted on removal of the mustard-leaf or plaster, will accomplish it, without fear of breaking or injuriously blistering the skin.

Poultices, unless very large, should be changed every two hours. Jacket poultices (the shape of ordinary lung protectors) are made sufficiently large to envelop the upper part of the body, and may be left on three or four hours. As soon as a poultice is applied, it should be covered over with cotton-wool, and secured by a loose flannel bandage. In medical cases a piece of thin mackintosh or oiled silk may be placed between the poultice and the cotton-wool, to prevent any suffusion of steam. On discontinuing hot applications, the part should be protected by a thick covering of cotton-wool.

PLASTERS are employed, some for their stimulating effect, others on account of soothing properties. Prior to applying a belladonna or other adhesive plaster, the skin on which it is to be placed should be washed and dried. The plaster then, having been gently warmed at the fire, or by holding the back of it on a hot-water can, should be laid on without wrinkles, and pressed in position with the hand for a minute or two. After a few days the edges will lose their adhesiveness and curl up, and should be neatly trimmed with scissors. In removing a plaster it should be carefully stripped off with one hand, while the other supports the skin around. The residuum of stickiness may be cleared away by a poultice or oil—or, more speedily, if the skin be not tender, by a few drops of turpentine on a piece of linen. Belladonna plasters occasionally produce great irritation, accompanied in some cases by a copious rash; this should be reported to the doctor, as it is not the effect desired.

OINTMENTS may be smeared directly on the part, or be spread on the *smooth* side of lint. They vary greatly in their medicinal properties, some being stimulating, even caustic, and others soothing in their nature; consequently care must be exercised in their application. When irritating ointment, such as would be ordered in a case of ringworm, is to be used, the application must be carefully limited to the diseased part; while soothing ointments, such as boracic or zinc ointment, may be applied with great freedom and invade the healthy parts around.

Whenever possible, all crusts and scabs should be removed by bathing or a bread poultice before applying the ointment.

FOMENTATIONS have the same effect as poultices; they are lighter and more quickly prepared, but need to be changed every quarter of an hour. To prepare fomentations, the following articles are required: A large metal bowl, a wringer (which is a small roller towel made of a yard and a half of crash), two sticks (hoop sticks answer admirably), several fomentation flannels, each half a yard square (old pieces of blanket are better than new flannel), and a large metal saucepan of boiling water.

In making a fomentation, the wringing sticks having been placed inside the wringer as far apart as they will lie, the flannel to be used for fomenting is spread between them. The central portion of the wringer, that enclosing the flannel, is then placed in the bowl (which has previously been heated), and boiling water is poured in until the bowl is three-parts full. The fomentation is then partially wrung by twisting the sticks in contrary directions so as to squeeze the flannel as dry as possible before it is taken out of the water. The wringer is next lifted out and the wring-

ing is completed. When wrung, the fomentation should be moist, but not wet, or it will scald the patient. It should be shaken up, applied immediately and covered, first with a mackintosh, then with two or three folds of flannel.

Fomentations made with water in which poppy-heads or camomile flowers, or both, have been boiled, have a soothing effect, while fomentations sprinkled by a coarse spray with a tablespoonful of common turpentine, or thirty or forty drops of spirits of turpentine, are useful in severe cramp of the stomach and in cases of torpid liver for relieving pain and stimulating the inactive organ. The latter fomentation is called a turpentine stupe. Spongio-piline answers rather better than flannel for medicated fomentations, as, being waterproof on one side, it maintains its high temperature for a longer period. It is wrung out in exactly the same way as flannel, but it is applied quite smooth. In some hospitals it is used, dry and warm, instead of mackintosh and folds of flannel to cover fomentation flannels.

DRY HEAT is useful in stimulating the circulation, and may often promote the patient's comfort. It is generally applied by means of hot-water bottles or india-rubber bags. Great care must be taken that the bottle is never allowed to touch the skin—it should never be inserted in the bed without being wrapped in a flannel bag; when applied to the feet, it should be placed under the bottom sheet. The skin of paralyzed and unconscious patients will blister with heat that would have no effect on a healthy skin. Stone and tin bottles should be quite filled, but india-rubber bags should only be a little more than half filled, being in this condition more easily adaptable to the curves of the body.

ICE, when ordered as an outward application, should be broken small, if necessary pounded, and be applied in an ice-bag tied to a cradle or other support; the weight of the ice must not rest on the patient, though the ice-bag must touch the part to which it is applied. A fold of lint should be placed under the ice-bag, except it is applied to an unshaven head, in which case the hair will be sufficient protection.

The ice should be kept *hung* up in a strong flannel bag, be broken in a wooden bowl by an ice-pick or strong stiletto, and be pounded by striking broken ice, enclosed in flannel, vigorously on a hearthstone or sink. When snow can be had it answers equally well. Ice-bags should be only half filled, and all air be carefully expressed, in order that the contact surface may be as large as necessary. The bag should be replenished immediately the last piece of ice is melted; or what was a few minutes before an intensely cold application will become an absolutely warm one. A good-sized ice-bag needs replenishing about every three hours. If for any reason the ice-bag cannot be refilled at once, rags wetted with iced-water, and frequently changed, should be applied to the part, to keep up the treatment. A large bladder is a good substitute for an ice-bag. A wine cork in the mouth of it gives good purchase for tying.

BLISTERS are produced either by painting the part with blistering fluid, or by the application of a plaster. The time a blister takes to rise varies very much, but from six to eight hours is the usual period. As soon as the blister has properly risen, the plaster, if one has been applied, should be removed, and the bleb be punctured in two places, when the fluid will run out of the lower one, and must be carefully absorbed by lint or absorbent cotton-wool. It must on no account

be allowed to touch the skin, either of the patient or of the nurse, as it is of itself a blistering fluid. Should the doctor order ointment, it must be applied and spread on lint, and be kept in position by strips of adhesive plaster. When ointment is not prescribed, the part should be covered with several folds of plain lint secured in the same way, Whatever dressing is applied will need renewing twice a day.

LEECHES are applied, when practicable, on a bony part, but never near a large bloodvessel. Explicit directions as to situation should be obtained from the doctor. They should be handled as little as possible; should they not bite readily, a few drops of blood from a pricked finger, or a little sugar and water rubbed over the part, will cause them to bite without delay. Leeches should never be pulled off; should they not drop off when gorged, a pinch of salt on their bodies will cause them to relax their hold. When applied internally, leeches are placed in properly made glass tubes (a minim glass makes a good substitute), and care must be taken to distinguish head from tail. A leech usually draws about a drachm of blood.

After the removal of a leech, bleeding may, if not severe, go on for some time. After an hour or so, if the bleeding continue, very hot water should be poured on the bite to arrest the oozing, and, if that fail, pressure should be applied by a pad of lint, tightly fastened by a bandage, and removed as soon as the bleeding stops. Should the bleeding be severe, some down may be scraped off lint and, mixed with a little powdered tannin, be spread thickly over the wound under a pad; if the bleeding is not then soon controlled, the doctor should be summoned.

Bleeding may be increased, after the leech has been

removed, by applying a linseed poultice, until the plethora has been relieved to the required extent.

MASSAGE is manipulation of muscles and other parts in different ways, each having a definite effect, and is applied locally or to the body generally. For the efficient nursing of some paralytic and other cases, a competent knowledge of massage is absolutely necessary, and in many ailments it is most useful; but at present there is a tendency to exaggerate the extent to which it is efficacious. A knowledge of elementary anatomy, an elastic but firm touch, and a smooth, cool hand are qualifications without which no amount of technical instruction will make a good masseuse. A clever nurse well up in elementary anatomy and physiology may acquire in a few lessons the art of performing the various movements in an intelligent manner; but by constant and varied practice alone can the requisite skill be attained to apply massage so as to relieve many and torture none.

Treatments consisting of a *combination* of massage with galvanism and other forms of electro-therapeutics are recent successful developments of medical science, but they have too often led to the battery being applied by inexperienced hands, whereby a temporary injury has been rendered permanent.

RUBBING is sometimes ordered to excite the circulation, or to assist in renewing the action of muscles that have from any cause been kept in one position for a long time; it is also useful in soothing nervous and irritable patients. The rubbing should be performed in steady long strokes with the nurse's whole hand.

CHAPTER V.

BATHS AND PACKS.

PRECAUTIONS for the maintenance of a healthy action of the skin are essential at all times, but particularly in illness, when the secretions of the skin are abnormally sour and offensive. Warm bathing cleanses the surface of the skin and opens the pores, and for these purposes the addition of soap and soda to warm water increases its efficacy. Warm sponging is very soothing, and will often induce sleep. Cold bathing stimulates and invigorates the action of the skin of healthy subjects, and is a valuable agent not only in the cause of cleanliness, but also for preventing colds and other ill-effects of a changeable temperature. After a cold bath a good smart rubbing should produce a healthy reaction and feeling of warmth in the skin; when such is not the case, and the cold bath is followed by a sense of chilliness, it should not be persisted in. Some people who, owing to a deficient circulation or other cause, cannot derive benefit from a cold bath, find a momentary plunge in cold water after a warm bath an excellent method of partially closing the pores of the skin and bracing the nervous system.

In illness baths must only be given under orders from the doctor; nevertheless, every part of the patient's body must be kept clean by frequent washing,

which must be accomplished, in severe illness, by degrees, so as not to exhaust the patient's strength. Mackintoshes covered with small blankets should be placed under and over the part to be washed, to protect the bedclothes, as all washing must be done without removing or wetting the clothing. For washing, a sponge wrung sufficiently dry not to drip should be used; for drying, well-warmed towels.

The following are the temperatures of various kinds of baths. That the temperature is correct should be ascertained by means of a bath or ordinary thermometer. A clinical thermometer must not be used:

Cold	bath	45°	Fahr. to	75°	Fahr.
Tepid	,,	85°	,,	90°	,,
Warm	,,	90°	,,	100°	,,
Hot	,,	100°	,,	110°	,,
Hot air	,,	120°	,,	140°	,,
Vapour	,,	110°	,,	120°	,,

COLD BATHS are sometimes ordered in cases of fever, to reduce the patient's temperature. For this purpose, a bath, half filled with water at about 90° Fahr., should be placed beside the bed, and the patient, enveloped in a sheet or blanket, be immersed therein; sufficient cold water should then be added to reduce the temperature of the bath below 70° Fahr. The patient should not remain in the bath more than from three to five minutes, and when lifted out should be wrapped in a warm blanket, placed in bed and then thoroughly dried. Nourishment, and in cases of exhaustion stimulant, should be administered immediately the patient is replaced in bed.

HOT BATHS are sometimes ordered during the early stages of eruptive fevers, to assist and accelerate the development of the rash. In these cases the patient

may remain submerged from ten to twenty minutes, the bath being maintained at its proper temperature by frequent addition of hotter water carefully poured in at the side so as not to scald or overheat any portion of the patient's skin. The patient should be wrapped in a blanket, and remain therein while immersed. Two small blankets, or large bath towels sewn together at one end, but so as to leave sufficient room in the middle for the head to go through, should be thoroughly heated ready to envelop the patient as he emerges from the bath. They should be spread lengthways over the bath, and the patient should pass his head through the slot before rising out of the water. The wet blanket should be left in the bath. The greatest possible care must be taken to avoid a chill.

SODA and SULPHUR BATHS are sometimes ordered in cases of rheumatism and skin diseases. For a soda bath from one to two pounds of common washing soda should be dissolved. The sulphur bath must be prepared according to the doctor's orders ; about four ounces of sulphuret of potassium in thirty gallons of water is the usual quantity ordered.

In rheumatism the various preparations of sea-salt, dissolved in hot water, are valuable, and they also increase the invigorating properties of a cold bath. The proportion of sea-salt to be added to a bath varies according to the strength of the preparation, and the directions on the packets are the best guide. When sea-water can be obtained, it may be used with advantage, as it contains the salts in natural solution to an adequate extent.

VAPOUR BATHS are prescribed in cases of rheumatism, gout, dropsy, and other diseases, particularly those affecting the kidneys and bladder, and are most

easily given when the patient is seated in a Windsor chair standing in a foot-bath. Blankets must be so arranged as to completely envelop the bath and the patient's body, while leaving his head uncovered. His feet must rest on the warmed edge of the bath, and as soon as he is seated and covered up, one corner of the blanket should be lifted, and the bath be half filled with boiling water; from blankets properly arranged no steam can escape. The patient should remain in a vapour bath from twenty to thirty minutes. If after a few minutes it is desired to generate more steam, one or more hot bricks or balls of fire-clay may be put in the water. The bath should be followed by rubbing with warm towels and a speedy return to bed. In some cases, in order to stimulate the relaxed skin, cold sponging is ordered after a vapour bath.

When it is necessary to give a vapour bath without the patient getting out of bed, the mattress and pillow should be entirely covered by mackintosh with a blanket spread thereon; the patient having been divested of his nightdress and wrapped in a blanket, should lie down under the cradles or supports (described in Chapter VIII.). The upper clothes, consisting of four blankets with a mackintosh on the top, are then put over the cradles, and are carefully tucked in, being so arranged over the shoulders that none of the steam can escape; the blanket that wraps the patient is removed by being drawn out from the bottom of the bed. Next, the spout of a bronchitis kettle is introduced under the blankets at the bottom of the bed, the kettle itself boiling on a *properly protected* spirit-stove. As soon as the patient has been sufficiently subjected to the effects of the vapour, the kettle is removed, and the cradles drawn out of

the bed from the bottom. Great care must be taken to avoid chilling the patient.

HOT-AIR BATHS are given in the same way, and of the same duration, as vapour baths; the heated products of combustion, from a *properly constructed* lamp, being substituted for steam. After a hot-air bath (which induces profuse sweating) warm sponging and rubbing with warm dry towels will be necessary, and should be commenced about twenty minutes after the lamp has been removed. After a bed bath, whether of vapour or hot air, the patient will need a complete change of bed-clothes. The bed-clothes should be changed, and a warm clean nightdress put on as soon as the sponging and drying are accomplished.

PACKS, like baths, are employed to induce free perspiration by opening the pores of the skin. Before giving a pack the bed is prepared in the same way as for a vapour or hot-air bath, with the exception that the upper clothes are not supported by cradles. A cold pack is administered by rolling the patient in a sheet wrung out of cold water, and for a hot pack a blanket wrung out of boiling water is used. Wringing a sheet is easily managed, even by one person, but a blanket requires much more care: wide hems, sufficiently large to admit of strong sticks being inserted, must be sewn at each end, and the whole blanket be soaked for a few minutes in boiling water. The sticks should be inserted while the blanket is dry, as the two ends will then float, and may easily be taken up. Two persons are required to wring the blanket, and great care must be taken that the process is thoroughly accomplished; should any wet patches be left, the patient will inevitably be scalded. When wrung, the temperature of the blanket should be about 110° Fahr.

A patient should remain in a cold pack from fifteen to thirty minutes, and in a hot pack from half to three-quarters of an hour. The same cautionary measures are incumbent after a hot pack as after a vapour bath.

CHAPTER VI.

INFECTION AND THE USE OF DISINFECTANTS.

In attending persons suffering from infectious diseases a nurse's duties are far more complicated than in other cases. Her first duty must always be to assist the recovery of her patient, and to promote his welfare and comfort; but she is also bound to take every precaution necessary to prevent the disease spreading to other occupants of the house or adjoining premises, and, further, to run the least possible risk, compatible with the efficient discharge of her primary obligations, of taking the disease herself.

In preparing a room for the reception of a case of infectious illness one at the top of the house should be chosen, and, if practicable, no one but the nurse and her assistant should occupy rooms on the same floor as the sick-room. The nurse must on no account sleep in the sick-room, and she should, whenever possible, have the use of a third room (by preference a bath-room) for washing and disinfection.

Carpets and woollen curtains must be removed; Indian matting may be laid down in place of carpet, and lace or muslin curtains may be hung up. The sick-room should be made as cosy and cheerful as circumstances will permit, for the patient will need,

during his necessarily somewhat solitary confinement, all the comfort that pleasant surroundings can give.

A sheet wrung out of disinfectant should be nailed to the top of the door frame outside the room, and the lower corner on the hinge side should be immersed in a pail full of the same disinfectant; this precaution will ensure the sheet being always saturated with sufficient moisture, as its capillary attraction will make good the loss by evaporation. Tall clothes-horses, covered with similarly prepared sheets, should cut off communication with the staircase.

FRESH AIR is of vital importance, and must be admitted in abundance; at the same time the patient must on no account be exposed to any draught. The staircase windows and those in adjoining rooms, as well as those in the sick-room, must be kept constantly open. A good fire, bright and cheerful, but not fierce, will iuduce a free current of air, and not only warm the room to an agre able and appropriate temperature, but act as a ventilat r. Fresh air is the foremost of disinfectants, and of primary importance to the recuperative efforts of exhausted nature. Food cannot be satisfactorily assimilated, blood be properly revivified, nor other functions of the body be efficiently performed without oxygen, the vital principle of the atmosphere.

In eruptive fevers the patient must be kept in bed, at any rate, until the rash has entirely disappeared. It is often advantageous to have two beds in the room, side by side, and to lift the patient from one to the other every day or two, when his strength is equal to the extra exertion. It must be understood that the patient is not to be moved without the doctor's permission. After the removal of the patient, the bedding on which he has lain must be removed to an

adjoining room for purification by exposure to a free current of air.

All evacuations must be passed into a bed-pan or urinal. Slipper bed-pans are more convenient for use in a recumbent position, but the round ones are more comfortable when the patient can sit up. Care must be taken to avoid chill; the bed-pan must be thoroughly warmed, and in very helpless cases its edges should be lightly rubbed with oil. Some nurses, instead of warming the bed-pan, slip it into a flannel cover; the objections to this plan are—that the flannel needs washing each time, or infection may be spread by it, and, moreover, it does not always prevent a feeling of chilliness. Some disinfecting powder should be sprinkled in before using bed-pans and urinals, which of course must be cleansed immediately after use. A small mop and strong solution of disinfectant will be found most suitable for this purpose. A round bed-pan, provided with a well-fitted cover, needs a pad of cotton soaked in disinfectant to be placed in the open handle. This pad should be removed only while emptying and washing. While carrying away a slipper bed-pan, it should be entirely enveloped in a towel wrung out of disinfectant.

THE WATER-CLOSET must be frequently disinfected, its window be kept wide open, and its door be closely shut. It is necessary to remember that covers of bed-pans and woodwork of water-closets need the same disinfection as the receptacles themselves.

A COVERED PAIL, half filled with disinfecting solution, should be brought to the bedside to receive body linen and bed clothing when changed; as the clothing is removed it should be immersed in the pail, the cover being at once replaced. All clothing should

be allowed to soak for at least four hours, and be then wrung out, and immediately reimmersed in a large tub containing a fresh supply of the same disinfectant solution. After soaking for another four hours it must be dried, and may then be sent to the laundry with safety.

Small pieces of old linen should be used instead of pocket-handkerchiefs, and be burned as soon as soiled, all discharges from the mouth and nostrils being charged with virulent infection. This precaution is particularly necessary in diphtheria, scarlet fever and small-pox. The use of sanitary towels is also essential.

BED AND BODY LINEN will need the same careful disinfection up to the last days of quarantine as in the first days of illness; and it is most essential to remember that sprinkling soiled linen with disinfectant is of no practical utility. Spraying may deodorize, but does *not* disinfect. Complete saturation for sufficient time, in an adequately strong disinfecting solution, is the only method of preventing the contagious dissemination of disease through body and bed clothes.

FUMIGATION.—It is the nurse's duty, as soon as the quarantine is completed, to see that the sick-room is thoroughly disinfected. For this purpose the most drastic and satisfactory process is sulphur fumigation. The furniture should not be removed, but be opened out as much as possible; for instance, the mattress should be taken off the bedstead, and be set up on end, and blankets should be hung on lines across the room. The room must be made as nearly air-tight as possible, by closing the register and pasting brown paper over the cracks of the window and door; two or three iron trays, each

containing from a quarter to half a pound of sulphur, should be supported on a pair of tongs or iron bars, over metal pails half full of water, and be placed as far apart as possible. When all is ready, the sulphur must be lighted by mixing it with live coals, or by pouring on spirit and igniting it. No attempt must be made to remain, even for a few moments, to see how the sulphur burns, as its fumes are deadly. Hurrying from the room, the nurse must lock the door and paste it up from the outside. All trouble in lighting the sulphur is obviated by the use of a sulphur candle, which can now be obtained at any good chemist's. After twenty-four hours' fumigation the room may be entered, when the windows must at once be thrown wide open, and the door then be closed; that is, immediately after, but on no account before, the windows are opened. Unless the door is quickly closed, the very pungent and unpleasant odour of sulphur will permeate and hang about the house. After the room has been thoroughly aired, the cleaning may be proceeded with. In severe cases, such as small-pox, scarlet fever and typhus fever, the walls must be stripped and be lime-washed before repapering; the ceiling must be lime-washed and whitened; the floor and all painted woodwork, the bedstead, etc., be thoroughly scoured, disinfecting soap being used as well as water containing a disinfectant. In less virulently infectious cases, such as measles, typhoid fever, whooping-cough, and chicken-pox, the walls need not be stripped, but they must be well rubbed with cloths dipped in disinfecting powder. Whenever a room is repapered, whether after sickness or not, care should be taken to see that the whole of the old and soiled paper is scraped off the wall, not merely whitened over; or double trouble and needless risk

will be incurred should disinfection at any time become necessary.

Since the passing of the Notification of Diseases Act it has been incumbent on every householder to notify the existence of infectious illness in his or her house to the district medical officer *immediately;* and it is the duty of all other occupants of the house to see that this has been done. The sanitary inspector is then sent to see that proper precautions are being taken, and that the rooms are thoroughly fumigated after the illness is over.

DISINFECTANTS may be classed under two heads —those that absolutely kill the germs of diseases, and those that render them harmless by combining oxygen with the deleterious gases in which they flourish. Carbolic acid, chloride of lime and Burnett's Fluid (chloride of zinc) are the best known examples of the former class, while Sanitas and Condy's Fluid are good specimens of the latter kind.

Those named and many others are satisfactory in use, but most efficient disinfectants are poisonous: Sanitas is an exception to the rule.

Carbolic acid (Calvert's No. 5) should be mixed with boiling water and used cold. It should be prepared of two strengths; the stronger should contain one ounce (two tablespoonfuls) to each pint of water, and be used for rinsing bed-pans and in the water-closet; the weaker solution should be composed of one ounce of carbolic acid to each quart of water, and be used for disinfecting clothing, wetting sheets, etc. This latter solution may be again diluted with an equal part of hot water for washing plates, spoons, feeders, glasses, etc.

For use about the patient's person, for spraying the room, and for the doctor's and nurse's use, Sanitas

will be found pleasant, effective, and harmless; not being poisonous, it may be used internally as well as externally. For internal use, as a gargle or injection, it should be diluted with from four to six times the quantity of water.

Carbolic acid is a deadly poison, and unmixed with water will burn the skin. In solution it has a very hardening effect on the skin, and a nurse who has to put her hands frequently into a carbolic solution should apply glycerine with equal frequency to neutralize its effects. Should a nurse have the misfortune to burn her skin with carbolic acid, she should at once use glycerine to mitigate the consequence.

Poisoning by carbolic acid taken in mistake for medicine can only occur through most culpable carelessness. In such an untoward event the nurse should instantly give the whites of three or four eggs, or a teacupful of salad oil, to protect the coats of the stomach from its corrosive action, and send urgently for the doctor. Shock to the system might be combated by hot-water bottles and blankets, or even a brandy enema.

While nursing cases of infectious illness, for the protection of her own health, besides the general precautions of disinfection, the nurse must avoid as much as possible swallowing her saliva, by the frequent use of her handkerchief and by expectoration when necessary; she should frequently rinse her mouth with Sanitas and water, in equal parts, or with some other disinfectant. She must endeavour to avoid unnecessary fatigue, take at least one hour's exercise in the fresh air daily, and sleep at least seven hours consecutively in every twenty-four. She should partake freely of light nourishing food, carefully avoiding every-

thing she knows to be trying to her digestive organs. Light wines are more easily digested than ale or stout, and a nurse, while not altogether avoiding stimulants, will do well to avoid increasing the amount she usually takes.

Should the illness end fatally, it will fall to the nurse's duty to prepare the body for interment. As soon after death as practicable, but not until after all friends have left the room, the body should be laid perfectly straight, with the hands at the sides; the jaw should be tied up with a folded handkerchief, and the eyelids closed and secured in position by strips of adhesive plaster if necessary, not with coins. After a reasonable delay (at least two hours), during which the corpse will grow cold, it must be washed reverently but thoroughly. A disinfectant diluted with warm water should be used, and the ablution should begin at the face and be continued downwards. The hair should be arranged as nearly as possible in the way it was worn in life; neither the plaster on the eye nor the bandage for the jaw need be replaced. A night-gown and stockings should be put on; the bed should be covered with a clean sheet, and a pillow should support the head. Another sheet should entirely cover the body with the exception of the face, over which a fine handkerchief should be kept, and removed before any friends enter the room.

When the illness has been infectious, disinfecting (Sanitas) powder should be thickly sprinkled over the body under the nightgown, and strewn inside the coffin. The coffin should be closed, and the interment take place as soon as possible.

In addition to the sanitary precautions already detailed, should there be any wounds or much discharge from the natural openings of the body, they should be

plugged with absorbent cotton-wool and be covered with adhesive plaster.

The room should be left as neat as possible, all articles in common use in illness be put away, and the window left slightly open at the top.

The undertaker usually places the body in the coffin, but the nurse or a member of the family should be present, as also when the coffin is screwed down.

CHAPTER VII.

COMPLICATIONS OF DISEASES.

COMPLICATIONS OF ILLNESS vary with different diseases, and the nurse should have some idea what to look for, and what precautions to take in certain definite cases, particularly those of an acute nature, which may be considered in their special forms.

SCARLET FEVER. — Complications arise with the decline of the eruption (at the latter part of the first week) or during the second, third, or fourth weeks.

Inflammation of the glands at the angle of the jaw, and inflammation of the ear, accompanied by discharge, are perhaps the most common, and should be brought as soon as possible to the notice of the doctor, as permanent deafness may ensue; the nurse must on no account rub the enlarged gland, lest an abscess result from her well-intended but ill-judged act.

Another accompaniment is rheumatism, commonly attacking the joints, which should be wrapped in fir-wool, flannel, or cotton-wool. Diarrhœa, sometimes mixed with blood, is now and then present.

Pericarditis (inflammation round the heart) frequently attends scarlet fever, and is essentially a condition for the doctor to diagnose; but any complaint of pain in the region of the heart should be reported to him as early as possible, and pending his visit, if

the pain be severe, relief should be obtained by applying mustard poultices or turpentine stupes.

Albuminuria, or acute Bright's disease, is also of frequent occurrence. When washing the patient, the nurse will notice a puffy condition under the eyes, and perhaps some swelling at the ankles. At the same time some change in the amount and colour of the urine may occur. The patient, if up, should go to bed, and any water passed should be kept for examination by the doctor.

One great aim during an attack of scarlet fever should be to protect the patient from chills, as the troubles enumerated are often due to a neglect of this precaution.

Desquamation, or peeling of the skin, can hardly be classified as a complication, but it must always be looked for with a view of preventing the spread of the disease. Directions to this end (such as frequent anointing with disinfectant oil, or sponging with a tepid dilution of some disinfectant) may tax the patience, but must be faithfully followed.

TYPHOID FEVER.—This disease runs a long course, the fever remaining up to the end of the third or fourth week, during which time several local complications may occur. Bedsores are prone to appear, especially when, from excessive exhaustion, evacuations are involuntary. Great attention must be given to the state of the draw-sheet, and the parts be thoroughly cleansed, as described in Chapter I.

Retention of urine frequently occurs, and should be reported if suspected. Other severe accompaniments are peritonitis, hæmorrhage from the bowel, and perforation of the bowel. Any of these terrible consequences may arise through incapacity on the part of the nurse. As typhoid fever is a disease in which

inflammation of the intestine invariably exists, the physician's first care is to order a suitable diet, and it is the nurse's bounden duty to see that this dietary is never exceeded; the slightest deviation may lead to the patient's death, and no nurse without the courage to resist appeals for more substantial food is fit to be entrusted with such a case. The woman who can feed a patient *as directed* has learnt the most important duty of a 'typhoid' nurse. Lung troubles of various kinds appear in some severe cases.

Distension of the bowel by flatulence is frequent. The abdomen may be supported by putting on a flannel bandage pinned moderately tight.

Sordes, or crusts on the gums and lips, always occur in bad cases, and should be cleaned with a camel's hair brush and peppermint water; the lips may be softened with glycerine or vinolia cream.

RHEUMATIC FEVER is commonly complicated with an affection of the chest. Pericarditis and inflammation within the heart are found in a large proportion of cases, often attended by great pain in the early stage; temporary relief may be obtained in the manner described under the head of Scarlet Fever.

Attacks of nettlerash, and in the young St. Vitus's dance, are by no means rare.

The painful joints are usually bandaged by the nurse; awkwardness on her part may greatly aggravate the suffering. An *assistant* should raise the limb carefully with both hands, keeping the joints as stiff as possible; the nurse can then apply the wool and bandage more evenly and cause less pain than by thrusting the bandage under the limb while it rests upon the bed.

A copious rash of sweat-spots (little watery blebs), and during convalescence an eruption of bright-red

spots varying in size from a pin's head to a florin, often appear, and need cause no anxiety. Like all other eruptions, they should be mentioned to the doctor.

An alarming complication sometimes arises even when the patient has lost most of the fever or is sitting up. Sudden oppression of the breathing, coldness, blueness of the face, sweating, and perhaps loss of consciousness, succeed comparative comfort. The heart is affected, and the doctor should be instantly and urgently summoned. The nurse should then prop the patient up, put hot-water bottles in the bed, and blankets over him. A strong mustard poultice should be applied to the heart, and brandy be administered freely; if the patient is unconscious, he should be turned on one side and an enema, consisting of an ounce and a half of brandy in an equal quantity of milk or water, be administered.

During and after rheumatic fever (as in all kidney disorders) woollen clothing *only* should be worn.

MEASLES.—The ordinary complications of this disease affect the chest, either as bronchitis or inflammation of the lungs. The patients must be carefully protected from all draughts of cold air, and should, if possible, be clothed in flannel gowns.

Convulsions sometimes occur—the patient should be immersed in a warm mustard bath. Discharge from the ears and violent inflammation of some parts of the body occasionally happen. Cleanliness should be the watchword of the nurse. Quarantine must be maintained in ordinary cases about ten days after the rash has disappeared; but should the skin peel off, quarantine must be enforced for some days after *desquamation*, or peeling, has entirely ceased.

WHOOPING COUGH is such a common disease of childhood that uncomplicated cases are often treated without medical advice, yet there are several grave dangers liable to arise. Bronchitis may supervene, and the accumulation of phlegm and consequent difficult respiration induce alarming exhaustion. Hæmorrhage may follow a violent attack of coughing, but the most urgent manifestation of danger is an attack of convulsions.

TRUE CROUP and DIPHTHERIA cannot in many cases be distinguished from each other, though it may be said the former *always* attacks the larynx, while the latter may or may not. Without attempting to distinguish between them, it may emphatically be stated that when a child has a cough and such difficulty in breathing that the soft parts between the ribs sink in during the act of inspiration, there is imminent danger of suffocation, and medical aid should be secured without *any* delay.

The frequent administration of milk and a little brandy, and attention to the temperature of the room, which should be kept up to 60° Fahr., and be moistened by means of a bronchitis kettle (see page 27), are the most important points to which to give attention till more precise directions can be obtained.

It may be well to mention that a fœtid discharge from the nostrils and excoriation of their orifices are sometimes the first indication of an attack of diphtheria.

Great care is necessary during and after convalescence, as paralysis or heart troubles too often arise after all danger has apparently passed away. No undue exertion or violent exercise should be undertaken for at least three months after an attack.

SPASMODIC or FALSE CROUP is very alarming; a child may be put to bed apparently quite well, and

awake suddenly with a harsh cough, fighting for breath. The attack is generally due to some unwholesome food remaining undigested in the stomach. An emetic of a teaspoonful or rather more of ipecacuanha wine in a little warm water should be immediately administered, and the child placed in a hot bath as quickly as possible. Later on a dose of a teaspoonful of castor-oil should be given.

HÆMORRHAGE is an accompaniment of many diseases, and often occurs to an alarming extent. The blood frequently maintains its usual character, when it is recognised directly; but it is often disguised, and should the nurse fail to detect it in its altered condition, valuable information may be withheld from the physician. From the nose, throat and lungs it is always self-evident, but from the stomach it may come away quite altered, looking like coffee grounds. Should a patient vomit anything of this nature, it should be saved for inspection. Blood may come away from the bowel having the appearance and consistence either of coffee grounds or treacle. From the bladder, again, it may come unaltered or mixed with urine, imparting thereto a dark *smoked colour*.

What can the nurse do? In the first place she must restrain the friends from following the mischievous practice of meeting hæmorrhage by doses of stimulant, which only accelerate the action of the heart and bring about an increase of the bleeding. The patient should lie down, and not be allowed to move or be moved, speak or exert himself at all. Ice or sips of very cold water should be constantly given, and, if at hand, two teaspoonfuls of hazeline in some water. If the patient be up and dressed, he should not be undressed, but any tight clothing should be loosened. A nurse should never wait to see what

turn hæmorrhage may take, but should at once summon the doctor. If, pending his arrival, the patient should seem to be passing into a state of collapse, a few drachms of brandy should be given, by the mouth or as an enema, lest the heart give in altogether.

When the bleeding is from the nose, very hot water (temperature 115° Fahr.) may be syringed at intervals up the nostril by an enema syringe and allowed to run out of the mouth. The patient must hold his breath for a few seconds while the water is injected.

RETENTION OF URINE arises from a variety of causes, and commonly follows difficult labours and operations upon the uterus, bladder, or rectum. In medical cases it occurs in conditions of great prostration. The patient failing to relieve herself, it becomes necessary to draw off the urine with a catheter, which should be done every six or eight hours. Professional nurses, after special instruction, are able to accomplish this object, but ordinarily it is the duty of the medical attendant. There is, however, plenty of opportunity for the unprofessional nurse to be helpful to the doctor; if she is informed at what time his next visit will be paid she should prepare the patient beforehand, and so economize his time.

Catheterism is practised with the patient lying either upon her side or on her back—the latter the more common position. She should be moved to the side of the bed most convenient, and her nightdress drawn up at the back to a level with the hips. A folded towel should be put under her, extending half-way to the knees, and a blanket should be placed over the bed-clothes, which the nurse, putting her hands under the blanket, should turn down as far as the knees. She should then pass a chamber towel round each thigh, so as to completely cover them, making the top

end of each towel meet above the bladder. The surgeon will require some oil for the catheter and two receptacles—one should be an ordinary chamber utensil, the other a small jar or the bottom of a soap-dish. When the legs are slightly separated, the smaller vessel will stand on the folded towel to receive the urine when the catheter is passed. The stream is stopped for it to be emptied into the larger vessel when necessary,

Water should be ready for the doctor to wash his hands, and while he is thus occupied the nurse should quickly withdraw the towels and rearrange the bed. Immediately after use the catheter must be carefully washed and cleansed internally by the passage of a stream of some diluted disinfectant.

SICKNESS is sometimes a natural effort of the stomach to relieve itself of contents it cannot assimilate, but it is also a distressing and troublesome accompaniment of many diseases, when, though its cause will be diagnosed and treated by the doctor, it may at least be partially controlled by the nurse administering ice, placing the patient in a recumbent position, and applying a mustard-leaf to the pit of the stomach. For exhaustion after continued and violent vomiting, small quantities of white wine whey, champagne, or brandy and soda-water, may be given to prevent collapse.

RIGORS, or shivering fits, occur in both surgical and medical cases, and generally usher in some untoward complication. The patient feels intensely cold and shivers, but his temperature remains high. Hot-water bottles should be applied to the extremities, and warm drink be given; but heavy extra clothing should not be put on. The doctor should be at once sent for.

CHAPTER VIII.

SURGICAL NURSING.

SURGICAL nursing should only be undertaken by those whose health is good, and whose nerves are steady both in sudden emergencies and under prolonged anxiety. No one with womanly feeling can witness a painful operation quite unmoved, but a good nurse will be thinking too much of her patient to betray signs of nervousness. In the haste and agitation of attending to a case of accident, a woman thoroughly self-possessed and capable of intelligent obedience will be of far more use to the doctor, and comfort to the patient, than one with more knowledge and less self-control.

SURGICAL CASES are divided under two heads, viz., those caused by operation and those that are the result of accident.

The special points of treatment are absolute cleanliness and rest, general and local; the latter being obtained by the use of splints, strapping, bandages, etc.

In some cases, before any effort is made to heal the wound, poulticing has to be resorted to, to cleanse the wound of dirt and foreign matter; if these are not removed at the very beginning, suppuration will continue and weaken the patient.

The edges of wounds are placed in apposition by

stitches or strips of plaster. It is the nurse's duty to thread the needles and cut the plaster, if the surgeon does not bring them already prepared. In dressing the wound after it has been stitched, the greatest care is necessary to avoid any traction on the sutures or surgical stitches while removing the soiled dressing. Ordinary dressings are generally entrusted to the nurse to perform, and for this purpose she should be provided with forceps and surgical scissors.

Whether for her own use or the surgeon's, she must have everything in readiness before the dressing is commenced. The principal things required will be two basins—one for clean water, and the other as a receptacle for that which has been used; a receiver for soiled dressing, a tray containing clean dressings, strappings, bandages, cotton-wool, lint, forceps, and scissors; a mackintosh to protect the bed, a sponge or syringe to wash the wound, two or three clean towels, hot and cold water, and some antiseptic. One basin should be put under the wounded part, and warm water and antiseptic, having been mixed in the other, should be syringed or squeezed from a sponge into the wound and allowed to flow out. Absorbent cotton-wool dries wounds nicely. The nurse must use her forceps, and avoid touching the wound with her fingers. When strapping has to be removed, both ends of the strip should be detached simultaneously or alternately, so that the edges of the wound, instead of being wrenched asunder, are kept together.

Strapping is also applied in the treatment of diseased joints and chronic ulcers, usually by the surgeon. It should be cut an inch or so longer than the required length, and be doubled on itself at one end to the extent of half an inch, to allow of its being warmed

by the nurse without sticking to her fingers, and to enable the surgeon to use greater traction. When in position its folded end should be snipped off.

BANDAGING can only be learned by practice, and be neatly performed after considerable experience; but the following rules may be of service: In roller bandaging, the outer surface of the roll should be in contact with the skin; in bandaging a limb it should be commenced at the point most distant from the trunk, and after being firmly secured by two or three folds one over the other, the roll should be evenly revolved and deposited along a spiral course, so that each layer overlaps the last to the extent of one-third its width. The ascending spirals on an arm or leg tend from the inside towards the front; when, as is frequently the case, the part to be bandaged is of uneven thickness, *reverses* will be needed to cause the bandage to lie evenly and give uniform support. A *reverse* is turning the bandage so that the inner, instead of the outer, surface of the roll comes next to the limb, and is done by first holding with the unoccupied hand the potrion of the bandage already applied at the point where the reverse is to be made; the roller, being slightly slackened, is then brought over by a turn of the wrist. Reverses should be made on the outer aspect of the limb, and succeed each other in a uniform line. A reverse should never be made over a tender part or bony prominence, and while making one the bandage must be held loosely (however tightly it is intended to be applied ultimately), slightly above the level of the limb, and be only sufficiently unrolled to allow reversal. While bandaging, the nurse must stand in front of the patient, and should by practice become ambidextrous, and bandage with either hand with equal facility.

Various kinds of antiseptic dressings are used in surgical nursing, their office being to exclude the germs of putrefaction and thus prevent the formation of pus. Gauze, lint, cotton-wool, wood-wool, tow, and peat moss are all used for this purpose, after being dressed with special kinds of disinfectants.

For PADDING SPLINTS double linings should be cut the exact shape of the splint, but with margins one inch all round; one half for turnings and the other to allow space for insertion of the padding, which should consist of wood-wool, of equal parts of wood-wool and tow, of horse-hair and cotton-wool, or of other suitable materials. A good layer of evenly-pulled tow surrounded by wood-wool is generally found most satisfactory. The linings having been sewn together form a bag the shape of, but somewhat larger than, the splint, and in this bag the padding is packed. The packing must be *perfectly even.* Having been neatly and evenly packed, the pad is placed under the splint, and is secured thereto by lacing across the reverse side of the splint with stitches of long linen thread placed close together, and if necessary knotted. It is the practice in some hospitals to stab or stitch through the padding, in the same way as mattresses, to prevent displacement. Care must be taken that the edges of the splint are well covered by the pad. The lining may be cotton for a simple fracture, but for a compound fracture some waterproof material, oiled cotton, or thin mackintosh should be used.

In nursing surgical cases, the element of danger arising from shock to the system must always be borne in mind, and any sudden change of temperature or signs of collapse or delirium must be reported to the surgeon at once. When loss of blood has occurred its recurrence must be anticipated, and particular care

in watching will be necessary while the patient is sleeping, for bleeding, so far from causing pain, has a sedative effect; thus great loss of blood, or even death, may ensue, without the patient awaking to the danger of his position. Without disturbing her patient, the nurse must ascertain that his hands and feet are warm, and his face and lips of a natural colour; anything dubious in these symptoms should be followed by a close examination of the dressing and still greater watchfulness; should bleeding have commenced, prompt measures must be taken, pressure on the artery leading from the heart to the seat of the injury will control arterial bleeding, in which the blood is of a bright-red colour and spurts out of the wound; pressure on the side away from the heart and into the wound will stop venous bleeding, which is of a dark colour and runs from the wound in even flow. When there is a mere oozing of blood, drop by drop, it is capillary bleeding, and slight pressure on the wound will stop it.

Besides the above treatment, the part must be raised above the level of the heart and ice or cold water be applied. No stimulant should be given, and the attendance of the surgeon should be urgently summoned at the very earliest symptoms of arterial or venous bleeding. (See HÆMORRHAGE, Chapter VII.)

OPERATIONS.—Before the surgeon decides on performing any operation, he requires to make a careful examination of the affected part. Examinations are made with the hand and by the help of various instruments. A stethoscope is used to assist the ear in distinguishing the sounds heard in the lungs and heart, which sounds are produced by respiration and pulsation, and vary constitutionally and exceptionally. A laryngoscope is an arrangement of reflectors used to

examine the throat. A speculum is used in making uterine examinations.

While the surgeon is making an examination the nurse should attend to his requirements, hand him his instruments, and see that the patient is not needlessly uncovered. Some days will probably elapse between the examination and operation; they must be utilized in increasing and husbanding the patient's strength in every possible way. He must be kept as cheerful as possible; but this is not best accomplished by ignoring or making light of the coming trial. She should avoid referring to, or dwelling upon, the subject, but it is far better for the patient to talk of it than to brood in silence.

When the day of operation arrives the bowels should be thoroughly relieved by a soap-and-water enema. If chloroform or ether is to be administered, no solid food must be given for at least four hours before the operation, though an enema of beef-tea and brandy may be ordered later. It is unsafe to administer chloroform while undigested food is in the stomach, as the food would almost inevitably be vomited, and the patient, being unconscious, be in great danger of choking.

The patient should be washed all over, and if a woman, her hair should, after being well brushed, be secured in two firm plaits. In some cases the hair cannot be arranged for many days after the operation, when, if it has not been tired beforehand, it becomes a source of continual irritation.

A firm deal table covered with a mattress is generally used in preference to a bed to operate upon. The mattress should be protected by a mackintosh covered with a blanket. All parts of the body except that to be operated on must be kept warmly covered. Additional mackintoshes, towels, hot and cold water,

and in some cases sponges, will be needed. The surgeon will order them, but it will be the nurse's duty to see beforehand that they are thoroughly clean and free from grit. Up to the time of operation they should be immersed in a covered jar of disinfectant solution, which should be labelled with the number of sponges it contains.

While the operation is being performed, the nurse should wait on the surgeon and attend to the patient if necessary. Towels and a receiver must always be placed near the patient's head to be in readiness in case of sickness. She should on no account watch the course of the knife, but should concentrate her attention on her own duties. When sponges are used they must be wrung quite dry before being handed to the surgeon, be counted out and be recounted as they are returned to her, as it is sometimes an assistance to the surgeon to have additional assurance that all the sponges inserted in the wound have been removed. Where the formation of much pus is probable, drainage tubes will be enclosed in the wound; they are usually small indiarubber tubes through which the pus may exude, and they are removed as soon as the healing process is fairly established.

As soon as the operation is over, the patient should be placed in a warm fresh bed prepared for long occupation, and should, if all goes well, shortly show signs of returning consciousness; vomiting may perhaps occur, ice should be given to control it, and as soon as it can be retained, some light food—such as iced milk or beef-tea—should be given in small quantities and frequently.

If the sickness should not pass off, and should the patient become extremely exhausted, have cold hands and feet, and, although consciousness has

returned, faintness come on, the surgeon must be summoned; hot water bottles should be applied carefully over the region of the heart and to the extremities, and unless there be bleeding, a tablespoonful of brandy be given in double the quantity of warm milk; such is collapse, and prompt treatment is imperative to restore the impeded circulation.

Hæmorrhage must be watched for, and sleep—especially natural sleep—be encouraged. For the first day or two good food must be given at least every two hours. The patient should enjoy perfect rest, both mental and physical, until recovery is completed. The greatest care must be taken that the sick-room is kept scrupulously clean. No one having recently been near a case of infectious illness—especially of erysipelas—should be allowed to approach the patient or nurse. Bedsores must be guarded against (as, should one form, it will materially impede recovery) in the manner described in Chapter II., and, however healthy the subject, the hips should be supported by an air cushion from the time of operation.

When the nature of the case renders it desirable that the bedclothes should be supported, they should be arranged over a cradle, which is a skeleton half-cylinder formed of three iron or cane half-hoops kept in position by longitudinal bars. Cradles are also used when given hot air and vapour baths, and as supports from which to sling broken limbs and suspend ice-bags.

CHAPTER IX.

DIET.

A NURSE should always superintend the serving of her patient's meals, and in certain cases it is desirable for her to make a practice of preparing all food with her own hands; to this end she should possess a knowledge of the simple culinary rules of nursing cookery, and should acquire proficiency in their exercise.

Meals should be served on a neatly-arranged tray covered with a clean serviette, the glass and silver should be carefully polished. Soup, gruel, beef-tea, etc., should be served in a proper covered cup, while for meat and vegetables a hot-water plate and cover should be used. When the patient cannot sit up, he may be fed from a feeder of ordinary shape, if without a strainer at the base of the spout. It is almost impossible to keep a spout with a strainer clean, and consequently it too often becomes a channel of absolute contamination to the hapless patient.

The doctor's orders with regard to diet must be conscientiously obeyed. No solid food that has been warmed after being previously cooked should be given to a sick person, but there is no objection to beef-tea and mutton broth being rewarmed as

required. They should stand to cool after making, to allow all fat to be easily removed, though it may be absorbed while hot by the skilful manipulation of clean blotting-paper.

If stimulant is to be given it will be ordered by the doctor, but the nurse should, in serious illness, divide the amount of spirit into doses of one or two teaspoonfuls, and administer them, at equal intervals during the twenty-four hours, mixed with liquid food, not with water. One teaspoonful of brandy mixed with three of milk, taken every hour, will be far more beneficial than four times the quantity every four hours. The amount ordered by the doctor must not be exceeded. Wine should not be diluted unless there is any difficulty in swallowing, in which case water must be added.

MILK is the most valuable of all diets for invalids. It should be *boiled* if the source of supply is uncertain, but scalding is of no use whatever. It may then be drunk warm, iced, or mixed with soda-water, barley-water, or lime-water. Milk is the only diet on which sick people, without wasting, can live solely. When no other nourishing food is taken, a quart or more should be given in the course of twenty-four hours.

*Fifteen grains of bicarbonate of soda to a quart of milk will prevent it turning sour, and render it more easily digestible.

The white of an egg in half a pint of milk, well mixed, is a capital drink for diphtheritic patients.

TO PEPTONIZE MILK.—Into a clean quart bottle put the (Fairchild) peptonizing powder—5 grains of zymine and 15 grains of bicarbonate of soda—and a gill of cool water. Shake, then add a pint of fresh, cool milk. Place the bottle in a pail of hot water, temperature

* The recipes marked with an asterisk are reprinted (by kind permission) from the diet-sheet of Dr. Sydney Ringer.

140° Fahr., for twenty minutes. It must then immediately be put on ice, or else boiled for three or four minutes.

Gruel may be similarly peptonized if made with *milk* or *milk* and water.

Boiling permanently destroys, and cold simply interrupts or suspends, the artificial digestive action.

Ice is always allowed and generally ordered to be taken in illness. It should be procured in one block, not several small pieces, and should be broken as required. An ice-bowl may be kept on the bedside table and replenished as soon as empty. A good substitute for an ice bowl is made by stretching a piece of flannel or muslin over an ordinary pudding basin and securing it with an elastic band; the basin and a spoon must be placed on a plate.

Cold water should never be denied to a patient who asks for it, but only *filtered* water, and that in small quantities, should be given. All filters require more or less frequent cleansing, and if neglected increase rather than diminish the previous impurity of the water. When properly filtered water cannot be procured, *boiled* water should be used. To obviate the flatness of *boiled* and some filtered water it may be aërated by rapid pouring from one glass to another.

The following are a few receipts for sick-room cookery:

Beef Tea.—To make beef tea properly, an earthen jar with air-tight cover is needed: one holding a reputed quart is a convenient size for making beef tea for one patient. A pound of lean beef (shin) cut up fine (not chopped) after being placed in the jar is covered with cold water and allowed to soak for ten minutes; a pinch of salt is then added, the cover fastened on securely, and the jar immersed in a saucepan

of cold water; the water should be brought rapidly to a boil, and remain boiling for an hour if liquid beef tea is wanted, or for three or four hours to gelatinize on cooling. Liquid beef tea is as strong as that which becomes a jelly on cooling. Equal parts of beef, mutton, and veal may be used instead of beef alone to vary the diet.

To peptonize Beef Tea.—Take half a pint of nearly boiling beef tea and half a pint cold, mix them in a covered jar, add thirty grains of zymine and twenty grains of bicarbonate of soda; place the jar under a cosy inside the fender to maintain the proper temperature (120° Fahr.); at the end of three hours the beef tea should be quickly boiled.

Meat Juice may be obtained by squeezing any very lightly cooked or raw meat in a pair of lemon squeezers. The gravy that flows from a well-roasted or grilled steak is equally nourishing, and is generally partaken of with greater relish; it should be carefully freed from fat, and, if warmed, must not be allowed to boil.

Extracts of Meat (various) suitable for domestic cookery are often used in the sick-room, but, generally, are unsuitable for digestion by invalids. Brand's preparations, however, particularly beef-tea jelly, do not come under this category.

Meat Juice (Valentine's) diluted with *cold* water or milk, is a diet most nourishing, agreeable, and easily assimilated, and nearly always proves an unfailing resource.

Mutton Broth.—Two pounds of the lean end of neck of mutton, two carrots, two turnips, and one onion, with one quart of water. Cut up the mutton and the vegetables and put them, with a pinch of salt and the water, on the fire in a closely-covered stew-

pan. Bring them very slowly to a boil and skim thoroughly. Let the broth stew slowly for three hours; strain it and remove all fat. Serve with toast or with the addition of well-boiled pearl barley, sago, semolina or rice.

GOOD SOUP will be obtained by proceeding in the same way, but substituting shin of beef for mutton. It may be served clear or be thickened with ground lentils or Revalenta Arabica, which, when used for this or any other purpose, must be cooked for at least half an hour, or the flavour will be unpleasant.

CHOPS should be grilled, or toasted in a Dutch oven, not fried.

STEWED OYSTERS.—Scald a dozen oysters in their liquor; take them out, beard them, and strain liquor. Put half an ounce of butter in a stewpan, dredge in sufficient flour to dry it up, add the liquor, and stir over a sharp fire with a wooden spoon. When it comes to the boil, add half a teacupful of cream, the oysters, and salt and cayenne to taste. Simmer one to two minutes, *not longer*. Serve with sippets of toast on a hot dish.

*STEWED EELS.—One eel, half a pint of strong stock, two tablespoonfuls of cream, half a glass of port wine, thickening of flour, a little cayenne.

Wash and skin the eel, cut it in pieces about two inches long; pepper and salt them and lay them in a stewpan. Pour over the stock and add the wine. Stew gently for twenty-five minutes or half an hour; lift the pieces carefully on to a very hot dish, and place it by the fire, strain the gravy; stir into the cream sufficient flour to thicken it, mix with the gravy, boil for two minutes, and add a little cayenne. Pour over the eels and serve.

*PANADA.—Take the crumbs of two penny rolls and

soak them in milk for half an hour, then squeeze out the milk; have ready an equal quantity of chicken or veal *scraped* very fine with a knife—pound the bread-crumbs and meat together in a mortar. It may be cooked, when seasoned, mixed with veal or chicken broth, or be taken up by means of two teaspoons in pieces the shape of an egg poached, and served on mashed potato.

VEGETABLES must be well boiled, and only those ordered by the doctor may be given to an invalid. Potatoes may be baked or boiled and mashed with milk, but not with butter.

PUDDINGS.

RICE.—One ounce of rice, half a pint of milk, sugar to taste. Wash the rice without soaking it add the milk, sweeten to taste, sprinkle slightly with nutmeg, bake one hour. Semolina, tapioca, and sago may be prepared in the same way.

CUSTARD.—One egg, one third of a pint of milk, sugar and nutmeg to taste. Beat the egg and add the other ingredients. Bake in a slow oven till set, about half an hour.

APPLE PUDDING.—Three apples, two ounces of crushed sugar, two ounces of breadcrumbs. Peel, core, and slice the apples, add the sugar and a piece of butter the size of a walnut; cover with bread-crumbs and bake three-quarters of an hour in a moderately hot oven.

A FAVOURITE PUDDING (cold).—One egg, one-third of a pint of milk, one-eighth of an ounce of gelatine, one ounce of lump sugar. Beat the yolk and white of egg separately, soak the gelatine in a small quantity of the milk, add the yolk of the egg and sugar. Bring

the rest of the milk to the boil and pour it over them as soon as the gelatine and sugar are dissolved; stir well and let the mixture come to the boil; at the moment of boiling pour the mixture on to the white of the egg, which should previously be well whipped; mix the whole thoroughly and pour into a mould. The pudding must not be stirred or shaken till cold, when it should turn out in appearance like a thick solid cream surmounted by a clear jelly.

CHOCOLATE PUDDING (cold).—Soak half an ounce gelatine. Boil a pint of milk and pour it over the gelatine, two ounces of Cadbury's Mexican chocolate (broken up), and two ounces castor sugar. Stir over the fire till quite smooth, and strain into a mould.

DRINKS.

GRUEL.—Pour one tablespoonful of Robinson's patent groats, mixed into a smooth paste with a wineglassful of cold water, into a stewpan containing a pint of boiling water or milk; let it boil ten minutes, stirring all the while; pour the gruel into a basin, add a pinch of salt, or, if preferred, some sugar and a little sherry or brandy. When salt is used the addition of a little butter, if not too rich for the invalid, will be found a great improvement.

*A GRUEL.—Beat up an egg to a froth, add a wineglassful of sherry, flavour with a lump of sugar, a strip of lemon-peel, and a little grated nutmeg. Have ready some gruel, very smooth and hot, stir in the wine and egg, and serve with sippets of crisp toast. Arrowroot may be made in the same way.

LEMONADE.—To the thin rind of one and the strained juice of two lemons, two ounces of loaf-

sugar should be added, and a quart of boiling water be poured on. Let it cool, then ice it.

* EFFERVESCING LEMONADE.—Take two large lemons and squeeze all the juice out of them, pour one pint of spring water to the juice, add three or four lumps of white sugar. When required for use, pour half of it into a tumbler and add half a small teaspoonful of carbonate of soda, stir well, and drink whilst effervescing.

LEMON SQUASH.—Take half the juice of a lemon and two lumps of sugar rubbed on the lemon rind and crushed. Mix in a tumbler, and fill up with Johannis water. The lemon and sugar should, if possible, be prepared an hour or two before the drink is required. Johannis, being a *pure natural* water, is preferable to manufactured soda or seltzer water for use in the sick-room.

BARLEY WATER.—Mix smoothly with cold water two teaspoonfuls of Robinson's prepared barley, stir it into a pint of boiling water, sweeten to taste, boil for half an hour, and when cold strain and add two teaspoonfuls of lemon-juice or a piece of cinnamon.

PEARL BARLEY WATER.—Wash two ounces of pearl barley and place it in a clean stewpan, cover with three pints of cold water and boil for five minutes. Strain out the barley, pour away the liquor, and wash stew-pan. Again cover the barley with three pints of cold water, boil for five minutes, then let the barley-water simmer gently from two to three hours. Strain, sweeten, and flavour with lemon-juice, raspberry-vinegar, or cinnamon. When cold, strain again through fine muslin. Rice, sago, and oatmeal waters may be similarly prepared. Barley-water for mixing with milk should not be flavoured.

* ARROWROOT AND BLACK CURRANT DRINK.—Take

two large spoonfuls of black currant preserve, boil in a quart of water, cover and stew gently for half an hour, then strain and set the liquor again on the fire. Mix a spoonful of arrowroot in cold water and pour the boiling liquor upon it, stirring well; let it get quite cold.

* WHITE WINE WHEY.—Take half a pint of boiling milk and add one or two wineglassfuls of sherry. Strain through a fine sieve, sweeten with sifted sugar, and serve.

* MILK AND ISINGLASS.—Dissolve a little isinglass n water, mix it well with half a pint of milk, then boil the milk and serve with or without sugar as preferred.

* MILK AND CINNAMON DRINK.—Boil in one pint of new milk sufficient cinnamon to flavour it pleasantly; sweeten with white sugar. This may be taken cold with a teaspoonful of brandy, and is very good in cases of diarrhœa. Children may take the milk warm without the brandy.

* EGG AND BRANDY.—Beat up three eggs to a froth in four ounces of cold spring water, add two or three lumps of sugar, and pour in four ounces of brandy, stirring it all the time. A few spoonfuls of this may be given at a time.

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Glycerine syringe.
Glycerine.

Bed-pan.
Urinal.
Mackintosh.
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Bed table.
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is closely allied to milk in the large proportion of flesh-forming and strength-sustaining elements that it contains. It is prepared on the principle of excluding the superabundance of fatty indigestible matter with which Cocoa abounds—supplying a refined thin infusion of absolutely pure cocoa, exhilarating and refreshing, for Breakfast, Luncheon, Tea, or Supper —giving staying power, and imparting new life and vigour to growing Children, and those of delicate constitutions.

HARTMANN'S

HYGIENIC WOOD WOOL TOWELETTES.

FOR LADIES.

In yellow paper, 2s. per dozen (special make for use after accouchement).
In gold paper, 2s. per dozen.
In blue paper, 1s. 4d. per dozen (new make).
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For Home Use, Delicate Health, for Ladies' Travelling and Accouchement they are Invaluable and Indispensable. Supplied at the actual cost of Washing. After use they are simply burnt.

Sample Packets of One Dozen at 1s. 3d., 1s. 7d. and 2s. 3d.

If Hartmann's Towelettes are not kept in stock by your draper, ask him to procure some for you, or write to the Manageress.

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It contains all the necessary Hartmann's Absorbent Wood Wool Sheets, Sanitary Wood Wool Towelettes, Binders, Safety Pins, Carbolised Vaseline, Thread, Pads, Fuller's Earth, Oiled Silk, Mackintosh Sheeting, etc.

It affords great cleanliness and comfort to the patient, and diminishes the risk of puerperal fever.

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And the CROWN

Lavender Salts

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These renowned Smelling Salts exhale a most delicious odour; they are a refreshment to the invalid, a delightful deodoriser, and a luxury for all. By leaving the stopper out for a few moments, a delightful perfume escapes, which freshens and purifies the air most enjoyably."—*La Follet.*

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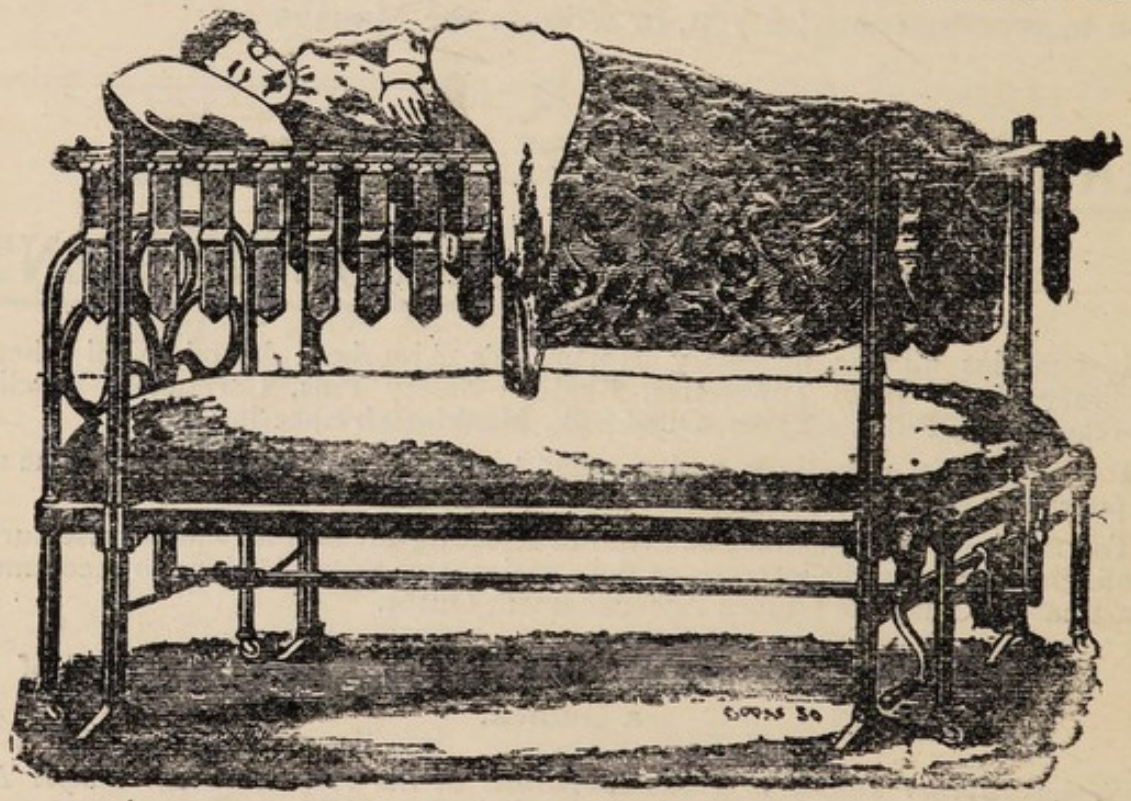

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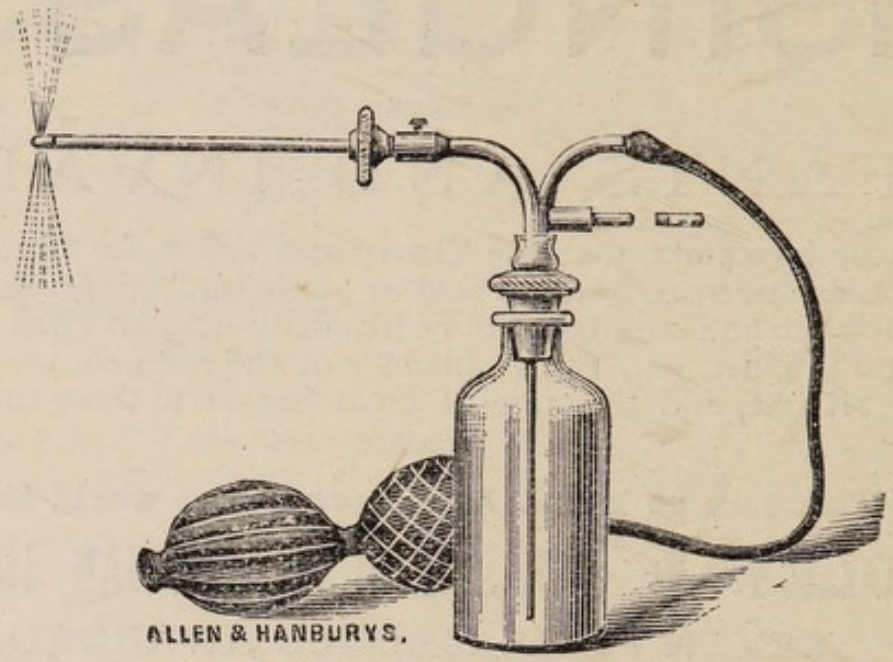
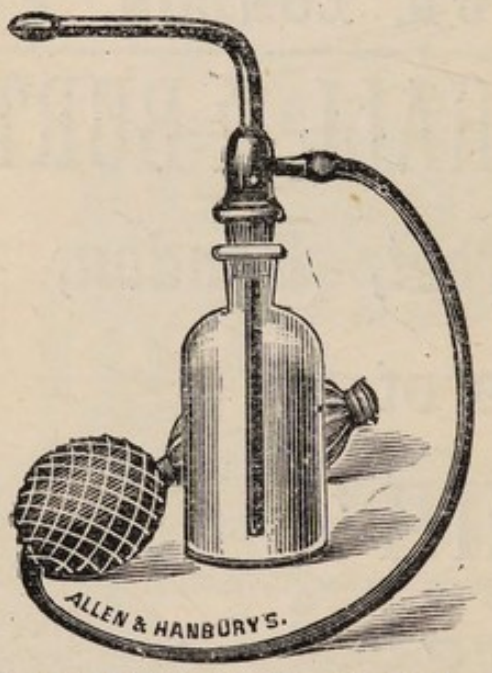
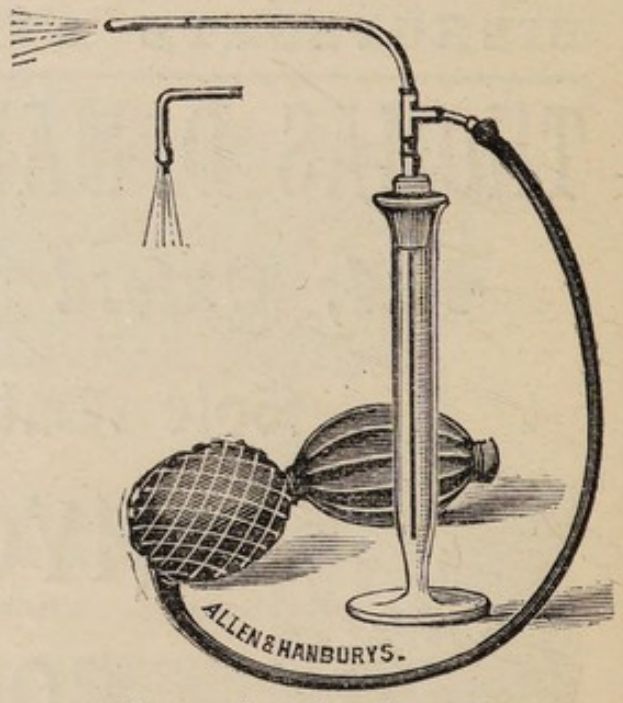


Spray, metal, to use in any direction, with 2 jets for Larynx, Posterior Nares, etc., 10s. 6d.



Spray, Vulcanite, Double Ball, 4s. 6d.



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The objects of the Society are to diffuse *Sanitary Knowledge amongst all Classes*, by organizing Lectures and Homely Talks in Drawing-rooms, School-rooms, at Mothers' Meetings and Working Men's and Girls' Clubs and Guilds, on subjects relating to First Aid to Injured, Home Nursing, Elementary Physiology, Domestic Hygiene, Food and Cookery, How to Make the Home Healthy and Happy, etc., and to circulate Tracts on these and kindred subjects.

Membership is constituted by the payment of £1 1s. annually; Life Membership by the single payment of £10 10s.

Members of the Society are entitled to a certain number of 'Homely Talks' free of charge for the poor of their neighbourhood, also a Ticket of Admission to all Lectures given under its auspices, and a copy of all publications of the Society.

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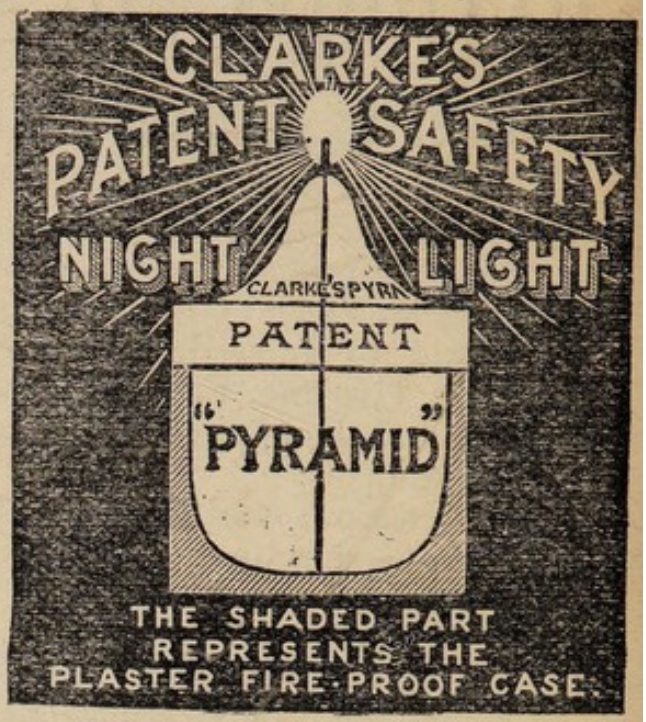
FOR ALL CLIMATES.

With DOUBLE WICKS, in Boxes containing 6 Lights and Glass, burn 10 hours each.
1s. per box.



SINGLE WICKS, burn 9 hours each, in Boxes containing 8 Lights.
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CLARKE'S IMPROVED PANNIKIN (Registered),
For Use with Clarke's 'Pyramid' Nursery Lamps.

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NO PARAFFIN OR OTHER DANGEROUS MATERIAL USED IN ANY OF CLARKE'S LIGHTS.

Far, Far and Away, the Best Night Lights.

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BED-PANS, Slipper shape.
Small, 4/- ; medium, 4/6 ; large, 4/9 each. Carriage 6d. each extra.

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Double texture, 36 inches wide, 3/9 yard.

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Vaginal bronzed reservoir, 1½ pints, complete with fittings, 4/- ; Do. do., large size, 5/9. Postage, 3d. each.

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Hockin's Improved Seamless, in leather box complete, 4/- each, post free.

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The Homersham, the only perfect feeding cup, 1/- each ; post free, 1/3 each.

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Best English, 1 yard boxes, 5/- yard, post free.

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No annoyance in its use, and very durable.
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