GOOD HEALTH

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THE DANGERS IN WATER.*

PROBABLY no article which we commonly employ is so great a menace to life and health as water, as there is no error in living that a person can commit which is so immediately dangerous to his health as the use of impure water. In the spring of the year, water becomes especially dangerous because the contaminating causes are then particularly active, investigation having shown the germs in the water to be excessively abundant and virulent at that time.

We hear a great deal of complaint about water's being hard, and about its not having a pleasant flavor, and of its being contaminated with certain gases or mineral substances. But the danger from these sources is really insignificant; for while there are some diseases produced by hardness of water, or by lime salts contained in it, — sulphates of lime or carbonates of lime or other mineral substances, — these are disorders which are really chronic in their nature, and comparatively rare. But the diseases due to germs are of such a character that they often cause death in a few weeks, and sometimes affect large numbers at once.

The germ-constituents of water have not been thoroughly understood until within the last few years, but by careful study of water by the methods which are now well known and commonly employed by bacteriologists, it has been found that there are a great variety of germs contained in water, especially that of dug wells, which is the water most generally used for drinking purposes throughout the country. Even in spring-water, and in waters supplied to the large cities, germs are also exceedingly abundant. The only water which is absolutely free from them is distilled water. Rain-water breeds them in great numbers. When water becomes stagnant, and remains in that condition for some time, the germs become still more numerous. Of course some of these germs are far more dangerous than others; but an eminent bacteriologist has found at least thirty different kinds in the intestines, each of which produces a deadly poison.

In water we are likely to take germs in a way which is certain to do the most mischief. If germs are taken with the food, they do not always prove harmful, because the gastric juice will destroy at least a part of them. But we ordinarily take water between meals, when the stomach does not contain any considerable amount of gastric juice; and the germs, not being destroyed in the stomach, are

*From a lecture by J. H. Kellogg, M. D., before the patients of the Battle Creek Sanitarium.

carried down into the duodenum and the small intestines, where the digestive juices are not so destructive to them. Here they produce poisons which affect the system just the same as poisons outside of the body affect it; and the result is such diseases as typhoid fever, cholera, dysentery, and many other maladies that are recognized as being due to poisons introduced into the system by germs in the food and drink. The high temperature, the vomiting, and the purging of cholera morbus, and the violent irritation of the intestines in dysentery and inflammation of the bowels, are all symptoms due to poisons generated by germs. No doubt many a person while traveling on the cars has taken a fatal dose of typhoid fever or some similar malady in a glass of water from the water-tank.

"But," it may be asked, "are not germs in water necessary to keep it pure? Are there not always animalculæ in living water? And are they not necessary to its purity?" — Most certainly not. While water nearly always contains animalculæ, it does not necessarily contain them in order to be pure. When they are there, it is because there is something for them to eat; and it is the things which they subsist on that are dangerous. It is not the animalculæ which are so mischievous, — in fact, some of them are beneficial, because they destroy things that are far more dangerous, — but it is the microbes, or germs, that are dangerous.

Now there is one thing that can be done which will always protect us from this danger, and that is, to take into the stomach no water which has not been boiled. If we take no water except distilled water, or that which has been thoroughly boiled, we run no risk. Even filtering is not a means to be relied upon; it is possible to remove all the germs by filtration, but ordinary filtration does not do it. There is no filter that is made, or that can be made, which will remove all the germs from water for any great length of time; for it soon becomes so filled with them as to be itself a source of contamination rather than a means of safety. Filters are necessarily made up of a porous substance in order to allow the passage of the water, and the germs will go anywhere that the water goes. It has been found that even limestone rocks can be penetrated by microbes. At first the water which passes through a good filter will be comparatively free from germs; but the germs will soon grow all through the filter and completely contaminate it.

The Pasteur filter is the best filter made, but even this is not safe for more than a few weeks. After that, the contents of the filter must be baked in an oven at a temperature of 300° F., which will be sufficient not only to kill the germs but to destroy their bodies. The Pasteur filter is the only one that can be renewed in this way. But the safest and best way is to boil the water before it is filtered.

A few years ago, Professor Koch and a company of fellow scientists went to Egypt to make a study of cholera. They had no fear of contagion, although they were not accustomed to that climate. They spent weeks among cholera patients; they examined the discharges of cholera patients and the bodies of those who had died of the disease, so that they were exposed in the most thorough manner possible; and yet only one of them contracted the disease. The reason was because they ate no food that was not thoroughly cooked, and drank no water that was not boiled and filtered through a Pasteur filter. One of the company ventured to drink some water which had been neither filtered nor boiled, and he was the only one who contracted the disease. If this simple precaution were generally observed, it would certainly do much to secure immunity from diseases which reap yearly a rich

harvest of victims. There are certain semicivilized and savage peoples who apparently take this precaution from instinct, and would no more think of drinking their water raw or uncooked than they would of eating their potatoes or yams in that condition.

In India every village has its common water-tank. This tank is simply a hollow basin scooped out of the earth, with the bottom cemented in some way so as to hold water. There are no running streams in that country, but there are at certain times of the year heavy rainfalls, and these tanks are so situated as to collect large quantities of the water. It is a religious duty of the Hindus to bathe every day, and so early every morning they go out and bathe in this tank. Later on the washerwomen come to this same fountain and soak and wash their clothes in it. When they go home, they take along some of the water from this same source to cook their dinner with. I have myself seen this plan used in Cuba, Mexico, and Italy. It may be economical as to water, but it certainly is not so as to life, and is no doubt largely responsible for the prevalence of cholera and other such epidemics among these peoples.

We are naturally disgusted with such a filthy custom, but it is a fact that in this country, with all our boasted progress in science, we actually do worse things in this respect than the Hindus. The water in these tanks is not so badly contaminated as that in many of our wells, surrounded by outhouses, pigsty, cesspool, and barn-yard, the filth of which drains through the soil into the well with every rain that falls.

We seem to be utterly thoughtless about what takes place underground and out of our sight. In this respect we are as stupid as the ostrich, who buries his head in the sand whenever he is pursued, and feels perfectly safe. If he cannot see his enemies, he thinks there are none there. We put this filth out of our sight, and think no more about it. For instance, dirty water is thrown into the sink and carried by a pipe into a cesspool, and we think no more about it. We put filth into holes in the ground; and if it is only out of sight, we think we are safe. The fact is, these sources of disease are far more dangerous when they are out of our sight than when they are exposed on top of the ground. They would then be more offensive to the senses of sight and smell, but not nearly so dangerous to life, because the natural means which would be brought to bear upon them — the ozone of the air, the sunshine, and the germs in the air — would soon seize upon the filth and reduce it to a harmless condition; and the winds, blowing over it, would scatter and dilute it at length, so that it would no longer be concentrated, and therefore less likely to produce harm.

Ice, especially that which is obtained from rivers, contains more or less germs from the sewage which is turned into them. It is commonly supposed that water is purified by freezing; but this is true only to a limited degree, as some of the most dangerous disease germs are rendered no less virulent by freezing.

There is no doubt, also, but that we are exposed to disease from the milk of cows who have drunk bad water. When we use this milk without taking the precaution to boil it, we get the bad water, perhaps with all its mischievous characteristics intensified. Water for cows should be as pure as possible, or else we must boil the milk. It should certainly be boiled from the first of May to the first of November; and if it were boiled the year round, there is no doubt but that the danger from tuberculosis would be greatly lessened.

When we swallow food or water in-

fected with germs to such an extent that nature's great disinfectant, the gastric juice, cannot overcome them, nor the bile finish their destruction, we wake up in the morning with a bad taste in the mouth and a coating on the tongue, which means that the alimentary canal is swarming with germs, and they work up into the mouth and are coated on the tongue like mold on a wall. These germs grow and develop, and set up fermentations until the whole alimentary canal is filled with poisons, and the result is an attack of typhoid fever or some so-called bilious disease.

It may be thought that I am making too much of this matter,— exaggerating the danger somewhat,— but such is not my intention. I desire simply to show that there is a potent cause for the increase of sickness and mortality during the summer and autumn months, and to impress upon the minds of all the fact that the prevention is to a large degree in their own hands. This subject is one of so great importance that I think it cannot be too widely agitated. The medical journals and newspapers ought to be full of it at this time of the year, and every opportunity should be taken of teaching the people the importance of the character of the water which they drink, and the necessity of protecting themselves by sterilizing it by boiling.

Microbes in Ice.— The simple fact that ice appears clear is no proof that it is pure. You cannot see microbes with the naked eye. The clearest ice may be the most dangerous, and the popular delusion that ice is purified in being frozen is a very sad one. Water will retain its impurities, in spite of its being frozen, for months, and even years. The number of microbes in ice is not reduced by freezing. Only lately it was shown that ice taken from the river Spree in Germany contained one thousand seven hundred microbes to the cubic centimeter, while ice from the lake of Geneva contained two hundred and ten bacteria to the centimeter. Professor Christomanar, of Athens, has shown that freezing may protect from certain impurities, but these are not the most injurious ones.

Usually ice companies cut their ice as near as possible to the large cities so as to reduce the cost of transportation. This is the case with New York, where ice is taken from the Hudson, just outside the city. Only a small quantity of the ice supplied to New York is shipped from the lakes of Maine and the Adirondacks, most of it coming from near-by lakes which receive the sewage discharges of numerous villages. There is only one absolute protection against the disease germs that ice carries. This is *distillation* or *sterilization* of the water before it is frozen.

The question of the contamination of water previously pure, by adding to it ice from an uncertain source, is a very important one. This consideration applies particularly to invalids and sick people, to whom ice is such a delicacy, and at times even a necessity, and with whom it is important that only the purest of food and drink should be used. It is also of no trivial importance to the general public. — *Frank J. Thornbury, M. D., Lecturer on Bacteriology in the University of Buffalo, N. Y.*

"THE calm beauty of a well-ordered life" means health, strength, power, and happiness to the individual, and it also means that he radiates an atmosphere like unto himself to all with whom he comes in contact, and thus does much to lessen the sum of human misery.

LAUNCESTON, TASMANIA.

TASMANIA AS A HEALTH RESORT.

BY ELDER J. O. CORLISS.

TASMANIA is the only colony of the Australasian group which is left without a representative of its aboriginal inhabitants. As the white men came in, especially that class known as convicts, the native race passed away. This island was at one time the general dumping-place for England's human garbage; and as late as 1842 there were twenty thousand of these criminals harbored there. Some millions of dollars were annually paid by the home government for the privilege of importing its refuse society to this spot; but although the money so paid was a large consideration in the running expenses of the island government, it was dearly earned. In those days the people of the rural districts lived in constant fear of convicts, who, having escaped from confinement, hid in the bush and prowled about by night, seeking occasion to steal and murder. The native blacks were naturally a gentle and inoffensive people, but through association with these refugees from justice, they became the most intractable and remorseless of foes. Matters became so serious at last that a work of extermination was begun, which in time reduced lawlessness to a minimum. The hand of disease also did its part toward thinning out the natives, so that finally not one of them was left in the island.

With the wild men gone, and the importation of criminals stopped, the settlers had opportunity for the improvement of their adopted country. This was begun with a commendable zeal; and had they been content to unite their interests with those of a neighboring colony, and so share the expenses of government, they might have been much more prosperous than they are. As it is, they now present the farce of one hundred and fifty thousand people, mostly poor, attempting to conduct a popular government, which includes a full fledged parliament, with all its paraphernalia, from a premier down to the pages who run on errands. A gentleman there told me that one out of every ten of the inhabitants is a government official of some kind. The salaries for government officials in that country would be considered enormously high in America. For instance, the governor of Tasmania receives the sum of $17,500 per annum for giving the people the benefit of his leadership. It will be readily seen that to maintain a popular government among so limited a number of people, is, to say the least, an expensive luxury. Yet the people appear to be happy; something in the very atmosphere seems to make them healthy and cheerful.

There is not that bustle and energy shown by Tasmanians that is manifested in adjacent colonies, yet some of them have prospered largely in the things which contribute to earthly comfort. They are naturally of a very quiet turn, and are hospitable almost to a fault.

Hobart, the capital city, is at the southern end of the island. The next most important town of the colony is Launceston, at the northern extremity of the country. The distance by rail between these two points is one hundred and thirty-three miles, and is covered in about six hours of delightful journeying, between hills, and along the banks of streams, through green meadows, and thrifty orchards. On the way, one crosses the Jordan, and passes through Jericho, even getting a glimpse of New Jerusalem. But taking these places as a criterion, there is certainly not much in a

name; for the Jordan of Tasmania is but a brooklet, and Jericho only a small hamlet; while its New Jerusalem has not a single street paved with gold, or with anything else for that matter. Indeed, the place is dignified with nothing more than a rough road, over which is drawn the coal from its celebrated mines.

CORRA LYNN, TASMANIA.

Launceston is on the Tamar River, about thirty miles from the sea, and at the head of navigation. Another small stream known as the Esk River joins the Tamar at Launceston, flowing into it from the west. This city has some fine buildings and beautiful parks. It is one of the summer resorts of people of leisure in the northern colonies. Being less than twenty-four hours from Melbourne by boat, many are induced to spend their summer holidays in a trip to this point, where there is plenty of opportunity for the resorters to enjoy delightful drives and outings among the hills in the vicinity.

Considerable enterprise has been manifested in making the surroundings of the town attractive. Just above the point where the Esk unites with the Tamar, the stream flows through a rugged district, where rocks tower on either hand, or are scattered about in promiscuous confusion. This region is known as Corra Lynn, but is commonly called by the uneuphonious

title of "the gorge." The city has been to great expense in fitting up this place as a pleasure resort. Trees and shrubs, plants and flowers, climbing and trailing vines, have been planted in every available place; bridges have been suspended above the chasms in the rocks; and where the huge boulders obstruct the passage at the water's edge, their sides have been hewn away to allow ample foot-paths about their stately bases. Seats are placed at intervals, inviting the weary to rest and view the wonderful productions of nature. Passing along, one sees perched aloft upon some projecting point of rock a rustic summer-house, standing like a grim, weather-beaten sentinel overlooking the seething, bubbling waters below. Still farther up the gorge, and standing almost in the path, is a Robinson Crusoe house, built of the standing trunks of gigantic ferns, and covered with thatch. At the terminus of this delightful winding way, one enters a garden of beautiful flowers and shrubs, laid out in graveled walks, with here and there a park, enclosing animals of various sorts.

This charming place is reached from town by crossing the bridge indistinctly shown in the picture of Launceston, well to the right of the large basin, and just beyond the anchored boats. This bridge spans the Esk at the point where it drops into the Tamar through the basin. Immediately upon crossing the bridge, a turn is made to the left, and one is greeted by an arched gateway over which are the words, "Cataract Cliff Grounds." A fee of one penny is exacted on passing the turnstile, and one is then within the place most famed for its rugged beauty in all Tasmania.

The basin of water shown in the center of the picture, which borders one side of the town, is an attractive place. Here are found at anchor pleasure yachts of all sizes and descriptions, the property of resident gentlemen of the town, who on fine days make runs down the river, sometimes as far as Georgetown, which is situated near the mouth of the Tamar, and is considered one of the first summer health resorts of the world.

Nature has left nothing wanting to make Tasmania an ideal place to live in. Could the inhabitants but realize the importance of a proper diet, there is nothing which they need for it that might not be abundantly provided in their congenial soil and climate. The plumpest and fairest cereals, the largest and finest vegetables, and the most delicious fruits grow there with the smallest amount of care and labor. But there, as elsewhere, many suppose that they cannot have strength for life's duties without eating flesh food two or three times a day. The children are remarkable for their ruddy countenances; but as they pass from youth to manhood, the faces of many take on a coarse, bloated appearance, indicating that they are gross livers. The consequence is, that when an epidemic passes through the land, large numbers of the people succumb to it. The hospitals of the country seem to be full the entire year, and during summer and autumn, when typhoid is prevalent, they are often packed beyond their capacity to care for the patients who seek admittance. There is no country on earth where one could better demonstrate the utility of healthful diet and habits of life than in Tasmania.

Nor live thy life nor hate; but what thou livest,
Live well; how long or short, permit to Heaven.
—*Milton.*

PRACTICAL HYDROTHERAPY.

The Fomentation.

BY J. H. KELLOGG, M. D.

HYDROTHERAPY is chiefly useful as a means of making thermic impressions upon the cutaneous surface. Scientific hydrotherapy, of course, includes various other uses of water, but its most important applications are those made for the purpose of impressing the central nervous system through the influence of thermic impressions upon the skin.

Water is certainly the most convenient and the most universal of all the methods devised for making thermic applications to the body. In the application of heat by means of water, heat is communicated to the body by conduction. The outer layers of the skin being heated by contact with water, they communicate the heat to structures lying still deeper, until the heat gradually works in.

No one of the many forms in which heat is thus applied as a remedial agent is of more universal indication than the fomentation. The fomentation consists in the application of a cloth wet in hot water; it may be considered as a hot compress. The virtue of the fomentation lies in its heat and moisture, which stimulate the circulation and relieve the engorged tissues of stagnant blood, thus taking off the pressure from the nerves, and calling a stream of blood rich with oxygen to refresh and revive the injured tissues and to help them contend with germs and other morbid matter which is threatening them with destruction.

The uses of the fomentation are very numerous. It is indicated wherever there is local pain without excessive heat or evidences of acute inflammation. Local congestions, neuralgia, toothache, pleurisy, pleurodynia, and most local pains vanish beneath its potent influence as if by magic.

For indigestion, colic, suppression of urine, constipation, torpid liver, dysmenorrhea, and rheumatic pains, it is a remedy of great power, and is used with almost uniform success. In the relief of sick-headache by applications to the head neck, and stomach, its efficiency is unrivaled. The fomentation is also extremely useful in cases of great loss of blood, in which fatal syncope may be prevented by making hot applications to the head, and so encouraging the circulation of blood in the brain.

The fomentations should be applied as hot as they can be borne. The second application can usually be made much hotter than the first. The skin should be protected by placing one or more thicknesses of dry flannel between it and the fomentation; and to retain the heat, a dry flannel, rubber, or oilcloth should be placed over the fomentation. The treatment may be continued from ten minutes to half an hour, or longer in special cases.

The fomentation is a very powerful measure, and should not be employed without intelligent caution.

Alternate hot and cold applications are frequently more efficient than the continuous fomentation. The hot applications should be generally followed by a cool or tepid compress for four or five minutes, or the part should be rubbed with the hand dipped in cool water until the redness produced by the fomentation in part disappears. In neuralgia, gout, and chronic rheumatism, in which the cooling has a tendency to cause a return of

the pain, the last fomentation cloth may be allowed to become cool, and upon its removal the part rubbed off thoroughly with a dry towel, followed by a brisk dry-hand rub. The parts should be covered by dry, warm flannels after the removal of the fomentation, and so protected from the air. By this means the good effect of the application may be prolonged.

Hot applications to the spine for some time without intermission will often occasion faintness; hence a cooler application should be made after the use of the hot cloths for fifteen or twenty minutes.

FIG. 1.—METHOD OF WRINGING A FOMENTATION CLOTH.

There are several different ways of preparing a fomentation, which may be variously adopted according to the circumstances. Whatever method is used, the cloths should be *hot*, not merely warm, and wrung as dry as possible from the water. Nothing is more disagreeable to the patient than a heavy fomentation dripping with lukewarm water. The water from which it is wrung must not only be heated once, but kept at a boiling heat. A small oil-stove may be utilized for this purpose in the patient's room, and thus save many steps.

The fomentation cloth should consist of several thicknesses of soft, heavy flannel. A quarter of a woolen bed blanket or two yards of flannel of loose texture is a most excellent provision for this purpose. Made of this size, the cloth may be dipped into boiling hot water in a pail or other vessel, by seizing each end and holding it so as to keep it dry for a sufficient length at the ends so that it may be wrung out without burning the hands. If the cloth used is not large enough to wring in this way, it may be folded to the proper size, held by the corner and dipped into the hot water, then placed lengthwise of the middle of a dry towel, and wrung dry by twisting the ends of the towel. Or if more convenient, the cloths may be wrung through an ordinary clothes-wringer.

FIG. 2.—WRINGING THE FOMENTATION CLOTH IN A TOWEL.

The cloths may be wrung from cold water, and heated in a steamer or in the oven, or they may be placed between papers on the top of the stove. The paper prevents the cloth from becoming soiled,

Fig. 3.—Placing the Fomentation on the Patient.

the water protects the paper from burning, and the steam generated quickly heats the cloth to boiling heat. There should, if possible, be two cloths, as the application can thus be made continuous, one being heated in time to take the place of the other as soon as it becomes cool. For a long fomentation, the heat may be made continuous by applying a bag of hot meal, salt, or sand, a hot brick, or a bottle of hot water, or, best of all, a rubber bag filled with hot water, over the moist flannel. Rubber bags, made short and broad for the stomach, or long and narrow for the spine, are excellent for this purpose; but hot griddles wrapped in paper, hot plates, hot flat-irons, etc., may be utilized in the absence of more convenient means.

When an intense effect is desired through the application of fomentations, the ordinary effects may be increased by the addition of mustard to the water in which the flannels are wet. Turpentine is also used. The usual plan is to wring out the cloths and sprinkle on a few drops of turpentine just before applying to the skin. Salt water is frequently used for fomentations with the idea of increasing the stimulating effect, which it may do to some degree.

Great care should be taken not to wet the patient's bed or clothing in applying the fomentations. He should be prepared for the treatment by removing his clothing and placing him on a bed protected first by a covering of oilcloth or even of heavy

Fig. 4.—The Fomentation Covered.

paper, and then with a blanket. A blanket or flannel may be laid under the patient, and brought up over him, thus forming a cover for the fomentations; or it may be laid over him first, and the fomentations put on the outside of a thickness of the dry blanket. If the room is cool, the

bedclothes may be brought up over all, and tucked in well at the shoulders. If the patient feels overheated, and the treatment is not particularly designed to induce perspiration, he may be covered lightly, and have the room of a moderate temperature. The fomentation should be changed every five or ten minutes, as it cools, and may be repeated from three to ten times or more as the case may demand. In colic, inflammation of the bowels, sprains, dislocations, severe bruises, etc., it is often necessary to keep up the fomentation for several hours at a time.

The cloths should be wrung dry and should be decidedly hot; yet they should not be so hot as to blister the patient. This is a very important point in the case of infants, and also of those who are paralyzed, helpless, or insane. Attention should be given the feet to see that they are thoroughly warm, before beginning the fomentations, and the head should be kept cool. Neglect of these precautions has often neutralized all the good that might have come from the treatment.

Thus it will be seen that the fomentation, though an agent of great value, is simple in application, and requires but few appliances, such as are likely to be found in any private family.

THE TENDRIL'S FAITH.

UNDER the snow in the dark and the cold
A pale little tendril was humming;
Sweetly it sang 'neath the frozen mold
Of the beautiful days that were coming.

"How foolish your songs," said a lump of clay;
"What is there, I ask, to prove them?
Just look at these walls between you and the day—
How can you have power to remove them?"

But under the ice and under the snow
The pale little sprout kept singing,
"I cannot tell how, but I know, I know—
I know what the days are bringing:

"Birds and blossoms and buzzing bees,
Blue, blue skies above me;
Bloom on the meadow, and buds on the trees,
And the great, glad sun to love me."

Then a pebble spoke up: "You are quite absurd,"
It said, "with your song's insistence;
For *I* never saw a tree or a bird,
So of course there are none in existence."

But "I know, I know," the tendril cried
In beautiful, sweet unreason,
Till, lo, from its prison glorified
It burst in the glad spring season!

— *Ella Wheeler Wilcox.*

CONTAMINATION OF DRINKING WATER.

LET us examine into some of the conditions surrounding domestic wells and springs in the larger towns and villages,— conditions which also prevail sometimes even about rural homes,— and we shall be able to understand how a well, like a Nevada silver mine, may have "millions in it," and how "the old oaken bucket" may bring from the depths, elements of disease with the same draft that refreshes the thirsty throat. For convenience a well is situated in the back yard, perhaps a rod away from the house, or it may be even nearer. Certain other things, also for convenience' sake, are grouped close about the back door. Here is a cesspool but a short distance, perhaps only a few feet, from the well;

there is a vault, a filthy institution which is an open disgrace to civilization. A little farther away is the garbage-heap. In other adjacent localities are the chicken-coop, the pig-pen, and the stable, with their accumulations of decomposing filth. It may be that in a corner a dead animal has been buried to save the trouble of conveying it to a distance. A damp and reeking spot near the back door marks the place where the slops have been deposited since the drain to the cesspool became stopped up with the accumulated refuse of half a dozen years.

Every one of the sources of contamination mentioned is a contributor to the well. A part of the putrid material floats upon the ground and is disposed of by evaporation, but the greater part of it soaks into the ground. It is a common error to suppose that whatever has disappeared into the ground is destroyed. The filth which has disappeared from the surface may be out of sight, but it is not out of existence. If the soil is filled with refuse of various kinds, the well will be contaminated. Every rain washes the filth a little deeper down, until it reaches the well proper or one of the underground veins of water by which it is fed. It may not be generally known that a well will draw water a distance of sixty feet. . . .

The long and active survival of disease germs in the soil was made manifest by excavations made inside a coffer-dam uncovering the bed of the Tiber, alongside the bridge leading to the Castle of St. Angelo, in Rome. Here, in successive strata, were found coins and other relics, fixing the age of the deposit down to the fourth century A. D. The soil, as it was slowly removed, was piled upon an adjoining wharf, and then taken away. When the very lowest and oldest of all the strata disturbed was so disposed of, an epidemic of typhoid fever broke out among the workmen and those living in the immediate vicinity. The result of careful examination is said to have shown that the trouble came from the lowest strata, and that the disease germs that had been lying dormant at the bottom of the Tiber for nearly fifteen hundred years were still active for evil, and proved their vitality.—*Frank J. Thornbury, M. D., in the Arena.*

VEGETARIANISM IN INDIA.[1]

THE basic principles of vegetarianism in India are different from those that have influenced the majority of vegetarians here. In your country there is a constant fight between the respective advocates of the meat diet and the vegetarian diet as to which of those foods is good for man's physical health. The effect on the spiritual part of man never, or seldom, comes into question. We look upon this question from a larger and broader standpoint. The Hindu philosophy teaches that the universe is a vast democracy, having for its members all the living beings, from the lowest animalcule to the highest archangel, and all of them have a right to live as much as you or I have. From this standpoint, if you cannot give life to any being, you ought not to take the life of that being. Because you live on a higher floor, that does not justify you in crushing those that live on the lower floor.

Let us see how the Hindus came to adopt a purely vegetarian diet. At any epoch in any country the current system of diet is not a mere matter of accident. Evolution molds the character of man, and directly affects the manners, customs,

[1] Address of Mr. Ganahi at the recent banquet of the Chicago Vegetarian Society, reported in the Chicago *Vegetarian*.

and habits of the people. Food is only a part of the manners and customs of a race. The history of human civilization in any progressive cycle of time can be divided into four stages. The first is that of fishermen. Man is controlled in this stage only by his animal nature, pure and simple. The prominent sensation in him is hunger; he adopts the simplest and easiest method of satisfying it; he goes to the nearest stream or rivulet and catches fish, which become his food. His animal nature is supreme. In the second stage he wanders here and there in search of food, and the animal nature being still powerful in him, he kills the animals that he comes across in his wanderings and search after food, for which of course he plans and makes different sorts of rude instruments and weapons of offense. In the third stage of civilization his spiritual nature, or higher self, is awakened a little, and he sees something that is common in him and the lower creation. He staggers at the thought of killing, and, therefore, instead of destroying life, he is prompted to protect it. He tames the wild animals, and they become his companions. He becomes a shepherd and a cattle breeder. With it he changes his system of diet. In the fourth and highest stage he becomes a social man, evolves ideas of high morality, engages himself in agriculture and commerce, and becomes the inventor and discoverer of arts and manufactures. In each stage the system of diet corresponds to the degree of civilization he has reached.

Even to-day in different parts of the world you will find races of men living in one or the other of the four stages I have mentioned. Historical investigation, then, teaches us that all races that can boast of the name "Aryan" have reached the fourth and culminating stage of civilization. Semitic races, like the Arabs, have been in the third stage — that of shepherds — from the very beginning of their history. The American Indians, the blacks of Africa, the Dasynes of India, and many others have remained in the first and second stages of civilization — fishermen and hunters. It is a matter of wonder and amazement to me that the Western nations, having reached the fourth stage of civilization, are still in the first and second stages so far as their system of diet is concerned.

I shall not take up your time in discussing the hygienic and ethical superiority of the vegetarian diet over the animal diet, but will say this on vegetarianism considered in its spiritual aspect: —

All foods produced by the destruction of animal life obstruct the spiritual progress of man. Just consider in what vibratory conditions the bodies of animals are put when they are taken to the slaughter-house and prepared for killing. Is it not an established fact that fear is the mother of all disease? Will not fear change the very condition of the animals in the slaughter-house? and will not their meat influence those that use their bodies as food? Without the animal food the human being is sufficiently of the animal nature. Why should he then add to his animal nature by taking animal food? Awakening of the spiritual sense and the recognition of high spiritual truths cannot be arrived at unless you make your body fine enough to receive the finer vibrations, which cannot be done with the animal food.

On days when the Mohammedans in India observe the Id festival, which corresponds to the turkey-killing day in this country, the majority of the members of the Jain community, fast as a sign of compassion for the thousands of poor creatures that are slaughtered by the followers of the prophet of Arabia.

IN A GLASS CASE.

Two or three young men who were visiting in Washington city recently went into the National Museum. Passing a cabinet, they glanced at the label on it, on which were the words, "The body of a man weighing one hundred and fifty-four pounds."

"Where is the man?" one of the young men asked.

No one answered him. In the cabinet was arranged an odd assemblage of heterogeneous articles. Among them were two large jars of water; also jars containing different kinds of fats; other jars in which were phosphate of lime, carbonate of lime, a few ounces each of sugar, potassium, sodium, gelatin, and other chemicals.

Another section held a row of clear glass jars filled with gases — hydrogen, nitrogen, and oxygen; a square lump of coal, and more bottles separately labeled phosphorus, calcium, magnesium, potassium. In a little jar was a fraction of an ounce of iron, and near by was a lump of ill-smelling brimstone.

The materials in these cabinets are given in exact proportions as they are combined in an ordinary man.

"It is very curious and interesting so far as it goes," said one of the young men. "But where are the retorts and tubes, and the fire, and the chemist?"

The young men stood silent, staring at what seemed to them a gruesome assortment of carbon and sugar and gas and iron and chemicals, with a certain awe and disgust.

"And that is what I am made of?" one of them said. "That is all that goes to make — *me?*"

"That is all," said a bystander, smiling, and walked on.

But the young men did not smile. The cabinets had set before each of them, for the first time probably, the awful problem of his own being.

"If that is all that is needed," said one, "so much gas, so much lime, so much iron, we should all be exactly alike. There is something more which they cannot put into cabinets."

"Yes," said another under his breath, "that added by the unseen Power, who puts into these senseless elements that which makes man a living soul."

They stood a moment, and then passed on in silence. To each of them his own soul and his God had suddenly become real, before these cabinets, filled with all the essentials for the making of a man — but one. — *Youth's Companion.*

A DANGEROUS EXPERIMENT.

Some fifty years ago, there lived in New York a young couple, strong, healthy, ambitious to be rich, and both saving and industrious enough to become so under ordinary conditions. The husband was in a business which required constant attention; and in order to promote it and save the expense of help which he thought he could not afford, he labored nights, often up to the hours of twelve and sometimes one o'clock, and then rose early and went at it again. His wife sympathized with him in all his undertakings, helped him in every way possible, even to the sharing of his midnight toils. In no way did either of them spare themselves. They knew something of the evils of poverty, and were deter-

mined it should not be their lot to be poor. Fortune favored them, and their bank account grew larger and larger, until to-day they can count the value of their possessions as amounting to two or three million dollars. They live in a fine country seat, and can gratify every wish so far as food, clothing, books, and travel are concerned.

During their early married life, when the strain of work was the greatest, two children were born to them, both boys, and they are alive to-day; but are they a comfort to their parents and a help in their declining years? Instead of that, they are both deformed and crippled, unable to help themselves or do any labor. Physicians believe the overwork and privation of the parents at the time of the birth of the children, and before, to be the only cause.

And the parents, are they still living and well? The husband has rheumatic gout, and has not been out of his house for months. He still loves money, and his head is full of schemes to acquire it. He has few intellectual acquirements beyond those which come from his actual business life; reads no books, and has no library in his house worthy the name. The wife also still lives, and is like her husband. The two oldest sons would better be dead than alive. A younger son, born after the wife had ceased to toil like a slave, gives some promise of being a man of character.

I called on this family not long ago with a friend who has known them from early life. The husband began almost at once to talk about money-making, and said, "It would be so easy to make another fortune if age and decrepitude had not prematurely gotten such a hold on my frame." The wife recounted their early struggle, and, as she thinks, their great success, but said not a word of their moral and intellectual growth.

After we had finished our call, I said to my friend, "That is the most poverty-stricken family I ever saw; of money they have indeed enough and to spare, but of health, of cheer, of joy, of happiness, they have none."—*Jennie Chandler, in the Journal of Hygiene.*

WALKING WITH BROKEN LEGS.

A NEW method of treating broken legs, described by the New York *Sun*, is of a nature to be of general interest. It is called the "ambulatory system," its peculiarity consisting in the fact that the patient is allowed and even encouraged to walk freely within a few days, sometimes within twenty-four hours, after the leg is broken. The *Sun* refers to the subject in connection with a meeting of doctors at which a man whose leg had been broken a fortnight before was introduced by one of the surgeons of Roosevelt Hospital, and proceeded to walk about the room without crutches, and with only the slightest perceptible limp.

The new treatment, which is said to have been in use in Berlin for some time, is applicable only in cases where the limb is broken below the knee.

Doctor Fiske, the Roosevelt Hospital physician referred to, gave the results of two hundred and fifty operations in which the ambulatory splint had been successfully applied. Wherever the treatment had been begun promptly, the recovery had been rapid, except in the case of alcoholic patients, in which the danger of delirium tremens setting in after the fracture was the obstacle. In healthy persons, the results were admirable. The method itself is described as follows:—

The patient is placed in a recumbent position, and the injured bones are set in place and bound securely with an ordinary muslin roller bandage. No cotton whatever is used in the binding. Outside of this roller a plaster of Paris gauze bandage is wound. This hardens, and leaves the limb encased in a plaster cast which generally extends from the toe-tip to the knee-joint. It holds the broken parts of the limb immovable, and hardens rapidly.

The best quality of cast and bandage is employed, and the patient is encouraged to walk without crutches after twenty-four hours. Care is taken, of course, to avoid all possibility of inflammation setting in. The reason the patient can walk so soon is that the weight of the body is supported upon the upper part of the ambulatory cast, which acts as a crutch.

Doctor Fiske cited a case where a patient seventy-two years old had been able to walk within eight days after the application of the ambulatory splint. The healing of the bones goes on while the patient is walking about, just as if he were lying down, as the fractured limb is in no way disturbed by the exercise. In fact, the reuniting of the fractured parts is hastened, and the stiffness of joints resulting from the old method of keeping the patient in bed is greatly reduced.

Within six weeks, often sooner, the bones will have united, and then the limb is subjected to hot and cold douche baths and to brisk massage to restore it to its normal condition.— *Youth's Companion.*

A New Idea in Isolation Hospitals. There is a movement on foot in Philadelphia, which had its origin with the women of that city, through the association known as the Women's Health Protective Association, for establishing an isolation hospital for pay patients, where any mother may go with her child or other member of her family sick with a contagious disease, and have all the comforts of home, with every facility for the treatment of the disease, and the attendance of the family physician if desired.

Several good results would be derived from accepting the advantages offered by such an institution. The risk of contagion to the other children and members of the family and of the community would be avoided; the quarantining of the house would not be necessary; the bread-winners of the household would be enabled to continue to attend to business as usual; and thus an appreciable share of the load of care and anxiety attendant upon such an illness might be lifted from the family.

Tesla on Sleep.— In reply to the question, "Is it wise for a man to deny himself and get along with a few hours' sleep a day in order to do more work?" M. Tesla, the great electrician, replied: "That is a great mistake. A man has just so many hours to be awake; and the fewer of these he uses up each day, the more days they will last; that is, the longer he will live. I believe that a man might live two hundred years if he would sleep most of the time. That is why negroes often live to advanced age, because they sleep so much. It is said that Gladstone sleeps seventeen hours every day; that is why his faculties are still unimpaired in spite of his great age. The proper way to economize life is to sleep every moment that it is not necessary or desirable that you should be awake."— *Pop. Sci. News.*

I FIND earth not gray, but rosy,
Heaven not grim, but fair of hue.
Do I stoop? I pluck a posy.
Do I stand and stare? All 's blue.

— *Robert Browning.*

A CENTURY OF VACCINATION.

As briefly summed up in a late number of the *British Medical Journal*, the results of vaccination during the century of its practise are very striking. It was on May 14, 1796, that Jenner performed his first successful vaccination. The average mortality from smallpox in Europe during the century preceding the introduction of vaccination was, in the cities alone, 3000 per 1,000,000 inhabitants; including the country parts, it was somewhat over 2000 per 1,000,000 inhabitants. Owing to frequent epidemics of smallpox, the mortality rose occasionally to between 5000 and 6000 per 1,000,000 inhabitants. In the century since vaccination, the mortality from smallpox has not been one tenth of that figure, as we shall see by taking statistics from individual countries.

In England the mortality rate was over 2000 per 1,000,000 in the last century; during permissive vaccination the rate fell to 417 per 1,000,000, and during compulsory vaccination from 1871, the mean rate has fallen to 53. The distance from a mean anti-vaccination mortality rate of 2000 to a mean compulsory vaccination rate of 53 is a long distance.

In Sweden, during the quarter century preceding vaccination the mean mortality rate from smallpox was 2045 per 1,000,000 inhabitants. During the fifteen years, 1802–16, of permissive vaccination, the rate fell to 480; and during seventy-seven years (1817–94) of compulsory vaccination, it fell to 155. This is not as good a result as in England; but still it is a material fall from the anti-vaccination death-rate of 2045 per 1,000,000 inhabitants to the compulsory vaccination death-rate of 155.

Prussia furnishes the finest example of immunity from smallpox through rigorous vaccination. Her anti-vaccination mean death-rate from smallpox was over 2000; during the permissive period it fell to 309; and during the compulsory period, since 1874, the mean rate has been only 15 per 1,000,000 inhabitants! Italy, during the permissive period, had a mean death-rate from smallpox of 440; during the later compulsory period the rate has has fallen to 110. Austria and Belgium practise vaccination, not by compulsion; and in the former the mean rate is 580, and in the latter 441. Spain does not practise vaccination generally, and her death-rate from smallpox in the single year 1889 was in these provinces: Almeria, 3080; Murcia, 2670; Corunna, 1230; Malaga, 1340; Cadiz, 1330; Cordova, 1400. In Germany that same year the death-rate from smallpox was only four.

The Sensation of Temperature.— The sensation of temperature experienced by the human body, and ordinarily attributed to the condition of the atmosphere, depends not merely on the temperature of the air, but also on its dryness, on the velocity of the wind, and on the suddenness of atmospheric changes, all combined with the physiological condition of the observer.

THE longer we live in this world the more we become convinced how little we know. The people most humble in their opinions are generally the best educated. It is an art which only a few of us learn: to be reticent of our own opinion when every one around us is expressing his. Yet this is one of the attributes of the well educated. Silence often speaks louder than speech.— *Edward W. Bok.*

RALPH WALDO EMERSON told a good story of a friend who always carried in his pocket a horse-chestnut as a protection against rheumatism, just the same as some people wear shields, Boyd batteries, the electropoise, and other trinkets. Emerson thus testifies of the results in his friend's case: "He has never had the rheumatism since he began to carry it, and indeed it appears to have had a retrospective operation, for he never had it before."

Bathing.— At what period or among what people the practise of bathing first originated, we do not know, but we do know from Homer — and he is a pretty good authority — that not only cold bathing but hot-water baths must have been established among the Greeks more than three thousand years ago, for he alluded to their use in the Greek camp during the Siege of Troy, 1194 B. C. Diomed and Ulysses were refreshed by the bath on returning from a night expedition: —

"Now, from nocturnal sweat and sanguin stain
They cleanse their bodies in the neighboring main;
Then, in the polished bath, refreshed from toil,
Their joints they supple with dissolving oil."

And Ulysses gives a glowing description of the bath prepared for him by the nymphs of Circe, thus: —

"That in the tripod o'er the kindled pile
The water pours; the bubbling waters boil;
An ample vase receives the smoking wave,
And in the bath prepared my limbs I lave;
Reviving sweats prevent the mind's decay,
And take the painful sense of toil away."
— *The Bath-Room.*

Sewerage for Melbourne.— The city of Melbourne, Australia, with a population of nearly five hundred thousand, has never had a system of sewerage; but owing to the untiring efforts of certain public-spirited citizens and government officials, a very elaborate and sanitary system of disposing of the sewage is now in process of construction. A detailed and interesting account of it is given by the consul-general in the March *Sanitarian*.

A Door Opened for the Russian Peasantry. — Though the great railway across Siberia is not yet half finished, it is beginning to serve its purpose as an outlet for the crowds of poorly fed, crowded Russian peasantry. The road has been completed as far as Krasnoyarsk, a distance of three thousand miles from St. Petersburg, which opens up direct communication with the valley of the Yenisei River, a region rich in game, timber, and ores, as well as in agricultural possibilities. The Russian poor are flocking to this new country by the hundred thousand, the government allowing them transportation at the rate of one mill a mile, and allotting to each family about three acres of land, which is to remain permanently for their benefit, though they are not allowed the right to dispose of it.

No one is more interested in the enterprise of the great Trans-Siberian Railway than the czar, who feels the greatest pride and enthusiasm in the undertaking and all the benefits it is expected to bring to the people of Russia. The vast wealth of the mines of coal, iron, and gold cannot but have an effect upon the industrial interests of the world, and the economic value of the opening of the rich and extensive agricultural regions will also be of the greatest import. It is said by those prepared to judge, that with the completion of this road no such famines as have been will again be possible in Russia.

THE great plague in Bombay, India, has passed its climax, and is dying out.

Medical Inspection for Schools. — An innovation in school management in New York City began March 28. One hundred and fifty medical inspectors of schools were appointed about two weeks ago to visit the schools daily and examine such children as in the judgment of the teachers gave evidence of illness. One hundred and forty-seven of the one hundred and fifty inspectors appointed entered upon their official duties March 29. The report of the first day's inspection was as follows: One hundred and forty pupils were excluded from the schools because of contagious diseases; there were fourteen cases of suspected diphtheria, three of measles, and one of scarlet fever in the contagious state of the disease; thirty-five cases of contagious eye diseases, three of mumps, one of croup; eight cases of chicken-pox, and eight cases of other contagious skin diseases; fifty-five cases of parasitic diseases; fifty-five diseases of the head, and twelve of the body.

Twelve of the parents of the children excluded visited the health board and violently protested against the exclusion of the children for any such cause. The total number of pupils examined was over four thousand. President Wilson, of the board of health, when the report of the first day's work of the medical inspection of schools was laid before him, said, "We have found the leak." He believes that this inspection will prevent among children, especially in the primary classes, the spread of contagious diseases which have defied the closest attention of the board of health in the past. Another good that must result from this medical inspection is the discovery of the dirty condition of the bodies and clothing of many of the children attending the schools. When the report is made covering this phase of school life in certain sections of New York City, it is believed that public sentiment will demand the establishment of free baths at once. Cleanliness is a simple impossibility in many of the East Side homes. — *The Outlook.*

Gelatin Copying Pad. — Glue, 4 parts; gelatin, 20 parts; sulphate of borium, 1 part; water, 7 parts. Dissolve the glue in water with a little heat; after soaking for several hours, add the gelatin and the borium. Turn into a tin mold and allow to cool, or run in thin layers on panes of glass.

Ink for Gelatin. — Aniline violet, 1 oz.; glycerin, 1 oz.; water, 8 oz.; alcohol, 1 oz. Heat the water, dissolve the aniline in it; then add the glycerin and alcohol. Keep corked. Shake well before using.

Sweet Peas Versus Flies. — Several scientific papers have recently announced the discovery that the odor of sweet peas is very obnoxious to flies, and that when placed in a sick-room it will keep it free from these very tiresome pests.

AMONG the latest things in stationery is a writing-paper which is specially manufactured for the prevention of the spreading by letters of various forms of infectious diseases. Every one is aware that in receiving letters from disease-stricken places, at home or abroad, they run a certain amount of risk. This stationery is so impregnated with antiseptics that all deleterious organisms adhering to it are rendered inert, even though a fever-stricken person has written or touched the letter.

Entertainment for the Nose. — Why doesn't Mr. Hammerstein, or Mr. Kosterandbial, or some other great showman devise an entertainment for the nose? One may pay his money at the door,

and have his ears ravished with beautiful melodies and his eyes delighted with harmonies and eccentricities of color, but what entertainment the poor nose gets, it must find for itself where it may. Now the pleasures of smell are very notable delights, and by no means to be sneezed at, unless they lawfully affect one in that way. The outdoor smells that one catches as he rides a bicycle along a country road — smells of locust blossoms, wild grape, hay, wet woods, farm-yards, and such like — supplement his other emotions in important measure. Perhaps smells alone would not be quite substantial enough for a whole show, but a spectacle accompanied by music and supplemented by a succession of pleasing and appropriate smells would certainly be worth paying to perceive. There might be some practical difficulty in making one smell succeed another promptly as the scene shifted, but that is only a detail, and it is the surmounting of difficulties in detail that is the successful showman's strong point, and excuses his exactions at the door. — *Harper's Weekly.*

A New Process of Embalming. — The art of embalming, so long ago practised by the Egyptians, has never been successfully revived; but a new process has lately been developed by an undertaking firm in Chicago, by which dead bodies are preserved. By simply withdrawing all the blood from the body, and injecting the embalming fluid into the veins, arteries, and all the cavities of the body, the flesh is gradually hardened until it becomes as hard as stone, and as imperishable. The flesh is also said to become transparent in some parts. No odor escapes from the body, and it retains the natural color.

This discovery will be of great practical benefit in the preparation of anatomical specimens, as well as a boon to embalmers.

Paving with Diamonds. — With our present ideas of the worth of precious stones, it seems almost incredible that they should have been used to macadamize streets in any modern city; but such seems to have been the case. The town of Kimberley, South Africa, was once a mining camp. Near it were the famous diamond mines, and the débris from the mines was used to pave the streets. Afterward, as machinery replaced manual labor, the miners thus thrown out of employment received permission to wash over the macadam in the streets to recover the diamonds in it. These washings produced about $200,000 worth of diamonds yearly; magnificent stones were found, and some excessively rich places. As an example, they tell of twelve square yards of street that yielded $10,000 worth of diamonds.

THE ARROW.

STRAIGHT from the mighty bow this truth is driven:
"They fail, and they alone, who have not striven."

Fly far, O shaft of light, all doubt redeeming,
Rouse men from dull despair and idle dreaming.

High heaven's evangel be, gospel God-given:
"They fail, and they alone, who have not striven."

— *The Outlook.*

Growth in Service to Others.— It is a well known law in the natural world about us that whatever has no use, that whatever serves no purpose, shrivels up. So it is a law of our own being that he who makes himself of no use, of no service to the great body of mankind, who is concerned only with his own small self, finds that self, small as it is, growing smaller and smaller, and those finer and better and grander qualities of his nature, those that give the chief charm and happiness to life, shriveling up. Such a one lives and keeps constant company with his own diminutive and stunted self; while he who, forgetting self, makes the object of his life service, helpfulness and kindliness to others, finds his whole nature growing and expanding, himself becoming large hearted, magnanimous, kind, loving, sympathetic, joyous, and happy,— his life rich and beautiful. For instead of his own little life alone, he has entered into and has part in a hundred, a thousand, aye, in countless numbers of other lives; and every success, every joy, every happiness, coming to each of these, comes as such to him, for he has a part in each and all.— *Ralph Waldo Trine.*

THE late Albert Nobel, a native Swede, whose name is familiar as the inventor of dynamite, has bequeathed a sum of money amounting to some ten million dollars for the purpose of encouraging scientific and medical study, literature, and the promotion of international peace. The income from this magnificent endowment, about three hundred thousand dollars annually, is to be divided into five equal portions, to be awarded each year in prizes for the most important discoveries or inventions in: (1) physics; (2) chemistry; (3) physiology or medicine; (4) for the most distinguished literary production; and (5) to the person who accomplishes the most in promoting the cause of peace in the earth. The competition is open to all nations.

IT is the all-round, fully developed we want,— not the ethereal, pale-blooded man and woman, but the man and woman of flesh and blood, for action and service here and now,— the man and woman strong and powerful, with all the faculties and functions fully unfolded and used, all in a vigorous and bounding condition, but all rightly subordinated. The man and the woman of this kind, with the imperial hand of mastery upon all— such is the man and such is the woman of power. — *Sel.*

THE human face is a canvass, and nature's writing goes ever on. But as the wrong act or foul deed sets its seal of distortion into the features, so the right act and true thought sets its stamp of beauty. There is no cosmetic for homely folks like character. Even the plainest faces become beautiful in noble and radiant moods.— *Harris.*

THOSE who are really awake to the sights and sounds which the procession of the months offers them, find endless entertainment and instruction. Yet there are great multitudes who are present at as many as threescore and ten performances, without ever really looking at the scenery, or listening to the music, or observing the chief actors.— *O. W. Holmes.*

IT is not the greatness of the task, it is the greatness of the human quality illustrated in the tiny tasks, that determine what we are and what we are making of ourselves.— *M. J. Savage.*

THE deepest truths were never written.

NATURAL DRINK.

THE Welsh miners who, some years ago, were locked up for many days without access to solid food were sustained because, fortunately, near to them, and within their reach, was a little stream which supplied them with water. And, in the absurd feats of men living without food, we find they all take water; when sometimes, for even forty days, they survive. Many call this starvation, but it is really not so. The water acts as a food — not, after all, a surprising fact when we consider that the human body, including even the teeth and the skeleton, is made up pretty nearly of sixty-five per cent. of water alone.

The greatest fact, however, derived from natural history is the magnificent one that all animals except man, and all plants, demand, as a drink, nothing but water. Life, strength, activity, intelligence, are sustained on this fluid alone. Nay, if we take man, we discover that not all men, women, and children use alcohol. Millions and millions never touch it, and yet, as our modern experience shows us, they live just as well, just as industriously, just as actively, as do they who indulge in alcohol. Most convincing is it, too, that men who take alcohol take it with water. Brandy contains half water, and it has to be diluted with more before it can be tolerated; our beers and ales contain over ninety per cent. of water, our wines over eighty; so that even the alcoholic populations are largely water-drinking communities.

The only drink for man, plant, or animal, in a natural sense, is water, without which we could not live, but which many poison with this foreign substance, giving no credit to the water that is their mainstay, and deluded in supposing that it is the alcohol, or spirit, they have put into the water that renders the vital service. — *Sir B. W. Richardson.*

Women Inebriates. — At a meeting of the Society for the Study of Inebriety held last February, in London, England, and reported in the *Medical Pioneer*, Dr. Pitcairn stated that, large as was the number of drunkards of both sexes in English prisons, the proportion of females was appalling. He said that as the convictions for crime were only ten per cent. of the female prison population, it must follow that the prisons were filled to repletion by the slaves of the alcohol habit. The records of the courts show that women rarely overcome the taste for liquor, as they are returned again and again to the courts for this offense, until death finally closes the scene in the prison hospital. These unfortunates are generally persons of no education, and are entirely ignorant of any trade.

The Drink Evil in Normandy. — According to MM. Brunon and Troudot, as reported in *L'Etoile du Matin*, "the quantity of brandy consumed in Rouen is frightful. There are streets of one hundred houses in which more than fifty are devoted to the sale of alcoholic liquors." With a population of 115,000, Rouen expends annually £480,000 for drinks. In one establishment, employing one hundred and fifty workmen, the master knows of only five whom he can send to make repairs in the town, and feel sure the work will be attended to. In another factory only fifteen out of two hundred are rationally sober.

Liquor has come to be indispensable with every meal, and the dealers, to satisfy the want for something that wil "bite and warm" while lining their own

pockets, have taken up the practise of adding a little sulphuric acid to the alcohol. Here, also, as well as in England, the degrading habit extends to the women; and being busy in the factories, they try more and more to simplify their cooking by the use of liquor. "Bread, coffee, and alcohol form the regular base of her cuisine. Sometimes even coffee is absent. In the morning the wife cuts slices of bread into the soup tureen, and then pours in a liter [one quart] or half a liter of brandy. This is the soup for *fête* days, or days when time presses; and they come often. It can well be imagined how the young generation fares placed on such a regimen. Where are the beautiful Norman lads of former times? You now see passing along the streets only puny, scrofulous, sickly children that tuberculosis is watching for, and whom the first attack of bronchitis carries off."

BEER-DRINKING in Germany is being discredited by competitive athletics. It is stated that three clubs of Leipsic students have abandoned the morning drinking-bout, and that several additional university clubs are about to take the same step. A desire to excel in athletic sports is said to be the impelling cause of this action on their part. This practical acknowledgement that beer-drinking is inimical to the best physical condition and to the highest degree of athletic success would be significant in any country, but it is especially so in Germany, the great beer country of the world.—*Journal of Hygiene.*

Whisky Did It.—Seldom have Shakespeare's words, "O, that men should put an enemy in their mouths, to steal away their brains," been so strikingly illustrated as in the following touching incident related in a late newspaper:—

It seems that one of the best Greek scholars in New York is a guard on the Sixth Avenue Elevated Road. Not long ago a famous professor in one of our leading universities published a volume on certain features of the ancient Grecian dialects, of interest only to scholars. The L guard referred to wrote to a New York newspaper, pointing out several errors made by the professor in his book. He signed himself, "Sixth Avenue Elevated Guard, No. ——."

A reporter sought out the man whose badge bore the number, and after a few minutes' conversation, asked, "How does it happen that you, a Greek scholar, should be doing such work as this?" The man hesitated, and his red face flushed still deeper, but he finally replied, "My Greek is still what it used to be, but my career has been ruined by whisky."

The Cigarette Habit.—The teacher of a public school in Chicago found that eighty of her scholars smoked from two to twenty cigarettes a day. Six only of these boys were able to do good work in their classes. The victims of the cigarette habit confessed that they were suffering constantly from headache, drowsiness, and dizziness. Many declared they could not write well because their hands trembled. A number were "shaky" when they walked, and unable to run for any distance. They could not rouse themselves to meet the examination test.

The teacher reported that these pupils were sure to fail if asked to memorize anything. Several of the smokers were from four to five years too old for their grade, and it was found that after they began to smoke, their progress ceased.

Except in three instances, the scholars hardest to discipline were smokers. Tru-

ancy and theft were directly traced to indulgence in the habit. Boys who had reformed and joined the Anti-cigarette Society said they "felt like different boys." The power and perniciousness of the cigarette habit are revealed by this fresh testimony from a competent and careful observer.— *Youth's Companion.*

PROFESSOR RUFUS CLARK, of the normal school of Winchester, Tenn., said, "I can go through this school and put my hand on every boy that uses tobacco, for he shows it in his face, and if I am in doubt, I can prove my surmise by looking at his recitation cards."

No More Whistling.— An old gentleman recently remarked as to how much less whistling is now heard on the streets than when he was a boy. "Why," said he, "when I was an apprentice lad, we all whistled. There was whistling, whistling by every bright young lad you met." Being asked how he accounted for the change in this respect, he replied: "Well, I will tell you one reason. Our young lads can't whistle now because they have cigarettes in their mouths." And there is too much truth in that remark.

Effects of Smoking on Boys.— A skilled physician investigated the effect of smoking on thirty-eight boys between the ages of nine and fifteen who were addicted to the habit. Twenty-seven showed distinct symptoms of nicotine poisoning. In twenty-two there were serious disorders of the circulation, indigestion, dulness of intellect, and a marked appetite for strong drink. In three there was heart affection; in eight, decided deterioration of the blood; in twelve, frequent bleeding of the nose; ten had disturbed sleep; and four, ulceration of the mouth. Of course many of them had several of these evils combined.

IT is said that flies confined in a showcase with cigarettes will die in less than five minutes, so deadly is the atmosphere in the case.

Effects of Tea and Coffee on Character.—Dr. Bock writes as follows respecting the influence of these drugs: "The nervousness and peevishness of our times are chiefly attributable to tea and coffee; the digestive organs of tea and coffee drinkers are in a state of chronic derangement, which reacts on the brain, producing fretful and lachrymose moods. Ladies addicted to strong coffee have a characteristic temper, which I might describe as a mania for acting the persecuted saint. The snappish, petulant temper of the Chinese can certainly be ascribed to their immoderate fondness for tea."

Coffee-Blindness.— Dr. Snaitken says: "It is well known that the Moors are inveterate coffee-drinkers, especially the merchants, who sit in their bazaars and drink coffee continually during the day. It has been noticed that almost invariably when these coffee-drinkers reach the age of forty or forty-five, their eyesight begins to fail, and by the time they get to be fifty years old they become blind. One is forcibly impressed by the number of blind men that are seen about the streets of the city of Fez, the capital of Morocco. It is invariably attributed to the excessive use of coffee."

WRITE it underneath your feet,
Up and down the busy street;
Write it for the great and small
In the palace, cottage, hall;
Where there 's drink there 's danger.

THE THERAPY OF EXERCISE.

PHYSICAL exercise as a means for the development and strengthening of the body, with the view to the preservation of health, has been practised for many years, but it is only within a recent period that it has been prescribed with any attempt at precision in the treatment of almost every form of chronic disease.

Exercise is not only an important adjuvant in the treatment of disease, but is also, when rightly prescribed, a therapeutic measure of great value in its curative possibilities. It may, in fact, be said that no chronic ailment exists in the treatment of which exercise in some form cannot be practised with advantage.

The physician who would have had the courage a few years since to prescribe any form of active exercise in the treatment of heart diseases would have been doubtless dubbed a crank, if not looked upon as a dangerous man in the community; whereas now exercise is regarded by many as being the greatest of therapeutic agents in the cure of just such affections.

The numerous cases of displacements of the internal organs and particularly of the abdominal viscera, which are so frequently brought to our knowledge, are now generally well understood to result, in the majority of instances, from a weakened or ill-nourished muscular system, due mainly to insufficient exercise; and it is further understood that no other therapeutic measure can successfully take the place of exercise either in the prevention of these displacements or in the restoration of the wandering organs to their normal positions.

It has long since been observed that the cure of indolent ulcers, chronic rheumatism, surgical wounds of long standing, and the union of fractured bones are facilitated by some mildly active or passive form of exercise. In fact, it matters but little what the nature of the disease may be, when the inflammation and fever have subsided, and the acute stage passed, nothing can be lost, but a steady gain will be made, by strengthening the patient; and this can be accomplished by no other means so surely as by prudent exercise.

It does not necessarily follow that exercise should be fatiguing, or require any exertion upon the part of the patient in the severe forms of disease. In such cases the exercise should be of a passive character, such as that coming within the domain of massage, the more active forms of exercise being resorted to as the increased health and strength of the patient will admit. The exercise, too, should be of a general character, extending to all parts of the body. Any attempt at the development of certain groups of muscles with complete absence of it in others will not be followed by the best results.

When the therapy of exercise is better and more generally understood and practised, a great advancement will have been made in the treatment of chronic ills.—*J. Clark Slay, in the Dietetic and Hygienic Gazette.*

ATHLETIC EXCESS.

A WISE critic says: "Athletes who have overdeveloped certain sets of muscles at the expense of others, men who have acquired a stoop from constantly bending, and people who are weak in the heart by violent exercise should be criticized severely for making gymnastics a menace instead of a means of help. The

impression they produce is most painful. A gymnast must show in his own body that he is benefited by his training in order for us to admire his cleverness. One is often inclined to disapprove altogether the idea of such exhibitions, as degrading to the art of gymnastics. . . . Nothing so satisfies the esthetic eye as a well-developed body responding to the will in executing difficult movements and tests of strength. There is beauty in rounded limbs and youthful contours, but the beauty of a clean-cut muscular figure evincing in every line strength and vigor, has a far more potent attraction than anything the disciples of Delsarte find admirable. Only when a gymnast can prove that he is an all-round athlete will the scientific physical trainer heartily approve of his giving exhibitions of his skill, for then he has attained harmonious physical culture, and shows himself as a model for others to imitate.

"Nothing better could happen for the cause of legitimate education than to have the public taste cultivated to expect greater all-round perfection."

DEEP BREATHING — WITH POINTS ON EXERCISE.

MUCH has been written of late years about the importance of deep breathing, but, generally speaking, all the advice given is to practise taking deep inspirations voluntarily, so many breaths so and so, and so often during the day. This is to take a very narrow view of the matter, as it seems to me. Beyond question, deep breathing is very important; but the only practical and by all means best way to secure it is by doing something to compel it in a perfectly natural way. Hard, sharp, muscular, all-round exercise is the proper thing. Walking, running, rowing, swimming, hill or stair climbing, golf, tennis, baseball — anything, everything, that will engage all the muscles and keep them supple, fine, strong, and free from fatty degeneration. Attend sufficiently to these things, and no one will have to tell you how to breathe. The "machine runs itself" automatically, and all its functions, including that of breathing, will be performed in the most natural manner if we treat it naturally. Indeed, if we could and would always do this, there would be no disease, no sickness, no excuse for drug-poisoning.

We may well take lessons from the lower animals, who in some respects are above us, in that they are more obedient to the laws of nature, which are the laws of God. Early this morning I observed a little English sparrow's antics on the edge of the neighboring roof. He was not still even for a second of time, though he evidently had nothing to do. His head was in constant motion, up, down, to one side and then the other, his body moving with a wiggle, twist, and turn, hop, skip, jump, a flutter of the wing, a bit of a flight — in brief, every movement was evidently a means of physical delight, as, indeed, it is and always will be with every living creature — man, woman, or child — who, through proper physical training keeps himself healthy.

"When I reflect on the immunity of hard-working people from the effects of wrong and over-feeding," said that wonderfully wise physician, Dr. Boerhaave, "I cannot help thinking that most of our fashionable diseases might be cured *mechanically instead of chemically* — by climbing a bitter-wood or by chopping it down, if you like, rather than swallowing a decoction of its disgusting leaves!" — *Charles E. Page, M. D.*

CAUTION IN BICYCLE RIDING.

WHETHER it is due to bicycling, I cannot possibly say; but since I took up wheeling, over two years ago, I notice every night, just before I fall asleep, that the muscles of my limbs give a sudden quiver. The movement is instantaneous, and I have no consciousness of it whatever until it occurs. I have been at a loss to account for this peculiar movement, or what would seem nervous vibration, which has developed during the last year, and, as I have said, comes regularly every night after retiring, and just before sleeping. I have thought that possibly it was due to the unconscious muscular movement of my limbs from much bicycling. I am not in the least of a nervous disposition, am in perfectly good health, and pride myself somewhat upon my muscular strength. For these reasons I have decided to do less bicycling, and what I do, at a more moderate pace.

I have read from an eminent authority on the subject that active muscular movement, regularly kept up, does often produce what might be called nervous unsteadiness, or twitching of certain muscles that are most called into action by cycling. I have come to believe more strongly that the bicycle should be used cautiously, especially as now that it has come into so general use. We might say that our people, at least all that can afford it, are bicycle riders, and the tendency is, at the outset, or for the first year or two, to overdo themselves by long excursions.

Let me reiterate a few arguments that have been advanced against such practise. Suppose one is out on an ordinarily pleasant day, riding at a moderate pace. You have passed the period when you have gained, so to speak, your "second wind," and the tired sensation that comes into the muscles of your limbs on the first few miles of your journey has disappeared. You take the hills easily, you ride steadily, not indulging in sprints, and are probably enjoying the trip immensely; but when night comes, although you indulge in a good supper, have a cold bath, and retire, do you not often notice that sleep seems to have departed? You may not be nervous, or at least will not think so; but the fact is, you cannot sleep. The cause of this can be traced, not to mental nervousness, but to another condition of the body that is not noticed generally. The muscles of the thigh and calf, having been in action so long a time, continue in motion, although this is not felt. But if one examines the calf muscles, the motions will be plainly observed. I have read an article by a physician, a devoted cyclist, who counted no less than sixty of these unconscious muscular movements to the minute. They are due to the abnormal conditions excited by long-continued action. Deep sleep will generally follow, but on waking in the morning there will be a weariness and tiredness even more severe than when retiring. After the person rises, however, and enjoys his breakfast, and again starts out awheel, the sensation of weariness soon passes away. Some imagine that this is a cure, and that the facts of the previous day have been overcome; but this is a wrong conclusion. What is needed is real rest. If the practise is continued from day to day, or even every other day, the conditions will continue to exist, and cycling become an actual physical injury. Many persons break down from this evry unwise and immoderate kind of practise; and riders, especially those of advanced years or middle age, should be very cautious in this matter. — *Current Literature.*

THE BOON OF WORK.

HALF the people in the world are busy trying to evade work. Well for them that they cannot wholly succeed. Of all the gifts to mortals, work is among the choicest. It is the great civilizer and balance-wheel of mankind. To the individual it is an incalculable blessing. Nor is this truism meant in the stereotyped sense in which it once figured as a fundamental law of education — the false and unpalatable sense that whatever was difficult and disagreeable was necessarily good discipline. It is meant in a scientific sense. Every advance in the study of mind and body reveals the fact that action is the normal condition of all animate creation. Nature abhors inertia not less than she abhors a vacuum. Decay and death are the penalty of inactivity, and not to use a faculty is to lose it.

"Get work; be sure 'tis better than what you work to get." A wiser epigram was never twisted than this quaint advice of Mrs. Browning's. Man works for bread, for wealth, for fame, or far-off ease. But these are not the real objects of work. They are but lures to lead man on to greater effort. They are no more the purpose of work than an oratorical prize is the purpose of speech. Money and position may be prizes, but the effect of the work upon the worker is infinitely better than the gold or honor that he works to get.

Like breathing and all the processes of nature, the effect of work is so subtle and gradual that few appreciate its value. It is recognized only in striking instances. Yet always it exerts its potent influence for change and growth and energy. It is the motive power of the engine of the heart, and sends the red blood coursing with renewed force through the tingling veins. It is the master-builder of the body and the brain, and daily tears down tissues only to build up stronger muscles, firmer flesh, and healthier nerve-cells. It writes wrinkles on the brow, 't is true, but not more surely than it writes convolutions on the brain. It schools the body to instant, deft, and accurate obedience to the mind. Watching the moral, we cannot fail to see that work is necessary to health and sanity, to growth and culture. It is as certainly an element by which the whole being thrives as air. As well hope to live without eating as to live without working. It is a condition that is imposed upon all life by the supreme Scientist himself.

Not only is work inevitable, and essential to the safety, health, and growth of the whole being, but it is one of the greatest sources of pleasure. Indirectly it adds to enjoyment because the change from effort, application, and monotony lends double zest to recreation. But it gives also direct pleasure. All enjoyment arises in the use of some faculty. Conversely the normal use of any faculty is pleasurable. The man who has found his natural and congenial sphere of work, and who prosecutes it under proper conditions, derives real and constant gratification from it, although, from necessity, he does not recognize it with the same effervescent enthusiasm with which he recognizes the pleasures of a holiday. Taken from his work, he would suffer more from the loss than he ever suffered from drudgery.

There is nothing like hard and systematic work to keep the emotions under proper control. It is the best oblivion in which to bury self or sorrow. It broadens the outlook and distracts the mind from petty personalism. Like a brisk walk or a plunge in the ocean, an exacting duty steadies the nerves, settles the mind, and dispels illusions. No one is

so foolish as to argue that unremitting work — work beyond the strength, work unrelieved by proper diversions — could prove of benefit. But properly limited, it is the salvation of man. To find one's work is the first duty of life, and to throw his whole heart into it is the second. He is the happy man who works. He is the successful man who works best. — *Minneapolis Times.*

A Manual Training-School for Women. — There has just been established in the city of New York a manual training-school for women and girls, the first school of its kind, so far as known. No fees are to be charged where applicants are in needy circumstances. The *Outlook* makes the following comment on the idea of manual training for women: —

"This [school] meets one of the greatest needs of the young women of New York. It is interesting to note that the leading instructors in manual training for women lay stress more and more, as the years go by, on the moral effects of such training. It is difficult to make the general public realize this great fact. The hand cannot lie. Recently the head of the Domestic Art department at Pratt Institute made this statement with regard to instruction in millinery: 'The milliner must make her design clear to herself before beginning, either by imagination, by a sketch, or by a model; sometimes by all three. She must have the manual dexterity so to cut, make, and design her materials as to express this idea the first time she tries. This requires a quick eye, a firm, delicate touch, and decision of character.'

"Of the use of a sewing-machine the rector said: 'It teaches a girl self control, a steady, firm touch, ingenuity, and some knowledge of machinery.' It is not merely for skill or wage-earning that manual training is designed. It has in it all that is necessary to train the whole nature, and this is its chief value; it is a promise of higher citizenship and better homes."

Hard Work Does Not Kill. — Edward W. Bok says to young men: "Don't get the notion that hard work kills. It doesn't; it can't. Work may tire, but that is all. Then you must rest. What good, hard work does is to make solid men. The healthiest men in the world are the men who work hardest. It gives them appetite for their meals, and brings refreshing sleep. Work all you like and can, only don't worry, and don't keep late hours. It is in the latter two points that danger lies; not in work."

No organ of the body should be strained to its utmost. There should be always kept on hand some "reserve force" for every power. This is true especially of the vocal organs. A good voice has been utterly ruined by one effort to reach the extreme limit of its capacity. Many a man has ruined a good physical constitution by a desperate effort to outdo everybody else.

If we look down, then our shoulders stoop. If our thoughts look down, our character bends. It is only when we hold our heads up that the body becomes erect. It is only when our thoughts go up that our life becomes erect. — *Alexander McKenzie, D. D.*

Miss Christian E. Yates, of Oakland, Cal., is probably the oldest woman who rides a wheel. She is eighty years old; and although she has learned to ride within a year, is already a skilful bicyclist, and can cover a long distance without fatigue.

HOW TO PREVENT CONTAGION IN SCARLET FEVER.

BY KATE LINDSAY, M. D.

(Concluded.)

WHEN preparing a room for a case of scarlet fever, it should not be forgotten that during the scaling time all things in the room are liable to be saturated by the infection; also that anything taken from the room is liable to carry with it the infection; therefore all clothing, bedding, dishes, wash-water, and slops from the room should be disinfected. If there is a fire in the room, in an open grate or a stove, all food left over, all dust and waste that is dry, should be burned at once. If possible, the sick-room should have an outside door, and the one which opens into the hall should have a sheet wet in a solution of bichlorid, 1-1000, hung over it, and all the cracks shut up by pasting paper over them. No carpet or any upholstered furniture should be left in the sick-room, as it can never be disinfected so as to be again made safe for use. The nurse should have two throat and nasal sprays, one for herself and one for the patient. The sick-room should never be swept with a dry broom, but the dust wiped from floor and furniture with a cloth wet in the disinfecting solution.

After the first case has appeared in a school or family, all the children who have been exposed to the contagion should be placed in quarantine for a week, away from the one already ill, and also away from others who have not been exposed. The temperature of each one should be taken three times a day, and their throats examined as often. If any child has a rise of temperature, or shows the slightest sign of sore throat, or complains of being ill in any way, it should at once be put in a room by itself and carefully watched, and also examined by the doctor. With proper care in this respect no other members of the family need be infected. Other children in a family where one member is ill with scarlet fever should not attend school unless they have been taken away from the house, and kept in quarantine for ten days.

If an epidemic of the disease breaks out in a school, the schoolhouse should be shut up and thoroughly cleansed and fumigated before it is used any more. The walls and floors and all the furniture should be thoroughly cleansed. All slates, sponges, and books should be burned; it is cheaper to buy new ones than to spread the infection. Contagious disease often spreads in a school from the uncleanly habits of the scholars in chewing each other's gum, and in putting pencils and other things in their mouths which have been saturated with the saliva of others. No one should ever practise the disgusting habit of making the mouth a general catch-all for pins, needles, nails, tacks, buttons, and other such things. Silver money is another thing which is often put in the mouth; and when one thinks into how many dirty pockets and mouths it has been, it is not strange that it should be the means of spreading the infection of contagious diseases. Yet fathers will often give their little ones silver money as a plaything, and that without either disinfecting or washing it.

The open water-pail and common drinking-cup at school are another source of danger, not only for spreading acute

infectious diseases, but all other kinds of infection, as cold-sores and mouth disorders. Every schoolroom should have a water-tank with a cover and faucet, and every child should carry its own drinking-cup in its lunch-basket. The habit of kissing, so much indulged in by school children, should be strictly forbidden, not only to prevent contagion, but in the interest of morality.

When a child has recovered from the disease sufficiently to be out of the sick-room, and is chafing under the confinement, it should be washed all over and oiled and clothed in clean garments, and put in a clean room for a few days, and then examined to see if there is any scaling or any discharge from the nose or eyes, or any sore throat. Another bath should then be given, and the examination repeated after two days. If all is then found to be right, it may be given a third bath, and allowed to go out.

When a patient is released from quarantine, great care should be exercised to see that no toy, book, dish, clothing, or any other thing that has been infected, gets out with him. It were useless to take so much care with the patient himself, and then allow a doll or picture-book filled with germs to spread the infection. The toys and books used in the sick-room should be cheap or home-made, such as there will be no hesitancy in burning. A pair of scissors and an assortment of old illustrated papers, or a jack-knife and a bunch of shingles will make most any convalescing child happy. Clean corn-cobs make fine building-blocks; and the corn itself is also very useful in this capacity, to string into necklaces and furnish amusement in various ways. There is no end to the ingenious home-made sources of entertainment that can be devised by the nurse to keep the little one busy through the tedious time of convalescence after the disease has subsided. They should, however, all be burned now and then, and thus avoid the reinfecting of the patient from the things he handles.

It is important to get the patient out of quarantine clean and free from infection; and it is just as much so to get the nurse out in the same condition, and also to have the room free from infection before any one else is permitted to occupy it. Before the nurse goes to take charge of another case, she should take a full shampoo bath, including the hair, and carefully cleanse her finger-nails, ears, and teeth. If she has any symptoms of sore throat, she should not go out until it is well. If all these precautions are taken to prevent the germs from getting abroad, instead of an epidemic resulting from the first case, it may be the only one in either the family or the neighborhood.

Children who are weak and debilitated from other diseases, and either children or adults who have undergone surgical operations, are predisposed to the disorder in a very malignant form, as are also women during the lying-in period. A nurse or any one who has been in contact with scarlet fever should never come near such cases. From what has been previously stated in this article it will be seen that every case of scarlet fever is contracted from some other case, either by direct contact with it, or by having the infection brought by something or somebody who has been in contact with it.

As milk is a very frequent medium by which the disease is conveyed to children, it is safest, unless there is entire certainty that the supply is from a clean source, to boil the milk before feeding it to children. Domestic pets, being likely to take the disease or carry the infection in their fur to others, should never be admitted to the sick-room. It is better to

make a cloth cat to amuse the little one than to run the risk of infecting some other child. The cloth toy can be easily burned when it has served its purpose.

As grown people who have not had the disease are liable to take it when closely confined with it, it is safest to let one who has already had the disease care for the sick child.

No one who has any symptom of scarlet fever or any connection with a scarlet fever case should visit any church or other public assembly, or travel in a public conveyance, without first thoroughly cleansing himself and changing his clothing; and the adult who may have the disease in a mild form should refrain from mingling with other people until every trace of sore throat and every scale has disappeared.

Do not neglect to let an abundance of nature's great disinfectants, fresh air and sunlight, into the house, and especially into the sick-room; and always bear in mind the fact that it pays to take a great deal of care and trouble to prevent the occurrence of scarlet fever, or any other disease, for that matter.

Nursing as a Profession.— Of late years, says *Harper's Bazar*, a very noble and wholesome occupation has developed itself, as profitable as shop-keeping, as honorable and as helpful as teaching, and one that can never go into disrepute except through special default of those that fill it. When the nurse comes, she is received as if she were a visiting angel; for she comes to give the last measure of comfort to our dear ones, our sick and dying — comfort that we do not know how to give with our own hands, but which she, with her skill and training, gives almost as soon as she enters the room. She comes to give us rest and relief, to take from us in our ignorance and half helpfulness the burden of responsibility, to let us have some sleep and rest, and be prepared for our joy or sorrow. And she is taken at her full worth. The work she does is work that in all ages has been considered womanly, refined, religious.

It has taken time, however, to bring the world to a full realization of this. It is indebted for a good part of the full realization of it to Florence Nightingale and the well-born women who followed her to hospitals. But the idea has grown since those Crimean days, and what it was fine to do for heroes it has since been felt fine to do for all humanity, high or low. Thus into the sick-room of to-day have come those whose birth gives them hereditary delicacy and refinement and grace, whose general education has developed and heightened their perception, and whose technical training has brought all these good qualities into use, the profession of nursing having been taken up by ladies, — in many instances people of as high a station as our republican institutions allow, — who wish to be independent or to add to their resources. And this fine nursing, followed by women of delicate habits, of tender sympathy, of good breeding, not only acquainted with its technique, but its esthetic and its moral side, is an art than which there is none finer.

THE *Scientific American* states that Dr. Freund, of Vienna, Austria, has succeeded in removing a hairy growth which covered the whole back of a four-year-old child, by exposure for ten days to the action of the X-rays.

MUSTARD and hot water in a foot bath will disperse a fever if taken in time, cure a nervous headache, and induce sleep.

THE TRAINED NURSE.

FLORENCE NIGHTINGALE was the first trained nurse, as the term is now understood, and her opportunities for professional work were but meager. She studied in a philanthropic German institution, which did not claim to be a training-school, but was the home of an order of deaconesses, who were taught nursing, and who went about caring for the sick and needy. In 1854, soon after the beginning of the Crimean War, Miss Nightingale went upon her mission of mercy, visiting the battle-fields, and doing all in her power to assuage the sufferings of the wounded soldiers. At the period of our own Civil War a number of noble and courageous women braved everything in their desire to assist the sick and disabled; how much more they might have done had they undergone a regular course of training can well be imagined.

Miss Nightingale, recognizing the necessity of educating women to become nurses, canvassed the matter with some English ladies interested in philanthropic work, and a school for this purpose was established in London. The English institution was remarkably successful, and developed splendidly under the careful and wise supervision of Miss Nightingale.

It was not until 1872 that a number of ladies, members of the State Charities Aid Association of New York, who were in the habit of ministering to the indigent sick in Bellevue Hospital, discovered that the lack of proper attendance in many instances retarded recovery. They found the corps of nurses in the institution totally inadequate to discharge their functions; they were in many cases illiterate, immoral, and intemperate, and failed to carry out the orders of the physician; in fact, they were incompetent in every way. These ladies set to work to convince the faculty that a reform was necessary, and the gentlemen finally agreed to allow an institution to be founded in connection with Bellevue Hospital. Most of the doctors were skeptics as to the result, but later on acknowledged their mistake.

The first superintendent of the school was Sister Helen, a graduate of the London Institute; she was endowed with infinite patience, perseverance, and strength of character, and nobly surmounted the many obstacles incident to the founding of a new school. A better class of women than before applied for admission, and their services were soon in demand. There was a marked improvement in these wards where the new nurses were in attendance, and they scored a notable success. Five pupils were registered the first year; now the graduates number over four hundred and fifty. Of these, sixty have become superintendents and head nurses in other hospitals; in fact, they are scattered all over the country.—*Godey's Magazine.*

MRS. MARY A. LIVERMORE says: "I have long maintained that the young women of the present day are not behind the men of the age in bodily vigor. For while young women damage their health by unhygienic dress and bad habits of life, young men deteriorate physically through the use of tobacco and alcoholic drinks and other pernicious practises. Experience and extensive observation long since convinced me that many of our girls are made victims of disease and weakness for life through the evils of the dress they wear from birth."

A BIT OF LIFE.

A MAIDEN sat within the door
And sang as many times before.
A man to daily toil passed by,
No love nor pleasure lit his eye;
But when he heard the merry song,
He whistled as he went along.

A woman by the window wept
For one who in the churchyard slept;
But when upon her hearing fell
That tune she knew and loved so well,
The flood of burning tears was stayed,
And soon a song her lips essayed.

Her neighbor heard the tender strain,
And softly joined the sweet refrain.
Thus, all day long that one song bore
Its joyousness from door to door.

— *Clara J. Denton.*

Singing Her Way Through. — In one of the city hospitals was a woman who had broken down from overwork. Her home was only one room, scantily furnished, and here for more than a year she had taken in washing to support her four small children and her sick husband. Hard labor, often continuing far into the night, had developed a weeping sinew on her right wrist. But in spite of her suffering, she continued to wash until her husband's death. Then she was obliged to go to the hospital.

After an operation had been performed, she remained for further treatment during convalescence. Then she really became the sunlight of the hospital. She had a fine, untrained voice, so sweet and cheery that it blessed every one who heard it.

"Why do you sing so constantly?" a nurse asked.

"Because I must. Life is pretty hard, and unless I sing my way through the day, I am afraid I'll give out."

One day she asked her nurse if there was not some way by which she could make herself useful in the hospital.

"There is a despondent patient in another ward who is very unhappy," said the nurse. "Nothing we can do seems to cheer her. Possibly if you were to sing to her, it might take her mind from herself and do her good."

"I shall be glad to try," was the quiet response. And she did try. She had hardly sung more than a few moments before the desponding woman's face brightened. Up and down the ward the tears fell, and as the sweet voice continued, smiles shone; but the tears soon dried, and the smiles remained.

"Send her again! Let her sing to us again!" the patients begged; and as long as she remained in the hospital, she sang her way through the sufferings of the inmates — for she had learned to sing her way out of her own.

Troubles crowd sooner or later into every life. It is not so much the difference in their character as the difference in the natures of those who encounter them that makes life bearable or unbearable. Sing your way through if you can! Even a little cheerful faith is of more value to the soul than years of melancholy endurance. — *Youth's Companion.*

House-to-House Nursing. — There are many families who cannot afford to pay for a trained nurse for sick members, however much they may need one. To meet the demands of such, a system is being inaugurated in some of the large Eastern cities, called house-to-house nursing. The trained nurse goes from one

patient to another, just as the doctor does,— follows in his wake perhaps,— and remains one or more hours, or as long as is necessary, and charges accordingly. In Rochester, N. Y., this plan has been introduced extensively. The nurse is prohibited from visiting patients with contagious diseases. The *Christian Register*, speaking of the system, says : —

"How many young mothers, unable to keep a nurse the traditional month necessary for caring for the new baby, would bless a skilled woman who should come in for an hour every morning to bathe and dress it for the day, and oil the domestic machinery, so that it would run smoothly.

"Such nursing is not only of physical benefit, but of moral help and mental cheer. It brings an atmosphere of rest to the tired household, and awakens hope. The nurse not only does her own work, but she shows the amateurs who continue her duties during the rest of the day how to perform theirs properly.

"The nurse also reaps some advantages from this plan. She has a sense of independence, a stronger home feeling, a greater variety of experiences, more out-of-door life, and a wider, deeper, more sympathetic interest in humanity at large. This, at least, is the experience of those who have adopted the profession of visiting nurse."

This method could be introduced with advantage into the smaller and even rural towns, where nursing is generally confined to the members of the patient's family and sympathizing friends.

The Training-School for Colored Women.— According to the Montgomery *Advertiser*, the scheme of the New Orleans University Medical College to found a training school for colored women as nurses is well under way, and is assured of success. The aim is to supply at moderate rates nurses who will be competent for all the duties performed by white nurses, and willing and able also to relieve the strain put upon an ordinary household by sickness, instead of, as is now sometimes the case, aggravating it. Careful inquiry was made by the physicians interested in the movement to make sure that there would be a paying demand for the graduates of the school, and the result was satisfactory. No one who has had much experience with sickness is ignorant of the fact that the trained nurse of to-day is, if indispensable, extremely expensive, directly and indirectly, or that there are many cases in which less costly, even if less accomplished, attendance would be a great convenience. If colored girls can be trained to meet this need,— and they unquestionably can,— it will open to their race an occupation which those fitted by intelligence and character now entirely lack.— *The Sanitarian.*

A Cat with Diphtheria.— Mr. H. K. Griggs, secretary of the local board of health of Westbrook, reports the following case : —

"Recently we had a family under quarantine with diphtheria. I cautioned the head of the family against allowing cats in the room where the child was sick, but he only pooh-poohed, and called me whimsical. They let the child have the cat to play with constantly. The result was that within a few days the animal was taken sick ; its throat was so swollen that it could not swallow, and it gave such unmistakable signs of diphtheria that they killed it without delay. That family has doubtless learned something from the cat, if they could not from the board of health."

ALL the laws of the universe are required to explain the circulation of the blood.

HYGIENE OF THE NURSERY.

BY J. H. KELLOGG, M. D.

(Continued.)

The Wet-Nurse.— A healthy wet-nurse, provided a suitable one can be found, is certainly to be preferred to any form of artificial feeding, when the mother, for any reason, is not able to nurse her child. Great care must be taken, however, in the selection of a wet-nurse. She must be healthy, neat, and tidy in her habits, as well as a woman of amiable disposition. The nurse who uses alcoholic liquors in any form, or who is given to fits of passion, or has any constitutional taint whatever, should not be employed. The wet-nurse should also be a person who is willing to regulate her diet in the interest of the child. Her food should be plain, simple, and wholesome; cheese, meats, condiments, such as mustard, pepper, etc., and coarse vegetables, like onions, carrots, parsnips, and cabbage, especially in such an objectionable form as sauer-kraut, should be entirely avoided. The diet should consist chiefly of fruits, grains, milk, and the more easily digested vegetables.

Artificial Feeding.— When a suitable wet-nurse cannot be secured, milk from a goat or cow constitutes the best food. Care should be taken in the selection of milk, that being preferred which is obtained from a cow which has calved two or three months previously. On account of the difficulty of regulating the diet and habits of a single cow, it is better, on the whole, to use mixed milk from a herd, as this will be subject to less variations than that of an individual cow.

The health and care of the cow, particularly the character of her food, are matters of importance, as there is no doubt that consumption is frequently communicated to infants from cows whose lungs have become diseased through confinement in close stalls with foul odors, and deficient and improper food. Cow's milk should be diluted at first with one-half water, the proportion of milk being gradually increased as the child's stomach is strong enough to bear it. Pure water, lime-water, barley-water, and thin well-boiled and strained oatmeal gruel may be used to dilute the milk. The object of the dilution is, first, to make it more nearly like mother's milk in the proportion of nutriment which it contains; and second, to render it less liable to form hard curds in the stomach, which are very likely to occur when the milk is taken undiluted.

The Sterilization of Cow's Milk.— Thousands of infants have died as the result of poisoning by the germs which are contained in cow's milk. The stomach of an adult is able to destroy these germs, but the feeble stomach of a young infant is not able to do so. Cow's milk, like mother's milk, when received from the mammary gland of a healthy animal, is practically free from germs, but through carelessness of milkmen and infection by germs from improperly cleansed vessels and other sources, many germs find their way into the milk. Warm milk affords an excellent field for the development of germs, so that a few hours after the milk is received from the cow, it may contain not only millions of germs to each quart, but also poisons resulting from the action of these germs.

Many mothers will doubtless be aston-

ished to know that most of the disorders of digestion from which infants suffer are due to germs which enter the stomach with the food. It may be safely affirmed that fully half the deaths among children are the result of this cause, which may be easily prevented.

It is highly important that every mother should know that this danger may be wholly obviated by the simple precaution of boiling the milk. A temperature of 212° F. will kill not only the disease germs which the milk may contain, but most of those which give rise to fermentation. Milk boiled for half an hour will keep perfectly sweet for two or three days. By reboiling at intervals of twenty-four to forty-eight hours, milk may be kept for an indefinite length of time. Fig. 1 represents a convenient utensil for sterilizing milk. In employing it, the following directions should be carefully followed: —

To six quarts of warm water add four and one-half pounds of salt. Stir thoroughly or shake until the salt is entirely dissolved. Pour the solution into the sterilizer. Carefully rinse the bottles which accompany the sterilizer, and fill to within about three and one-half inches of the opening. Put the bottles in the sterilizer without corking. Place over the fire and allow to remain fifteen minutes after the solution begins to boil. Then remove from the stove, cork the bottles without removing them from the sterilizer; replace upon the stove, and continue boiling for fifteen minutes, after which the sterilizer should be taken from the stove without removing the bottles, and allowed to cool gradually. If the bottles are taken from the sterilizer before becoming cool, they are very liable to break. After they have cooled, place the bottles in an upright position in a cool place. Milk preserved in this way will keep indefinitely.

The solution should be removed from the sterilizer, and the sterilizer carefully rinsed each time it is used, as the long-continued action of the salt on the metal will injure it. The solution may be used any number of times, it being only necessary to replace, each time, the water lost by evaporation.

The objection is sometimes raised that boiled milk does not agree with infants, because it gives rise to constipation. Some physicians are also of the opinion that boiled milk is less digestible than

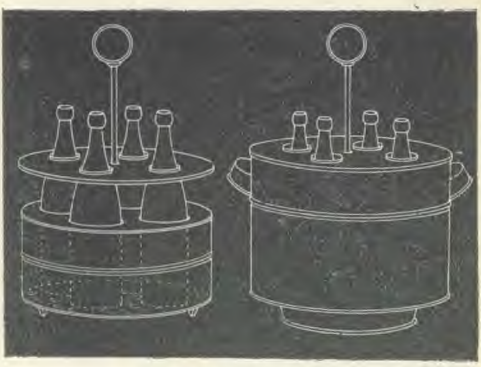

FIG 1.—MILK STERILIZER.

milk which has not been boiled. This difficulty may be obviated by the employment of the process known as Pasteurization, in which it is heated to 170° F. for half an hour, instead of boiling. By daily repeating the Pasteurizing, the milk can be kept for an almost indefinite length of time. When it is required to keep milk sweet for several days, as in traveling upon the cars, it may be readily accomplished by sterilizing in the manner above described, repeating the process on three successive days. In rubber-stoppered bottles, milk sterilized in this way will keep many months.

A Convenient Food-Warmer.— In Fig. 2 is shown a convenient means of keeping a child's food warm. It consists of a rubber hot-water bag with a

thick woolen cover large enough to contain both the bag and the feeding-bottle. In the absence of the hot-water bag, a heated brick or a large bottle filled with hot water may be used,—any device that will retain heat long enough to warm the milk.

Care of the Nursing-Bottle.— Cow's milk or other fluid food is best given to

FIG. 2.—CONVENIENT FOOD WARMER.

an infant with a proper nursing-bottle. (Fig. 3.) The best forms of nursing-bottles are those furnished with rubber caps such as is shown in Fig. 4. The cap should be removed and well cleansed with boiling water in which soda or saleratus has been dissolved, in the proportion of a teaspoonful to the pint, each time the bottle is used. Both the nursing-bottle and the rubber nipple should be kept immersed in a weak solution of soda when not in use. They should be scalded a second time just before the child is fed. A rubber nipple should be purchased without an opening, as the openings are nearly always too large. A small opening may be made with a needle, and this may be enlarged afterward, or a second opening may be made if necessary. This is one of the most valuable means for preventing overfeeding.

FIG. 3.—NURSING-BOTTLE.

FIG. 4.—RUBBER CAP.

If a suitable nursing-bottle cannot be obtained, the child may be fed with a spoon. The spoon-feeding, although involving considerable trouble on the part of the mother or nurse, is preferable to the employment of a nursing-bottle with a long tube, which is almost certain to render the child ill by infecting the milk with germs.

Physiology of Childhood.— There is scarcely an organ which behaves in the young as it does in later life. They are more delicately organized, and contain a larger proportion of water, and are more easily injured. The bones contain less earthy matter, animal matter predominating. The brain is being rapidly developed. The arterial pressure is not so great.

The digestive organs of infants present many peculiarities. The digestive glands are but gradually prepared for their functions. The salivary glands are only partially active. The secretions of the stomach contain more lactic than muriatic acid. The stomach is less elongated, and occupies a more vertical position than in the adult; hence vomiting is more frequent, more readily produced, and causes less disturbance to the general system. The liver is much larger in proportion to the size of the body than it is in adult life. All of these differences must be taken into consideration in treating infants and children.— *Dietetic Gazette.*

DURING the last twenty-five years the world has progressed, and the trained nurse is now recognized as a member of an important profession.

BACHELOR HOUSEKEEPING.

BY MRS. E. E. KELLOGG.

THERE is a constantly increasing class of working-girls and women, who, tired of restaurant and boarding-house life, are looking for some plan of simple housekeeping which will enable them without much extra labor to live substantially and healthfully. Several of this class, who have been recently trying a diet largely made up of the products manufactured by the Sanitas and Sanitarium Health Food companies, believe they have solved the problem. With the aid of a small kerosene lamp stove, or a chafing-dish, to prepare something hot for each meal, and the abundance of fruits and canned foods to be found in the market, one can, with the use of these foods, provide an ample bill of fare with pleasing variety from day to day, as the following menus and accompanying recipes will illustrate: —

Breakfast No. 1.

Fresh Fruits
Granose Flakes with Cream
Nuttose Sandwich
Caramel-Cereal (hot)

Dinner No. 1.

Tomato Soup with Vermicelli
served with Whole-Wheat Wafers
Banana Sandwich made with Moistened Zwieback
Granose Flakes with Poached Eggs
Fruits and Nuts

Breakfast No. 2.

Fresh Fruits with Bromose
Crystal Wheat with Cream
Fruit Toast, made of Zwieback and Fresh or Canned Fruit
Graham Wafers or Granose Biscuit

Dinner No. 2.

Gluten Omelet
Stewed Tomato or Canned Corn
Apple Granose
Wafers
Granola and Cream

Breakfast No. 3.

Fresh Fruits
Granola Fruit Mush
Zwieback with Hot Cream
Sliced Nuttose

Dinner No. 3.

Stewed Peas with Nuttose
Gluten Mush with Dates
Wafers
Fruit and Nuts

RECIPES.

Nuttose Sandwich. — Slices of nuttose placed between thinly sliced white or graham bread, biscuit, or wafers, spread with nut butter, makes a most excellent sandwich.

Tomato Soup with Vermicelli. — Cook one-half cupful of broken vermicelli in a cupful of boiling water for ten minutes. Turn into a colander to drain. Have boiling a quart of strained, stewed tomatoes, to which add the vermicelli. If preferred, the tomato may be thickened slightly with a little corn-starch rubbed smooth in cold water before adding the vermicelli; or the vermicelli may be cooked in the tomato. Salt to taste, and just before serving add a tablespoonful of nut butter rubbed to a cream in half a cup of water.

Granose with Egg. — Granose is an excellent accompaniment of soft-boiled or poached eggs. Serve the eggs, when cooked, with a spoonful or two of the dry granose in each individual dish.

Fruit Toast Made of Zwieback. — For the preparation of the toast, the zwieback must be first softened with some hot liquid. If the cream is used for this purpose, it should be fresh and very thin. Heat it nearly to boiling in some rather shallow dish. Put the slices, two

or three at a time, in it, dipping the cream over them, and turning so that both sides will become equally softened. Keep the cream hot, and let the slices remain until softened just enough so that the center can be pierced with a fork but not until at all mushy or broken. With two forks or a fork and a spoon, remove each slice from the hot cream, draining as thoroughly as possible, and pack in a heated dish. Repeat the process until as much zwieback has been softened as is desired. Cover the dish, and keep hot until ready to serve. Special care should be taken to drain the slices as thoroughly as possible to prevent their becoming mushy. It is better to remove them from the cream when a little hard than to allow them to become too soft, as they will soften somewhat by standing, after being packed in the dish. Prepare the sauce for the toast, and pour into a pitcher for serving. Serve the slices in individual dishes, turning a small quantity of the hot sauce over each as served. If water instead of cream be used to moisten the zwieback, lay the slices on a perforated tin or in the bottom of a colander, set within another dish, turn boiling water over it, and drain immediately. Hot fruit juices may be used in a similar manner for this purpose.

To prepare the sauce, turn a can of well-kept berries into a colander over an earthen dish, to separate the juice from the berries. Place the juice in a porcelain kettle, and heat to boiling. Thicken to the consistency of cream with flour rubbed smooth in a little water; a tablespoonful of flour to the pint of juice will be about the right proportion. Add the berries, and boil up just sufficiently to cook the flour and heat the berries; serve hot.

Fruit Toast No. 2.— Take fresh red or black raspberries, blueberries, or strawberries, and mash well with a spoon. Add sugar to sweeten, and serve as a dressing on slices of zwieback previously moistened with hot liquid.

Apple Granose.— Prepare a fruit pulp by rubbing stewed tart apples through a colander; sweeten to taste, and evaporate to about the consistency of marmalade. Spread a thin layer of dry granose in the bottom of a pudding-dish; add a layer of the fruit pulp, then a layer of granose. Fill the dish with alternate layers of fruit and granose, finishing with a layer of granose on the top. Let it stand for an hour or so, until the granose flakes have become slightly moistened. Cut in squares and serve. In its perfection this dish should be neither mushy nor variegated with dry granose, but each flake throughout should be delicately moistened with the fruit pulp. Thus it will be if care is taken in the preparation of the fruit pulp, and no more granose used than the fruit can moisten.

Granola Fruit Mush.— Granola makes a most appetizing and quickly prepared breakfast dish. Into a quart of boiling water sprinkle a pint of granola. Milk may be used instead of water, if preferred; then a little less granola will be needed. Cook for two or three minutes. Stir into it, when done, a large cupful of nicely steamed, seedless raisins. Serve hot with cream.

Raspberry Granola Mush.— For this, use the freshly extracted juice of red raspberries, diluted with one part of water, or the juice from canned red raspberries. Heat a quart of the juice to boiling, sprinkle in sufficient granola to thicken (about one pint will be needed), cook for two or three minutes, and serve hot, with or without cream.

Gluten Mush with Dates.— Heat a quart of milk or water, to boiling; sift in lightly six tablespoonfuls of gluten. Just before serving, add some fresh dates, from which the stones have been removed.

The Diet of Grecian Athletes.— Diet for athletes among the Greeks was a very different thing from that prescribed for athletes at the present day. The Greek candidate for a prize at the games was put on a diet of new cheese, dry figs, boiled grain, milk, and warm water, but allowed no meat whatever, and on this apparently simple diet, great efficiency in athletic sports was attained.

OLIVER WENDELL HOLMES said: "Most assuredly I do believe that body and mind are much influenced by the kind of food habitually depended upon. I can never stray among the village people of our windy capes without now and then coming upon a human being who looks as if he had been split, salted, and dried, like the salt fish that has built up his arid organism. If the body is modified by the food which nourishes it, the mind and character very certainly will be modified by it also. We know enough of their close connection with each other to be sure of that, without any statistical observation to prove it."

THERE is in Hythe, England, a lady who has lived all her life on simple bread and butter. A report says, "She has never tasted meat, fish, game, vegetables, jam, and only a few kinds of biscuits and sweets. She is strong and healthy, and has never had a day's illness in her life, and never had recourse to medicine of any description. Her friends have tried in vain to induce her to eat something besides bread and butter, but she confines herself entirely to the diet on which she has existed for at least thirty years."

A PHYSICIAN who is now a lecturer in a medical college says that when a student, his food cost him but one dollar a month. Most of it was eaten raw, and consisted of fruits and nuts. His standing in his class was up to the average, and his health was well-nigh perfect. He paid five dollars a month for his room rent, and got along without fire.

A CONTEMPORARY has calculated that the average man takes five and a half pounds of food and drink each day, amounting to one ton of solid and liquid nourishment annually. In seventy years, therefore, he eats and drinks one thousand times his own weight.

A NOVEL document was filed in the office of a county recorder in Missouri recently, in which "Mrs Belle Asher apprentices her daughter, Letha Asher, nine years old, to Mary Jane Love, to learn the trade and art of housekeeping."

THE sea has no herbivorous inhabitants. Its population live on each other, and the whole of this immense expanse of water is one great slaughter-house, where the strong forever prey upon the weak.

CHILDREN should be trained to eat slowly, no matter how hungry, or how important business is pressing. Much better a little food well masticated than a hearty meal swallowed in haste.

A VERY little goes a long way in India. A cent a day per head will not only keep body and soul together, but provide a sufficiency.

THOUGH we boast of modern progress as aloft we proudly soar
Above untutored cannibals whose habits we deplore,
Yet in our daily papers any day you chance to look
You may find this advertisement: "Wanted — a Girl to Cook."

— *Ida Goldsmith Morris.*

THE HEART OF THE SPRING.

I HEAR her swift feet coming
  By ways the south wind clears;
I hear her low voice humming
  The music of the spheres;
I feel her warm heart beating
  On Nature's throbbing breast,
While snow and ice retreating
  Comply with her behest.

With gift of gold, the willows
  Lift high their welcoming hands;
By sunshine led, the billows
  Kneel low upon the sands.
She comes! her power confessing,
  The wind and sun obey,
And earth receives for blessing
  The heart of spring — sweet May.

— *Lydia Avery Coonley.*

HOW SHALL WE TEACH THE CHILDREN PATIENCE?

BY MRS. E. E. KELLOGG.

PATIENCE is one of the essential attributes of a well-rounded character. It is a willing, cheerful waiting until the time of fulfilment. Would we ingraft this most important trait in our children's characters, we must begin the training very early in life. "If we would have our small man a grown-up man of many virtues, we must furnish them to him early, not waiting to have him put them on with pantaloons and suspenders."

Even before the child is capable of voluntary effort, he may be taught the habit of waiting contentedly when it is necessary, for the attention requisite for his comfort. If the mother by the tone of her voice, her looks and manner, shows loving sympathy for him; if she judiciously avoids giving him what he cries for while he is crying, but by tactful management tenderly calms his excited feelings, and then gives him the care he was crying for, even the infant of a few weeks will soon learn that it can wait, and under what circumstances it must wait.

Care must be taken that in the beginning his patience is not taxed too often nor too long. The time which to the adult seems short may to the child appear indefinitely long. It is not wise that baby should exhaust himself with crying in the effort to learn patience, and this will rarely happen if the mother performs well her part, seeking by some of the innumerable ways known to mother wisdom to divert his attention from his grievances and beguile him of his impatience.

The mother can offer the child an incentive to patience by showing, in the manner in which she gratifies his wishes, her approval of his patient waiting. The baby cannot reason abstractly, but he can early in life feel his mother's approbation, and strive to do those things which will call it forth.

The mother who would teach her child patience must sedulously keep her word with him. There are mothers who would consider it the height of incivility to break their promise to a grown-up friend, yet will thoughtlessly tell a waiting child, "In a minute mama will come," and go on gratifying their own ease or pleasure for an hour, interspersing the time, when the child makes complaint, with, "Yes, dear, in a minute," "Just one minute more, dear," etc. The fruition of such treatment will be far more likely to be impatience than patience.

The little tot who finds it so difficult to keep still patiently even for the shortest

space of time may be helped to do so unconsciously by teaching him the beautiful little game, "Putting the Fingers to Sleep." The child holds out his open hand, which to him represents a family of fingers. Calling the fingers by the names of father, mother, brothers, and sisters, he doubles each down separately on the palm of his hand till all five are down, then sings with his mother: —

"Now I put them all to bed,
Pillowed is each sleepy head;
Let them rest in peaceful slumber."

Says a well-known writer: "He could not keep still unless he felt there was a reason for it, but here is a game of which he understands the meaning, and he will remain perfectly motionless for minutes, with an expression of greatest importance, lest he waken the sleepers; thus he exercises self-control, and learns patience by the exercise."

The child who is sick or ailing may be helped patiently to endure his suffering through manifestations of his mother's loving sympathy. True sympathy has a wonderful power to allay pain, even with men and women; its effect is by no means less upon unfledged men and women. Effort should be made to amuse the mind into forgetfulness of the body, "but the less fuss and unusual indulgence, the better for the child's health of body and mind, and the purer the lesson of patience he may bring out of his sickness."

Provide the little child with a box of soil and some seeds; let him plant them, water and care for them, and watch and wait for the results. This will help him to cultivate patience. The mother must see that a regular time is provided each day for the child to attend to his garden box, and must keep up his interest by telling him about the leaves and blossoms that will by and by reward his efforts.

Tell him stories illustrative of growth and development. Tell him about the carving of a statue, the printing of a book, the building of some structure which he has seen, — all accomplished by slow, patient, persevering work, a little to-day, a little to-morrow, until all is completed.

If the mother can show the child by comparison how much better hand-work he is able to do now than when he was smaller, or than his baby brother or sister can do; then show him the work which a grown person can do, and which he may hope to do equally as well as he grows older, it may help to inculcate patience by impressing his mind with the fact that all improvement and growth are gradual processes; that first the seed, then the blade, then the ear, is one of nature's immutable laws.

An atmosphere of patience in the home will do more than all else toward training the children to be patient. Small children are lacking in the power of resistance, which comes in later years, hence everything outside themselves is stronger than they, and influences them. Unconsciously they imitate the dispositions of those around them, and are cheerful, patient, and content, or impatient and discontented, according to their environments. Parents must themselves be patient if they would have patient children, remembering that the growth of a human soul is very slow work. When a child does wrong, they must kindly and patiently deal with him, and patiently wait for the result.

Harriet Martineau says: "The finest opportunity for the cultivation of patience in a household is where there are many children, — boys and girls, — with no great difference of years between them. Here, in the first place, the parents have need of all the faith and patience they have, to bear hopefully with the impatience of some of their children. There are moments, hours, and days, in the

best households, when the conscientious and tender mother feels her heart rent by the spectacle of the quarrels of her children. When a mother sees her children scratch and strike, when her ear catches the bitter words of passion between brothers, her heart stands still with grief and dread. But she must be comforted. All may be well if she overrules this terrible necessity, as she may. She must remember that the strength of will thus shown is a great power for use in the acquisition of patience. She must remember that the odiousness of passion is not yet evident to her children as it is to her. She must remember how small is the moral comprehension of a child, and therefore how intense are its desires, and how strong is the provocation when those desires are thwarted. She must remember that time and enlargement of views are what children need to make them men; and that time and enlargement are sure to come to these young creatures, and make men of them, if the parents do their part. Her part to-day is to separate the children who cannot agree; to give time and opportunity for their passions to subside, the desire of the moment to pass away, and the affections and the reason to be aroused. She must obtain their confidence apart, and bring them together again when they can forget and agree. If she finds that such troubles enable her to understand her children better, and reveal their own minds to themselves, and if such failures help them to a more careful self-rule, the event may be well worth the pain.

"There are few large families of children in which quarreling does not sometimes occur. But if the quarreling does not early cease, if the liability does not pass away like the diseases of childhood, it is sadly plain that the fair opportunity of cultivating a habit of patience has been lost or misused. It must be early and watchfully used. Every member of the household must be habituated, constantly and as a privilege, to wait and forbear for the sake of others. The father takes the lead — as he ought to do in all good things. His children see in him, from year to year, an example of patient toil, — patient and cheerful toil, — whether he be statesman, merchant, farmer, shop-keeper, artisan, or laborer. The mother comes next, — waiting patiently on her sick or helpless infant, forbearing with the servants and children, enduring illness and fatigue, and cheerful through everything."

As previously remarked, the training in patience should be begun early in life, and it might well be added, "Yes, even before the child is born." Prenatal influences have a very strong effect upon the formation of character, and the prospective mother may aid the disposition of patience in her child by her own manner of life during her time of waiting.

Expressing One's Self.— There is a great deal said in these days concerning the value of the art of expression. The kindergarten and the primary schools are cultivating the faculty; and story-telling, history-making, and autobiography are part of the required work of the very smallest children.

This is all very well. English is a noble language, and the whole of a lifetime is none too long to acquire a mastery of it. It is charming to hear it well managed in infancy and youth, but teachers must not lose sight of the fact that before we can make much progress in the art of expressing ourselves, we must have some sort of a self to express, — a self with not only information, but with convictions and hard-thought-out conclusions. — *Demorest's Magazine.*

THE SALVATION OF MR. CRANDON.

BY MRS. S. M. I. HENRY.

I.

"I DON'T know but I shall lose all the religion I ever had during this revival, Mary."

"Now, George, don't begin on that strain."

"Well, all right; I can keep bottled up if you haven't patience to hear me! But one would suppose—."

"George, you know it is nothing but nerves and overwork."

"A man of God ought not to be spiritually nervous, Mary; and God's work ought never to be overwork. You know that perfectly well. I doubt if—."

"Now stop, George Crandon, I am not going to let you say things, even to me, that you will have to take back on your knees, if I can help it. I have seen you before. Come; let me help you on with your gown. The breakfast will spoil before prayers are over."

"I can't have prayers this morning, Mary, you will have to—; and how am I ever going to stand up and preach?"

"You will feel better after you have had your coffee and steak. You know you must preach to the converts this morning."

"I know—."

"They will expect a good, practical, inspiring sermon, too, and you will have to chirk up."

"Don't, Mary; it is out of the question. I have not a bit of inspiration for anybody. Just have a mind to get out my wheel, defy Sunday and religious sentiment, and take to the woods."

"George! I should feel dreadfully to hear you talk this way if I did not know you would never do such a thing."

"Well, I ought to be anything in the world just now but a minister of the gospel—My, but how my head feels!—Throw up the window, Mary—s-s-z-z-p! but that does taste good. I think I will have to go into another room to sleep after this, so I can have all the windows open. How I would like the old barn loft, and the hay once more, with the wind whistling in through the cracks."

"Everything is waiting, George."

"Let it wait!"

"It is fifteen minutes to nine."

"What if it is? Go and have prayers without me. Don't wait breakfast; I don't want any."

Mrs. Crandon stood a moment irresolute, then turned and went out. Mr. Crandon closed the door behind her, slipped the bolt, and dropped to his knees beside the bed with his face in the pillow; groaned, and then began to sob like a heart-broken woman. After a moment his sobbing formed into words,—short, jerky ejaculations.

"O God—O Christ, thou knowest what it is, I do not. Why do I doubt? Why must I be left to doubt even while I say I believe? Why must I almost blaspheme in trying to lead a soul into faith? What makes people come to hear me, and accept my teaching, when it is no teaching at all, but a pretense? I do not know anything to teach; I do not know anything at all, *for sure*. I do not know this morning if there is a God. Christ seems a myth, the gospel a sham. I am afraid I shall say as much in the pulpit some time, when this awful feeling takes me unawares. O God, save me; somehow, by somebody; if you ever saved anybody, save me! They say my sermon on the salvation of Saul was great, but one on the salvation of Crandon would be greater."

He was aroused by a hand on the door-knob, then a tap. He did not hasten to answer, but after a while opened, and found his wife looking a little anxious, for her, in waiting.

"Come to your breakfast, George; this is no way for a man to do. I am making more fresh coffee,— a fresh breakfast throughout, in fact; for you cannot preach if you don't eat."

Mrs. Crandon was losing patience, and when that happened, she did not carefully select either tones or words.

He did not reply — he had learned that he would better not, for he was a peaceful man — but followed her to the table. He did not say good morning to his little daughter Stella or to Jennie, the servant, who was bringing in the coffee; and the corners of his mustache had a droop which would have brought tears to his mother's eyes; for she would have known just how the grieved lines looked under that manly ornament; for she would have remembered the baby lines of grief; and to the understanding of the mother, the heart of the man is not so very changed, after all, from that of the child.

But Mr. Crandon's wife could not afford to humor or encourage dumps in her husband, especially on Sunday morning, with the clock going on to ten. She was a good woman and a loving wife; but she did not have the ready tact in words and manner that would provoke smiles, or bring merry replies. She was not a lively companion. She was conscious of a burden for herself and her husband, the church, and the world; but she was strong, and never "gave way" for herself or any one else. For what was the use? So she set herself firmly to resist and overcome this doubting devil that sometimes took possession of her husband, inopportunely by the only practical means which she fairly understood,— food and drink. However lacking she might be in some things, in these two she was great.

"Here, George," she said, following the girl with a steaming cup in her hand. "Drink this capsicum first, it is not *too* hot; you can drink it all right. It will make you feel like eating. It will warm up your stomach — stimulate you — you know. Prevent you from having that gone feeling."

Mr. Crandon took a spoonful, and lifted it gingerly toward his mouth.

"Now don't do it that way, George; just take it up and swallow it quick; it won't burn half so bad. Then here is some soft, buttered toast, salt and good, with some grated cheese over it; that will prepare the way for your coffee."

Mr. Crandon tried his best to obey, but one swallow of the capsicum was enough. It brought the tears to his eyes, made him gasp, and clap his napkin to his mouth. He looked up at Mrs. Crandon, and started to leave the table; but she laid her hand firmly on his shoulder, and he sat back helplessly.

"What a baby you are, George," she laughed. "You grow worse every day. You used to take it, and it did you good. It will do you good again."

"I can't do it, Mary. I think I shall be better anyhow soon. I will get out-of-doors."

"Not till you eat something. I am not going to have you leave this nice breakfast like that. Try it, and you will find your appetite all right. I'll get you some of that cordial."

"All right, maybe that will fix me up; but I cannot eat anything."

"You are getting very particular, George. I never took more pains with a breakfast."

"The breakfast is all right, Mary; anybody could see that just to look at it. The fault is in me, dear. Please pardon

your poor old hubby for being so cantankerous this morning.— Hark, there is the bell; I must get myself together somehow."

He started up from his chair, but was this time again hindered by a pair of springy, clinging arms about his neck.

"I wish it was n't Sunday, papa, and somebody could preach for you, and you and I could go out to the park on our wheels."

He did not voice the answer that was in his heart: he dared not for his child's sake; so he only gathered her up close to him, hid his face a moment under her chin, and then putting her away, arose to get ready for church.

II.

"Mr. Crandon 's a lost man!"

"A lost man? Brother Crandon?"

"Yes, Brother Crandon."

"I don't see how; a better man never lived."

"That is all right, and part of the trouble. If he was n't so good, he might be saved."

"What a way you have of putting things. Just what do you mean this time? What has happened anyway?"

"He had another of those spells of his in church this morning when he was preaching,— turned white, and *sat* down, fortunately, instead of falling. We took him home and put him to bed."

"O! I 'll run over at once."

"No, dear, let 's have our dinner first. I've got to drive out to the hospital. Dr. Green is their family physician, you know."

"Is he dangerously ill? He must be if he consented to be put to bed."

"I think I expressed myself on that point at first, did n't I? Under the circumstances, I should call him dangerously demoralized. You ought to have had a look at the dinner which was waiting for him. When I got through helping Dr. Green put him to bed, and started for home, I made a short cut through the dining-room. The girl was just setting the dinner on. I stopped, arrested by my senses, and diagnosed the case from the dining-room standpoint. It was a great risk even for me — and he is exposed to it three times a day."

"Did it make you hungry, John?"

"Wait a bit; I will give you the menu: cold sliced roast beef, red as blood; some kind of salad, made of meat and potatoes; and celery, dressed with cream and vinegar, I suppose — you see I remember how it used to be; cold baking-powder biscuit; a dish of old-fashioned pork and beans, hot from the oven, sparkling all over with grease — baked yesterday, heated up for Sunday; coffee, O, how strong! by the smell; a big pitcherful of the thickest cream; pickles; and on the side-table, fruit, mince pie, and cheese, for dessert. You see the combination? and the consequences to a man like Mr. Crandon?"

"Is n't it dreadful!"

"Dreadful is no word to express it; it is criminal; especially when one realizes what it is making of a man like Mr. Crandon, and how it is unfitting him for the work which he ought to live to do. I wish I could be his doctor for twenty-four hours. I wish Mrs. Crandon was a woman who could be influenced."

"So do I. She is a good woman; but she is so afraid somebody will think that her literary and platform abilities have made her unwomanly that she carries her housekeeping to the extreme. She is determined to be known as a good cook, or —"

"Or perish herself, and kill her family in the attempt?"

"Looks that way. I never knew a woman who was so eager for a new recipe for something good to eat. If Brother

Crandon had no income besides his salary, there would be more hopes, as far as the food danger is concerned; for then she could not afford to spend so much in concocting new dishes. Stella told Margaret the other day, when she was here to dinner, that she thought it so nice to have such simple meals, and no greasy things to wash up afterward. She liked our sort of food, she said, but she knew her mother would never take to any style of eating that did not make lots of work; for she liked the work so much. She said her mother liked the cooking better than the eating, and she thought perhaps that was the reason why she was never sick. We laughed at the child. She has such a serious way of saying queer things."

"Well, something has got to be done, or we are going to lose the best man I know; to say nothing of that bright little Stella. She is dyspeptic already."

"I believe you are right, John. We must not lose either of them, and if he is lost, as you said, he must be found and saved; for he is a good man, and good men are scarce."

"That's so. Haven't I seen him among other men? What a lover of men, what tact,—what a peace-maker! I do not know of another man who could have straightened out our tangle, and have built up our old waste-places, as he has, and made us all come so near loving each other,—and to think he is being killed by victuals and drink."

"O, not wholly, John. Don't overstate the case—one never wins that way. The work has something to do with it,—don't you think so? No man could do what he has done this winter with impunity. He has not had any strength left for digestion."

"Work? digestion? Work don't kill; not often; man was made for work. If he does not abuse his stomach and liver, and doesn't worry, he can do any amount of work. It is what he puts into himself that makes the mischief. Here is Brother Crandon, only forty, and broken down as a man twice his age need not be. His work would never break him. Of course he hasn't slept as he should, but his stomach is at the bottom of all the restlessness that has kept him up late."

"But don't you think, John, it is hard to carry a church like ours, especially for a man full of zeal and enthusiasm, who longs to do all there is in sight, as he does? Centuries of sin have made lots of work, and spoiled lots of workers; and the things that the delinquents ought to have done, have to be piled on to somebody; and a man like Brother Crandon cannot see things go undone, so he can scarcely help overworking in a city full of poor suffering prodigals: the love of Christ constrains him, *hard.*"

"Does the love of Christ constrain one man to kill himself with work for the salvation of another? Since He died, once for all, the Crandons ought all to live for the same purpose for which he died, and be joyful and well in doing it; and strong to carry the message of salvation to his lost ones. Christ is not to be charged with one ounce of the burden that is breaking the back of our pastor. It is wicked indigestion, every bit of it; and a woman's ambition is at the—no; Satan himself is at the bottom of it, prodding that good woman, and a city full of others just like her, on to deeds of slaughter.

"You ought to have heard her relate to Dr. Green the effort she has made to keep up Mr. Crandon's appetite since he began to fail. First she tried ginger tea, hot and strong, with plenty of cream and sugar. That did not help him much. Then she tried capsicum, boiling hot, with which he blistered his mouth, and swallowed what he could. She is great on hot things. His first attack found her

unready; but she is not a woman to be surprised twice by the same thing; so now she is in a constant state of preparation with something to warm him up, and to tempt him to keep on eating; but nature is taking things into her own hands, I suspect; for she said he did not want anything she could fix for him."

"What did Dr. Green say?"

"He looked over at me and pulled his beard. We do not often agree, but I think we saw eye to eye part of the way into Mr. Crandon's case."

"You have not told me yet how you happened to be with Dr. Green."

"I was n't. I was listening to the sermon as usual, until it suddenly stopped. And when the preacher, who happened to be my pastor, turned white, reeled, and suddenly sat down, you don't suppose I stopped to think that I was the other doctor, do you? I simply got there as quick as I could. Dr. Green was not any quicker: and we naturally took him between us into the parsonage, and put him to bed. Two rival doctors who are brother Christians can certainly carry their common pastor between them without quarreling, when it comes to a case of life and death!"

(To be continued.)

GIVE YOURSELF.

THERE are many mothers, who, like Martha, are so cumbered with much serving that they forget to choose that better part which can never be taken away from them. They are so busy giving *things* to their children, that they cannot give *themselves;* they are so worn with furnishing comforts, that they cannot furnish inspiration; they are so attentive to polishing the goblet of life that they quite forget to pour out the wine itself. These words are written for such mothers. Let us consider together a few principles.

1. Nothing can make up to a child for the companionship of a good mother; no clothes, no dinners, no spotless housekeeping, no books, no education, no social position — nothing in the wide world. For life comes from life. By warmest brooding the nest is filled with fluttering, winged life. Characters, convictions, loveliness, unselfishness, cannot be taught in books; they must be imparted by the contact of a loving spirit. The mother owes nothing less than herself if she would bring robust souls to maturity.

2. If her own personality is the best gift that each mother can give her child, she can find a way to give the gift. There is always a road to the best. Old notions of duty may have to be given up, the relative value of services relearned, the order of life recast; but it can be done. The old motto, "Let us live for our children," will have to yield to the higher thought of Froebel, "Let us live *with* our children." The gain to both mothers and children will be great.

If these two principles be accepted, it remains only to work them out into life. This may, and probably will, demand several things. It will demand, first, a giving up. What can I simplify in order to give myself? Is it their clothes? Well, is n't it better for them to have their mother than to be the most artistically dressed children on the street? Would n't those three afternoons spent up town studying effects in children's cloaks, while the children played with those naughty little Mugginses, have been better spent with the children? Supposing

that my Sophronia does wear a little red turban that I bought ready-made for a dollar, while my neighbor's Dorothy is adorned with the most bewildering little beauty of a hat that her mother copied straight from Paris. She has the bonnet, but Sophronia has had her mother. And in the time saved there is room for a story, a song, a walk, a quiet cuddle, or any one of a dozen other delightful expe-riences which mean so much to the little ones, and are looked back upon in later years with the sweetest remembrances.

It is noble to be a good housekeeper, but it is better to have the adoring, con-fidential love of my children. If I can't have the reputation of a remarkable housekeeper, and have time to help Jack with his kite, and Nellie with her music, then shall I look serene though I am re-garded as a trifle slack by punctilious neighbors. Let us learn how many things we need not know, nor do, nor have, if they hinder us from better doing and having.

Again: to give herself to her children, to live with them in the highest ways, the mother must learn the secret of co-opera-tion with her children. There are count-less services performed for the child that were better if done by himself. A little time expended early in training will save hours of time for growing together in sweet companionship. Many a mother destroys her own highest influence by slavishly waiting on her children. They come selfishly to think of mother as a kind of convenience, who does things for them, and not a beloved helper who en-joys their life with them. If the mother will take the trouble to accept the help offered by little children, though it does take her longer than to do the work her-self, and will persistently require suitable services, she may save hours of time later on, and rear a company of efficient helpers. If Susie can make the beds, and Rob sweep the porches, and Harold set the table, and Jessie see to the little ones, there is no reason why mother can't go with them for a happy afternoon in the park. If Kate darns the stockings, mother can get time to read things by which to interest and instruct her children.

It pays though! There is nothing that pays better than the intimate knowledge and sympathy gained from companion-ship with our children.—*Home Interest.*

THE BIRTH OF A SOUL.

A MOST wonderful instance of the awa-kening of an imbecile child is reported by Dr. Richards, of Dr. Howe's famous school for imbeciles in Boston, in the March number of the *Child-Study Monthly.*

The little boy, whose name was Syl-vanus, was eight and a half years old when he was placed under the care of Dr. Richards, who, in giving his report, says the child had never known his mother. She had never seen a smile upon his face. His father had tried sending a light from some shining object into his eyes, and he had never blinked but once. He had no power of locomo-tion; no sense of touch or pain. He was absolutely helpless. Such was the little boy that Dr. Richards took to the institution to treat and teach,—a hope-less case almost any one would have said, but not so the good doctor. He took the eight-year-old boy, and dealt with him as with a babe. He was held in arms, rubbed, manipulated, bathed, and worked upon in every way to rouse the energy of the body.

After a month of careful study the doctor began reading to him. Getting down on the floor beside the child, he read an hour at a time every day for three months — read intelligently, as if the child understood every word, adapting the intonations as if reading to an intelligent person.

The child finally heard this voice that was ringing around him in a musical tone month after month. One day the doctor came in as usual, but sat in a chair and read to himself. Looking one side to see if Sylvanus missed him, he noticed that the child actually appeared to be uneasy. Immediately he lay down again beside him, and read as usual. The boy breathed a soft "Ah." The first want was planted. He wanted his friend, and he wanted him there on the floor beside him.

For another three months the reading continued, when the teacher again tried reading to himself. After a long time the child seemed to be trying to do something. Gradually he lifted his finger, and laid it on the doctor's lips. So the reading was resumed, and every day the pupil was given the privilege of opening his teacher's lips in this way.

At last there came a day when Sylvanus smiled — the first smile of recognition. "It was enough to pay me ten thousand times over for all I had done for him," exclaims the devoted teacher.

Thus the training went on step by step, with infinite patience and tenderness on the part of the doctor, till the child could walk and talk. Then object-lessons came in. But the rest of the story we will let Dr. Richards tell in his own words: —

"He must go down to the shoemaker's every day to see the shoemaker make him a pair of shoes. 'What are these, Sylvanus?' we would ask, and he would say, 'Shoes.' 'Who made them?' 'Shoemaker.' 'What is this?' 'Bread.' 'Who made it?' 'Betsey' (the girl). And so the object-lessons had a connection in his mind.

"One day I showed him an apple. 'What is that?' 'Apple.' He had picked it up on the ground. 'Who made it?' 'Don't know.' 'Did n't the shoemaker?' 'No.' 'Did n't Betsey?' 'No.' It was time to give him another lesson.

"I took him up-stairs one morning to an east window to see the sun rise. 'What is that, Sylvanus? Say sun.' 'Sun,' he repeated. 'Who made it, Sylvanus? Say God.' 'God,' he repeated. I left him there and went down-stairs. When breakfast was ready, I sent the nurse for him.

"When I went back to the schoolroom, this little boy had crept up to the window, and was talking to another boy. 'What is that, Charley? Say sun, Charley.' 'Who made it? Say God, Charley.' Calling up one child after another, he went through his brief lesson, 'What is that? Say sun. Who made it? Say God.' He was the best teacher I ever had.

"Some days after, in my object-lessons, I took up the apple. 'Who made it?' I asked of the children. All were silent but Sylvanus. He looked up as if he had a thought. 'What do you think, Sylvanus?' I asked. 'God,' was the reply. He had made the connection. Remember, this was the little child who, when eight and a half years old, lay upon the floor, and could not recognize a thing about him.

"One day Sylvanus saw a mother come in and take up another child, and try a jacket on him. Sylvanus looked up in my face and asked, 'Have I a mother?' I told him he had a mother. He said that he wanted to see her. So she came one day; and when she came into the

room, she looked all around, and said, 'Where is Sylvanus?'

"As soon as he heard his name spoken, he answered, 'Here I am; is that my mother? O mother, I am so glad to see you.'

"And there was joy in heaven over one soul that was redeemed."

THE ELEMENT OF COMFORT IN DRESS.

WOMEN have not been accustomed to consider their comfort in the matter of dress. Being taught that raiment is more than the body, it is a matter of course that they should fit their bodies into their raiment, however much it cramps them; and getting used to cramping, they do not much mind it. I am well aware that most women would not at all understand what I mean about the discomforts and injuriousness of the clothing. They think they are comfortable, and great pity it is that they do think so! for this is evidence that they have deadened their physical sensibilities. They little know the outrage they are committing on their organisms.

A woman with bands hanging on her hips, and dress snug about the waist and chokingly tight at the throat, with heavy skirts dragging down the back and numerous folds heating the lower part of the spine, and with tight shoes, ought to be in agony. She ought to be as miserable as a stalwart man would be in the same plight. And the fact that she can coolly and complacently assert that her clothing is perfectly easy, and that she does not want anything more comfortable or convenient, is the most conclusive proof that she is in an altogether abnormal condition, or else that she has not much idea of the grand uses to which her powers might be put.

Not only should the growing girl be so absolutely easy in her clothing that there is no possible restriction to growth, but every mother, every housekeeper, teacher, sewing-girl, every woman who has any work or responsibility to bear, every woman who, in the goodness of her heart, longs for power to help others, every Christian woman, should be so free that under all the movements of the body, in bending, lifting, leaping, or lying down, no organ or muscle should be at all restrained in its natural action. It is not enough that a garment be fitted to the size of the figure; at least four to six inches allowance should be made for the play of the body, and this in every garment worn. If all the women in this country would do this, half their ailments would disappear in a year, and they would realize that they had entered upon a better life. — *Dr. Harriet N. Austin.*

THE VALUE OF PETS FOR CHILDREN.

PETS are an endless joy to children. They lend themselves readily to every kind of make-believe, and are always available as playthings and consolers of woe. Parents sometimes complain that they are such a trouble, are in the way, and require so much care. Could they realize thoroughly their value as a source of happiness and a means of education, these objections would forever cease. Childhood without pets is bleak and barren and altogether incomplete.

What the child loves he will most observe and study. Soon knowledge comes

THE JOSEPHINE GOWN.—(For description see Publishers' Department.)

concerning the habits and ways of the little creatures that share his life; and personal affairs are insensibly arranged so that there will be time for everything — for play, for stories, and for duties. Birds must be fed regularly, rain or shine, no matter how tempting the invitations of playmates or the latest fairy tale. The dog must be washed and kept in the house until thoroughly dried. If the kitten is stupid and dull, its little owner must see that its food is more carefully selected, that it does not have too much meat. Perhaps his small savings will have to be expended in catnip. The playful puppy must be trained with infinite patience not to trample on the flower-beds, not to bite furniture, nor tear holes in clothes. Animals must also be taught to avoid danger, even if pain has to be inflicted to insure their future self-preservation. Attention to these details influences the mind and character, leading to firmness without harshness, to economy of time, to order, method, and regularity.

Children, like most savages, are naturally cruel. But theirs is the cruelty of ignorance, not of malice. Animals that are dependent have a civilizing influence upon the child. Their many wants and necessities, their helplessness, awaken a sense of moral responsibility. A living creature cannot be neglected without pain and suffering following. Sometimes death results from neglect. Very different is the condition of the book or toy that is forgotten and left out in the rain. It is spoiled, and the loss is the child's own. In a measure he is responsible only to himself for the welfare of inanimate possessions. But a sentient being who can repay love with love has a deeper claim. Things that feel have rights. Even young children recognize this, and learn through affection for their four-footed friends to recognize this claim to health and happiness.

Pets also have a hygienic value, many of them requiring fresh air and exercise at regular intervals. This necessity takes the child out-of-doors, in sunshine, on dark days, and in all sorts of weather except during extremes of heat, cold, and wet. It gives an object of interest to what might otherwise be a dull performance.

Childhood, like every age, needs its duties. These must be simple and genuine, and not tasks imposed arbitrarily, which another might do as well. The child's duties should be definite and inexorable, not done at all if he forgets or neglects them. Through protection, nurture, and ownership of living things, inexorable duties are best presented. The child secures in this way some of his best development; for he learns many lessons in self-denial and self-control, acquires a sense of personal responsibility and wise restraint, and is taught in the most natural way, and all unconsciously, to appreciate the rights of others, even the humblest, and to respect them always. More than this, by doing deeds that merit gratitude, children begin dimly to understand how much gratitude they owe to the loving hearts and hands forever busy in their behalf. There is a certain spiritual and intellectual growth that comes from protecting and fostering the dependent, from caring for loving and lovable animals. — *Louise Fiske Bryson, M. D.*

Education of the Taste in Girls. — A writer in the *Dietetic and Hygienic Gazette* well says upon this point: —

"It is useless to reason with girls about the unhealthfulness and ugliness of the dress that 'makes' the figure, and the

'fit' of which is the pride of their hearts, until they have been led into a careful study of physical law and the rules of art, so that their false ideas of structure and their equally false standards of beauty, may give place to a full comprehension of the true. With this understanding will unfailingly come a reverence for womanhood, for wifehood, and for motherhood.

"This point can be attained, with the majority of girls, by continually drawing their attention to the lines of the ideal human form as given to us in Grecian art. If statuary is not within reach, pictures can be used, and will effect almost the same results. Few people can continue, for long, to stand unmoved before the majestic womanliness of the Venus de Milo, or the lithe gracefulness of the Medici; nor do I believe that any girl of ordinarily refined taste will hesitate to respond to the gracious loveliness of Richter's Queen Louise of Prussia coming down the stair; and a constant companionship with this and similar pictures will soon make the 'lovely figure' of the fashion-plate absolutely hideous; and the admiration for stiffness, misnamed trimness, will give way to a real enjoyment in the fully developed proportions and the artistic clothing of them. This matter, then, as do all matters of education, resolves itself into the question of properly directed tendencies."

The Woman Who Charms.— It is natural for all women to wish to be liked and admired by their acquaintances, or, in other words, to wish to be charming. Some people imagine that charm is a natural gift, which it is impossible to acquire. Such is by no means the case. It is an art which may be acquired and cultivated.

The word "charming" is not an easy one to define, because it comprises so much, but we all recognize instinctively a charming woman when we see one. First, to consider the subject from a negative point of view; the term "charming" could not be applied to a loud, fast woman. Such a woman may, it is true, win the admiration of some, but she would not be described as charming. As we consider the subject, a picture of a bright, gentle-voiced lady rises before us, a woman whose dress is remarkable only for its exquisite taste and simplicity. It is not, in fact, her dress which strikes the eye first, for it is so thoroughly in harmony with herself, that it is, as it were, but the frame to the picture.

Beauty is not an essential feature of "the woman who charms," but her smile is sweet and winning, and her laugh drives away the blues. Neither is she necessarily a talented woman, but she converses with ease and intelligence on the topics of the day. Her opinions are defined, and to a certain extent decided, but at the same time they are open to correction.

The charming woman is not in the habit of talking about herself and her own peculiar troubles and grievances. She has her "bad days," like every one else, but she takes care that others shall not suffer on her account; and when she has an attack of the dumps, she isolates herself, in order that the infection may spread no farther. She is, above all, a sympathetic woman, and knows how to make people feel that she takes an individual interest in them. She is never too busy to lend assistance, and a grasp of her hand is as good as a number of words from any one else. She is a woman who adapts herself to the varying circumstances of life, and who prefers to look on the bright side of things. All disagreeable and unkind remarks that she hears made about others die with her, and she knows how to say the right word at the right time. In conversation, she studies the sore points of her acquaint-

ances, and studiously avoids them, and adroitly introduces subjects on which they can talk best. She is content to be in the shadow, if she can make another shine.

Such is the description of "the woman who charms." These characteristics have not been acquired in a flash, but by careful study of herself and others. She is by no means a paragon of perfection; but, with all her shortcomings, she is possessed of the valuable art of charming. — *Sel.*

Books in the Home.— A bright, pleasant library to interest and feed restless minds on stormy days and during the long evenings of winter will throw pleasant associations around the home. It should not excite wonder that so many boys in the towns and cities find their way to the street at night and fall easy victims to evil habits and corrupt associates. It is not at all surprising that so many farmers' sons and daughters desert the old homestead as soon as they outgrow parental control, for the home life has been too narrow and barren to satisfy that inborn craving to be interested and entertained. Their best safeguard will be found in a home that is made full of sunshine, attractive to them by pleasant books and cheerful conversation. Having no such home, acquiring no love for reading, and finding nothing to attract and satisfy in life within doors, their active natures drive them to the street or store in search of the amusements the home should provide, and they are exposed to untold perils.

A library that the children may call their own should be found in every American home where there are children. The material is abundant from which to satisfy every disposition and taste. Truth and fiction, history and biography, prose and poetry — nothing is wanting to stir the sluggish or gratify the fastidious. Such a library would solve many knotty problems for the parents, and bring to them a peace and satisfaction that no similar outlay ever brought. — *The Home Monthly.*

The Home View.— Jenny came home from school with swollen eyes and a sobbing heart. "Mama," she said, while the tears broke forth afresh, "I can't get my subtraction, and I don't want to go to school any more."

"Why, my child, don't say that," was the gentle reply. "Tell mama what is the matter."

"Miss Fox was awful cross 'cause I can't get my examples. I don't care, I can't hear half she says when she explains them. She talks low, and I sit in the back seat, and I don't want to go to school any more," was the angry explanation.

"Why do you not tell her about it, and ask to have your seat changed?" asked the mother; "I am sure Miss Fox would be glad to help you if she knew."

"She told us that we need n't any of us ask to change our seats. I 'm afraid to."

Just how much of this view Miss Fox received when she called half an hour later, is not definitely known.

One who visited her room the next week reported that Jenny occupied the front seat, stood by her teacher's side, where she could hear during recitations, and did the subtraction problems very well.

Points About Beds.— A recent writer offers some sensible hints about beds: Since we spend one third of our lives in bed, it is important to know how to spend that time in the most comfortable and healthful manner. The best bedstead is one of iron or brass; an elaborately

carved wooden one, such as is so commonly used, is cumbersome, and with difficulty kept absolutely clean.

The bedstead should be fitted with woven-wire springs, a good hair mattress, and either hair or air pillows. Feather pillows are too heating to the head, and are open to the same objections as feather beds. Over the mattress should be spread a flannel or light cotton covering, which can be removed and aired daily. The sheets should be made of cotton or linen, and washed weekly. Too many thick, impermeable blankets are not to be recommended, as they are heavy, burdensome, and great accumulators of impurities.

The ideal bed should be spread, during both winter and summer, with just the right kind and amount of covering required to retain the natural bodily temperature. In winter the bed should be warm. To many persons a cold bed is a deadly contrivance. Many an unfortunate guest has entered the cold spare chamber and laid his warm, perspiring body between icy bedclothes, only to awaken with a severe, if not fatal, illness hovering over him. Such diseases as pneumonia, bronchitis, and rheumatism are often contracted in this way.

It is undeniable that people enjoy better health and are less liable to colds who sleep in cool rooms. It is better to use the now omnipresent hot-water bottle on very cool nights than to sleep in the enervating hot chambers which so many people seem to think the acme of comfort.

Teasing in Children.— There are few children who always succeed in carrying their point by teasing; but there are fewer who never succeed by this means. Most parents give way, sooner or later, in some of these conflicts with their children. It may be that they are less determined than their children, or that they are simply tired out by the teasing. It may be that they are moved by their children's earnestness in the matter, and that they yield because of their tenderness toward the little pleaders. It may be that their first answer to the appeal is a thoughtless one, and that a fuller consideration of the matter leads them to see it to be right to reverse their impulsive decision. Whatever be the parents' reason for their course in such a case, if they give a negative answer to their children's first request, and an affirmative one in response to more or less teasing on the children's part, they train their children to believe that teasing is an important factor in a child's progress in life; and of course they are responsible for their children's continuance in the habit of teasing.— *Sel.*

Handweaving.— With the fad for old furniture and bits of china and lace there may also come a return to the industries of our great grandmothers; for the *Outlook* says that word has come across from England that "handweaving has become a fashionable pastime in England, and that some beautiful and artistic textiles have been woven after designs by the weavers. It is said that the table linen and toweling woven by some ladies are, in truth, works of art."

TIGHT lacing is contemporaneous with bad national prosperity and a low degree of artistic development. — *Emma C. Cushman.*

WE admire everything for its naturalness except the human figure.

SIMPLICITY is the highest art.

EDITORIAL.

DIABETES A DISEASE OF HIGH CIVILIZATION.

THOUGHTFUL men long ago reached the conclusion that the conditions of life afforded by "high civilization" are not conducive to health, but, on the contrary, tend to physical deterioration. The class statistics of death from diabetes mellitus show this very clearly; for example, according to Saundby, the rate of mortality from diabetes has risen, in Paris, within the last ten years, from an average of eight in each 100,000 population to an average of thirteen; while in Copenhagen it has risen from five to eight; and in England and Wales it has increased, in fourteen years, seventy per cent., after allowing for the increased population.

Bertillion, a leading physician of Paris, has shown that, while this is true of all classes of persons, the increase is much more pronounced among the wealthy classes than among the poor, the average in the poorer parts of the city being only seven to nine in 100,000, while in the wealthy quarters the average is sixteen to twenty.

Recent investigations by Marie and others show that the old idea that the liver is usually healthy in diabetes is an error, and that, on the contrary, it is generally the seat of inflammatory processes. Accumulating facts point more and more directly to the idea that diabetes is, like most other chronic disorders, the result of vicious habits of life, and probably chiefly dependent upon errors in diet. The liver is a long-suffering organ, and seldom undergoes derangement of any sort except from abuses heaped upon it through dietetic errors, its relations with the digestive tract being such that it is compelled to perform an immense amount of unnecessary labor as the result of any disturbance of digestion which impairs the integrity of the digestive process.

The cheapness of sugar and its various products, and the consequent increase of the use of sweets of various sorts, including confections, jellies, sirups, etc., must be held largely accountable for the enormous increase in frequency of this disorder within the last two decades.

Especially to be deprecated is the custom of adding sirups, sugar, and other sweets to farinaceous articles of foods, such as oatmeal, breakfast cakes, etc. The absurdity of such a practise is apparent when one recalls the fact that farinaceous foods are fully one-half starch, and that this starch is all converted into sugar in the process of digestion; hence to add sirup or sugar to oatmeal is simply adding sugar to sugar, like sweetening sirup with honey. It should be remembered also that cane-sugar is not an alimentary principle which is naturally adapted to the human digestive apparatus.

Considered from a zoological standpoint, man is unquestionably dietetically related to the gorilla, the chimpanzee, and the orang-outang, his nearest relatives in the animal kingdom. These animals subsist, when in their natural state, exclusively upon fruits and nuts, the chief saccharine element of which is levulose, a sugar which is much sweeter than cane-sugar, and which is closely allied to, if not identical with, the final product of starch digestion in the alimentary canal.

Starch, when cooked, begins to undergo digestion as soon as it is received into the mouth. The conversion of this element continues from half to three quarters of an hour after the food enters the stomach, and may extend so far as to change almost the entire amount of starch taken, when conditions are favorable. The writer has found as high as fourteen per cent. of sugar after a test-meal consisting of water and one and one-half ounces of dried bread which contained no sugar. Cane-sugar is not acted

upon by the saliva, and undergoes no change until the intestines are reached, when, coming in contact with the intestinal fluid, it is transformed into a sugar which is capable of assimilation. Cane-sugar is, however, capable of fermentation while remaining in the stomach, on account of the presence of microbes, which first transforms it into a more highly hydrated form of sugar, and then converts it into alcohol, and later, into acetic and other fatty acids.

It is thus apparent that cane-sugar, while not itself readily digested, also interferes with the digestion of other foods. When taken in large quantities, it must impose an enormous amount of extra labor upon the liver by leading to the absorption of large quantities of imperfectly converted starch and an excess of saccharine material. In addition to this, the products of fermentation resulting from the presence of sugar must exercise a most damaging influence upon the liver, and may be the cause of the interstitial hepatitis which commonly accompanies diabetes. Loeb has recently expressed the opinion that in many cases sugar is present in the urine in small quantities for many years before its discovery, the quantity of urine finally increasing to such an extent as to lead the patient to consult a physician.

In the writer's opinion, cane-sugar is an unwholesome article of food, and should be discarded from our tables. If used at all, it should be only in moderate quantities, as a means of rendering palatable excessively acid fruits. Its use in such cases even is decidedly doubtful, since the acidity of sour fruits may be equally well neutralized by the addition of sweet fruits. It should be remembered also that sugar, from a chemical standpoint, is an acid, and hence, when added to sour fruit, does not in the slightest degree neutralize or antidote the free acids present, but only hides them, or prevents their recognition by the nerves of taste.

The love for sweets is doubtless a natural instinct. Sweet foods are, as a rule, wholesome, and the taste for them may be safely indulged without stint; but this rule applies only to those possessed of the sweet flavors found in nature. If a natural sugar, like that contained in malt extracts, were substituted for the cane-sugar of commerce, a great gain would be made so far as the digestion is concerned, as this is a natural sugar, produced by the diastatic digestion of starch, and is precisely the same as that resulting from the action of saliva upon starch.

THE EFFECTS OF ALCOHOL UPON THE BRAIN.

Dr. Bedford Pierce, medical superintendent of the York Retreat, England, in a recent article in the *Medical Pioneer*, calls attention to some most interesting and important facts in relation to the effects of alcohol upon the brain and nervous system. Dr. Pierce shows from statistics that more than fourteen per cent. of all cases of insanity in England are due to alcohol, 20.08 per cent. of cases of insanity in men being the result of alcohol, and 8.1 in women. At the Royal Edinburgh Asylum, the number of cases of alcoholic insanity during the past fifteen years was 16.4 per cent. During "influenza year," this number was suddenly increased, doubtless as the result of the extensive use of alcohol as a remedy for la grippe.

The effects of alcohol are shown to be hereditary — at any rate as regards idiocy and imbecility. We quote as follows from the article referred to:—

"Dr. Howe, of Massachusetts, in examining the antecedents of three hundred idiots, found that forty-eight per cent. were the children of habitual drunkards. Dr. Beach, out of four hundred and thirty patients in Darenth Idiot Asylum, found thirty-one per cent. similarly the progeny of drunkards.

"Dr. Legrain, in a recent work upon 'Social Degeneration and Alcoholism,' has published an account of the descendants of two hundred and fifteen drunkards that he personally has traced. This work shows conclusively that in such families a very large number of the children die young, and that

the families rapidly die out; that epilepsy, insanity, and other nervous disorders are extremely common.

"Before leaving this part of my paper, it may not be out of place to express the opinion that I consider the influence of alcohol upon the brain of infinitely greater importance than its influence upon the circulation or upon other parts of the body. And it is on this account that I regret that we have, so far as I know, to look to Germany for workers to elucidate the action of alcohol and other drugs upon the mind.

"In England it is true that we have heard of the watering of geraniums by diluted solutions of alcohol, and of attempts to accustom water-fleas to live in weak spirits and water; but we hear that neither geraniums nor water-fleas flourish. All this, however, is remote from the problem in hand, and the skeptical person is not convinced by deductions drawn from such experiments. The work done by Professor Kraepelin and his pupils in Heidelberg promises to be of very great importance. Unfortunately for us, his book detailing his experiments and researches into the mental phenomena produced by alcohol and other drugs, has not been translated into English.

"Kraepelin has summed up his conclusions as to the action of alcohol in his *Psychologische Arbeiten*, *Band I*, p. 83. He states that experiment has shown that the idea that alcohol strengthens, has arisen from self-deception. Alcohol only facilitates the discharge of motor impulses, and does not make them more powerful. If there is any strengthening effect, any increase of power, it is very transitory, and is quickly followed by a pronounced diminution, which takes some time to disappear. He goes on to say: 'Moreover, the powers of conception and judgment are from the beginning distinctly affected, although we perceive nothing of it. The actual facts are exactly the opposite to the popular belief. I must confess that my own experiments, extending over more than ten years, and the theoretical deductions therefrom have made me an opponent of alcohol.'"

The observations of Professor Kraepelin agree exactly with experiments undertaken several years ago by the writer, which clearly show that alcohol even in moderate doses diminishes the acuteness of all the perceptives, and the ability of the brain to receive impressions and to transmit impulses. Two ounces of brandy lessened a young man's lifting capacity more than twenty-five per cent. Science gives no countenance to the use of alcohol, even in the greatest moderation.

THE OYSTER GOING.

It is gratifying to know that that filthy bivalve, the oyster, whose proper function in the world is the consumption of the ooze and slime which cover the bottom of the ocean, and the stems of submarine plants, is rapidly creating such a bad reputation for itself that there is already a prospect that its consumption as an article of food may be practically abandoned.

It has long been known that the consumption of the oyster not infrequently gives rise to severe illness. A few years ago an eminent surgeon in Chicago died as the result of consuming a few raw oysters. It is more recently, however, that the fact has been made clear — and it has been established beyond the possibility of doubt — that the oyster is a common source of epidemics of typhoid fever. The *British Medical Journal* has been particularly active in making this fact known to the public, as the result of which it is claimed by the leading oyster companies of Great Britain that there has been a decrease in the consumption of oysters amounting to three fourths; that is, the quantity required to meet the demand at the present time is only one fourth that of three or four years ago.

In their anxiety to save their business from utter ruin, the oyster companies have appealed to sanitary authorities for relieving suggestions. Professor Herdman, of Liverpool, comes forward with the suggestion that oysters received from foreign parts, should,

like cattle, be subjected to quarantine for from one to four weeks; and also suggests that no one should think of consuming oysters without subjecting them to at least one day's washing in a stream of water running from a tap. It is not claimed, however, that any of these measures will entirely obliterate typhoid fever and other poisonous germs, but only to some degree diminish them.

The companies, are, of course, laboring earnestly to recuperate their rapidly failing business; and it is accordingly proposed that the government shall appoint oyster inspectors, whose duty it shall be to make careful investigation of the bivalves offered for sale in the English markets,— to examine their mouths, and look at their tongues, so to speak, — and ascertain whether there remain behind any of the filthy germs which they have been in the habit of swallowing in the pursuit of their life calling.

It must be clear to any one that to provide for the inspection of every oyster — the only method by which complete safety could be obtained — would be altogether too expensive a process, and one which can never be adopted. Consequently it is pretty certain that, however successfully the public alarm may be quieted for the time being, it will redevelop sooner or later as the result of new outbreaks; and it is to be earnestly hoped that the ultimate result will be the repudiation of the oyster as an article of diet, the germy bivalve being left alone to pursue, unmolested, the avocation allotted him by nature.

THE FOUNDER OF THE RED CROSS IN A POORHOUSE.

J. Henry Dunant, the real founder of the Red Cross society, and the organizer of the famous convention of Geneva, was born in Geneva, May 8, 1828. The horrors which he witnessed in the campaign of Napoleon III against the Austrians in Italy, in 1859, led him to write a pamphlet upon the subject, which horrified the civilized world with the terrible cruelties of war, especially the account of the suffering of the wounded through neglect. A few years later, in 1863, he traveled at his own expense from capital to capital throughout Europe, and finally succeeded in organizing the conference in Geneva in October, 1864, which resulted in the permanent organization of the Red Cross society.

M. Dunant spent the greater portion of his fortune in developing this splendid charity, and, a few years later, lost the balance of it. He has since been obliged to live as an object of charity in a poorhouse. It is to the credit of the empress of Russia that she has recently provided for his comfort and maintenance. Like many other philanthropists, M. Dunant does not find the compensation for his philanthropic labors in this world. It is unfortunate indeed that society is so little appreciative of the sacrificing efforts of such men as to deny them even proper recognition.

A Better Chance for the Insane.— We are glad to note that the management of the MacLean Insane Asylum at Waverly have provided their patients, both men and women, with a fine gymnasium, completely equipped with gymnastic apparatus and a Turkish bath. It is understood that regular classes in gymnastics will be organized for the patients, so that they will thus have something of an advantage over their more unfortunate fellow mortals who happen to be nervously sick outside of an insane asylum; in fact, we are not quite sure but that the unfortunate inmates of the Waverly Asylum are, in some respects, better off than the neurasthenics and other nervous invalids outside who require treatment, as there are not more than two or three institutions for the sick in this country where proper attention is given to the employment of gymnas-

tics and physical training as a part of the regular system of treatment.

The world is gradually finding out that insanity is a malady of the nervous system, which must be treated in accordance with the very same principles by which other human maladies are treated, and that little good results from the treatment of the disease itself; that a cure, if obtained, must be found in the removal of the causes whereby the patient has been make sick.

Nuts and Fruits Man's Natural Diet.—Nuts are unquestionably the vegetable analogue of meat and other animal foods, not only containing all the food elements to be found in animal products, but in finer and more digestible form, more delicately flavored, and wholly free from the deleterious elements which abound in meat, and which are closely associated with all forms of animal food. Nuts and fruits are stated by the most eminent comparative anatomists to be the natural diet of man, as they are of his primitive relatives, the gorilla, the orang-outang, and the chimpanzee; hence it is not surprising that nuts should prove to be not only a perfect complement to a healthful dietary, but a food which is not only agreeable to the palate but acceptable to the stomach, even when it is so diseased that other less natural foods are rejected.

The general prejudice against nuts on the ground of their indigestibility is the natural outgrowth of the attempt to use them in a perfectly natural state, with no preparation except such as can be given by the teeth. With an entirely healthy stomach and sound teeth, this preparation is generally sufficient, but experience has shown that the digestibility of most nuts is as much improved by artificial preparation and cookery as is tha of vegetables and other food-stuffs.

ANSWERS TO CORRESPONDENTS.

CHOLERA INFANTUM.—A mother in Nebraska who has lost two children from cholera infantum is anxious to have directions for feeding her babe during the summer to avoid the disease. She asks, "1. Will sterilized milk produce cholera infantum? 2. If so, what should be fed a fifteen months old baby? 3. Should a child that does not cut teeth until over a year old, be fed anything except mother's milk? 4. Is it a sign of ill health if a child loses flesh after beginning to walk?"

Ans.—1. No; nevertheless there are some children with whom cow's milk does not seem to agree, and is liable to produce a disordered state of digestion which would lead to cholera infantum.

2. When the child has teeth, it should begin to eat food which requires mastication. Granose and bromose constitute a perfect diet for a child a year or more old.

3. Yes, if able to digest it. Bromose would be excellent for such a child. The writer knew of the case of a child which suffered with rickets, and at the age of a year was so imperfectly developed that it had no teeth; yet it was rapidly cured by the use of an exclusive diet of granose and bromose.

4. The child is probably being allowed to exercise too much; attention should be given to his diet. Give him a tepid bath followed by an oil rub.

HIVES.—Can you give any treatment for chronic hives other than is outlined in "Home Hand-Book"? They appear on the shoulders, back, and chest, and are very troublesome.

Ans.—Adopt an aseptic dietary. If the tongue is coated, the stomach should be washed out. Use antiseptic charcoal tablets.

ENLARGED TENDON.—A lady in Michigan writes: "There is a cluster of hard bunches in the palm of my right hand, the largest not quite so large as a two-cent piece. Sometimes they protrude much more than at other times; when I am tired or nervous, they seem larger. They first appeared about a year ago. I noticed another nearer my wrist a few days ago. Electricity seems to help them for the time. Will you kindly tell me the probable cause, and what treatment is required?"

Ans.— The case is one which requires the attention of a skilled physician and surgeon. A cure may possibly be effected by the application of galvanic electricity, but an operation may be necessary.

La Grippe.— A lady of fifty-four years had an attack of the grippe several years ago, since which time one of her arms has been constantly cold. 1. Is the symptom serious? 2. What can be done for it? 3. What treatment would you advise for a young man who has fainting spells and night sweats as a consequence of grippe? 4. What can be done to reduce the swelling of the lymphatic glands of the neck? 5. Is pain in the back of the head and between the shoulders caused by this swelling? 6. Would a cold increase the swelling? 7. Would you recommend the Medico-Electric Inhaler sold by Maynard & Co., Cincinnati, as a cure for catarrh? 8. Would you recommend a change of climate for a person afflicted with the foregoing conditions?

Ans.— 1. The case may be serious; it should have the attention of a skilled physician at once.

2. Fomentations applied to the upper portion of the spine; hot and cold sponges, rubbing of the arm, and applications of electricity can be recommended; also the heating compress, which consists in an application to the arm of a cloth wrung out as dry as possible from cold water and covered with flannel; repeat in two or three hours. This should be done twice daily. The arm should be rubbed vigorously after each treatment.

3. The case should have thorough investigation. The patient may have tuberculosis, or consumption. In case this disease is present, we recommend the patient to go to the Colorado Sanitarium at Boulder, Colo., or at least to correspond with the superintendent of that institution, Dr. W. H. Riley.

4. The alternate application of galvanic electricity is a remedy which in the hands of a good electro-therapeutist sometimes effects a cure in cases of this sort; in many cases, however, the glands must be removed by a surgical operation.

5. Probably not. It is more likely caused by disturbance of the sympathetic nerve resulting from indigestion or the displacement of the stomach or other abdominal viscera. Such pains are often relieved by wearing an abdominal supporter. We recommend the Natural Abdominal Supporter, which can be obtained from the Modern Medicine Company, Battle Creek, Mich. A cold sponging of the upper part of the spine is also a useful remedy.

6. Yes.

7. We have no acquaintance with this device, but from its name we should judge it to be more or less of a humbug, as there is no means by which electricity can be taken by inhalation.

8. The pure, dry air of the Rocky Mountain region would probably be helpful.

Burning in the Feet — Catarrh. — 1. What causes a burning sensation in the soles of the feet? 2. What can be done to relieve it? 3. Please give a remedy for catarrh. It seems to be all through my system.

Ans.—1. There is probably an irritation of the abdominal sympathetic nerve, producing disturbance of the circulation. Irritations of this sort arise from indigestion, from prolapse of the stomach and bowels, from floating kidneys, and from displacement of other internal organs.

2. The causes must be removed. If the abdominal organs are prolapsed, an efficient abdominal supporter must be worn. If indigestion is the cause, this must be remedied by proper treatment. Application of cold water is likely to increase the burning; hot water is more effective. If the symptom is troublesome at night, an application of dry cold in the form of a bag filled with cold water may be advantageously employed.

3. There is no such thing as "catarrh all through the system." The idea that catarrh is a disease which may affect every organ of the body has no scientific foundation. Catarrh is a malady which is confined to the mucous surfaces; however, it is not infrequently primarily the result of a morbid condition of the body, which produces simultaneously other symptoms; but persons suffering from catarrh are almost universally found to be suffering from other maladies at the same time, particularly indigestion, general weakness, inactivity of the skin, etc.

In the treatment of chronic catarrh it is necessary to build up the whole body. Remedies addressed to the nose, throat, or other affected regions are not alone capable of effecting a cure; however, local remedies are of very great value,— the essential oils, applied by means of a vaporizer, nebulizer, or an atomizer, being exceedingly useful. These antiseptic remedies must be applied in a most thorough manner, however, to render any great service; the applications should be made for five or ten minutes every hour; the more frequent the application, the more thorough will be the effects.

CALLOUS. — "I have in the bottom of my left foot, in different parts of the ball, half a dozen abnormal growths resembling both warts and corns. They grow out in a round, hard knot, like a corn, and when cut down to a level with the surface of the skin, with a sharp knife, show little black pits, as warts do under the same circumstances. They are very painful. I have to pare them down to level about twice a week, which often makes them bleed. I think they were caused originally by projecting nails in the shoes, though I fail to see why the growths continue after the cause is removed. Will you kindly inform me how to remove the trouble?"

Ans.— This patient is evidently suffering from callous, a condition which does not always readily yield to treatment. Temporary relief can always be obtained by removing the thickened epidermis with a sharp knife in a manner similar to that employed for the removal of a corn; it should first be thoroughly softened by soaking in hot water.

The trouble is very prone, however, to return. If the callous is so situated that the pressure can be removed by means of a proper pad of chamois skin or leather, with an opening arranged in such a way that the callous fits into the opening, so that the pressure is made around its circumference, a permanent cure may be effected, but the pad must be worn for several months. The pad may be kept in place by the application of a little pitch. In this case we would suggest the wearing of a felt insole inside of the shoe, with holes cut in it to correspond to the callouses.

DEFECTIVE CIRCULATION.— 1. Is it a grave symptom to have the blood recede from the hands, leaving them numb and lifeless? 2. What is the best way to improve the circulation of the blood in a rather delicate young lady?

Ans.— 1. Yes; it is an indication of a serious loss of vital energy.

2. The patient probably needs more and better blood. The activity of the heart largely depends upon the quantity of blood circulating in the blood-vessels; the more blood, the more vigorous the heart's action; the less blood, the weaker the contractions of the heart. The patient's dietary should be especially arranged with reference to a rapid increase of fat and blood; bromose, maltose, and other nut products are especially recommended for this purpose. (See announcement in advertising column.) An outdoor life, a cold sponge bath every morning followed by vigorous rubbing, and all other measures which improve the general health are indicated.

DYSPEPSIA.— A lady of fifty-three years has been troubled with dyspepsia for over twenty years. The right side bloats after meals, and until within the last six months there was frequent vomiting. She is careful about her diet, eating no meat and drinking no tea or coffee. 1. Can anything be done to diminish the size of the bladder? 2. What advice would you give for the dyspeptic condition?

Ans.— 1. Yes. The management of such a case, however, requires the personal attention of a skilled physician.

2. The patient should have a test meal. This can be taken at home, with directions which may be obtained by addressing the superintendent of the Battle Creek Sanitarium. It is probable that the patient should visit the Battle Creek Sanitarium, or one of its branches, for treatment, as the case is one which cannot be cured without the most thorough measures.

LITERARY NOTICES.

A VALUABLE PURITY PAMPHLET.—"Sex Injustice" is the subject of a very able, thoughtful address given by the Rev. Antoinette Brown Blackwell, at the Twenty-first Annual Meeting of the American Purity Alliance, held in the United Charities Building, New York, which has just been published in pamphlet form, with cover, and an excellent portrait of the author. It is a very strong presentation of the prolonged and cruel injustice to which woman has been subjected on account of sex, with race degradation and a dual standard of morals for men and women as the deplorable outcome. It is a most valuable pamphlet for purity workers everywhere, and merits the widest possible circulation. Price by mail, 10 cents. Address American Purity Alliance, 105 East 22d St., New York.

IN the May number of *Lippincott's Magazine*, Alva Fitzpatrick traces the fortunes of certain "French Pioneers in America," *i. e.*, Napoleonic exiles who came to Alabama after the downfall of the empire. It is a curious by-chapter of Southern annals. Mrs. Schuyler Van Rensselaer writes of the "Beginnings of Liberty in New York." "Life in the Cotton Belt" is described with full knowledge by Francis Albert Doughty; and "Early Man in America," a more remote but not less interesting theme, is considered by Harvey B. Bashore. Dora E. W. Spratt gives some facts as to the difficulties of "Earning a Living in China." "Some Bird-Songs" are reproduced with musical illustrations, by Henry Oldys. "A Star Route Case," by Mary E. Stickney, is a tale of old days in the West, when mail coaches were "held up" by agents of their owners. "Marthy's Dress," by Carrie Blake Morgan, is a pathetic and effective piece of work by one who never, in prose or verse, writes otherwise than well. J. B. Lippincott and Company, Philadelphia.

IN its May number the *Atlantic Monthly* contains two instructive articles on life in rural New England and the problems presented by the rush of the population to great cities. Professor N. S. Shaler, of Harvard University, writes sympathetically of Nansen's heroism in going farthest north, and tells the scientific result of the expedition. There is a characteristic and pleasing paper on the Japanese city of Izumo, by Lafcadio Hearn, and an interesting group of literary papers under "Men and Letters" by John Burroughs, H. C. Merwin, and Kenyon West; while Professor Gildersleeve gives the concluding paper of his "Sixty Days in Greece," in which the spirit of ancient Grecian life and literature has been so well portrayed. And these are only a part of the interesting and instructive articles that constitute this very valuable number of the magazine. Houghton, Mifflin & Company, 4 Park St., Boston, Mass.

THE honors and attentions showered upon General Grant during his tour of the world are, perhaps, unequaled in the history of kingly hospitality. He was received everywhere as the greatest soldier of his time and as the foremost living American. The Hon. John Russell Young, who accompanied General Grant throughout the famous journey, in the May *Ladies' Home Journal* graphically recalls its conspicuous incidents. Mr. Young brings to light a fact that has received but passing attention; viz., that General Grant was instrumental in arranging the terms of a treaty of peace between China and Japan, which prevented an outbreak of war between those nations.

PUBLISHERS' DEPARTMENT.

GOOD HEALTH in its new dress is growing in popularity. Commendations for both the cover and the contents are coming in from all sides. If the friends of the reformatory ideas for which this magazine stands will take pains to introduce it to their neighbors as opportunity offers, they will have the pleasure of knowing that while our list of subscribers is growing more and more rapidly, their friends are having the best of opportunities for learning how to live healthfully.

THE Good Health Publishing Company is preparing to put several general agents into the field for the purpose of pushing a vigorous campaign in behalf of the circulation of its books. The interest in health and temperance principles is growing everywhere, and many eyes are turning toward the Battle Creek Sanitarium as the headquarters for information on all subjects pertaining to health. There is certainly no place in the world where a larger amount of original investigation has been carried on, where there has been a more extended experience, or one more productive of practical results than here. An army of young men and women is wanted to go out and present these principles to the public.

"PAPA," said a little boy, "I know what makes people laugh in their sleeve."

"Well, my son, what is it?"

"'Cause that 's where their funny-bone is."

GOOD HEALTH CLUBS.—The campaign for the organization of Good Health clubs has already opened, and is meeting with excellent success. Requests have been received from a number of cities for the organization of these clubs, and the interest in the work is growing.

MISS NELLIE DALY, who has been for several weeks engaged in the organization of Good Health clubs in East Saginaw, reports excellent success as the result of her efforts. She has organized and conducted several classes in physical culture, and

has been very cordially received by the best people of the city. She has recently accepted the position of teacher of physical culture for the Young Women's Christian Association. Miss Edith Hare, also a nurse from the Battle Creek Sanitarium, has recently joined Miss Daly, and both the young ladies have their hands full to meet all the demands upon their time for instruction and professional services.

MRS. NELLIE PRUITT has for the last few weeks been engaged in instructing classes in cookery and dress reform, and holding cottage health meetings in Cleveland, O., and adjacent towns. She reports a lively interest in her work, and that health foods are warmly received wherever they are introduced. The public ear is wide open to receive instruction in the principles of health and sanitary reform. It is encouraging to note the growing interest in these vital subjects. We hope soon to be able to send out a score or more of well-prepared young men and women to labor in the interest of these principles.

A HEALTHFUL FRUIT.—A lazy dyspeptic was bewailing his own misfortunes and congratulating a friend on his healthy appearance.

"What do you do to make you so strong and healthy?" inquired the dyspeptic.

"I live on fruit alone," answered his friend.

"What kind of fruit?"

"The fruit of industry; and I am never troubled with indigestion."

WHO IS GOING TO GET THAT BICYCLE?—The Richmond wheel is unquestionably the best bicycle made. It has a spring in the frame which makes it possible to ride over a corduroy road or a rough cobblestone pavement without jar. It is the only wheel which receives the unqualified commendation of the physicians of the Battle Creek Sanitarium. It is especially desirable for invalids, who are more affected by jars than are well persons. We have heard from several who are working for the Richmond wheel offered in our premium list, and hope we shall have the pleasure of supplying a dozen or more.

SPRING CLEANING.

YES, clean yer house an' clean yer shed,
An' clean yer barn in every part;
But brush the cobwebs from yer head,
An' sweep the snow-banks from yer heart.
Jes' w'en spring cleanin' comes aroun',
Bring forth the duster an' the broom;
But rake yer fogy notions down,
An' sweep yer dusty soul of gloom.

Sweep ol' idees out with the dust,
An' dress yer soul in newer style;
Scrape from yer min' its worn-out crust,
An' dump it in the rubbish-pile.
Sweep out the hates that burn an' smart;
Bring in new loves serene an' pure.
Around the hearthstone of the heart
Place modern styles of furniture.

Clean out your morril cubby-hole;
Sweep out the dirt, scrape off the scum;
'T is cleanin' time for healthy souls—
Git up and dust! the spring has come!
Clean out the corners of the brain,
Bear down with scrubbin' brush an' soap,
An' dump ol' Fear into the rain,
An' dust a cozy chair for Hope.

Clean out the brain's deep rubbish-hole,
Soak ev'ry cranny great an' small,
An' in the front room of the soul
Hang pootier pictures on the wall.
Scrub up the windows of the mind,
Clean up an' let the spring begin;
Swing open wide the dusty blind,
An' let the glad new sunshine in.

Plant flowers in the soul's front yard;
Set out new shade an' blossom trees.
An' let the soil, once froze an' hard,
Sprout crocuses of new idees.
Yes, clean yer house an' clean yer shed,
An' clean yer barn in ev'ry part;
But brush the cobwebs from yer head,
An' sweep the snow-banks from yer heart!

—*S. Walter Foss.*

THE JOSEPHINE GOWN.

A Maternity Gown.

THE gown shown this month opposite page 308 is most satisfactory in every detail. Being adjustable in all parts, it readily lends itself to the changing form. The lining fronts are fitted with a puff, which extends to just below the bust. There is one dart, extending from below the puff to the bottom of the waist, in each side of which eyelet holes are worked, making the waist adjustable at will by a lacing cord. The full vest front and the top of the skirt are provided with casings for elastic, and additional length is allowed for at the top and sides of the skirt. No bands being used, the top of the skirt is narrowly bound, and buttonholes are worked in the skirt, which meet the buttons on the waist, thereby suspending all the weight of the garment from the shoulders. A folded ribbon or girdle is made to cover the buttons at the waist.

The effect of the double jacket front is very pleasing, and the style is favorable to a combination of materials.

A cloth model, basted together so that no mistake need be made, will be furnished for $5.00, or gowns will be made to order. Measurement blanks sent on application.

A FACETIOUS college professor, who felt the necessity of a change of air, said to the janitor, "Please open the windows, and let the remains of the senior class pass out."

THE Battle Creek Sanitarium Health Food Company report a steady increase in their business, which was already large two or three years ago. Although they have three large factories constantly running, it has recently been necessary to organize night crews to keep up with their orders. Several tons a day of these excellent food products are sent out to the public, every package a missionary in the direction of dietetic reform.

Truly the world moves. Twenty years ago these foods were little known, and were often subject to ridicule. At the present time they are everywhere recommended, and are constantly growing in public favor.

OUR attention has been called to the fact that just at the present time a peculiar sort of epidemic is raging in the vicinity of Battle Creek, Mich. For the last twenty years the Battle Creek Sanitarium has been manufacturing a cereal coffee formerly known as Caramel Coffee, but now known as Caramel-Cereal, the name having been changed two or three years ago to avoid conflict with the food laws of various States prohibiting the application of the term "coffee" to anything other than pure coffee beans.

Two or three years ago a gentleman who had formerly been a patient at the Battle Creek Sanitarium, and had there become acquainted with the excellent cereal coffee substitute which has so long been in use at that institution, undertook to manufacture a similar preparation. By ingenious and somewhat misleading advertising he has built up quite a large business in cereal coffee, shipping several carloads monthly to various parts of the United States. This success has given rise to a sort of infection, which has taken hold of half a dozen or more individuals who are likewise capable of knowing a good thing when they see it, and are inclined to work a good idea for all there is in it; so at the present time there are in Battle Creek six different factories besides the Battle Creek Sanitarium Health Food Co., all engaged in making cereal substitutes for coffee which resemble each other so closely that only an expert can tell the difference; they are all made in essentially the same way, and are practically the same thing,—there is little choice among them, notwithstanding the various representations made about "food experts," etc. Numerous remarkable properties are claimed for these various coffee substitutes; such as the power to "make red blood," "regulate the heart," "restore the nerves," etc.; while "a nourishing beverage," "blood making" and "strength making" are other descriptions applied to them, all equally untrue and absurd.

The Battle Creek Sanitarium which for thirty years has been manufacturing its cereal coffee and shipping this excellent substitute for a pernicious drug to all parts of the known world, has no quarrel with any of its imitators, the oldest of whom is not yet three years of age, but rejoices that the reformatory ideas which it has advocated for more than a quarter of a century through the various agencies connected with the Battle Creek Sanitarium, and especially its monthly health journal, GOOD HEALTH, have reached such a point in public favor as to have acquired a commercial value. Indeed, the institution congratulates itself that it has so many energetic assistants in the propagation of the important facts respecting the evil effects of tea and coffee which it has been earnestly pointing out for these many years. As might naturally be expected, however, these commercial reformers are about as happy among themselves as a parcel of Kilkenny cats, and are just now engaged in a very unseemly squabble over the question as to who is the proprietor of a certain round red patch borne on the outside of the packages in which certain of these pseudo food experts and amateur coffee-substitute manufacturers serve their products to the public. It is of the utmost importance that the ownership of this red patch should be clearly established, and that the characteristic features of the packages in which these various products are put up should be minutely defined to the public, since it is only by means of the external wrappings that any difference among them could ever be discovered. The Battle Creek Sanitarium Health Food Company looks on complacently, enjoying this skirmishing, since it all serves to push along the good work of emancipating the American people from the delusion embodied in the misleading poetic line, "The cup which cheers but not inebriates," as applied to tea and coffee. The worst coffee substitute which we have yet discovered is harmless compared with tea and coffee.

The Battle Creek Sanitarium Health Food Company having been in business for more than a quarter of a century, it has no concern as to the question of who did or who did not originate the red patch aforesaid, and feels assured by the fact

that its business has more than twice doubled within the last eighteen months, that, however much a discriminating public may be misled for a time, the final decision will be in favor of that which is truly genuine and meritorious. As Abraham Lincoln said, "You may fool all the people part of the time, and you may fool a part of the people all the time, but you can't fool all the people all the time."

The Caramel-Cereal package bears no red patch, but carries on its end a picture of one of the buildings of the great Sanitarium where it originated, and to whose appreciative guests it has been served for the last thirty years. Caramel-Cereal, when tasted, may at once be distinguished from every other cereal coffee by its delicate aroma, and the fact that it agrees with the most delicate stomachs.

Caramel-Cereal can now be obtained of the leading grocers in nearly all the chief cities of the United States. Samples may be obtained by addressing Sanitarium Health Food Company, Battle Creek, Mich.

ANOTHER MATTER.— An Irish priest had labored hard with one of his flock to induce him to give up the habit of drinking, but the man was obdurate.

"I tell you, Michael," said the priest, "whisky is your worst enemy, and you should keep as far away from it as you can."

"My enemy, is it, father?" responded Michael; "and it was your riverence's silf that was tellin' us in the pulpit only last Sunday to love our inimies!"

"So I was, Michael," rejoined the priest, "but was I anywhere telling you to swallow 'em?"— *Youth's Companion.*

VACATION DAYS.— In the lake regions of Wisconsin, Northern Michigan, Minnesota, Iowa, and South Dakota, along the lines of the Chicago, Milwaukee & St. Paul Railway, are hundreds of charming localities pre-eminently fitted for summer homes, nearly all of which are located on or near lakes which have not been fished out. These resorts range in variety from the "full dress for dinner" to the flannel-shirt costume for every meal. Among the list are names familiar to many of our readers as the perfection of Northern summer resorts. Nearly all of the Wisconsin points of interest are within a short distance from Chicago or Milwaukee, and none of them are so far away from the "busy marts of civilization" that they cannot be reached in a few hours of travel, by frequent trains, over the finest road in the Northwest — the Chicago, Milwaukee & St. Paul Railway. Send a two-cent stamp for a copy of "Vacation Days" giving a description of the principal resorts, and a list of summer hotels and boarding-houses, and rates for board, to Geo. H. Heafford, General Passenger Agent, Chicago, Ill.

MOST people who have been to California want to go again, and those people who have never been there want to go now. When you study the attractions of various routes for getting to the Pacific Coast, you will find your own comfort and convenience will lead you via the Southern Pacific. The season of 1896-7 is the third for that splendid semi-weekly train service, which has become famous throughout the country, known as the Sunset Limited. This splendid transcontinental train leaves New Orleans every Monday and Thursday morning, passengers from the North and East making direct connection with it and all lines centering in New Orleans. The train itself, which, by the way, runs through to San Francisco, is a solid Pullman-built train, vestibuled throughout, steam-heated and lighted by Pintsch gas. It comprises in its equipment a drawing-room for ladies, the first car of its kind ever built for any railway, smoking-room for gentlemen, bath-room, buffet, barber shop, drawing-room cars, and an unexcelled dinner; a library of well-selected books, and all the current periodicals, which are at the disposal of the passengers. A ladies' maid accompanies the train, whose services are at the disposal of the lady passengers. If you are contemplating a trip to California, or have friends who think of going there, write to W. G. Neimyer, General Western Agent, Southern Pacific Co., 238 Clark St., Chicago, who will cheerfully send you literature descriptive of the scenic and romantic features of the line and the train.

"MISTER, said the small boy to the druggist, "gimme another bottle o' them patent pills you sold father day before yesterday."

"Are they doing him good?" asked the clerk, looking pleased.

"I d'no whether they 're doin' father good or not, but they 're doin' me good. They jis' fit my new slungshot."— *Detroit Free Press.*

SOUTH DAKOTA in springtime is clothed with verdure green and spotted with the beautiful blue and white prairie flowers, tokens of luxuriant soil, like that fair country to which Moses led the children of Israel in ancient times. And like unto that land of plenty, South Dakota outrivals its sister States of the East in the products of its soil, sown, cultivated, and harvested in less time and with greater ease than in any other portion of the United States. And so we say to you that now is

the opportunity of a lifetime to "go west and buy a farm." For descriptive lists and prices, address H. F. Hunter, Immigration Agent for South Dakota, 295 Dearborn street, Chicago, Ill.

WHAT A MAN CAN DO IN SOUTH DAKOTA WITH $1000.— He can buy 160 acres of good land for $1000, paying $400 down; balance in three payments due in three, four, and five years, at seven per cent. He can also buy one hundred choice ewes for $300 and ten good cows for $300. The milk and butter from the cows will pay all farm and family expenses. The increase of sheep and wool will pay off the mortgage before it is due. In five years he will have a farm all paid for and well stocked. For descriptive lists and prices address H. F. Hunter.

THE SUNSHINE STATE is the title of a generously illustrated pamphlet of sixteen pages in reference to South Dakota, the reading-matter in which was written by an enthusiastic South Dakota lady — Mrs. Stella Hosmer Arnold — who has been a resident of the Sunshine State for over ten years. A copy will be mailed to the address of any farmer or farmer's wife, if sent at once to Harry Mercer, Michigan Passenger Agent, Chicago, Milwaukee & St. Paul Railway, 7 Fort St., W., Detroit, Mich.

A BANANA skin lay on the grocer's floor. "What are you doing there?" asked the scales, peeking over the edge of the counter.

"Oh, I'm lying in wait for the grocer."

"Pshaw!" said the scales; "I've been doing that for years."

PONDER OVER IT.— A prominent building owner, with years of experience, gave the following instructions to his architects: "I have had my experience with kalsomines and other goods claimed to be just as good as Alabastine. I want you to specify Alabastine on all my walls; do not put on any other manufacturer's dope, if he will furnish it for nothing. Alabastine is all right; and when I cease to use it, I shall cease to have confidence in myself or my own judgment."

Miss Mobile — Well, Martha, how is your husband now?

Martha — Po'ly, miss, po'ly. He 's got that exclamatory rheumatism.

Miss Mobile — You mean inflammatory rheumatism, Martha. "Exclamatory" means to cry out.

Martha (with solemn conviction) — That's it, mum, that 's it! He don't do nothing but holler! — *Sel.*

FREE FARM LABOR BUREAU.— In order to assist the thousands of unemployed men in Chicago, the Workingmen's Home, at 42 Custom House Place, has established a Free Labor Bureau, and is prepared to furnish men to farmers and others in all parts of the country without expense to either. Employers applying should state definitely as to the kind of work, wages to be paid, and if railway fare will be advanced. Address Labor Bureau, Workingmen's Home, 42 Custom House Place, Chicago, Ill.

ON May 1 the Tennessee Centennial and International Exposition opened its doors with appropriate ceremonies in honor of the one hundredth anniversary of the admission of the State into the Union. This exposition and also the one held at Atlanta are most significant as manifestations of the more liberal spirit which is stirring the New South, and rapidly dissipating any feeling of sectionalism between the North and the South.

SPECIALLY low excursion rates via the Northwestern Line (Chicago & Northwestern Ry.) to San Francisco, Minneapolis, and Milwaukee, on account of the C. E. Convention, July 7–12, the meeting B. P. O. Elks, July 6, and the N. E. A., Jule 6–9. Low tourist rates to the cool mountain resorts of Colorado, to the Wonderful Black Hills of South Dakota, and other Western resorts. Up-to-date trains superbly equipped with through palace sleeping cars, free reclining-chair cars, and dining cars. Apply to agents of connecting lines, or address W. H. Guerin, M. P. A., 67 Woodward Ave., Detroit, Mich.; or W. B. Kniskern, G. P. & T. A., Chicago, Ill.

DIRECTORY OF SANITARIUMS.

THE following institutions are conducted under the same general management as the Sanitarium at Battle Creek, Mich., which has long been known as the most thoroughly equipped sanitary establishment in the United States. The same rational and physiological principles relative to the treatment of disease are recognized at these institutions as at the Battle Creek Sanitarium, and they are conducted on the same general plan. Both medical and surgical cases are received at all of them. Each one possesses special advantages due to locality or other characteristic features.

ST. HELENA SANITARIUM, OR RURAL HEALTH RETREAT,

ST. HELENA, CAL.

W. H. MAXSON, M. D., Superintendent.
IRVING E. KECK, Business Manager.

THIS institution is beautifully located at the head of the Napa Valley. It is a fine large building, with excellent appointments, and all facilities required for the treatment of chronic invalids of all classes. It has also a record for a large amount of successful surgical work. There are several able physicians connected with the institution. The scenery is delightful, the climate salubrious; the water supply, which is furnished by mountain springs, is pure and abundant. Hundreds of cases of diseases generally considered incurable, have been successfully treated at this excellent institution during the twenty years of its existence.

CHICAGO SANITARIUM,

28 COLLEGE PLACE, CHICAGO, ILL.

THIS institution is a branch of the Battle Creek (Mich.) Sanitarium. It is favorably located near Lake Michigan, in the southern portion of the city, close to Cottage Grove avenue, and facing the old Baptist University grounds. A few patients are accommodated. Facilities are afforded for hydrotherapy, and the application of massage, electricity, Swedish movements, and other rational measures of treatment.

NEBRASKA SANITARIUM,

COLLEGE VIEW (LINCOLN), NEB.

A. R. HENRY, President.
A. N. LOPER, M. D., Superintendent.

COLLEGE VIEW is a thriving village located in the suburbs of Lincoln, with which it is connected by an electric railway. College View is the seat of Union College, one of the leading educational institutions of the West. The Sanitarium has a beautiful location, facing the spacious college grounds, and gives its guests the advantages of a quiet, homelike place, combined with appropriate and thoroughly rational treatment. It has a full equipment of excellent nurses, and has already won for itself an enviable reputation in the West.

PORTLAND SANITARIUM,

PORTLAND, ORE.

L. J. BELKNAP, M. D., Superintendent.

THIS institution is beautifully located in the center of the city, in a fine building, with spacious grounds; and although it has been in operation scarcely more than a year, it already has a good patronage, and has evidently entered upon a successful career. Facilities are provided for the dietetic and medical treatment of chronic ailments of all kinds. The advantages for treatment include, in addition to various forms of hydrotherapy, electric-light baths, apparatus for the application of electricity in its various useful forms, manual Swedish movements, and massage.

COLORADO SANITARIUM,

BOULDER, COLO.

W. H. RILEY, M. D., Superintendent.

THIS institution is located on a beautiful site of one hundred acres, including a fine mountain peak, and commanding extensive landscape views, which, for variety and beauty, can hardly be equaled. The site adjoins the thriving city of Boulder, and is about one hour's ride by rail from Denver, the streets and principal buildings of which are easily discernible from the peaks around Boulder. The equipment consists of a large building especially erected for the purpose, two fine cottages, and every appliance for the application of hydrotherapy, and for the special treatment of pulmonary ailments, to be found in the best establishments of like character. Particular attention is given to the dietetic treatment of patients, and to systematic exercise, in addition to the special treatment for specific ailments. The altitude is between five and six thousand feet, just that which has been determined to be the best for pulmonary troubles. Though but a few months have elapsed since the work of this institution was fairly begun, a large number of persons suffering from pulmonary tuberculosis have already been cured, and are now rejoicing in sound health. The rational hygienic treatment, with the climatic advantages, has proved effective in the cure of cases which, without the combined advantages of these superior measures, must certainly have succumbed to the disease.

GUADALAJARA SANITARIUM,

STATE OF JALISCO, MEXICO.

D. T. JONES, Superintendent.
ADDIE C. JOHNSON, M. D., J. H. NEALL, M. D., Physicians.

THIS institution, established in 1894, is the first and still the only one of the kind in Mexico. It affords, in addition to the unsurpassed climatic advantages of the region in which it is located, facilities for the employment of hydrotherapy, electricity, massage, manual Swedish movements, and dietetics, in the treatment of all forms of chronic disease. The altitude is the same as that of Denver,—from five to six thousand feet. Guadalajara has the advantage of a climate more nearly uniform than any other with which we are acquainted. Located in the tropics, it enjoys almost perpetual sunshine, while its altitude is such as to prevent excessive heat. There is probably no better place on earth for a pulmonary invalid. It is only necessary that the advantages of this institution should become known to secure for it extensive patronage.

INSTITUT SANITAIRE,

BASEL, SWITZERLAND.

THIS institution affords the only place in Europe where patients can receive the advantages of a thoroughly hygienic diet, baths, Swedish movements, massage, and various other methods of treatment, applied after the manner and in accordance with the same principles which govern the Battle Creek Sanitarium and its several branches. The physician in charge has received a thorough training in the institution at Battle Creek. Terms are moderate. No better place for sick persons or semi-invalids abroad than the Institut Sanitaire.

Address, 48 Weiherweg.