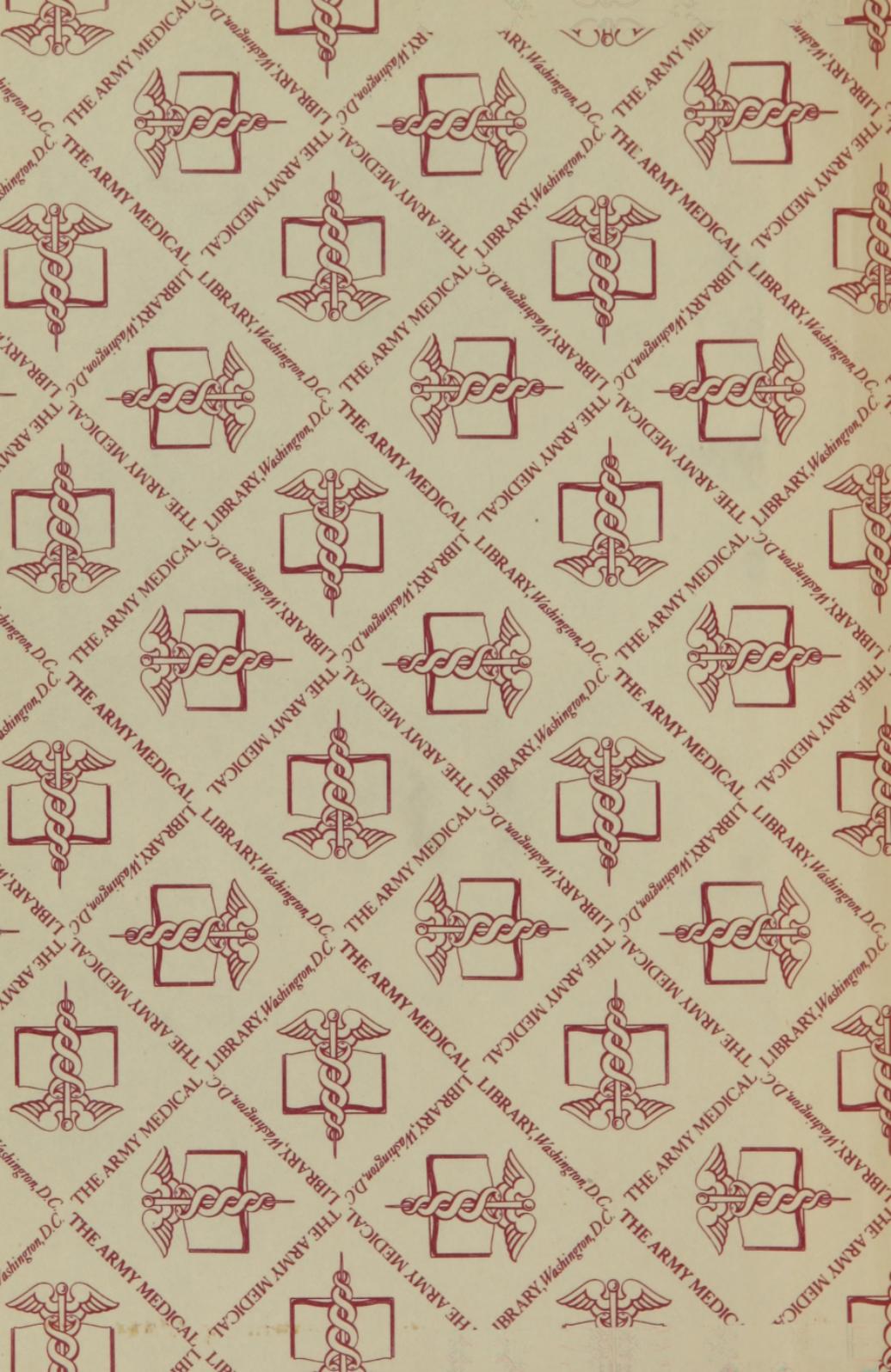
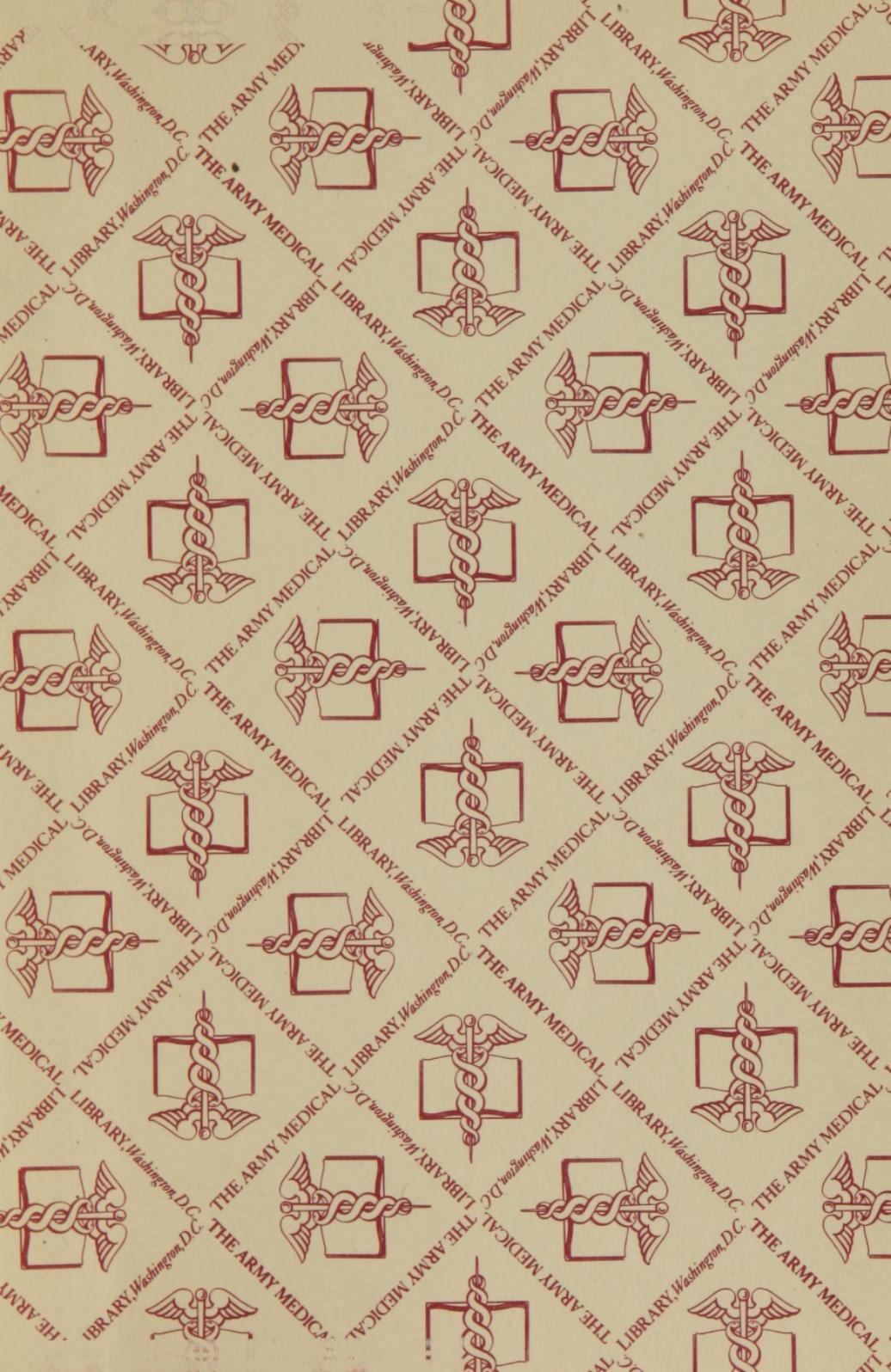


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1875

Care
of the
Sick







PLAIN DIRECTIONS
FOR THE
CARE OF THE SICK,
AND
RECIPES FOR SICK PEOPLE.

ENLARGED EDITION.

KEEP THIS WHERE YOU CAN READILY FIND IT.

BY
A FELLOW OF THE COLLEGE OF PHYSICIANS, PHILADELPHIA,
AND
PHYSICIAN TO SEVERAL OF THE CHARITABLE INSTITUTIONS OF THE
SAME CITY.

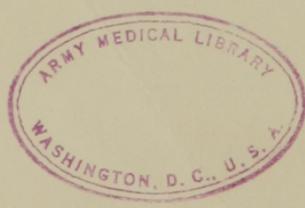
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MUTUAL LIFE INSURANCE COMPANY OF NEW YORK.

RICHARD A. McCURDY, President.

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INTRODUCTORY.

THIS pamphlet is intended to present a few prominent facts upon nursing the sick, with some general observations upon diet, ventilation, etc., etc. The plan of arrangement was suggested by, and free use has been made of, that excellent treatise, "Notes upon Nursing," by Florence Nightingale, a book which should have a place in every house and library, and be thoroughly understood by those under whose care the sick usually come.

As many may not have the opportunity of seeing the work referred to, and as they are usually the persons who most need information upon these things, the following "Care of the Sick" has been prepared by a physician, and the expense of publication borne by a kind friend for gratuitous distribution among them.

The "Recipes for the Sick," included with it, explains itself, and is prepared and published with the same end in view.

A. P. T.

HOWARD HOSPITAL AND INFIRMARY FOR INCURABLES,
1518 and 1520 Lombard street, Philadelphia.

August, 1875.

CARE OF THE SICK.

Disease Means Something Wrong.

DISEASE means *want of ease*, and wherever found it is a sure sign that something is wrong inside of the body or outside of it. *Discomfort* is one of the earliest signs we have of its approach, and therefore the most valuable. Pain is a later one, more solicitous, perhaps, but none the less kind in its intentions, for all of that.

They both warn us that something is somewhere wrong, and mean that sickness will surely overtake us, unless we see where the wrong is. When found, the mischief which *has* been done should at once be corrected, and its return must be prevented by avoiding in the future that which first *produced* it.

Detection of Things Which Favor Disease.

Now, there are many little monitors by which these outside conditions favorable to disease are detected. The chief one, or at least the one as much relied upon as any other, is the *smell*. Whenever substances which have been alive become dead, and are undergoing decay, little particles of them break away from the main mass, float in the air, come in contact with the nostrils, and we *smell* them. These vapors which are bred by decay in decomposing substances, are *poisons*, and, like all other poisons, a little absorbed will con-

taminate the health of the body, while more will so much affect the health as to produce sickness and even death.

Cause of Unpleasant Odors Must be Removed.

There is but one conclusion to be drawn from this, and it is, that whenever an unpleasant odor is detected, you may be *certain* that there is something in the air which should not be there, and if permitted to remain, it may sooner or later be attended with evil results. The true means for relief in such a case is, *removal* of the offending cause, whatever it may be. Sometimes this can not well be done, so we must *lessen*, as much as lies in our power, its tendency to evil.

Emanations Induce Disease.

Everybody knows, nowadays, that those little broken-off particles or emanations from manure-heaps, refuse from slaughter-houses, drippings from the kitchen, defective privy arrangements, etc., etc., when taken into the body through the air we breathe, for a time long enough, will sooner or later bring on "bad health," low fevers; and, with other conditions, induce fever, cholera, yellow fever, etc. Not only may they *produce* such diseases, but they certainly tend to *transform* into serious disease what would otherwise be but a trifling affection, which should yield to the simplest measures. There is not a physician in extensive practice who does not every day, in his rounds, see *some* disorder withstand his efforts, which he knows should readily yield, and which obstinacy he feels perfectly satisfied is due to the cause referred to: a poisoned blood.

In another place, a matter of this kind will be referred to as deserving an early and earnest consideration by all persons living in houses with a drainage system communicating in the usual way with the street-sewers.

Besides these causes of disease which can be detected through the smell, and removed by the person himself, or the Health Officer, there is another class of poisons not so readily detected, but whose presence can be quite as readily demonstrated in other ways.

We call them "*poisons*," you see, for they are nothing less than poisons, and physicians when talking to each other give them no other name.

They are the "poison vapors" which are bred in the bodies of all living animals.

Constant Changes Going on in the Body.

Most readers know that the bodies of animals are constantly undergoing changes; that is, the old particles, becoming worn out and useless, are thrown into the blood, and carried away, while new ones are taken from the blood and put in their places. These new ones answer the purpose for a while, become old, as did the new ones they supplanted, and in due time yield their places to newer ones, better adapted to the purpose intended. This constant *change* goes on until death; or, more correctly speaking, *life continues as long as those changes take place*. It will be seen that these old decaying particles as they become useless must be carried away through the blood and out of the body as soon as possible.

Washed Away by Pure Air.

The chief means by which this end is accomplished is through the use of pure air, which, as it were, washes away these impure particles from the blood. This air enters pure, through the mouth and nostrils, into the lungs, and comes out laden with these poisonous materials. If these decaying particles are taken into the lungs again, they not only *prevent* the escape of the poisonous materials from the body, but really add *more* poison to the already laden blood.

Soiled Air Can Not Purify Soiled Blood.

Soiled air can no more purify soiled blood than soiled water can cleanse soiled clothes. There is one thing that can do it, and that is, *plenty of pure air*.

One Gallon of Pure Air Spoiled Every Minute.

Now, the question is, how much pure air does it require to answer this purpose? You may have some idea of it when you remember that an ordinary man spoils not less than 3,000 cubic feet of pure air every hour. A sick person needs much more. He should never be put in a room that contains less than 1,500 cubic feet of air space, *i. e.*, it must be at least 15 feet long, 12 feet wide, and 9 feet high, allowing a little for furniture. Even then the ventilation wants to be very good.

A Gas Burner Consumes Eleven Gallons a Minute.

Not only is the air of a room made impure by breathing, but it is made impure by the gas we burn as a

light. It is estimated that an ordinary burner consumes as much air as eleven men would do—that is, one gas burner in three quarters of an hour consumes as much air as would answer a man for a whole night.

Stoves Consume Twenty-five Gallons a Minute.

If there is an ordinary stove in the room, it destroys as much air as would twenty-five men. All these things and estimates must be thought of when you hesitate sometimes about putting up or letting down a sash of lights a few inches.

If the house is an old one there may be a “fireplace” in the room. If so, do not attempt to seal it up “because the air comes in”—as it is just the thing you want—but leave it open, or at least the best part of it. If the house is a more modern one, there is, perhaps, a “flue,” if so, do not upon any excuse attempt to close it, but let it alone.

Opening For Ventilation To Communicate With The Pure Air.

A great many persons have an idea that this letting-in of pure air, or “*ventilation*,” means raising a window a little from the bottom, or opening a door a short distance. They never mind much *where* the window or door opens into—it is all the same, so they open somewhere. The idea is not correct. Ventilation not only means providing a means for the *pure* air to come *in*, but for the *bad* air to get out. This can usually be accomplished by drawing down the top sash a few inches, which will let the heated impure air *out* of the room, and by raising up the lower sash a few

inches to let the fresh air *into* it. If you wish to know that the hot air really goes out at the upper opening, some time hold a lighted candle near it, when the blaze will be carried outward by the force of the escaping current; and if you will hold it to the opening below, the flame will point inward from the current of cool air which comes from without. A more certain way to secure the proper amount of fresh air is to have an opening on opposite sides of the room, so that the air will circulate *through* the chamber as much as possible.

Remember not to have the *current* play over the *bed* on which the person lies sleeping, as the person might catch a *cold*.

Pure Air—Little Risk of Catching Cold.

But if there is no other way—and some rooms are so constructed that no other means appear possible—it is better to open the windows, and escape the effects of the “draught,” by putting an extra covering over the person. Should there not be two windows in the chamber, raise the only one you have and open the door a little. If no means suggests itself to you by which a desirable amount of pure air can be permanently secured, bear the matter in mind, and some day when your physician comes in ask him about it. Persons who habitually sleep in such badly ventilated houses are seldom compelled to wait long for an opportunity to ask a physician such things, as it is to the occupants of these houses that he is most frequently summoned.

Importance of Pure Air to the Sick.

If pure air, as before stated, is so important to people who call themselves in health, how much more important is it to those who are *sick*. Especially is it the case with those who have fevers, etc., which physicians now tell us are conditions of the system overcharged with poisonous materials, poisonous vapors, which for some reason have not been thrown out of the blood. Perhaps they were *produced* simply from the want of pure air. The lungs try to throw the load off, as can be detected by the heavy odor the breath has; the skin is trying to do the same thing, as you will see by the sickly, clammy feeling detected there; and a physician will see that a dozen different attempts are made in one place or in another, with the same object in view. These noxious materials, as they are cast off, tend to poison the air around more and more; so we must assist nature in relieving the patient by keeping a constant supply of fresh air in the chamber where he lies. Not only do we assist in *curing* the patient, by carrying away these poisonous materials by plenty of pure air, but, at the same time, we greatly lessen the chances of other persons *contracting* the disease by breathing the concentrated poison.

Pure Air Destroys Impurities, as Pure Water Purifies the Impure.

If we add a pint of pure water to a pint of impure water, we *dilute* the impure water, and it is made that much the more pure. If we add a dozen pints of pure water to it, we dilute it still more, and bring it nearer purity yet; but if we add a certain number

more, instead of the impurity becoming *diluted*, it is absolutely *destroyed*, and Dr. Letherby, of London, says that the water is perfectly *pure*. It is the same with impure air. A certain quantity of pure air added to it dilutes the bad air and makes it *less* noxious, while if a certain quantity more is added, the impurity of the air is *destroyed*, as in the case with impure water.

Any person can judge from this of the good effect of much pure air upon bad air.

Contagious Diseases Prevail Mostly in Winter.

Most observers have noticed that certain contagious diseases, as small-pox, scarlet-fever, etc., are very apt to prevail during the winter. The reason of it is a simple one, and is because the poisonous or contagious principle is kept *confined* in the room through fear of admitting the cold. It becomes so concentrated and virulent that it is capable of producing the disease in others. In warmer weather, this prejudice against fresh air does not exist; the doors and windows are kept open, the fresh air enters in abundance and *dilutes* the emanations so much that they lose their *power* to extend the disease. These diseases then cease until closed doors come again with the cold weather.

If pure air can do so much during warm weather, it should be made to do as much for us at all times, and it will do it if we but give it the opportunity.

This is not only the case in low fevers, scarlet fever, etc., but the same principle holds true with most other diseases, so that the first thing and the last thing a nurse should do is this :

Air from Kitchen, etc.

Keep the air the sick person breathes as pure as the air outside without chilling him. Many persons think, as before remarked, that the right thing has been done if a door or window is opened ; never mind where the air comes from, whether from a close entry, a foul kitchen, or even from an untidy water-closet. If the air does come from any such place, the sick-room is not "aired," as the saying is, but only *more* poisoned. The kind of air one wants is the best air of the neighborhood, and this usually comes from the outside of the house.

With air, as with water, it should not only be apparently *pure*, but it should also be certainly *fresh*.

With plenty of open windows to let in the pure air, and a little burning fuel to take off the chill, it is an easy matter to get the kind of air all sick persons need. It is a rare thing, indeed, for a person to "catch cold" while in bed. Indeed, some physicians say they never saw a case of it from such a cause, and if the bed-clothes are properly tucked in about the shoulders it is hard to imagine such a thing could occur, unless the air is so cold, as it were, that it acts upon the lungs as it would upon the ear, nose, or fingers, directly inflaming these organs of respiration as it would "frost-bite" the parts named.

Precautions on Getting Up in the Morning.

The time when people are most apt to catch cold is just after getting up from a warm bed, when the skin has become somewhat relaxed from many hours, or per-

haps days, of lying there, and rendered less capable of reaction. The same temperature which refreshes a patient in bed while *protected* by the bed-clothing, might destroy the patient just arisen. Common-sense will tell us, from this, that while we want pure air, we of course want that which cannot *chill* the sick person.

Here it may be remarked that what is frequently called a cold is as often the result of *debility* as the direct exposure to a draught of cold air. If each individual will observe his own case the next time a cold is contracted, it will be found that more than likely it was *preceded* some days by lassitude, headache, more or less complete inability to exercise the thinking faculties with the usual success, disturbed digestion, etc., etc. These symptoms have all become exaggerated by a very slight exposure, and sometimes the cold appears without any remembered exposure. When the named symptoms appear, it perhaps would be wiser to examine into the supposed cause of *them*, rather than what particular exposure to a draught of air gave rise to the cold. While a discovery of the remote causes of the attack may place it in the power of the person to prevent a recurrence, and the cause is often a disturbed condition of the health, a judicious, generous diet and attention to fresh air will often give more relief than "Squills" and other domestic remedies of the same kind.

Protection from Cold.

Cold has been called "the great enemy of age," and as the same inability to resist death is found in the

sick, cold may be said to be the great enemy of the weak. The report of the Registrar-General of Great Britain for the cold months of the year 1875 shows that while there was no new malady, but only the familiar forms of bronchitis, phthisis pulmonalis (consumption) and pneumonia (inflammation of the lungs)—always holding their own in the returns of the causes of death—yet these well-known diseases have been answerable for a number of victims greatly in excess of the average. Thus, where the weekly average for ten years from the three specified causes had remained about stationary during the prevalence of the cold weather of December, there was an increase of twenty-five per cent. in the death rate. The probable, or, at least, the only assignable cause of this mortality, was the low temperature which prevailed. This is true as to the *cause* of death; and the same authority shows that the death rate from all causes, among persons 60 years old and upward—which previously stood at 62 per thousand of all the deaths from these causes—rose during seven cold weeks to 130 per thousand, and during the cold weather of the last two weeks of December, 1874, rose still higher, to 150 per thousand.

The same authority tells us that the fatal effects of cold were found in 1855 to be subject to the same definite law of increase just noticed. If life is divided into stages of twenty years, as 20, 40, 60, 80, the mortality assignable to the cold at the four periods is 2, 7, 5, 45, 182, so rapidly does it increase as age advances. In another expression it may be said, the returns show that the rate of mortality is doubled every nine years after the age of 20.

While these official figures from the *Times* disclose how rapidly the *aged* succumb to the cold, as well as how many more of the ordinary *sick* yield also to its influence, it will be found that an increase in *infantile* mortality is also to be noticed.

While cold leads to this great mortality among the weak and aged and the very young, it cannot be doubted, on the other hand, that in warmer latitudes it would be found, if reliable statistics could be had, that the great *heat* of summer leads to quite as great a mortality among the aged and debilitated. Ordinary observation will satisfy any one of the truth of it about young children.

Now, for practical purposes, there is a little difference between an aged or a young person and a *sick* one. Hence, because violent and extreme changes should be avoided, as much as possible, at the periods of life mentioned—cold proving most destructive to the aged, and heat to the young—therefore a corresponding carefulness should be observed in regard to the *sick* of every age.

The consideration of these facts naturally leads to the inquiry whether we are helpless under the conditions which they disclose; but common sense and experience fortunately show that we are not. While the susceptibility is doubtless increased by the sudden variations of temperature referred to, the question appears whether the still greater variations to which people *unthinkingly* expose themselves may not be quite as dangerous. In this respect, an audience just leaving a hall or place of amusement is an instructive sight. It will generally be found to include numbers

of delicate ladies who habitually dress in furs and warm wraps, who have been sitting for two or three hours, with low dresses, in a heated, vitiated and relaxing atmosphere, and who then wait, before starting home, in a cold, draughty lobby, not only standing in thin shoes, but in talking and laughing with their friends, take deep breaths of the raw cold air into lungs which have been previously breathing a vapor-bath. Many of these changes of temperature incident to the customs of society are of a purely *artificial* character, scarcely to be resisted by the strong with the best of health. The waste of health and strength is often too great for the robust, and the weak had better avoid them.

Many of the illnesses deplored under this head are doubtless due to the direct *shock* given by the sudden entrance of a volume of cold air into the lungs; which could have been avoided almost entirely by the simple expedient of breathing only through the *nostrils*, and keeping the lips closed, so that the air would have become *warmed* before entrance into the lungs.

The sudden changes from heat to cold do not all take place away from home. Many of the "colds" are due to the arrangement of private houses, which appear to be built for neither heat nor cold, and do not resist either of them. A person going from the house to the outside cold air has been taught to put on a coat; but a person going from one room to another has not this fear, and steps into a cold bath without warning. We say cold bath, for practically the communicating entries of the house, with gas-burners at

every landing of the stairs, are just about as well a devised means of getting the heat from the lower rooms, where needed, to the garret, where *not* needed, as if specially designed for the purpose—particularly if the lower outside doors are occasionally opened. *Invalids* should therefore always pass through entries and along stairways as well protected as if going into air as cold on the other side of the front door.

Congestions.

A chill from such air to an invalid, or even a healthy person, drives back the blood from the surface upon the internal organs, probably inflicting upon them sudden and serious injury. Even the reverse of this is injurious, for it is well known that there is no more common cause of chilblains than bringing numbed fingers suddenly to a warm fire. What occurs on the fingers will occur, under like circumstances, in the lungs; and many of the fatal attacks of pneumonia (inflammation of the lungs) occurring in the aged and the debilitated could probably be traced back to the sudden changes of temperature in passing from a warm room to one that ought to be so; or to take in volumes of frosty air into the lungs, through the mouth, on coming from a heated apartment.

Drainage.

It is generally supposed that impure air is found in small houses in the little streets of a town. It is found there, but in other places, too. This is especially the case in large cities, since underground drainage has been generally introduced into our larger streets.

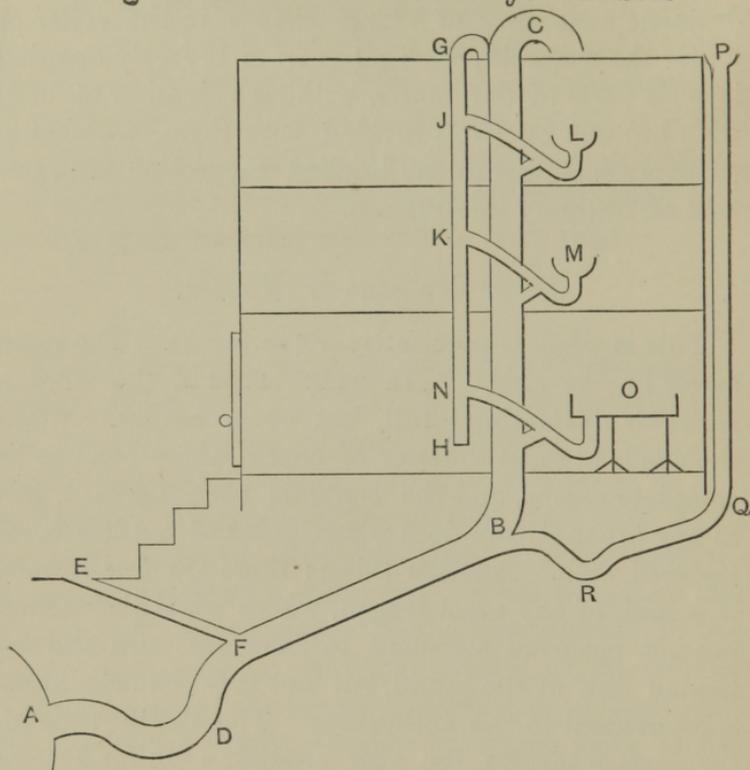
If any man should come to us and suggest a system of drainage consisting of a large cistern in the cellar or under the sidewalk, with pipes from it freely opening into all parts of our house, without valves, or at best, with but one or two provided with them, we should probably feel hurt at the implied suggestion as to our lack of ordinary intelligence.

Sewer Drainage in Houses.

This is what is practically done for us. The main sewer in the street is, in every sense of the word, a *reservoir*; sometimes full, but never empty. When the tide is high, as a matter of course, there can not be complete escape, and the contents back upward, just as any other stream does whose point of outflow is interfered with. Another thing: there are few sewers, it is said, of any great length, where some obstruction has not occurred sufficient to interfere with the intended flow of the liquid, but not great enough to become evident to the authorities. The depth beneath the surface insures, the year around, a uniform temperature, at which decomposition steadily and rapidly goes on.

What must become of the results arising from decomposition? Being lighter than the air, they tend to rise, and if they can not escape at the *outlet*, must in some *other* direction. But even suppose the terminal outlet is not closed (it is rarely open, however), the outlet is intended for heavy *liquids* to run out of, not for light *gases* to emerge from. The sewers all "dip" in a direction to favor the running off of the water, and that means if one end is lower, the other

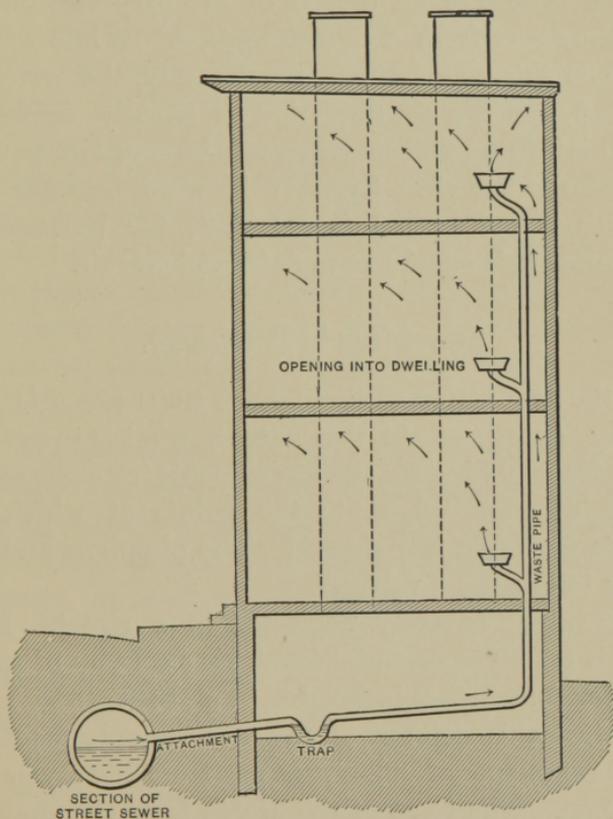
Diagram of a House Correctly Plumbed.*



A is the sewer. A B C is the soil-pipe, opening on the roof at C. and trapped at D. E F is the ventilating-pipe, communicating with the soil-pipe just behind D. G J K H is the ventilating-pipe to the traps, opening on the roof at G and giving off branches at J K and N to the traps of the fixtures L M O, which branches are connected on the soil-pipe side of the traps as indicated. P R is the leader from the roof, connected with the soil-pipe at B and trapped at R. The object of E F is to have a constant current of air blowing through the pipe. The air in B C being within the house, becomes heated and escapes through C, while fresh air enters through E F. The object of G H and its branches J K N is to prevent siphoning of the traps by an action similar to that of a Sprengel air-pump.

* (The engraver has made all the traps in the diagram too shallow except at R. They should be so deep as to divide the U-shaped column of water into two distinct limbs, connected only at the bottom.)

must be higher. The consequence is the liquids, as they move along the sewer toward the outlet, give off the putrescent emanations, which, being lighter, tend to adopt a direction the opposite of the heavy liquid, and that is *upward*,



toward the attachments and the higher parts of the main sewer. They accumulate at these points to such an extent that when the density of the atmosphere is favorable, as indicated by the barometer, the emanations of the "inlets" at the corners of the streets, are

so great that passers-by are disturbed by them. At times the accumulation is so great that heavy cast-iron plates of the inlets are violently thrown out by the escape of the gases. It is popularly said, because there is an explosion with it, attended by flame, that the trouble is due to an escape of ordinary burning-gas into the sewer from a defective pipe. While willing to admit this may happen occasionally, the writer is satisfied that the accumulation is usually sewer gas, which is inflammable under certain circumstances upon exposure to the air. Even if it were burning gas, it has not yet been believed that, for purposes of breathing, it is equal to pure atmospheric air.

Sewer Gas in Dwellings.

If the production of these deleterious gases is constantly going on to this extent, what is to prevent them from passing *up* the attachments from the sewer, through the local pipes, to the points at which the liquids were first introduced? The plumbers and gas-fitters tell us the "valves."

A "valve" is rarely neglected in a closet. Now, what is it? The essential feature is a column of water, three or four inches in height, in a bent tube. The *weight* of this column of water is the only resistance to the passage of a body of gas from the sewer into the room. The force of the breath from the mouth of a strong person will readily displace it. The daily variation in the density of the air, as indicated by the barometer, is even greater than *this*, and must surely permit large volumes of deleterious gases to escape into the house from the sewers of the streets.

Typhoid Fever.

With many physicians who have given the subject attention, there is no doubt that the increased prevalence of typhoid fever in the better houses of the large cities, within the past few years, is *largely* due to the contamination of the breathing air with poisons of this character. Minor expressions of the same disordered condition of the blood, as ulcerated sore throat, persistent debility, and general maladies and complaints of the same character, are doubtless largely due to the same influences. While they may not of themselves often be the technical *cause* of death, these poison vapors impair the general health, and the person falls a ready prey to diseases which, under other circumstances, would have been followed with a happier result.

As it is universally conceded that there is at present no other practicable method of getting rid of refuse material than by means of a system of sewers, it remains only to see if the evident defects of the present appliances for the purposes cannot be overcome. The *entire system*, it is contended by many physicians, should have some connection, as by means of high chimneys, with the upper currents of air. This, properly arranged, would afford a ready outlet for the gases which now are compelled to seek many through our houses. As manufactories using fire for steam are generally and quite uniformly scattered over the area of the city, some arrangement, it seems, could readily be made by which attachments with the sewers might be made with the smoke-stacks. The greater portion of the gases would then be *consumed*. In addition to

this, each set of drainage pipes belonging to each house should have an attachment, by means of a distinct flue, to the *highest* chimney of a house where a fire is most used. This can be done so that it will always be easier for the gases to pass outward above the roof through it than through the "traps," as they are called, to the rest of the house. This can be done for every house at a comparatively small expense, and, compared with the disadvantages mentioned without it, it may be said at no expense. The proper place for such an attachment would seem to be at the point where the pipe leading from the sewer to the dwelling meets the pipes coming from the different parts of the house, near where a "trap," as it is called, is sometimes placed in the cellar. The connection with the chimney, of course, should not be made too low or too near any opening into the house.

The attachment should not be made to the spout for the rainfall, as the metal is rapidly corroded, and the point of outlet for the escape of the gas may be such as to give a supply to some friendly current of pure air *en route* to a window of the bed-chamber.

While this arrangement will drain the larger pipes of the house and the sewer, it will not necessarily insure the escape of products of decomposition arising from the liquids adherent to the inside of the pipes, between the *junction* of this escape-tube and each point of entrance through the house for residual matter. The use of disinfectants from time to time may answer for many of them, but the pipe from the closet should always have an independent outlet to the open air. The ordinary "traps" and "valves" can not afford the necessary protection.

Many households now suffering from what they term obstinate colds, headaches, and, in fact, many other symptoms which compel them to say they are never well, would not only find a disappearance of these things, but also secure escape from typhoid fever and other ultimate results of this blood-poisoning, by an inquiry into the entire subject of the drainage, and applying the means of relief herein suggested.

The influence of sewer emanations upon general health is seen from the often quoted returns of the Registrar-General of Great Britain. Since 1847, all London privies were compulsorily made to drain into the sewers. This established communication between the public drains and the rooms of private houses. Comparison of a series of years before that date and since shows that the average number of deaths per thousand has increased 400 per cent. The whole of this increase is not due, of course, to the exhalations, or to the poisoning of the drinking water, but a large part of it is assigned these causes, especially the first.*

In Disease Less Heat is Produced than in Health.

In most diseased states, there is much less heat produced than in health; and there is a constant tendency to a decline and ultimate extinction of the vital powers by the call made upon them to sustain the heat of the body. In such cases, the patient should be

* A celebrated English physician once described a sewer as "the continuation of a diseased intestine," and no more dangerous enemy can well be imagined in a man's household than a defective sewer connection, permitting the peculiar emanations from other people's houses to mix with the breathing air, and through the lungs to gain a lodgment again into the body.

looked at with care every little while, and as soon as this *tendency* is discovered, the temperature of the body should be kept up by heat externally applied, as by means of warm bricks, tin cans or bottles filled with hot water, etc.

Decline of Heat of Body Toward Morning.

Such cases of decline of the heat of the body occur at all times, even in summer. This coldness, indicating a decline of vitality, is most apt to happen toward morning, at the time the effect of the preceding day's diet begins to be exhausted. Everybody knows that it is usually toward the morning when we begin to suffer from the effects of cold, because the vital forces are then beginning to slacken from the want of food. If this is the case in health, it is the same in disease. Hence, from midnight until nine or ten o'clock the next morning, the condition of the patient should always be carefully *watched*, and as soon as want of heat is noticed the nurse should at once take means to counteract it.

The Patient and the Physician.

In diseases of the respiratory organs, the importance of care in adjusting the temperature, especially at night, is seldom thought of; yet a little trouble taken in time has often saved a delicate constitution from falling into consumption. Even in a bad climate, it is only by experience that any one can tell how far this terror of all families may be escaped. People are often wholly demoralized by fear when its name is mentioned. Medical men who hesitate to use the

word, knowing what despair it will lead to, are accused of deceit. The frantic parent whose child is threatened, tries all kinds of experiments, rushes wildly from place to place, consults all kinds of quacks; uses half a dozen methods of treatment, perhaps all at the said time; alternately keeps the patient constantly in the open air, and secludes him altogether; and when the end inevitable, in such treated cases, comes at last, is subject to life-long self-questionings as to whether anything more might have been done. Some people, again, are never warned of dangerous diseases or tendencies until it is too late. The physician's grave looks are unseen, his warnings unheeded, and then he is asked to bear the result.

The right reason, among the many reasons invented, is seldom thought of when the death occurs, for all that affection and anxiety could do has been done. A little more precision and obedience to the orders of the physician; a little less regard to the morbid cravings of the patient; a more complete absence of a display of nervousness or fear might have doubled the chances of the sick person's recovery.

Currents of Air to be Avoided.

Although fresh air of the proper temperature is absolutely necessary, the prudent nurse will always arrange its entrance so as *not to allow a current over the patient*. No rule can be laid down here to avoid this, but it must be left much to the judgment of the attendant. If the nurse sees no way to avoid the "draught," be sure to ask the physician when he comes.

Smoky Chimneys.

If we are to preserve the air within the room as pure as that without, it is needless to say that the fire must not smoke, and a fire is very apt to smoke if fresh fuel is added in too great a quantity at once. In cities, however, physicians have less frequently to notice smoke in a room than they have the presence of "gas" from a stove. There are few things more annoying to the sick, especially those suffering from diseases of the throat, lungs and heart, than the prevalence of this "gas."

Chamber Utensils.

Nothing should *ever* go into the "slop-pail" of a chamber but the refuse water from the wash-basin, etc., and then it should stand no longer than necessary. *Under no circumstances whatever should the contents of any utensil used about the bed ever go into it.**

* Some observations by Florence Nightingale upon these matters are given here from "Notes on Nursing:"

"The use of any chamber utensil *without a lid* should be utterly abolished, whether among sick or well. You can easily convince yourself of the necessity of this absolute rule by taking one with a lid, and examining the under side of that lid. It will be found always covered, whenever the utensil is not empty, by condensed, offensive moisture. Where does that go when there is no lid?"

"But never, never should the possession of this indispensable lid confirm you in the abominable practice of letting the chamber utensil remain in a patient's room *unemptied* except once in twenty-four hours—*i. e.*, when the bed is made. Yes, impossible as it may appear, I have known the best and most attentive nurses guilty of this; aye, and have known, too, a patient afflicted with severe diarrhœa for ten days, and the nurse (a very good one) not know of it because the chamber utensil (one with a lid) was emptied only once in twenty-four hours, and then by the housemaid who came in and made the patient's bed every evening. As well might you have a sewer under the room, or think that in a water-closet the plug need be pulled up but once a day. Also take care that your *lid*, as well as your utensil, be always thoroughly rinsed.

"If a nurse declines to do these kind of things for her patient, 'because it is not her business,' I should say that nursing was not

In the beginning, we spoke of the injurious effects of effluvia or vapors, known as "bad smells," and we shall here revert to the subject again in a special manner.

Fumigations, Disinfectants, and the Like.

An able medical lecturer in Philadelphia is in the habit of tersely saying before his class that fumigations, as a rule, act on the principle of "one stink stinking out another stink." There is a deal of truth about it. The popular idea is that they destroy filthiness. Used in the ordinary way, they can do no such thing.

her calling. I have seen surgical 'sisters,' women whose hands were worth to them two or three guineas a week, down upon their knees scouring a room or hut, because they thought it otherwise not fit for their patient to go into. I am far from wishing nurses to scour. It is a waste of power. But I do say that these women had the true nurse-calling—the good of their sick first, and second only the consideration what it was their place to do—and that the women who wait for the housemaid to do this, or for the charwoman to do that, when their patients are suffering, have not the *making* of a nurse in them.

"Earthenware, or, if there is any wood, highly polished and varnished wood, are the only materials fit for patients' utensils. The very lid of the old abominable close-stool is enough to breed a pestilence. It becomes saturated with offensive matter, which scouring is only wanted to bring out. I prefer an earthenware lid as being always cleaner. But there are various good new-fashioned arrangements.

"A slop-pail should never be brought into a sick-room. It should be a rule invariable, rather more important in the private house than elsewhere, that the utensil should be carried directly to the water-closet, emptied there, rinsed there, and brought back. There should always be water and a cock in every water-closet for rinsing. But even if there is not, you must carry water there to rinse with. I have actually seen in a private sick-room the utensils emptied into the foot-pan, and put back unrinsed, under the bed. I can hardly say which is most abominable, whether to do this or to rinse the utensil *in* the sick-room. In the best hospitals it is now a rule that no slop-pail shall ever be brought into the wards, but that utensils shall be carried direct, to be emptied and rinsed at the proper place. I would it were so in the private house."

They only make filthiness less *evident*, because they make the odor less perceptible, which is an indication of its presence. Remove the *cause*, and all the unpleasant effects must cease.

At the present time it is known that many diseases are caused by small living organisms, called microbes. Among these diseases are consumption, cholera, yellow fever, typhoid fever, typhus fever, diphtheria, whooping-cough, small-pox, measles, scarlet fever, and several others of less importance. Each of these diseases is caused by its own particular microbe, which can be transferred to a healthy person and then start up the original disease. These microbes may be present in the dejections, in the vomit, in the expectoration, in the breath, or may be detached from the skin. In order to destroy them it is necessary to use disinfectants, which will kill them. It should be remembered that in order to be of any avail, a disinfectant should remain in contact with the substances to be disinfected a sufficient length of time to accomplish the object in view, otherwise it is valueless. The following statements are taken largely from a report on Disinfection and Disinfectants, prepared by a special committee of the American Public Health Association.

Among the disinfectants the following are the most important. For convenience they will be called

Standard Solutions.

No. 1. CHLORIDE OF LIME.—This has an odor which is quite offensive to many. It bleaches clothing readily and may even destroy delicate fabrics. A standard

solution of 4% strength is made by adding six ounces to a gallon of pure water.

No. 2. BICHLORIDE OF MERCURY.—Commonly known as “corrosive sublimate.” This cannot be used in contact with metal, as it is precipitated. A standard solution is made in the strength of 1 to 500 by adding fifteen grains to a pint of water.

No. 3. CARBOLIC ACID.—A standard solution of 5% strength is made by adding seven ounces to the gallon of water.

No. 4. SOLUTION OF CHLORINATED SODA.—Commonly called Labarraque’s Solution. It bleaches vegetable colors slowly. A standard solution of this in 10% strength is made by mixing it with nine parts of water.

No. 5. CHLORIDE OF ZINC.—A standard solution of this in 10% strength is made by adding a pound to a gallon of water.

All of these solutions are very poisonous and must be handled with care. To leave a dish of carbolic acid in the room or to sprinkle some chloride of lime on the floor does not hurt the microbe unless the microbe happens to fall into it. Disinfectants must be applied directly and thoroughly to the microbe-carrying substance in order to do their work properly. The following rules are given for the purposes noted :

For Excreta.

Mix each stool thoroughly with two quarts of No. 1, the standard solution of chloride of lime, or of No. 3, the standard solution of carbolic acid. Let it stand at least one hour with the former and four hours with

the latter before emptying. For privy-vaults and cesspools, use liberal amounts of No. 2, the standard solution of mercury bichloride, or of No. 3, the standard solution of carbolic acid, and scatter plentifully over the surface chloride of lime in powder. Rub down the walls frequently with No. 3, the standard solution of carbolic acid. These measures are of especial value in cholera, typhoid, dysentery, and tuberculosis. In cholera, diphtheria, yellow fever and scarlet fever, all vomited material should be treated in the same way.

For the Expectoration.

This should be discharged into a cup containing a considerable quantity of No. 1, the standard solution of chloride of lime, or of No. 2, the standard solution of mercury bichloride, to each pint of which fifteen grains of potassium permanganate should be added. It should remain in this for several hours before emptying. All cloths which have been used to wipe the mouth should be burnt. These measures are of great importance in consumption, diphtheria, scarlet fever, and infectious pneumonia. When it is remembered that one-seventh of all deaths occur from consumption in some of its forms, and that it is very frequently caught by inhaling dried sputum, the importance of thorough disinfection in this disease cannot be too highly insisted on.

For Clothing and Bedding.

If of little value, destroy by fire. If it can be washed, boil for at least half an hour, or immerse for at least

four hours in No. 2, the standard solution of mercury bichloride diluted twice, or in No. 3, the standard solution of carbolic acid diluted once. If it cannot be washed, expose it for two hours to a dry heat at a temperature of 230° F., at least. Mattresses should have the cover removed or freely opened before disinfection. In fact, it is better to destroy them and blankets by fire.

For the Person.

The hands and bodies of the attendants and of convalescents should be washed with No. 4, the 10% standard solution of chlorinated soda, or No. 3, the standard solution of carbolic acid diluted one-and-a-half times.

For the Dead.

Envelop the body in a sheet thoroughly saturated with No. 1, the standard solution of chloride of lime, or No. 2, the standard solution of mercury bichloride, or No. 3, the standard solution of carbolic acid.

For the Sick-Room.

While occupied, wash all surfaces occasionally with No. 2, the standard solution of mercury bichloride, diluted once, or No. 3, the standard solution of carbolic acid, diluted once.

After the patient has been removed, wash all the walls, floor and ceiling, and all other surfaces in the room. Then close it tightly by stuffing rags or papers in the cracks of the windows and doors. Burn in it at least three pounds of sulphur to every 1,000 cubic feet. A good way to do this is to take a washtub and

put in it a few inches of water and several bricks. On the bricks place an iron pot containing the sulphur. Pour over this a pint of alcohol and set fire to it. Let the room remain closed for at least twenty-four hours. Then wash all the surfaces with No. 2, the standard solution of mercury bichloride, diluted once, or of No. 3, the standard solution of carbolic acid, diluted once, and then with soap and water. After this use quantities of fresh air and as much sunlight as possible.

Do not think that this question of disinfection is of little moment. If you remember that "an ounce of prevention is worth a pound of cure," you will understand that a few cents spent for disinfectants may save you a doctor's bill and possibly a funeral. And if you use them at all, do it thoroughly. Unless disinfection is well done it is worse than useless, for it will induce a false sense of security. If you fail, do not blame these principles, but your own lack of attention to detail in carrying them out.

Iron Mold.

In using all salts of iron, remember that every spot of it on muslin or linen leaves an iron mold.

Cleanliness—Meaning of the Term.

A house may be filthy where there is not a *pile* of dirt anywhere to be seen. Carpets filled with dust, saturated with grease, etc., uncleansed furniture, old papered walls of years' standing, are just as much sources of impurity to the air as a refuse heap in the

cellar. They defile the atmosphere quite as much, and more or less tend to encourage disease. Sweeping with a broom certainly can remove much dirt from a floor, but what it does not sweep out it scatters through the air, making little true improvement. After the dust "settles," the room is usually "dusted," which practically means whipping the dust from one piece of furniture to another with a bunch of feathers. It really seems that the dust had better be left alone, unless it can be *removed* altogether, and the only way to do this is to *wipe* everything with a damp cloth. The floor of a sick room should really be without a carpet, or if there is one, it should be well beaten before the patient goes into the room, and again well beaten and aired as soon as the person is done with it.

Exquisite Cleanliness.

Few people—never mind who they are—have any idea of the exquisite cleanliness required in the sick-room. The smoky chimney, the dusty furniture, the utensils emptied but once a day, even in the best houses, keep the air of the sick-room constantly dirty. What a person in health "may put up with" for a night only, may prove a source of suffering, postponement of recovery, or even the hastening of a fatal end, to the sick person who is confined there, perhaps in one posture, for twenty-four hours.

PERSONAL CLEANLINESS.

Soap and Water for Cleansing the Skin.

In almost all affections, the function of the skin is more or less disturbed; and in many important diseases, nature relieves herself almost entirely through the skin. The poisonous materials are merely thrown out by the skin, not carried away from the body by it. Nothing but soap and water can do that. If we permit the sick to remain unwashed, or their clothing to be worn after it has become saturated with perspiration or other excretions, we interfere just as much with the natural process as if a slow poison were given by the mouth; only it is not so rapid in its operation.

Comfort from their Use.

None but those who have been sick, and know from personal experience, can tell how much delicious comfort may be secured after the skin has been carefully washed and properly *dried*. It is not the mere *feeling* of comfort which has been obtained, but it is a sign that the vital powers have been relieved by removing something which was *oppressing* them.

Cleanliness of skin and ventilation have much the same end in view, the removal of noxious materials from the system as rapidly as possible.

Precautions to be Observed in Washing the Sick.

The various modes of washing the sick cannot be given here for want of space; besides this, the physician is always ready to give any advice which may be

needed.* Care should be taken, in all these operations of sponging, washing and cleansing the skin, not to expose too great a surface of the body at once, so as to check the perspiration, which might retard recovery from the disease or renew the trouble in some other form. In several varieties of diarrhœa, dysentery, etc., when the skin is hard and harsh, the relief of the sick person from washing with water and using a good deal of soap is almost beyond calculation.

Tepid Water.

In other cases, sponging with tepid water and soap will be ordered, then tepid water alone, and afterwards properly drying the skin with a soft warm towel. Sometimes when water alone is to be used, a little vinegar added to it makes the sponging more refreshing. Of course, no one would think of using vinegar at the same time soap is used. Bay rum is very acceptable, also, to the face, neck and hands of sick people, when used after sponging or bathing. If not convenient, some common spirits diluted with water may be substituted.

In this connection, it may be well to remark that special care should be observed in the use of water for bathing persons suffering with debility, the result of sickness or of age. In such persons, it is often seen that a bath used with benefit in robust health, or when younger, under other circumstances is followed by

* See pamphlet, "Recipes for Sick People," distributed through the Howard Hospital and Infirmary for Incurables—added to and bound with this. In it are directions for bathing children, and a little change in the appliances will make them do for adults.

palpitation of the heart, slackened pulse, more or less vertigo, shivering, and other feelings of discomfort, lasting some time after its use.

In ordinary cases, it may be accepted as a good rule that whenever a bath, hot, tepid, or cold, is followed by a sense of oppression or inconvenience of any kind, it has not done good, and it may be well to suspect it has done harm. The amount of heat required to vaporize moisture is much larger than is popularly supposed, and if the person, aged or sick, or both, has not that surplus of heat to spare for the special purpose, over and beyond what he is likely to need for the ordinary purposes of the body, more or less disastrous results are invited from the reckless expenditure. Even healthy persons, accustomed to a morning bath of cold water, sometimes feel an instinctive repugnance to it, and on such occasions this should not be disregarded, but some other form used. A sponge bath or a warm bath in a well-heated room will answer better, followed by drying with a warm soft towel.

By *age*, the writer does not mean the number of technical years the person has lived, but refers rather to the effect upon the "constitution," as it is called, the work he has done has had.

LIGHT.

Light—What the Want of it Does.

A dark house, never mind where it is found, is always an unhealthy one, and usually a dirty one, too. Want of light discourages growth, promotes scrofula,

encourages "consumption," and, in fact, everything else which is bad. It is the unqualified experience of all who have had opportunities of judging, that light is second only in importance to fresh air; and the next worse thing after a close room is a dark one. Many suppose that it is upon the "spirits" only that sunlight acts, and not upon the body. It is just the other way. It does the *body* good, and the brighter spirits show it. Most persons know that light *purifies* the air, and any one who does not, has only to go into a room where the shutters are kept closed, to see what a close and corrupt smell the air has there. It is because the sunlight has not purified the atmosphere.

Sick Persons and Sunshine.

If possible, the sick-chamber should be the room of the house which has the most sunshine coming into it, and if the bed can be so placed that the person lying on it can see a good piece of the blue sky, so much the better it will be. If the patient can see out of two windows instead of one, he will be twice as well off. It is found in all hospitals that those rooms facing the sun have fewer deaths, all other things considered, than those which are upon the shady side of the house; and where statistics have been kept for a period of years, it is found that the average time for recovery is less upon the sunny side than upon the shady side of the building. Not only do fewer patients die, perhaps, in the southerly exposed sides of hospitals, and sick people get well there faster than those on the northern exposure, but it has been shown recently that

in asylums, prisons, etc., more of the inmates become ill who are compelled to dwell on the shady side of the building than those who live on the sunny side.

Idiocy Favored on the Shady Side of Deep Valleys.

Readers know of the sad variety of idiocy (*cretinism*) found on the sides of deep valleys in Switzerland, to which the sun has not free access; while on the other side, more favored by the light, there will, perhaps, be found nothing of the kind.

These facts at once demonstrate the value of sunlight, and it will be a very unwise person indeed who neglects to apply his knowledge of its importance to affairs of every-day life.

There are some few diseases, very few, as certain affections of the eye or of the brain, where a subdued light is required for a time. Even in these, a room on the sunny side of the house, with curtains to the windows, is usually better than one on the shady side.

Patients Usually Lie with their Faces Toward the Light.

The first time the reader of this passes through the ward of a hospital, let him observe how almost all the patients lie with their faces turned toward the light. Ask one of them *why* he does so, and he will scarcely be able to give you an answer; but you see he *does* it. The reason is deeper down than his understanding. It is his *nature* to do so, just as it is the nature of plants to always make their way toward the light, and their leaves or flowers to incline toward the sun. While you are looking at the faces turned toward the

sunlight, count how many sick you see lying with their faces toward the wall. Among a hundred patients, not more than half a score will be seen avoiding the light.

REST.

Kind of Noise, Rather than Loudness, which Disturbs Sick People.

It is rarely that the *loudness* of a noise hurts a patient, but it is usually the *kind* of noise that produces an *expectation* upon the mind of something more happening, or being about to happen; he does not know what it is. The putting up of a scaffold near by, perhaps, will not trouble him—he knows what that is; while whispering or talking may annoy him beyond endurance. To some, however, *any* kind of noise is disturbing. A sharp and sudden noise, which is not steady, usually gives more distress than other kinds. Anything which *suddenly* awakens a patient out of his sleep will throw him into greater excitement, and consequently do him more harm than any continuous sound, however loud it may be.

Never Awaken a Sleeping Sick Person.

When a patient sleeps, never under any circumstances let him be awakened, unless you have the sanction of the physician. A sick person who has been asleep but a little while, and is then awakened, very seldom can go to sleep again; while, had he slept a few hours, and then been aroused, he might have fallen asleep again in a few minutes with little effort.

Why?

The reason is something like this: In a sick person, the brain is, as a general thing, weakened and debilitated like the other parts of the body, and needs strengthening. It gets this by sleep, which is rest. If rest is interrupted a few minutes after it begins, the brain is weakened so much the *more*, and tends the less to sleep. The brain, therefore, not only loses the good of the little sleep it has had, but also its ability to sleep, becoming what physicians call "irritable." If a patient sleeps for a time, the brain becomes that much the stronger, and can the more readily rest the next time.

Expectation Painful.

As before mentioned, no noise which excites a patient's *expectation* should be made in his room. Hence, no one should ever speak in low tones near the bed of the patient, or hold a conversation in a room or passage where the sick person can *occasionally* overhear a word. This is absolutely cruel. Such carelessness very frequently induces delirium, especially if the patient is apprehensive about his own condition, *and most sick persons are, no matter how reluctant they may be to admit it.*

While mentioning this matter, there is another thing occurs to me, and one which is frequently done by a thoughtless nurse. It is when she wishes to make some special inquiry of the physician in regard to the condition of the patient. She usually remains in the room until the physician is ready to leave it, and then calls, with an air of conscious importance, that she

has "something particular" to ask him about the patient.

Nurses.

The tact and qualities needed in the sick-room are not always the result of experience, nor do amateur nurses possess it. Now and then a lady is born to it, and the physician to that house rejoices exceedingly; for his own credit, as well as the recovery of the patient, is probably assured. He seldom, however, has this good fortune, because geniuses are not common. Many nurses cannot observe, and they will not think. The fire is alternately half extinct, and blazing up the chimney. It is not warm at sunrise and sunset, and moderate at midday, when the sun shines warmly. No care is taken to continue a priceless sleep, by keeping the cinders from falling on the unprotected fender; or in gently restoring the fire by quietly putting on lumps of coal, previously wrapped in pieces of damp paper, ready for noiseless use. The desired morning meal is brought in after the patient has passed from appetite to faintness. More than likely the tea is smoked. It is painful to see a patient in the hands of such a nurse, especially if the nurse is kind-hearted.

Affection only, however warm, will not qualify a sick-nurse. The cool head and steady hand of a professional stranger is often to be preferred. Many a life has been sacrificed by ignorance, stupidity, or anxiety, where the nurse would have gladly died to save the patient.

A good nurse should have the keen perceptions and the nice little ways of ladies; at the same time not

above supplying all the patient's needs. Some one, too, who can intelligently talk of something else besides the dying agonies of her last case; and, perhaps, judge wisely when the patient must be kept quiet, and when he may see a friend. Such a person, without giving offense, could assume the responsibility of forbidding the discussion of worrying, household troubles in the sick-room, or even get rid of a visitor who staid too long—especially that class of ladies who seem unwilling to lose a single opportunity of displaying their taste and sensibility, by telling the patient how some one else with the same symptoms had recently died in extreme convulsions.

Pleasant Faces at the Bedside.

The lugubrious countenance assumed by her, to harmonize with her conceptions of importance, usually confirms the fears of the sick person to a remarkable degree, indeed, and the nurse returns to a new field of labor in quieting the apprehensions she has cruelly excited. Conversations upon any subject should never be held just outside of the chamber door, where a word now and then can be overheard by those in the room; and, as intimated, what is overheard, with what is *suspected*, by the poor patient, is frequently the beginning of the worst. Remember always that a cheerful face "doeth good like a medicine."

Never, under any circumstances, ask, within hearing, whether the physician does not think the patient worse, or ask the physician his opinion as to the result of the disease. Indeed, no question or reply calculated in any way to suggest an unfavorable issue, should, under

any excuse, be indulged in before the patient. When the necessity becomes evident it can be done as other things are done, wisely. There is a good deal of human nature even in sick people.

Kind Injuries.

Everybody knows the harm which may come from an injudicious spoonful of unsuitable food. The indulgence of some whim by a fond mother may prove fatal to a sick child. The longed-for change of posture may be accorded a day too soon. The cruel application of some surgical appliance may be put off a day too long.

Observing Directions with Reason.

A physician is often in despair when he prescribes a poultice, as he often fears it will be so applied as to do more harm than good. And valuable as all kinds of baths are in illness, he dare not order them, knowing the insane way in which his orders will be carried out. Above all, he is afraid of what may be termed the "cumulative dose," whether of medicine or nourishment; and he finds it impossible to persuade either the patient or his family that half a dozen tablespoonfuls of brandy in half a dozen hours, are not the same thing as one glass in six hours; or that when he orders medicine to be taken every two hours, the effect will not be the same if a double or treble dose is taken at once to save trouble to the patient and the nurse.

Unnecessary Noises.

Unnecessary noises, though slight, disturb a sick person much more than necessary noises of a much greater amount.

Creaking Doors.

A good nurse will see that no door opens with a creak, that no window rattles, and a *very* good one will also see that not even a curtain flaps. A drop of oil and a feather will do away with the creaking.

Things Ready Before Actually Needed.

A trained nurse commences her arrangements for the night *before* the patient begins to grow sleepy. She knows that arranging the pillows, moving the chairs, stirring the fire, and making up her own bed, *disturb* the rest of the sick person. Sometimes an amateur does not think of this, and is surprised because the patient lies awake all night. A good nurse will also see in advance that nothing from down-stairs, likely to be needed before morning, has been omitted.

Haste.

All appearance of *haste* is painful to the sick. The rule is, *do things quickly and do things quietly.*

Asking Questions at the Wrong Moment.

Never divide a sick person's attention by speaking to him while he is in the act of doing anything. Most of the accidents which occur by feeble persons falling, etc., will be found to have happened while

the person was attempting to answer some question proposed by a heedless individual.

When you visit a sick person, always sit where he can see you without turning his head, and do not speak while behind him.

Never lean against, sit upon, or even shake the bed in which the sick person lies.

Reading to the Sick.

It is the experience of most nurses that, when a person is too sick to read, he is too sick to listen to any one else. If you do read, let it be done slowly, distinctly, and steadily. Sick people always prefer having a thing *told* to having it *read* to them.

The eyes of the convalescent and debilitated are *easily* injured by use while in such conditions of health. The greatest care should be taken, therefore, to use them as little as possible before recovery. The usual absence of the necessary amount of light for reading purposes, wholly independent of the condition of the *strength*, makes reading in a sick-room almost as dangerous to the sight as the use of print in the growing twilight—something well known to be *peculiarly* destructive to the vision.

VARIETY.

Change in Things About the Room.

No one but an old nurse, or a person who has been ill for a long time, can possibly know what a weary, dreary thing it is to be confined to the same room for a great while, and see no change in anything about it. It will be found that the majority of *cheerful*

patients are those who are not confined to a single room, and the majority of *depressed* cases will be seen among those subjected to a long monotony of objects surrounding them. The nervous system really appears to suffer as much from want of change as the digestive organs would from a continuance upon a single diet—*i. e.*, the soldier from his “three years or during the war,” of boiled beef.

Beautiful Things Liked by the Sick.

Unless a person has been sick, and has learned from personal experience, he can scarcely realize what a pleasant thing it is to see beautiful objects and brilliant colors while recovering from illness. Such cravings are termed “fancies” by some; but never mind what they are called, these indications are always valuable, and should never be disregarded. The senses of sight and hearing require natural and innocent gratification as much as the stomach demands appropriate food. It is a harmless satisfaction to indulge them, and it should be done. If the indulgence makes the sick person get well the faster, a wise nurse will observe these “fancies,” making them aid convalescence.

Flowers in the Sick Chamber.

It is a popular prejudice that plants and flowers should not be tolerated in the chamber, “because they give off carbonic acid gas, which is poisonous.” So they do give off this gas, and the gas is poisonous; but the quantity of carbonic acid gas given off from half a dozen bunches of flowers in half a dozen nights

would scarcely equal the amount of the same gas given off from a couple of bottles of mineral water.

Odor of Flowers.

The *odor* of certain flowers, as lilies, hyacinths, etc., is unpleasant to some people, and whenever such is the case, these objectionable ones should, of course, be avoided in the selection. A judicious variety in the colors should always be sought, and it may be well to remember that scarlet is rather stimulating in its effects, while blue is rather soothing.

Convalescence.

In convalescence, even more than in illness, the attentions of an inexperienced nurse are often trying to an invalid. If he has been well nursed, he may still be amenable to the discipline of the sick room, and will probably do what he is bid. If he has not learned to do as told without question, he has still many things to learn before he gets well. At first, perhaps, he will be allowed to sit up hours, when minutes was the physician's orders. He is able to persuade the nurse to give him a tumblerful when a wineglass was allowed. He is allowed to see a newspaper for a few minutes, and he reads an exciting novel. He is permitted to see a visitor, and has a roomful of company. He leaves the house for the first walk, muffled up, and is allowed to sit on a cold garden seat. Upon returning home exhausted, there is no nourishment ready for him, and probably the *warmed* clothing is taken off to put on his *cold* house suit.

After Convalescence.

During the period between convalescence and complete recovery, as the patient throws aside the bondage of illness, and returns to ordinary life, it is seldom that his reviving appetite is properly humored. The *sequelæ*, as they are called, of many fevers are both developed and aggravated by the careless way unwholesome food is offered to the recovering invalid. This is even more often the case when the illness is chronic, or there is delicacy of constitution. Such a man is often compelled to sit down to a dinner where he is asked to choose between stewed kidneys and salt beef. Once in a great while, he is prudent enough, to the wonder of his hostess, to ask for a bread and water diet. The writer knew of an instance where a son convalescing from typhoid fever was permitted by his mother to eat half of a dried apple-pie, because he had asked for it. In speaking of his death the next day, she remarked that she had heard that *green* apples were unwholesome.

Sick People and Business.

As a rule, business matters should not be discussed before sick people. Sometimes a man who has not made his will before his illness will be anxious and uneasy till he has made it, and will get better when the matter is off his mind. The less sick people are called upon to use their mind, the better it will be. They should not be asked what they will have, but should be saved the mental exertion of making a choice.

TAKING FOOD.

A Little Food at a Time, and Often Repeated.

A little food at a time, and often repeated, is the general rule for sick people. Frequently, where a physician orders beef-tea, or something of the kind, a nurse will try to give a cupful every three or four hours. More than likely the patient's stomach rejects it, whereas, had a tablespoonful been given every half hour or so, it would have been retained, digested, and have done the patient the intended good.

Sustain Strength in the Morning.

The majority of weak patients are unable to take food of any solid kind before eleven o'clock in the morning, and before that time comes around they are sure to be pretty well exhausted. This would not be so apt to occur if a spoonful of beef-tea, of wine and arrow-root, of whisky-punch, or of whatever stimulant has been ordered by the physician, could be given him every hour or two, from the early morn until then. Perhaps by noon, or even sooner, he might be able to eat food as substantial as a mutton-chop or a piece of nicely-broiled beefsteak. If food as solid as these can not be taken, of course the nurse will persevere in the use of beef-tea, prepared milk, or whatever else the physician has ordered.

Brandy and Whisky.

In this connection, it may be well to make a few remarks about the use of brandy, whisky, and other stimulants for the sick. They are always easily had,

and, therefore, oftenest used. But where there is any hereditary *tendency* to the use of such things, where the individual has ever shown a disposition to use them as a *beverage*, or where the *associations* of the person in the future may peculiarly expose him to solicitation, none of these stimulants, under any consideration, should ever be ordered, unless there is absolutely *no alternative*. This is said, because in many instances substitutes can easily be found by the physician. It is a subject deserving of the gravest consideration, particularly in the case of young men.

Sometimes, if nothing else will answer, these stimulants can be given, without comment, as a *prescription* from the apothecary.

Food at the Bedside.

Never leave the patient's food untasted by his side from meal to meal, in the hope that he will eat it. He never does eat it, and you only add disgust to his distaste, by leaving it in sight. Let the food come at the right time, and if it is not eaten, be sure to take it away in a little while.

Overloaded Plate.

A sick person's plate should never be overloaded with food, nor should he ever see or smell the food prepared for others. While eating, the patient should be left alone as much as possible.

Whatever is prepared for the sick must always be of the first quality, and cooked with the greatest care. Remember that sick-cookery should at least do half the work of the patient's weak digestion.

“Drops.”

Always keep your patient's cup and saucer perfectly dry, so that no “drops” of liquid will fall on the sheets, pillow or dress. As a rule, nurses have no idea what a difference this minute want of care makes to the comfort and even willingness of the sick to take food.

WHAT FOOD.

Common Errors in Regard to Diet—Beef-Tea.

Florence Nightingale says on this subject that one of the most common errors among women in charge of the sick, respecting sick diet, is the belief that beef-tea is the most *nutritive* of all articles. “Now just try,” she says, “and boil down a pound of beef into beef-tea, evaporate the water, and see what is left of your beef. You will find that there is barely a teaspoonful of solid nourishment to half a pint of water in beef-tea.” There is, nevertheless, a certain nutritive value in it, as there is in tea; we do not know what. It may safely be given in almost any inflammatory disease, but it should never be alone depended upon, especially where much nourishment is needed.

Eggs or Steak.

Again, it is an ever-ready saying that “an egg is equivalent to a pound of meat,” whereas it is not so at all. Much trouble has occurred from this mistaken notion. It is a question whether, weight for weight, eggs are *equal* to beefsteak. Also, it is seldom noticed with how many patients, particularly of nervous or bilious temperament, eggs disagree. Most puddings

made with eggs are distasteful to them in consequence. An egg, whipped up with wine, is often the only form in which they can take this kind of nourishment.

Meat without Vegetables.

Again, if the patient is able to eat meat, it is supposed that to give him meat is the only thing needful for his recovery; whereas scorbutic (scurvy) sores have been actually known to appear among sick persons living in the midst of plenty, which could be traced to no other source than this—namely, that the nurse, depending on meat *alone*, had allowed the patient to be without vegetables for a considerable time, these latter being so badly cooked that he always left them untouched. To all intents and purposes, he really had no fresh vegetables at all.

Milk, Butter, Cream, etc.

Milk, and the preparations from milk, are most important articles of food for the sick. Butter is the lightest kind of animal fat, and though it wants the sugar and some of the other elements which exist in milk, yet it is most valuable both in itself as fat and in enabling the patient to eat more bread.

Albumen.

The reason of it is just this: Animals require in their food an albuminous constituent, a starchy one, and another of fat. The first, or albuminous (the purest form of which is the white of an egg), enters largely into the formation of the human body, the muscles being chiefly composed of it.

Sugar.

The second, or starchy component, does not enter into the structure of the body as such, but is converted into sugar during digestion, and has much to do with the formation of the tissues and heat.

Oils.

The oily parts enter largely into the composition of the brain, nerves, and, in fact, all other portions of the body, and, when broken up and consumed, supply a good portion of the fuel for heat of the body.

Common Salt, Phosphates, Etc.

Besides these three mentioned, which are most conspicuous, there are other substances, as common salt, phosphates, iron, etc. These are supplied through food, but our space will not permit more than a mere reference. All food *must* contain these substances in proportionate quantities. If it does not, the appetite *craves* the one wanted, and if not properly supplied, the part of the body suffers into which the wanting component enters.

Butter Wanted with Bread.

To feel assured of this, if the reader thinks a moment, he will remember that no one likes bread alone, but wants some butter with it, which supplies the oily part, and the appetite craves, too, a piece of meat, cheese, or an egg—the albuminous part. We want butter with our rice or potatoes, because rice or potato is always pure starch, and wanting in fatty matter; so nature says we must *add* the wanting parts.

Food Must Have in it What the System Wants.

As all food which properly sustains man must contain these principles, it will be readily seen that those vegetable substances, which are composed of but one of them, or even two, can not *alone* support life. Experience confirms this view. Oils or fat are useful as oils or fat, but cannot supply the place of starch or sugar; nor can starch or sugar supply the place of albumen or flesh.

Variety in Food.

To obtain all these needful constituents, we must seek a *variety* in our food, and not depend exclusively upon any single one for continued use. There are some apparent exceptions to this rule, as in the case of milk, which we know is capable, under certain circumstances, of sustaining life for a length of time; but the exception is only apparent when we examine into the matter.

Bulk of Food.

An almost universal error among nurses is in the bulk of the food, and especially the quantity of the drinks, they offer to their patients. Suppose a patient is ordered four ounces of liquid during the day, how is he to take this if you make it into four pints by diluting it? The same with tea and beef-tea, with arrow-root, milk, etc. You have not increased the *nourishment*, you have not increased the renovating power of these articles, by increasing their *bulk*; you have very likely *diminished* both by giving the patient's digestion *more* to do, and most likely of all, the patient will leave half what he has been ordered to take, be-

cause he cannot swallow the bulk with which you have been pleased to invest it. It requires very nice observation and care (and meets with hardly any) to determine what will not be too thick or too strong for the patient to take, while giving him no more than the bulk which he is able to swallow.

Milk.

Milk has these necessary articles in suitable proportion more than any other food, perhaps, in general use. It has the starchy part advanced a step into the shape of sugar, the albuminous part as the cheesy constituent, and the fatty as the creamy element. Hence, milk might be taken as a sort of representative diet, and better adapted to sustain the body in health, or to strengthen it in sickness, than any single article of food.

Flour.

Flour made from wheat, meal from oats or Indian corn, grits, etc., come next in order, perhaps, and stand at the head of the list of all articles of food grown for general consumption. Food of the above description is made up chiefly of starch, some albumen (under the form of gluten), and a certain amount of oil. Hence, bread made of flour may well be called the "staff of life," because, from containing these elements, it is capable of supporting life by itself, for a longer time than any other single article of food, excepting milk, as mentioned above. But though containing these essential elements of life, yet flour, without the addition of albuminous or oily matter, to a certain degree, can not long *properly* sustain the human body.

Flour Better than Corn-Starch.

If flour can not nourish the body in a proper manner, it will at once be seen that corn-starch, arrow-root, tapioca, and the like—which are nothing but pure forms of starch, made by washing away the oily and glutinous (albuminous) parts—can not *possibly* be expected, when used alone, to afford more than a limited amount of nourishment; not, of course, as much as food prepared from flour, which has *in* it the deficient articles. Not only is flour more nutritive than arrow-root, or any preparation of starch, but it is less liable to ferment, and, as a rule, it should be preferred whenever it can be used.

Useful Articles of Food.

Do not misunderstand what is meant. None of these articles, compared with flour, are spoken of as *useless* to the body; but some preparations for the sick must be more useful than others, because they contain more of the elements of usefulness in the shape of albumen, starch, oil, etc.

Cream Better than Milk.

From what has been previously said, it will be seen that milk, when it agrees with the digestion, may be one of the most valuable articles we have to restore the sick, and in many chronic diseases, cream will be found superior even to milk, because of its richness in those parts the system most requires. Even although not as digestible to some people, it is less apt than milk to turn acid in the stomach. It is often beneficial to dyspeptics and convalescents, taken alone or diluted

with water. Unless there is something to contraindicate it, as an irritable condition of the digestive tract, mush made of Indian meal, if suggested to the patient, is often an acceptable change, and there are few things, in every sense of the word, more nutritious than mush and cream, or mush and milk.

Cream seems to act in the same manner as beef-tea is generally understood to act, and to most persons it is much easier of digestion than milk. In fact, it seldom disagrees.

Cheese.

Cheese is not usually digestible by the sick, but it is good nourishment for repairing waste ; and physicians constantly see the sick desiring it, which craving shows how much it is needed by them.

Sour Milk.

But if fresh milk is so valuable a food for the sick, the least sourness in it makes it, of all articles, perhaps, the most injurious, diarrhœa is a common result of fresh milk allowed to become at all sour. The nurse, therefore, ought to exercise the utmost care in this. Yet if you consider that the only drop of real nourishment in your patient's tea is the drop of milk, and how much almost all patients depend upon their tea, you will see the great importance of not depriving your patient of this drop of milk.

Buttermilk.

Buttermilk, a totally different thing, is often very useful, especially in fevers, if it can be procured fresh.

Intelligent Cravings of the Sick for Particular Articles of Diet.

In the diseases produced by bad food, such as scorbutic dysentery and diarrhœa, the patient's stomach often craves for and digests things, some of which certainly would be laid down in no dietary that ever was invented for the sick, and especially not for such sick. These are pickles, jams, gingerbread, fat of bacon, suet, cheese, buttermilk. "These cases," says Florence Nightingale, "I have seen not by ones, nor by tens, but by hundreds. And the patient's stomach was right and the book was wrong." The articles craved for, in these cases, might have been principally arranged under the two heads of fat and vegetable acids.

There is often a marked difference between men and women in this matter of sick feeding. Women's digestion is generally slower.

Sweet Things.

In laying down rules of diet by the amounts of "solid nutriment" in different kinds of food, it is constantly lost sight of what the patient requires to repair his waste, what he can take and what he cannot. You can not diet a patient from a book; you can not make up the human body as you would make up a prescription, and say, so many parts "carboniferous" and so many parts "nitrogenous" will constitute a perfect diet for the patient.

Patients' "Fancies" for Food.

The nurse's observations here will materially assist the doctor; the patient's "fancies" will materially assist the nurse. For instance, sugar is one of the most nutritive of all articles, and is particularly recommended in some books. But the vast majority of all patients, young and old, male and female, rich and poor, hospital and private, dislike sweet things. A person may take to sweets when he is ill who dislikes them when he is well, and many fond of them when in health, will in sickness leave off everything sweet, even to sugar in tea. Sweet puddings, sweet drinks, are their aversion. The furred tongue almost always likes what is sharp or pungent. Scorbutic (scurvy) patients are an exception; they often crave for sweetmeats and jams.

Acid Fruits.

The desire shown by the sick, and especially by those who are getting well, for acid fruits, as baked apples, cranberries, lemons, etc., should never be disregarded. The important use the acids of fruits play in the body is a long story; so we can only insist upon the importance of regarding these "cravings" wherever found. Sometimes the physician has good reasons for not wishing them given, as the acid may neutralize or decompose some remedial agent employed; but, as a rule, these fruits, properly prepared, may not only be given without injury, but with decided benefit. So, whenever a sick person "craves" such things, be sure to call the physician's attention to it, and ask if you can give them.

The question is often asked for the advantage of persons in health as well as the sick, at what *time* in the day fruit should be eaten? In tropical countries, where fruit is the chief article of food, the rule appears to be that the *earlier* in the day it is taken the *better* it is, and the *later*, the *worse*. In hot weather, many wise people will eat none after noon, alleging that the digestion then declines in power with the decline of the day, and the fruit, instead of digesting, *decomposes*, owing to the presence of the saccharine matter. The *objection* to fruit and certain kinds of vegetables late in the day, be the explanation what it may, is certainly *justified* by an ample experience.

When "taken for tea," especially if the person feels somewhat exhausted from labor or the heat of the day, they often do not appear to *digest*, but decompose, irritating the stomach and bowels until rejected during the process popularly known as cholera morbus. Whenever this occurs, do not put it upon that scape-goat the "liver," and take another dose of purgative medicine; but on yourself, for what you ate some hours before and under what circumstances. If you use your experience, another attack need not be feared for a long while. Many fruits and vegetables, such as melons and cucumbers, particularly if eaten immoderately, under such circumstances acquire the reputation of being "unhealthy," instead of which the eater is unwise.

Calves-Foot Jelly.

Calves-foot jelly is another article of diet in great favor with nurses and friends of the sick. Even if it

could be eaten solid, it would not nourish. It is simply the height of folly to take one-eighth ounce of gelatine and make it into a certain bulk by dissolving it in water, and then to give it to the sick, as if the mere *bulk* represented *nourishment*. It is not known that jelly does not nourish, that it has a tendency to produce diarrhœa; and to trust to it to repair the waste of a diseased constitution is simply to starve the sick under the guise of feeding them. If one hundred spoonfuls of jelly were given in the course of the day, you would have given one spoonful of gelatine, which spoonful has scarcely any nutritive power whatever.

And, nevertheless, gelatine contains a large quantity of nitrogen, which is one of the most important elements in nutrition. On the other hand, beef-tea may be chosen as an illustration of great nutritive power co-existing with a very small amount of solid nitrogenous matter.

Beef-Tea.

Dr. Christison says that "every one will be struck with the readiness with which certain classes of patients will often take diluted meat-juice or beef-tea repeatedly, when they refuse all other kinds of food.

But beef-tea as ordinarily made, is really only a stimulant, very much like coffee. To make a beef-tea that contains considerable nutriment, as well as stimulant, cut a thick piece of good, juicy steak into lumps about the size of a small lemon. Broil each piece slightly and then squeeze it thoroughly in an ordinary lemon-squeezer, or, better still, in one of the small meat-presses that are made nowadays for this purpose. You will not get a great deal of juice, but it is a fair nutri-

ment for the sick. It can be served hot or cold, with salt and pepper to suit.

Beef-Tea Added to Other Articles of Food.

It has been observed that a small quantity of beef-tea *added* to other articles of nutrition, *augments* their power out of all proportion to the additional amount of solid matter.

Observation, not Chemistry, Must Decide Sick Diet.

Chemistry has, as yet, afforded little insight into the dieting of the sick. All that chemistry can tell us is the amount of "carboniferous" or "nitrogenous" elements discoverable in different dietetic articles. In the great majority of cases, the stomach of the patient is guided by other principles of selection than merely the amount of carbon or nitrogen in the diet. No doubt, in this, as in other things, nature has very definite rules for her guidance, but these rules can only be ascertained by the most careful observation at the bedside.

Milk Compared with Meat.

Again, the nutritive power of milk, and of the preparations from milk, is very much undervalued, since there is nearly as much nourishment in half a pint of milk as there is in a quarter of a pound of meat. But this is not the whole question, nor nearly the whole. The main question is what the patient's stomach can assimilate or *derive* nourishment from, and of this the patient's stomach is the sole judge. Chemistry can

not tell this. The patient's stomach must be its own chemist.

Diet for the Well and Diet for the Sick.

The diet which will keep the well man healthy may kill the sick one. The same beef, which is the most nutritive of all meats, and which nourishes the healthy man, is the least nourishing of all food to the sick man, whose half-dead stomach can *assimilate* no part of it—that is, make no food out of it. On a diet of beef-tea, healthy men, on the other hand, speedily lose their strength.

Home-made Bread.

Patients have been known to live months without touching bread, because the *kind* they wanted could not be had, and they could not eat baker's bread. These were mostly country patients, but not all. Home-made bread or brown bread is a most important article of diet for many patients. The use of aperients may be entirely superseded by it. Oat-cake, and bread made of Indian-meal, are others.

Sound Observation Has Scarcely Yet Been Brought to Bear on Sick Diet.

To watch for the opinions, then, which the patient's *stomach* gives, rather than to read "analyses of foods," is the business of all those who have to settle what the patient is to eat—perhaps the most important thing to be provided for him, after the air he is to breathe.

Now, the medical man who sees the patient only once a day, or even only once or twice a week, can not

possibly tell this without the assistance of the patient himself, or of those who are in constant observation of the patient. The utmost the medical man can tell is whether the patient is weaker or stronger at this visit than he was at the last visit. The most important office of the nurse, after she has taken care that the patient breathes pure air, is to carefully observe the *effect* of his food, and report it to the medical attendant.

Tea and Coffee.

A great deal too much is said against tea* by wise people, and a great deal too much of tea is given to the sick by foolish people. When you see the natural and almost universal craving in the sick for their "tea," you cannot but feel that nature knows what she is about.

* It is made a frequent recommendation to persons about to incur great exhaustion, either from the nature of the service, or from their being not in a state fit for it, to eat a piece of bread before they go. I wish the recommenders would themselves try the experiment of substituting a piece of bread for a cup of tea or coffee, or beef-tea, as a refresher. They would find it a very poor comfort. When soldiers have set out fasting on a fatiguing duty, when nurses have to go fasting in to their patients, it is a *hot* restorative they want, and ought to have before they go, and not a cold bit of bread. If they can take a bit of bread *with* the cup of hot tea, so much the better, but not *instead* of it. The fact that there is more nourishment in bread than in almost any thing else has probably induced the mistake. That it is a fatal mistake there is no doubt. It seems, though very little is known on the subject, that what "assimilates" itself directly, and with the least trouble of digestion, with the human body, is the best under the above circumstances. Bread requires two or three processes of assimilation before it becomes like the human body.

The almost universal testimony of men and women who have undergone great fatigue, such as riding long journeys without stopping, or sitting up several nights in succession, is that they could do it best upon an occasional cup of tea—and nothing else.

Let experience, not theory, decide upon this as other things.

Not Too Much of It.

But a little tea or coffee restores them quite as much as a great deal; and a great deal of tea, and especially of coffee, impairs the little power of digestion they have. Yet a nurse, because she sees how one or two cups of tea or coffee restores her patient, thinks that three or four cups will do twice as much. This is not the case at all; it is, however, certain that there is nothing yet discovered which is a substitute to the patient for his cup of tea; he can take it when he can take nothing else, and he often can take nothing else, if he has not it. It would be very desirable if any of the abusers of tea would point out what to give to a patient after a sleepless night, instead of tea.

Tea in the Morning.

If you give it at five or six in the morning, he may even sometimes fall asleep after it, and get, perhaps, his only two or three hours' sleep during the twenty-four. At the same time, you never should give tea or coffee to the sick, as a rule, after five o'clock in the afternoon. Sleeplessness in the early *night* is from *excitement* generally, and is *increased* by tea or coffee; sleeplessness which continues to the early *morning* is often from *exhaustion*, and is *relieved* by tea.

Tea and a Coated Tongue—Lemonade, Barley Water, Etc.

The only patients known to refuse tea, have been typhus cases, and the first sign of their getting better was their craving for tea. In general, the dry and coated tongue always prefers tea to coffee, and will

quite decline milk, unless with tea. Coffee is a better restorative than tea, but a greater impairer of the *digestion*. Let the patient's taste decide. You will say that, in cases of great thirst, the patient's craving decides that it will drink *a great deal* of tea, and that you can not help it. But in these cases, be sure that the patient requires diluents for other purposes than quenching the thirst; he wants a great deal of *some* drink, not of tea only; and the physician will order what he is to have.

Coffee said to Prevent "Waste."

Lehman, quoted by Dr. Christison, says that among the well and active "the infusion of one ounce of roasted coffee daily will diminish the waste" going on in the body "by one-fourth," and Dr. Christison adds that tea has the same property. Now, this is the result of actual experiment, Lehman weighs the man, and finds the fact from his weight. It is not deduced from "analysis" of food. Experience among the sick shows the same thing.*

Cocoa.

Cocoa is often recommended to the sick in lieu of tea or coffee. But independently of the fact that sick people very generally dislike cocoa, it has quite a different effect from tea or coffee. It is an oily, starchy

* In making coffee, it is absolutely necessary to buy it in the berry and grind it at home. Otherwise you may reckon upon its containing a certain amount of chickory, *at least*. This is not a question of the taste, or of the wholesomeness of chickory. It is that chickory has nothing of the properties for which you give coffee. And therefore you may as well not give it.

nut, having little restorative power, but simply increasing fat. It is like mockery of the sick, therefore, to call it a *substitute* for tea. For any renovating *stimulus* it has, you might just as well offer them chestnuts instead of tea.

BED AND BEDDING.

Fever a Symptom.

A few words in relation to bedding and bedsteads, and principally regarding patients who are entirely or almost entirely confined to their beds.

Feverishness is generally supposed to be a symptom of fever. Sometimes it is, but usually it is a symptom of *bedding*. The patient has had reintroduced into the body the emanations which day after day have saturated his unaired bedding.

Uncleanliness of Ordinary Bedding.

In looking out for an example in order to show what *not* to do, we should take the specimen of an ordinary bed in a private house; a wooden bedstead, two or even three mattresses piled up above the height of a table, with a valance attached to the frame. Nothing but a miracle could ever thoroughly dry or air such a bed and bedding. The patient must certainly alternate between cold damp after his bed is made, and warm damp before, both saturated with organic matter,* and

* For the same reason, if, after washing a patient, you must put the same night-dress on him again, always give it a preliminary warming at the fire. The night-gown he has worn must be, to a certain extent, damp. It has now got cold from having been off him for a few minutes. The fire will dry and at the same time air it. This is much more important than with clean things.

this from the time the mattresses are put under him until the time they are picked to pieces, if this is ever done.

Soiled Sheets.

If you consider that an adult in health exhales by the lungs and skin, in the twenty-four hours, three pints, at least, of moisture, loaded with organic matter ready to enter into putrefaction; that the quantity in sickness is often greatly increased, the quality is always more noxious—just ask yourself next where does all this moisture go to? Chiefly into the bedding, because it can not go *anywhere else*. It *stays* there, because, with the exception of a weekly change of sheets, scarcely any other airing is attempted. A nurse will be careful to fidgetiness about airing the *clean* sheets from *damp*, but airing the *used* sheets from *noxious* damp will never occur to her. Besides this, the most dangerous effluvia we know of are from the excreta of the sick. These are placed, at least temporarily, where they must throw their effluvia into the under side of the bed, and the space under the bed is never aired; it cannot be with our arrangements. Must not such a bed be *always* saturated, and be always the means of *introducing again* into the body of the unfortunate patient who lies in it that poisonous matter which nature is trying to *get out* of the system?

Low Bedsteads Better than High Ones.

If a bed is higher than a sofa, the patient often prefers not to get out at all, rather than undergo the fatigue of getting out. If the bed were a low one,

he might often feel like taking a few minutes' exercise every day in another room, or even in the open air. It is so very odd that people never think of this, or of how many *more* times a patient who is in bed for twenty-four hours is obliged to get in and out of bed, than are those who only get into bed and out of bed once during the twenty-four hours.

Bed in a Light Spot.

A patient's bed should always be in the lightest spot in the room; and he should be able to see out of a window.

No Bed with Curtains.

It is scarcely necessary to say that the old four-post bed with curtains is utterly inadmissible. Hospital bedsteads are in many respects very much better than private ones.

Scrofulous Diseases, etc., often a Result of Disposition of Bed-Clothing.

There is reason to believe that not a few of the cases apparently resembling scrofula, among children, proceed from the habit of sleeping with the head under the bed-clothing, and so inhaling air already breathed, which is further contaminated by exhalations from the skin. Patients are sometimes given to a similar habit, and it often happens that the bed-clothes are so disposed that the patient must necessarily breathe air more or less poisoned by exhalations from his skin. A good nurse will be careful to attend to this. It is an important part, so to speak, of ventilation.

Bed-Sores.

It may be worth while to remark, that where there is any danger of bed-sores, a blanket should never be placed *under* the patient. It retains damp, and acts like a poultice.

Heavy and Impervious Bed-Coverings.

Never use anything but light blankets as bed-covering for the sick. The heavy cotton impervious counterpane is bad, for the very reason that it keeps *in* the emanations from the sick person, while the blanket allows them to pass through. Weak patients are invariably distressed by a great *weight* of bed-clothes, which often prevents their getting any sound sleep whatever.

Pillows.

One word about pillows. Every weak patient, be his illness what it may, suffers more or less from difficulty in *breathing*. To take the weight *off* the poor chest, which at best is hardly up to its work, ought, therefore, to be the object of the nurse in arranging his pillows. Now, what does she do, and what are the consequences? She piles the pillows one upon the other like a wall of bricks; the head is thrown upon the chest, and the shoulders are pushed forward, so as not to allow the lungs room to *expand*. The pillows, in fact, lean upon the patient, not the patient upon the pillows.

Bed for the Sick.

It is impossible to give a rule for this, because it must vary with the figure of the patient. Tall pa-

tients suffer much more than short ones, because of the drag of the long limbs upon the waist. But the object is to *support*, with the pillows, the back below the breathing apparatus, and above the hips; so as to allow the shoulders room to fall back, and to support the head, without throwing it *forward*. The suffering of exhausted patients is greatly increased by neglect of these points. And many an invalid, too weak to drag about his pillows himself, slips his book or anything at hand behind the lower part of his back, to support it.

Clothing for the Sick.

As a rule, it is too heavy in weight—that is, it weighs more in pounds than it ought, to give the warmth it might. Fabrics looser in texture contain more air between the fibres, and, as a general thing, they are much warmer than the more closely woven materials.

The head weighs several pounds, the arms with the shoulders several more, and all must be supported on the upper part of the chest by a few muscles. In ordinary health, these muscles have strength to do it, but with the weak or sick, they have less than enough. Each piece of clothing is an additional burden, and unless chosen with proper thought, is more than the wearer can bear, unless he can get a pillow or bed to help. Sometimes the sick person will be seen to get up and walk about, wearing a garment suitable in weight; when before, with something else, there was a complaint of constant weariness.

RECIPES

FOR

SICK PEOPLE.

Food for the Sick.

Any person having to provide food for the sick must have noticed, after a few days, the difficulty in getting a *variety*. There are really but a few things a sick person cares to eat, and does not want to eat the same thing too often. As a rule, the sick prefer *plain* articles of the best quality, cooked in the most approved, simple style. As a general thing, they do not eat game or fish, and prefer good beef to almost any thing else, unless lamb-chop. Occasionally poultry is eaten, usually chicken. Greasy foods, or foods cooked in grease, will not be tolerated; nor are spiced or highly-seasoned dishes as apt to be liked as those cooked plainly.

As sick people do not eat a great deal, too great a variety should not be offered for any single day. If there is reason to think the illness may be a long one, the nurse should keep in mind her resources in the shape of foods likely to be eaten by that particular patient in that special attack, and map out the future accordingly. In this way, the more delicate and concentrated can be held back until she shall have been

compelled to abandon some of the others, quite as useful early, but less so later. For instance, where beefsteak, lamb-chop, or soups *can* be given, the nurse should keep back the beef-tea until the later stages of the disease, when the stomach can digest only the most delicate food. By *delicate* is meant digestible, with the least tax upon the stomach; not expensive, nor saturated with some almost intolerable "flavor," as some persons about a sick-room seem to imagine.

The reader has doubtless often seen beefsteak, lamb-chop, beef-tea, and brandy and cream, given during the day, when the first *alone* should have been used.

Tenderloin cut across the grain, as all meats should be, is the best part of the beef for the sick. The steak should be about half an inch or a little more in thickness, and broiled over fresh coals not giving off smoke. The object, in broiling all things, should be at once, before the *escape* of any of the contained juices of the piece, to secure over the whole surface a film of cooked substance which will act as a shell to *retain* the useful parts within until they become cooked.

The meat should be cooked enough to be palatable. The hard, dry portions should be rejected as carefully as scraps of bone. Pepper and salt should be used according to taste.

A tender lamb-chop, if properly broiled, with the fat removed before serving, is often acceptable, and is as easily digested and as nutritious as anything likely to be given.

The convalescing often strongly express a desire for something salt, and with a different taste from the ordinary food. Thin shavings of dried beef cut across

the grain, or a fragment of broiled smoked herring, or herring-roe, is a grateful and usually harmless addition to the meal.

Roasted potatoes are preferred by the sick, as a rule, to all other forms of preparing them. To get a couple of mealy ones suitable for the delicate, at least half a dozen should be cooked. During convalescence, when beefsteak begins to be eaten, a little well and drily cooked tomato is not only palatable, but useful. Potatoes fried in very thin slices, without a particle of grease appearing on them ("Saratoga style"), are often grateful to the convalescing.

Boiled Rice.

Most readers think this is something easily prepared. So it is, perhaps, but few nurses have an idea of the necessity of having it properly done—that is, cooking it until every grain becomes perfectly *softened*. If the grains are not reduced to this soft state, rice is almost certain, when swallowed, to irritate the digestive organs, and instead of soothing the parts and sustaining strength, will actually produce diarrhoea, etc. This has been frequently noticed in hospitals.

When properly boiled until each particle becomes so softened that the *grain* cannot be detected when eaten—but not cooked so much that the shape of the grain is destroyed, and the mass reduced to the appearance of paste—there are few articles of diet for the sick which can be made more acceptable to the taste of invalids than boiled rice.

Milk Blanc-Mange.

A quarter of a pound of loaf-sugar, one quart of milk, one and a half ounces of good isinglass. Pour the milk into a lined saucepan, add the sugar in powder, and the isinglass in small shreds; then boil gently until the latter ingredient appears all dissolved. Keep stirring over the fire for about ten minutes, taking especial care to prevent these easily scorched materials from becoming so.

Strain into a pitcher, and when nearly cold pour into a mould oiled with a little of the freshest oil. When required for use, it may be carefully turned out.

Rice Blanc-Mange.

A quarter of a pound of the best rice-flour, two ounces of loaf-sugar, one ounce of butter and one quart of milk. Mix the ground rice with some of the milk into a perfectly smooth paste, placing the remainder of the milk into a lined saucepan with the butter, sugar, and enough lemon-peel to give the desired flavor. Bring the milk to the boiling-point, and stir in the rice-paste. After boiling for ten minutes, pour into a mould previously greased with salad-oil. When perfectly cold, it is ready for use upon removal from the mould.

Arrow-root Blanc-Mange.

Two tablespoonfuls of fresh arrow-root, three quarters of a pint of milk, lemon and sugar to the taste. Mix the arrow-root to a perfectly smooth paste with a portion of the milk, putting the rest into a lined saucepan with the pulverized sugar, butter, and lemon-peel.

Let it boil, constantly stirring until thick enough for use, then pour into the mould until cold enough for serving.

Corn Starch.

To one tablespoonful of corn starch add enough cold water or cold milk to make a perfectly smooth paste. Then pour this into half a pint of boiling milk and carefully boil a few minutes, stirring it all the time, and putting in a little salt. Sweeten to the taste and add any essence or spice liked by the person who is sick. Then set aside to cool.

This, like everything else which contains milk, requires great care to avoid *scorching*, as the least trace of it will be detected by the person for whom prepared. For this reason, a saucepan with thick sides is usually preferred, and the heat should always be applied to the *bottom* of the vessel. In stirring be cautious not to splash against the sides of the utensil more than can be helped, for there the scorching usually takes place.

(See remarks on page 93, at the end of "Milk for Infants.")

Arrow-Root.

Take a teaspoonful of arrow-root and mix with it enough cold water to make a paste free from lumps. Pour this slowly into half a pint of boiling water, and let it simmer a while until it becomes thick and jelly-like; sweeten to the taste, and add a little nutmeg or cinnamon. Instead of the half pint of boiling water, the same quantity of boiling milk, or half milk and half water, may be used. This will make it more nutritious.

Oatmeal Gruel.

Mix a tablespoonful of oatmeal with a little cold water until it makes a smooth paste ; pour this gradually into a pint of boiling water and boil slowly for twenty or thirty minutes, stirring it all the time, and being very careful not to let it scorch in the least. Salt, spice, and wine or brandy should be added to it, unless there is some good reason for not doing so.

Formerly, the Scotch oatmeal was generally ordered, but the Bethlehem, Canada, and, quite recently, the brand known as the Ohio oatmeal, have been found quite as useful and palatable. On the score of economy alone, under these circumstances, it may be well to give the domestic brands a fair trial.

Boiled Flour.

Take a pint of good wheat flour, tie up in a piece of muslin in a firm mass, as you would a pudding, put it into a pot of boiling water, and let it boil from morning until bedtime. Then take it out and let it dry. The next morning remove the muslin, peel off and throw away the thin rind of dough, and with a nutmeg-grater grate down some of the hard, dry mass into a powder. One, two, or three tablespoonfuls of this powder may be used, by first slowly and carefully rubbing it down into a smooth paste with a little milk, then mixing this paste carefully with a pint more of suitable milk, and bringing the whole to the boiling-point. Be careful, as you must with everything else containing milk, to keep from scorching ; and this can best be done by applying the heat to the *bottom* of the vessel alone, not to the sides.

The boiled flour thus prepared, can be given by a spoon or through a nursing-bottle.

Panado.

Take a slice of wheat bread, break into fragments, and sprinkle over it a teaspoonful of ground cinnamon; pour on it a pint of boiling water, and boil a few minutes until well mixed, when some sugar with a little grated nutmeg must be added. If desirable, a piece of butter may be put in, and also some wine or brandy.

Barley Water.

Take nearly an ounce of pearl barley and wash it well, then pour on it a pint of boiling water and carefully boil to one half. Strain the liquid through a towel, then add some sugar and lemon-juice. A small piece of orange or lemon-peel, dropped in while boiling, makes it more acceptable to many persons.

Currant-jelly Water.

A tablespoonful of currant jelly thoroughly mixed through half a pint of cold water.

A sick person may drink as much as wished of this acid water. As with all other drinks for the sick, a little at a time, and often repeated, is the way it should be given.

Toast-Water.

Carefully remove the crust from a slice of stale bread, and toast the slice through on both sides, but do not burn it. Break the slice into three or four

pieces, and put them into a pitcher with a small piece of orange or lemon-peel. Pour on a pint of boiling water, cover up with a napkin, and, when cold, strain off the water for use.

It should be freshly made, especially in warm weather.

Toast-Soup.

Take a thin slice of stale wheat bread, and toast until it is brown through and through; but be careful that you do not burn it. While it is still hot, spread some butter over it, but no more than will strike into the bread without leaving any on the surface. Now break it into fragments, put the pieces into a pitcher, and pour on rather more than half a pint of boiling water. A little pepper and salt improves the taste; so they may be added.

This drink is usually found very acceptable to sick or delicate persons, and at the same time is quite nutritious. It was much recommended under the name of "toast-soup," by the late Dr. William Darrach of this city, and gave satisfaction wherever used.

Brandy.

When brandy is ordered for a sick child, it is meant that a few drops, according to the age, should be given in water or some sweet milk as often as the condition of the patient requires it. Unless told to do otherwise, keep it in reserve for the time of the day when the sufferer appears to exhibit signs of being weaker than usual, and then give enough to restore it to its average condition in health, trying not to get *above* that. Usually it is more frequently needed in the

latter part of the day, or quite early in the morning, than at other times.

Wine-Whey.

Put half a pint of sweet milk over the fire, and as soon as it begins to boil, slowly pour in a wineglass of sherry wine mixed with a teaspoonful of sugar. Grate into it a little nutmeg, and as soon as it comes to a boil again, remove it from the fire. When cool, strain for use.

Milk-Punch.

Pour two tablespoonfuls of good brandy into six tablespoonfuls of sweet milk, and add two teaspoonfuls of ground loaf-sugar. Grate some nutmeg into it, and the punch is ready for use.

An adult person can take a tablespoonful of this every two or three hours, but for infants or children you must remember that *one-fourth* of it is brandy. Milk-punch is much ordered by physicians for people who have low fevers and for those who are debilitated.

Brandy, Egg and Milk.

Take a fresh egg; break it; separate the yolk from the white, and whip each with a fork, until it becomes a froth. Then thoroughly mix them together, and add enough good milk or ordinary cream, well sweetened with finely-ground loaf-sugar, to make a tumblerful. Next pour in a tablespoonful of good brandy; if this is not convenient, a proportional quantity of the best whisky may be used instead. See again that it is well mixed with a fork, when it will be ready for the sick

person. A little grated nutmeg added improves the taste to some people.

(In using any of these Recipes which include stimulants, always bear in mind the risks suggested on page 49.)

Milk and Cinnamon.

This is often recommended in case of diarrhœa, especially the form occurring in hot weather among children.

Take half a pint of new fresh milk, add enough ground cinnamon to get the desired flavor, and then some white sugar. The cinnamon from the apothecary, broken into little bits, is better, as a rule, than the "ground cinnamon" kept in the kitchen.

This drink may be given warm, or taken cold. Sometimes a teaspoonful of brandy can be added.

Extracts of Beef.

There are several such articles advertised and sold, but as a rule there is a marked difference between them and the article prepared at home. If one package should turn out defective, the sick person frequently takes such a decided prejudice against the whole *class* of such food that the nurse has reason for regretting she did not undertake to make it herself. When used, this risk must always be taken into consideration.

Essence of Beef.

Take a pound of fresh beef, the veiny part from the neck, as free as possible from fat; cut it up into very small pieces, or, what is better, shred it with a fork. Sprinkle over it a little salt, and put the meat into a

stout stone bottle, such as mead or Scotch ale comes in ; cork tightly and tie cork down with a string. The cork is usually not put in until steam begins to escape from the bottle. Stand the bottle in a vessel of cold water, which should slowly be brought up to the boiling-point, and kept at it for at least four hours. To prevent the bottle from breaking against the side of the vessel, by the movement of the boiling water, it should be secured by a piece of cord. Strain through a piece of coarse linen ; then let the liquid stand awhile in a cup, and, with a spoon, carefully skim off any fat which may have arisen to the surface. It may be seasoned to the taste with pepper and salt.

The liquid obtained in this manner is one of the most agreeable and highly nutritious articles of diet which can be prepared for the sick.

Invalid's Soup.

To one pint of the essence made as above, quite hot, add half a pint or rather less of the best cream, likewise hot, to which the yolk of a fresh egg has been added.

Mix them carefully together in a lined saucepan, and after seasoning, as much may be served as required.

Liebig's Beef-Tea.

Take a pound of lean, fresh beef, the veiny part from the neck, free as possible from fat, and cut it up into small pieces like mince-meat ; then slowly and thoroughly mix with it an equal weight of water (about a pint). Place it in an earthen vessel, and heat until it begins to boil. After it has boiled for a

minute or two, take the vessel from the fire, and strain the liquid through a towel. The strained liquid, which is the beef tea, may now have added to it enough pepper and salt to suit the taste.

Beef Broth.

Take a pound of suitable beef, not the steak, as is generally suggested, but of the neck or shoulder; a piece well filled with veins, free from fat adherent to it; divide into small slices with a sharp knife; place in a pan, add the proper quantity of salt, then pour on a quart of cold water, and treat it as in the directions for Chicken Broth.

Chicken Broth.

Take a small chicken, remove the skin and all the fat between the muscles, and divide it, longitudinally, into halves. Then remove the lungs, which lie in the depressions in the backbone, as well as everything else inside adhering to the side-bones and back. After having thus carefully prepared the halves, with a sharp knife subdivide each of them through the bones and muscles, into thin slices of as uniform size as possible.

Put these pieces into a pan, sprinkle with salt, and then pour over them a quart of cold water; place on the fire, and bring the water slowly up to a simmering point, keeping it there, after it has reached that point, with a slow fire, for an hour and a half. Then remove from the fire to some place near, where the heat will be kept up; let it remain there half an hour, and then strain through a sieve, so as to separate the fibre from the fluid.

A clove or two, half a dozen pepper-corns, a few allspice, a stalk of celery, or some of the popular kitchen herbs, can be added during the cooking, particular regard being had to the taste of the person who is to use it.

Thus prepared, we have a palatable preparation of sufficient strength for an invalid whose condition admits of an animal diet in a light form. Poured upon thin slices of toasted stale bread, plain or thinly spread with butter—or with rice, barley, sliced potato, or anything else of the kind—a desirable addition can be placed on the list of food suited for convalescents.

Mutton Broth.

This is prepared from a pound of good mutton, free from fat; slice, and further treat as directed for Beef Broth. After simmering for an hour and a half over a slow fire, let it boil half an hour longer before setting it aside, preparatory to passing through the sieve.

Stewed Oysters.

Take half a dozen first-class oysters, of medium and of the same size, just removed from the shell. Place in a lined saucepan with the liquor, and pour on a gill and a half of boiling water. Let the vessel stand over the fire a moment only, and skim off the froth rising to the surface containing certain impurities. Then remove from the fire, and pour the contents from the pan into a heated dish, rejecting the last remaining tablespoonful of liquid containing the scales of shell, grains of sand, etc., and carefully wipe out the saucepan with a suitable cloth.

Then pour back into the saucepan the contents from the dish, add a lump of the best butter, half as large as one of the oysters, the cracker-dust from half a freshwater-cracker, a little cayenne pepper, a couple of whole grains of allspice, and a little salt, placing the vessel again on the fire. Then add a gill of fresh cream, and as soon as the oysters seem just cooked through, before becoming shriveled and hard from the heat, pour for use into a previously warmed bowl.

Cod-Liver Oil.

The portion to be taken—not the contents of the bottle, or it will become rancid—should be warmed, and if poured on the top of some ale covered with froth, and then more placed over it, so as to envelop the oil, but little trouble will be found in taking it.

A fragment of Scotch herring, broiled, first chewed, then the warmed oil, followed by another fragment, completely hides the taste. A pinch of common salt placed in the mouth just before taking the oil is said to render the liquid almost tasteless, especially if followed by another after the oil. A slice of lemon stewed with sugar, chewed and followed by the oil, and that followed at once by another slice, answers the same purpose.

The oil should be prepared and brought in ready for swallowing, and given without comment. This is to lessen the general and unmerited prejudice among those who have never had occasion to use it. Immediately after the spoon has been emptied, a napkin must be used to the lips to remove the possibility of a drop of the oil keeping about the mouth.

It is probably safe to say that two-thirds of the cod-liver oil found in store outside of the large cities, and much there too, is as unfit for use as bottled butter of ten years' keeping would be. Pure cod-liver oil is almost tasteless. Among the numerous brands in the market, the best within general reach is De Jongh's and Marvin's. The former is not superior to the latter, but being a foreign oil, is more expensive than the last. Many other brands, however, are very good. Cod-liver oil is nothing but an easily digested *food*, often necessary for the complete assimilation of the important parts of other foods. When proper assimilation does not take place—assimilation being the *conversion* of the digestive material into the proper tissues of the body—various diseases and tendencies, as tuberculous deposits, become prominent. About all the good, therefore, to come from the use of this food depends, like the good from other foods, upon the *quality* of it.

Lime-Water.

Take a piece of unslacked lime (never mind the *size*, because the water will only take up a certain quantity of it), put it into a perfectly clean bottle, and fill the bottle up with *cold* water; keep the bottle corked, and in a cool, dark place, such as a cellar. In a few minutes it is ready for use, and the clear lime-water can be poured off whenever it is needed. When the water is exhausted, fill the bottle again. This may be done three or four times; after which some new lime must be used, as in the beginning.

Milk for Infants.

There can be no doubt that it was intended that every infant should have the milk of its own mother to nourish it; but sometimes this can not be had, and then we are compelled to use another kind. Whenever infants are fed with milk, it should always be of the purest kind, and drawn each morning and evening from the cow. When this can be had, it should not be given until it is made more like human milk by adding a little loaf-sugar to it, and about one-third or one-fourth of water. The water should be hot, and the sugar dissolved in it; then slowly pour it into the milk, and allow it to simmer just a little over the fire. If you scorch it in the least, throw it out.

This is the way you do in the morning with the fresh milk, which is to last until evening, and at night you must do so again with the evening's milk, which is to last until morning.

If you do not *know* that the cow's milk is of full strength—and you will find very little that is, in a large city—it may be better if you add no water at all, or, at least, no more than enough to dissolve the sugar.

What is better than the ordinary milk, such as we get in the stores or out of wagons, is the milk of the common goat, which can always be had, fresh, in this part of the city (the south-western), all the year around, every night and morning, with but little trouble, and at small expense. Not only has it these advantages, but it resembles human milk more than does that of the cow; so much so, that it requires no sugar, and but little water. Many physicians, who have seen

both kinds used, have learned to prefer the milk of the goat to that of the cow. When brought home fresh in the morning or evening, it should be heated to a gentle simmer, cooled, and then put away into the stone bottle, closely corked with a nice clean cork, and kept in a cool dark cellar.

When an infant is to be fed,* do it in this way: have a cup and spoon, which should never be used for any other purpose whatever; scald them in hot water, and then pour into the cup as much of the prepared milk as you think the infant should use at once. After the wants of the child have been satisfied, what is left in the cup should be thrown out, especially during the hot weather, and milk fresh from the stone vessel used the next time. The cup and spoon should now be washed in hot water; then scalded, and allowed to stand awhile in the sun. If the infant soon needs more food, have another cup and spoon which can be used; and, after they are used, go through the same trouble again with them, if you call it trouble. If you do not give everything this care, the infant may become ill, and you will have a great deal more of a different kind of trouble, and run the risk of losing the little one besides.

If possible, get the milk fresh every morning and evening, and this can be done if you use that of the goat. If at any time you find that the "child's stom-

* Under the head of "Rules for the Management of Infants During the Hot Season," the Obstetrical Society of Philadelphia has recently published a pamphlet containing some brief and valuable rules upon the general management of infants during the summer; suggestions for emergencies in such cases, and recipes for several forms of diet suitable for nursing children. It can be had gratuitously at any of the Charities of the city, and many physicians, likewise, can furnish it

ach turns," as the saying is, after taking the milk, you may be quite sure that the trouble is *want of neatness*, which "turned" the milk a little before the child swallowed it. A trifling thing about the milk, which the mother's sight or taste can not detect, may not only make the infant sick, but disturb its health for several days. If the vomiting continues, take a tablespoonful of lime water, and add to it a tablespoonful of cold water and give it to the infant as a drink, between the times of nursing. If the vomiting still continues, take the child to some physician and ask him where the trouble is.

When it is found necessary to bring up an infant "by hand," as the phrase is—from an absence of the milk of the natural mother, its poor quality, or defective quantity—a little preparation in advance, for the undertaking will relieve the person who is to act as the nurse from a great deal of trouble, and perhaps increase, by one half, in many cases, the chance of life for the child. The best milk usually brought to town from dairies, as a rule, is taken from the cow the night before, or early in the morning of the day on which it is delivered. During transportation, it is subjected to what might be compared to a churning process, by the motion of the vehicle, to a warm and varying temperature, as well as to exposure to the air. The best of milk, without these acquired disadvantages as everybody must know, is one of the most delicate substances in ordinary use with which we are acquainted. A thunder-shower will sour the milk of a whole dairy. Litmus-paper will show, in hot weather, that exposure of fresh, pure milk, in a cup

or spoon, to the air for a few minutes, has developed evident changes in its character.

If the milk delivered at the door is of this doubtful character, however pure and fresh it has been, it must be evident, after a moment's thought, that the great point is to keep it from getting worse. Exquisite cleanliness, it is said, is the life of the dairy; and it will be found that the life of the child fed with milk depends, in large degree, upon the same thing. To best secure it, the following directions should be carefully observed, especially as the cost of the appliances for the purpose need not exceed fifty cents.

In the first place, always get the best milk to be had. Many people are content to regard any thing of the kind coming from a wagon as "milk." It is only the name of it.

Secondly, it should be the duty of one person alone to attend to the entire matter; and, under no circumstances, should another be permitted to interfere.

If the milk is delivered at the house once a day, get two large glass bottles, each large enough to hold the quantity obtained. See that the neck and mouth of each are perfect, and get several fresh, well-fitting corks. Never think of using a plug of paper for a stopple. Then get of the apothecary six "six-ounce" flint-glass "prescription-bottles." They should be perfectly plain, without letters or flutings. Such depressions in the glass tend to collect the milk, making it more difficult to maintain the desired neatness. The same number of rubber nipples, possibly four, will answer. Then in a wooden window-sill, at the

southern side of the house, to get the greatest exposure to the sun, drive, "sloping," half a dozen good sized nails.

After the milk has been prepared as already directed, using a vessel and spoons which have been used for no other purpose, scald the large receiving bottle, pour in the milk, wash the cork, put it in tightly, and put away. Immediately cleanse and put away the utensils used in preparing the milk. If you have no cool, dark cellar, or no refrigerator to keep the milk in, wrap it up in a blanket kept wet by sprinkling water over it, or arranging a drip so the water will constantly fall on the covering. Or it may be kept wrapped up in a covering made by lightly quilting ordinary chicken-feathers between two layers of old blankets. A protection made in this way, kept in a shady place, will preserve a piece of ice, now retailed for five cents, for twenty-four hours. The bottle of milk can be kept inside against the ice.

The large bottle used the time before for receiving the milk, should be emptied, but the milk left over should in no case be put into the fresh bottle, nor "used while it lasts," instead of new milk. The cork should be washed in hot water, well wiped, dried, and carefully put away. Then the bottle should be washed out with soap and hot water, particular attention being given to the angles, where the bottom joins the sides, and at the neck, so as not to leave the slightest particle of deposit adhering. As an additional precaution, some scouring sand with water should be shaken up in the bottle. Then stand, with the neck downward, in some place where the sun will shine on

it as much as possible, until ready for use the next day. When used, it should be "scalded" before pouring the milk into it.

No more should be taken from the larger bottle and put into the nursing-bottle, than is thought the infant can use at one time. Let the child use that quantity, and if there is any left over, do not place the nursing-bottle on the table for an hour or so, expecting that the child can use the rest; for in much less time the milk will have undergone a change unfitting it for use as food. It is no waste to throw what is left away.

This is a very important thing to recollect. A robust adult would be made sick by using such milk as a drink, and you can imagine what the continued use as food by an infant, of such a preparation, will do for it.

As soon as the child has used of the milk as much as it wishes, at once remove the rubber nipple, throw it into a vessel of water containing a little Castile soap, or a small piece of borax (a piece as large as a grain of barley to a pint of water), gently and thoroughly wash it off and out, particularly cleansing the angles and apertures, and then rinse off in water containing a little common salt. Afterward wipe carefully so as not to change the shape; put away in a cool, dry place, and do not use it again until its turn comes. Before using, rinse in tepid water.

These remarks, of course, apply to the ordinary plain nipple, to fit over the mouth of the bottle. They are not, perhaps, as useful as the kind consisting of a glass tube dipping into the milk in the bottle,

and passing through the stopple, where it terminates in a tube of rubber with a mouth-piece. After use by the child, it should be carefully taken apart, according to the directions, each portion cleansed in the most thorough manner, and not used again until its turn comes.

Now, in reference to the bottle. This should next be washed with soap and water, then scalded, removing the gummy and almost invisible portions of milk adherent to the sides of the bottle. These troublesome deposits are apt to be found where the sides and bottom join, and the best way of getting them away is by a small piece of linen, twisted around the point of a suitable wire. Then hang the bottle, bottom upward on one of the nails spoken of, and let it stay there in the sun until its turn comes.

The time consumed in this will be saved every day, six times over, by the time saved in other directions for the child; the cost of the entire outfit is less than the cost of a single prescription of the physician. In many cases, a careful observance of these minute directions will be followed, in hot weather, by a most marked improvement in the health of the child.

Under this head, it may be remarked that the almost universal habit of giving infants corn-starch, arrow-root, bread, and other forms of starchy food with the milk, is not sanctioned by reason nor experience. Starch is not an *easy* substance to digest at any age; and at this period of life, the appendages of the mouth, stomach, and bowels to effect it, are not sufficiently developed. If the starch does not digest, sooner or later it must give rise to trouble. This development may

be *presumed* upon the appearance of the back teeth used in *grinding* such food. Until then the child may be kept on a *milk* diet.

Poultices.

A poultice usually is only a desirable vehicle for imparting heat and moisture. By softening the tissues, poultices facilitate the passage of inflammatory products outward. The heat and moisture relax the tissues, and to that degree relieve the tension due to the inflammation, and to that extent relieve pain. The pain can further be eased by adding laudanum and such substances to the surface of contact of the poultice.

The materials best calculated to take up and give out the heat and moisture spoken of are in common use. There must be enough of the mass to secure and retain enough heat to be of use, and therefore a poultice should be at least an inch thick. To prevent cooling in spreading, the cloth upon which the mass is to be spread should be laid out on a heated plate or dish, and the poultice, with not enough free liquid in it to "drip," rapidly and evenly spread over the muslin. A thin piece of quite old muslin should then be spread over the surface of the poultice, so the mass will not come into immediate contact with the skin. The spread area of the poultice should be just the size required; and the fabric upon which it is spread should extend beyond the edges of the poultice material, so that the unspread selvage can be turned over the edge of the mass. This will keep the poultice from leaking away.

After having been applied as warm as can be borne, a piece of oiled silk—or even oiled paper might answer—should be spread outside to retain the moisture, and something outside of that again to keep in the other useful feature of the poultice, the heat.

Such applications must necessarily be removed and renewed every little while. If poulticing is to be done at all, it must be done well, and that is, properly. A few hours of poulticing, applied every half hour, will do more good than many hours of poulticing done in the usual way.

Flaxseed Poultice.

Take of flaxseed meal a sufficient quantity, and pour on it, little by little, enough cold water to make of suitable thickness. Then heat the entire mass. A small piece of lard is sometimes added to keep it from adhering to the part.

Slippery-Elm Poultice.

It is made like the above, only using ground slippery-elm instead of flaxseed meal.

Bread-and-Milk Poultice.

Remove the crust from the part of a loaf of stale bread, and crumble the bread into a bowl. Pour on this enough sweet milk to cover it, and simmer over a fire, stirring it all the while until the bread becomes completely broken up. The poultice is now to be applied to the patient as warm as can be borne.

Yeast Poultice.

Mix a pound of linseed meal or oatmeal into half a pint of yeast. Then heat the mixture over a gentle fire, stirring carefully to keep from burning. When it becomes warmed through, it can be spread on linen like any other poultice.

Yeast poultices are often ordered by physicians when there is a fœtid discharge from ulceration, which it is supposed to correct.

Bread-and-Water Poultice.

Take a slice of stale bread, carefully pare away the hard brown crust which lies around the edge, and then dip it into a vessel of hot water; lift it out at once, and if not too hot apply to the part where it should go.

Mustard Plaster.

Take mustard flour (which is ground mustard) and add to it an equal quantity of rye or wheat flour. The rye flour is usually preferred to wheat flour, because it is thought to remain moist for a longer time. Mix them together thoroughly on a plate, and add as much *cold water*—not vinegar, which impairs the usefulness of the mustard for this purpose—as may be necessary to make a soft mass. Spread evenly over a piece of muslin, and to prevent the mustard from adhering to the skin, a piece of gauze or some such material should be spread over the surface of the plaster.

If the plaster is intended for a child, it should be made at least half the strength by using one-half less of the mustard.

Whenever mustard plasters are used, the skin under it should always be looked at every few minutes, and the plaster removed as soon as *decided redness* is found. In no case must it be left on long enough to produce blisters, because they are painful, more difficult to heal than blisters made by most other substances, and prevent the physician from applying other remedies to the part for the relief of the patient, should the mustard not have answered the purpose intended. A mustard plaster is one of the most valuable domestic remedies which can easily be obtained, but it should never be allowed to produce a blister. This is specially to be observed in the case of children or delicate persons.

Spice Plaster.

Take of powdered cayenne pepper, powdered cloves, powdered cinnamon and rye flour, equal quantities; mix them together on a plate, and add as much honey as will make a soft mass; spread upon a piece of muslin or other close fabric.

Whenever this plaster becomes dry, and begins to crumble off from the substance upon which it is spread, a fresh one should be made.

Flannel Dipped in Spirits.

Take a piece of old, soft flannel, heat it before the fire, then fold it into the size and shape required. Dip it into hot water and wring it dry. While this is being done by one person, some one else should put some common whisky into a shallow dish, over the fire, and heat it. Be very careful that the whisky

does not catch on fire. As soon as heated enough, dip the flannel spoken of into it, and squeeze out any excess of spirits, which would merely drip away to the annoyance of the sick person. Have the skin of the patient exposed, and rapidly apply the flannels, as hot as can be borne. Over this flannel apply another piece, which has been heated quite hot and folded like the first one. If desirable, a bandage may be brought around to secure them in position. As soon as the inner flannel which was dipped in the whisky has become somewhat dry, another one should be at once prepared and applied in its stead.

In painful affections of the bowels, chest, etc., etc., this flannel dipped in spirits is one of the most sure and speedy means of relief which can be obtained until medical assistance is secured. In cholera, too, it should be invariably applied at once, not only to the stomach, but to the hands, feet, arms and legs. If the pain is very great, or does not yield to a few applications of the flannel, some cayenne pepper may be added to the heating spirits.

Heated Applications.

A bag somewhat larger than the part to be covered should be made of thin flannel, and this should be half filled with hot bran, hops, camomile flowers, or whatever is to be used. Apply to the side or part where it is to be kept, and retain it there by a bandage. When the bag and contents become cooled, quickly remove, substituting a few thicknesses of hot flannel until the bag can be again heated by placing it in the oven of a stove, or by some other convenient method.

Common salt is often used in this way—sometimes by filling a stocking with it—when hops or the other articles can not be had or are not desired. Common salt, wheat or Indian corn even, can be used, although their weight is somewhat objectionable, as it permits them easily to become displaced.

Turpentine-and-Egg Liniment.

To the yolk of one egg, well beaten, add two wine-glassfuls of turpentine, mix them well together, and then pour in a wine-glassful of the strongest cider vinegar. After these have been made to unite by stirring, pour in, little by little, three wine-glassfuls of water.

This will be found a very valuable liniment, and one which can be made at all times.

Lead-Water Lotion.

When surgeons order “lead-water,” they mean a peculiar preparation which can only be had at the apothecary’s. The following is a useful substitute, if the surgeon gives his assent, and as it is much less expensive, may be tried where the cost is a consideration :

Take half an ounce of the sugar of lead (acetate of lead), dissolve in an earthen vessel with a pint or even a quart of cold water, adding a couple of tablespoonfuls of good cider vinegar. Pieces of linen dipped in it and applied to inflamed surfaces, as a rule, will give as satisfactory results as the more expensive preparation.

An ounce of laudanum added will give a valuable substitute for the popular "lead-water and laudanum."

It must be kept where no one can swallow it, as poisonous results follows from the lead.

Water Dressing.

This is something often ordered by the medical attendant, and is a much simpler thing than is usually imagined. It is so simple, in fact, that many persons neglect to use it properly.

It consists in a single or double layer of old coarse linen or muslin, large enough to cover the part, wet in cold water, and kept constantly *wet*, not damp. This is done by removing the piece of linen, dipping in a pan of water, squeezing out the excess, so there will be no dripping and re-applying it to the part; or, by taking up some of the water with a sponge and gently squeezing out enough on the cloth to keep it wet. The latter plan is usually the better, as there is no disturbance to the parts beneath, an important consideration in many cases.

As the water evaporates quite rapidly, it will be safe to say it is one person's constant business to secure the advantages of such a dressing. Sometimes a vessel of water can be judiciously placed near by, and a moistened string over the side, one end in the water the other over the linen, will give, drop by drop, just enough moisture to answer the purpose. No dripping on the bed or person should be permitted. It is not only annoying, but the evaporation gives rise to chilliness.

Baths for Children.

The kind of bath ordered is usually the one for the hot weather of summer, or the "hot bath" at night, in the cool or cold weather. The latter should never be used, unless directed by the physician or some person whose judgment in these matters is good.

Ordinary Bath.

Take some water, neither too warm nor too cold, pour it into a wooden tub or a large earthen vessel, such as a hand-basin, which should be of about the same temperature as the intended water. It is better not to use a metallic vessel, unless it is a regular bath-tub. The water should *never* be so cold as to make the child *shiver* when put into it; and be very careful not to let the child strike the cold edge of the vessel, which is apt to frighten it, and give future trouble when you attempt to bathe it at another time. See that the doors and windows are closed to keep little currents of air out of the room, which are apt to give it a cold. The soap, towels, and clean clothing for dressing the child again, should be got in complete order and placed conveniently for use. Remove the child's clothing as you would at night, and be careful not to alarm it by anything you do. Place it sitting in the water, and then gently and rapidly wash the entire body, using some soap. The length of time the child should remain in the water, must be left to the judgment of the mother; but in *no case* should it be continued until its lips and fingers become blue, or its teeth begin to chatter. Take it quietly out, and with a soft, dry, or even warmed towel, begin at the face

and gently dry the entire surface of the body. Do not *scour* the skin with a single fold of the towel, but have it doubled. If you wish, you may use a coarser towel afterward. Dress the child as soon as possible, and be careful not to move it about the room too much before it is clothed, as you must remember a person moving about undressed becomes chilled much sooner than one who is kept quiet.

In the hot weather of summer, such a bath may be given once every day, unless there is some good reason for not doing so.

When a *bath* is ordered, a bath of *water* with soap is always meant, and in no case should mustard or anything else be used unless you are told to do so.

Salt Bath.

This is given like the one just described, only you add as much common salt to the water as may be necessary. It is well to remember, that "salt cools water," as the saying is, so you must have the water rather warmer before the salt goes in than you wish the bath to be after the salt dissolves.

For the purpose of bathing, it will be found that the ordinary coarse salt is quite as good as what is called "rock salt."

Hot Bath.

This bath is not often necessary for infants or children, and when given it should be by the advice of some competent person. Physicians frequently order it in certain affections of the chest, which usually occur

in the cold weather ; and when ordered, do it as follows, unless a different plan is told you :

Take an ordinary hand-basin, or, if it is not large enough use a small wooden tub, and stand it in front of a fire until the inside becomes quite warm. Then pour into it the water, which should be as hot as the child can bear without inconvenience. The skin of an infant is much more sensitive to heat and cold than a grown person's hand ; so it is well not to forget that what may appear only warm to you will prove too hot to the child. As in the " Ordinary Bath," just described, see that every door and window has been closed, and let no one come into the room until the child has been bathed and dressed. The clothing should be carefully removed, and while doing this do not let the child become frightened, as it often will, at your preparations. Then stand it in the tub, wash its limbs and the lower part of the body. The child should now be made to sit down in the water ; then, with the towel wash the other parts of the body, neck, and face, which are not under the water. Do it quickly, but *never* forget to be gentle. A little Castile soap may be also used.

The length of time the child should remain in the bath, must, as in other cases, be left a great deal to the intelligence of the mother ; but usually it should not exceed two minutes. A good general rule, in the absence of a better one, is to take it out as soon as the perspiration breaks out on the skin. Where the skin is wet, this is hard to tell ; but if you will look at the forehead, close to the hair, little beads of moisture can be seen coming out on the reddened skin.

The child has now had the bath, but the more important things are yet to be done. The first of these is to have an old soft towel, which has been made quite warm at the fire; then begin to dry the face, neck, shoulders, and downward as far as you can. After this, lift the child from the tub, and finish the gentle but rapid use of the towel. The clothing which is to be next put on, should have been all arranged for use before the child's garments were taken off for the bath, and the linen, flannel, and whatever else is to be put on, all nicely warmed before the fire. Lastly, have a small blanket—the one used for the cradle will do—and after it has been warmed, wrap it around the child, secure it at the neck with a pin, and the little one is ready for the bed. If all of these things have been done, and in this way, the child feels quite comfortable, and it would be a pity to put it into a cold bed; so, while you are dressing it, let some one take a hot iron and with it go over the place in the bed where the child is to lie.

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THE GROWTH OF ITS ASSETS.

In 1884 its total assets amounted to.....	\$103,876,178 51
In 1891 its total assets amounted to.....	159,507,138 69
A gain of nearly.....	\$56,000,000 00

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The total income in 1884 was.....	\$19,095,318 41
The total income in 1891 was.....	37,634,734 53
Gain in 1891 over 1884.....	\$18,539,416 12

THE TOTAL INSURANCE IN FORCE.

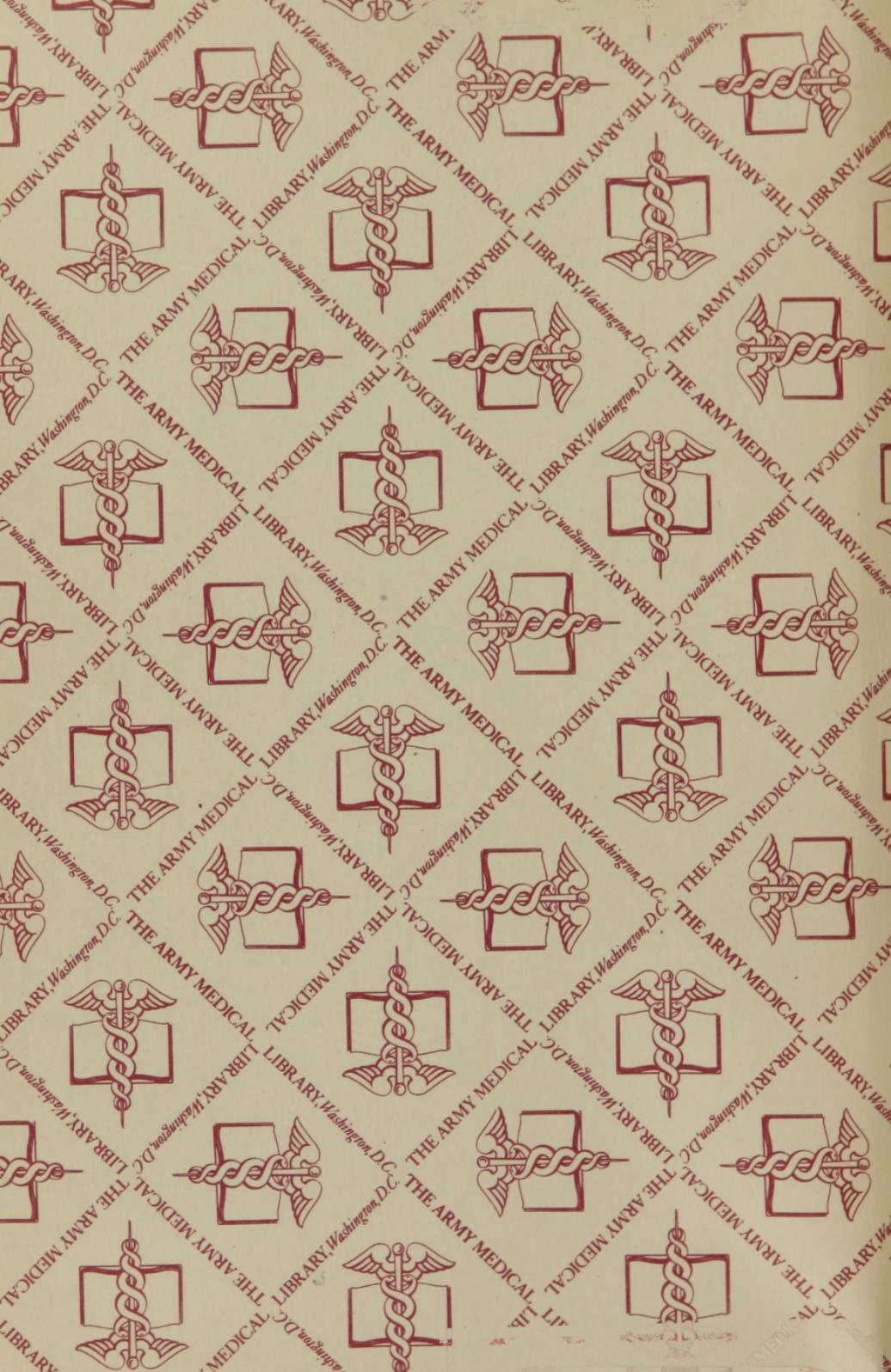
In 1884 the total insurance in force was.....	\$351,789,285 00
In 1891 the total insurance in force was.....	695,484,158 00
Gain of Insurance in force.....	\$343,694,873 00

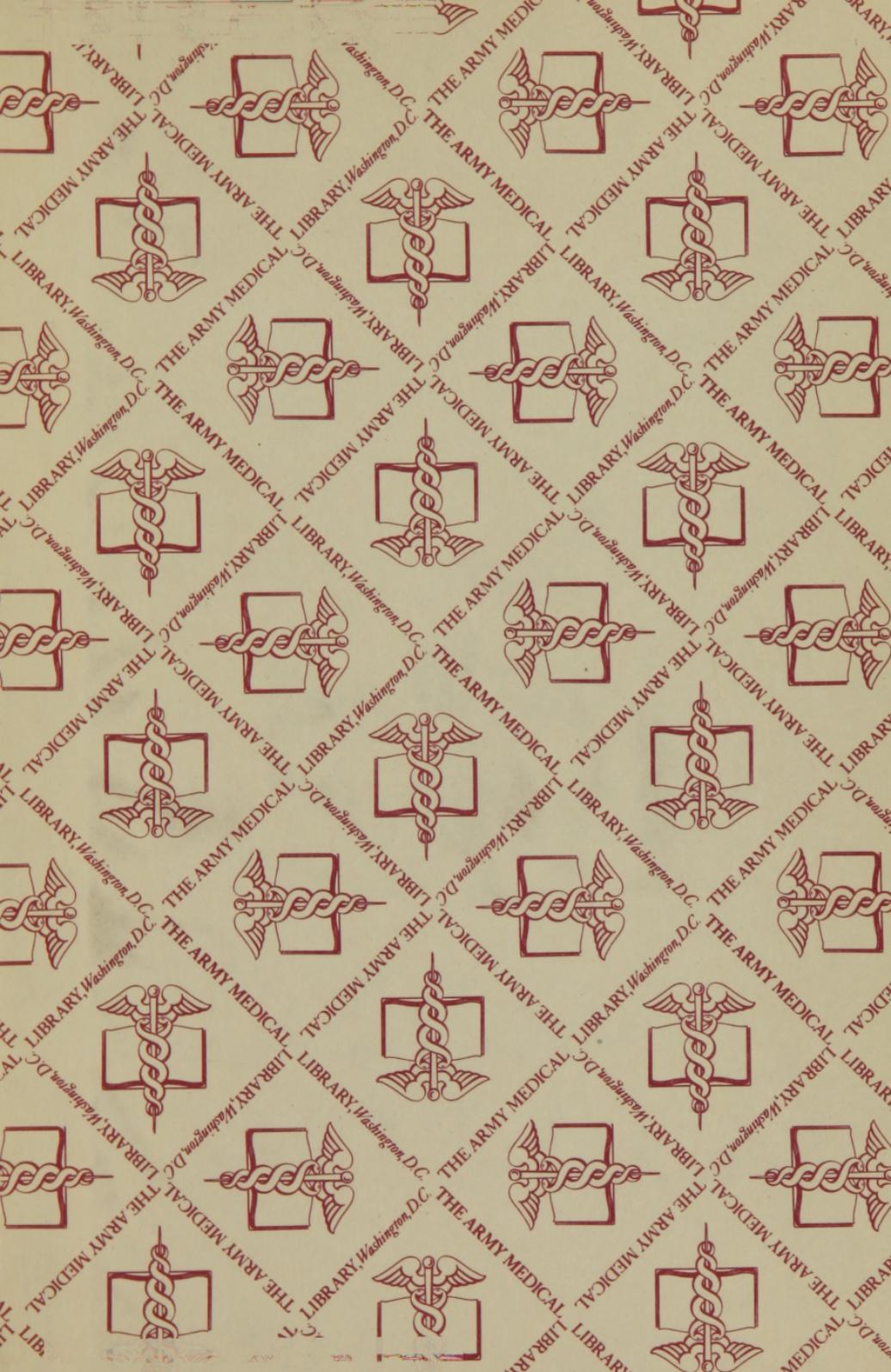
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