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ARE WE TO BE A TOOTHLESS RACE?¹

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TWENTY-FIVE years ago dentists were not nearly so numerous as they are to-day. They used to travel from town to town, carrying their outfits with them, in a manner similar to that of Methodist itinerant clergymen in the early history of that denomination. They would do such jobs of dentistry as they could find in one town, and then go to another, with difficulty earning a livelihood. But at the present time this profession is a very lucrative one; dentists are growing rich. So many people are putting their gold into their teeth that, as some one has suggested, the gold-mines of the future are likely to be found in the cemeteries of the present day.

This decay of teeth is not a local accident or a matter of mere local interest; it is an indication of constitutional decay, — of the decay of the human race. A horse-dealer would not buy a horse that had decayed teeth; he would know that that horse was losing his vitality and growing weak; and yet people offer themselves to the world as being strong and vigorous when they have scarcely a sound tooth in their heads. We find young people from twenty-two to twenty-five years of age getting married, — and without a sound tooth. Such people are not fit to be fathers and mothers. Their constitutions have already begun to decay, and

their decayed teeth are an evidence of that constitutional deterioration.

Teeth decay just as apples, potatoes, and other fruits and vegetables decay, just as dead animals decay, — through the action of germs. Germs, when allowed to take up their abode in the mouth and to develop in large numbers, form colonies upon the teeth. They accumulate in the mouth, and grow there in the form of patches. In the morning the teeth will feel rough, and will be covered with a yellow or whitish slime. This roughness is due to germs. They come from the food, the air, and the water, and feed upon the remnants of food which they find in the mouth and between the teeth.

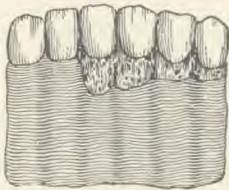
The saliva and the mucous membrane have power to destroy germs to some extent. The experiment has been made of planting deadly germs upon the septum of the nose, and in three hours they were killed by the mucous membrane. Healthy living tissue has the power to kill germs. When the mouth is in a clean, wholesome condition, germs can not obtain a foothold there; but when fragments of meat and other particles of food are left in it, they become hotbeds for germs, which feed upon these fragments of food, develop, and prey upon the teeth. Uncleanliness of the mouth is, therefore, one reason for the development of germs. Another cause of germs in the mouth is the loss of ability in the body to destroy

¹ Abstract of a lecture delivered in the parlor of the Battle Creek Sanitarium.

them, and the cause of this lowered resistance of the body is, as a rule, poor digestion. A weakened body that is losing its resistance to germs, manifests this loss of resistance as quickly in the teeth as in any other part of the body, and perhaps more quickly. The premature decay of the teeth, then, is always a sign of a weak and enfeebled constitution. Sound teeth are an indication of a sound body.

The first thing a doctor does when a child is brought to him for treatment, is to examine its teeth. If a child of ten years has decayed teeth, it will be almost certain to die prematurely. Primitive people and savage tribes live to be very old, and have sound teeth, some even having a third set when very old. In some of the marshes in the northern part of Michigan the skeletons of mammoths have been found with the teeth in perfect condition, yet these mammoths have been dead perhaps two or three thousand years. I have seen a dozen or more mummies in the British Museum with perfectly sound teeth.

These facts show that teeth ought not to decay; that they ought to be the best preserved of any structures in the body; that they ought to remain intact longer

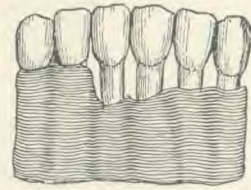


HUMAN TEETH COVERED WITH TARTAR.

than any other part; and yet in this country we find them decaying earlier than any other structure because of the action of germs and the loss of resistance on the part of the body.

When the teeth are sound, they are so covered with enamel as to be protected from changes of temperature and from injury from other causes. In a natural

state, they are strong enough to bite hard substances without difficulty. Being protected by such a coat of mail, as it might be called, how is it possible for them to decay? The decay of the teeth is accomplished in this way: Some of the germs that form colonies in the mouth and upon the teeth, secrete a substance which is capable of dissolving the enamel, and



HUMAN TEETH INJURED BY TARTAR.

then the germs gradually work their way into the teeth. You have probably noticed old crags and rocks upon mountain tops where mosses and lichens have grown, destroying a portion of the hard substance beneath them. These mosses are capable of forming substances which can dissolve the hardest rock, crumbling it and finally disintegrating it. So it is with the germs that grow in the mouth; they are capable of gradually dissolving the enamel and crumbling it off, after which they work their way down into the teeth.

The teeth usually begin to decay in the hidden parts, not upon the surface. Decay most frequently begins between the teeth because portions of food are caught and held there, and there the germs grow unmolested. Between thirty and forty different kinds of germs can live in the mouth, a large number of which are capable of attacking and destroying the teeth.

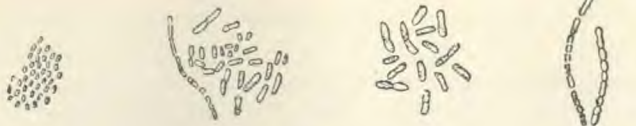
There is a popular idea that sugar, candies, and other sweets cause dental decay. This subject has been much discussed, and authorities are not entirely agreed upon it. While some people say, "I have eaten quantities of candy, and my teeth are sound," others say that



A LAKESIDE RESORT NEAR BATTLE CREEK, MICHIGAN.



candy has destroyed their teeth. It seems to me to be a question of digestion rather than of sweets. There are certain persons who can eat candy with impunity, because they have the ability to resist that par-



BACTERIA FOUND IN PUTREFYING MATTERS.

ticular cause of indigestion; but in others cases it produces indigestion, and indigestion diminishes vital resistance, thus favoring the attack of germs and dental decay.

Another cause of the premature decay of the teeth is amylaceous or farinaceous dyspepsia, or starch indigestion. This is becoming an almost universal disease among the American people. It greatly lessens the vital resistance of the body in every part, including the teeth. Germs being more numerous in the mouth than in any other part of the body, their effects are produced in the mouth and upon the teeth to a greater degree than elsewhere



BACTERIA WHICH INFEST THE MOUTH AND ALIMENTARY CANAL.

when the teeth are left covered with fragments of meat and other debris.

The skin soon becomes diseased when dirt is allowed to accumulate upon it. It is well known to skin-specialists that dirt

is a prime cause of skin disease. If one should allow the skin to become as dirty as the teeth sometimes do, nothing could prevent the action of germs upon the skin, and it would soon succumb to their attacks. So it is not a strange thing that the teeth succumb to germs.

One of the results of the growth of germs in the mouth is a coated tongue. If a person has a coated tongue, he is sure, sooner or later, to have decayed

teeth. Ice-cream is considered by many to be bad for the teeth; others are of the opposite opinion. Even some dentists try to show that ice-cream is not injurious to the teeth because it does not destroy the enamel.

But while it may not hurt the teeth directly, it injures the stomach, produces biliousness and



BACTERIA OF DENTAL CARIES.

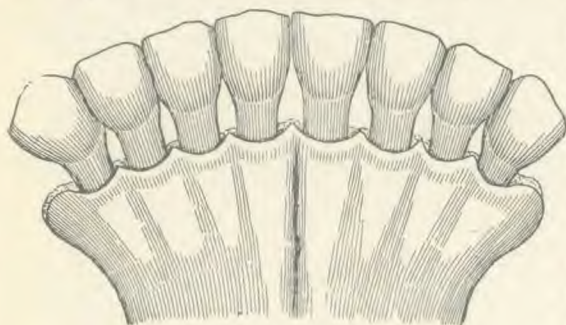
a coated tongue, thus lowering the vital resistance of the body, and exposing the teeth to destructive germ-action.

Another important cause of the decay of the teeth is the failure to furnish proper food for their nourishment. The popular idea is that there are not enough salts in our food, but the difficulty does not consist in a lack of these elements in our food, but rather in a lack of ability to absorb and digest them. Grains and nuts contain an abundant supply of salts. It is the acid of the stomach which prepares these salts for absorption; and when this is not present in proper quantity, we are unable to digest and absorb them, and thus become subject to softening of the teeth from lack of nutrition.

It is supposed that phosphate of lime and carbonate of lime are necessary for the teeth, because, when the teeth are

burned, these elements are left. It is thought that we do not get a sufficient quantity of these elements in our food, hence doctors prescribe doses of them for the teeth. But any one who wishes to take a dose of phosphate of lime for the nourishment of the teeth, only needs to eat an extra slice of graham bread or a granose biscuit.

Last year I made a study of a hundred cases of persons, some of whom had hypopepsia and others hyperpepsia. Careful examination was made of their stomach fluids and of their teeth, and it was found that those who had hyperpepsia had twice as many teeth left as those who had hy-



TEETH OF A HEALTHY COW.

poppepsia. The conclusion from this examination was this: in hypopepsia the stomach has lost the power to make gastric juice and to destroy germs, hence this condition is more favorable to the decay of the teeth than hyperpepsia, in which there is an excess of hydrochloric acid in the stomach, therefore a good ability to destroy germs, and to disinfect the food.

There is no doubt that the use of flesh food is one of the chief causes of dental decay. The reason is, that little particles of meat get between the teeth, and encourage the growth of destructive germs. The germs that destroy teeth are the same as those that cause the decay of flesh. It is better not to have dead things of any sort lying around in the mouth for the sub-

sistence of germs, but to keep it entirely clean and free from fragments of dead animals; and that can be most easily accomplished by putting nothing of the sort into the mouth. The monkey is a vegetarian, and has sound teeth, so I recommend persons who wish to have healthy teeth to live on the monkey's diet,—fruits, grains, and nuts: there is nothing healthier.

A vegetarian diet is, without question, conducive to the development and preservation of the teeth, because, first, it excludes meat; and secondly, it gives us food in proper condition for the use of the teeth,—food that requires thorough mastication. The teeth need exercise, and a vegetarian diet gives them healthy and normal exercise. Flesh food does not usually require much mastication. Our teeth are not adapted to eating flesh, but to the cutting, crushing, and grinding of grains, fruits, and nuts.

People generally eat too much soft food. If we could banish spoons and forks from our tables, so as to be compelled to take all our food hard and dry and from the hand, as we now take bread, it would be much better for the race. I am satisfied that lack of use is one cause of the premature decay of the teeth.

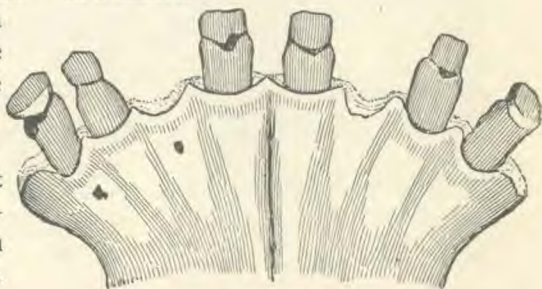
In order to preserve the teeth, it is necessary to use them. In the famous Mammoth Cave, there are fishes that have no eyes, or mere rudiments of eyes. They have gradually wasted away from non-use. There are strong indications that the people of the United States are in a fair way to lose their teeth in the same manner, from lack of use, and to become in course of time a toothless race. In New York City it has been found that the teeth of the cows of the distillery dairies, which live on distillery slops that do not require mastication, are almost entirely gone. The teeth should be scoured by

rubbing against hard food that will polish them. A wagon tire is kept clean and bright by constant movement and by coming in contact with the hard ground; machinery is kept in good condition by constant use and friction. So when dry food comes in contact with the teeth, it scours them, keeps them clean, and preserves them. I know of nothing better adapted to this purpose than granose, zwieback, or the dry crusts of hard bread.

People are likely to be reckless in regard to losing their teeth. Never lose a tooth if you can avoid it. I have known some people to have sound teeth taken out in order to have some new and handsome "store-teeth" put in. That is the greatest possible mistake. Keep your teeth as long as you can, even if they are not handsome. Get them filled as soon as there is the slightest decay perceptible.

To lose a tooth is to lose a part of one's life. We are not aware how dependent we are upon our teeth for our physical welfare, because we do not stop to think what a beautiful apparatus they form for grinding our food. The mouth is a mill formed upon the "gradual reduction" plan. Our front teeth furnish an apparatus for cutting the food. The side teeth, the cuspids, or cutting teeth, are sometimes improperly called "canine teeth," or "dog teeth," and some people argue that because we have "dog teeth," we must be carnivorous animals. But these teeth are not "canine teeth;" they are made for cutting the food, while the dog's teeth are constructed for the purpose of tearing and "hetcheling" food. Then we have the bicuspid, or small molar, by which the food is made still finer; then the molars, or multi-cuspids, including the "wisdom teeth," which complete the grinding process. So, when we speak of the mastication of a morsel of food, we mean that it is first cut by the front teeth, then

passed a little farther back in the mouth to the small molars, or bicuspid, for further grinding; then still farther back to the molars for completion of the grinding process. The food is thus worked farther and farther back in the mouth, and ground up finer and finer, until it gets behind the "grinders," or molars, and then it is close to the throat and ready to be swallowed, having been sufficiently masticated.



TEETH OF A COW FED ON DISTILLERY SLOPS.

While the food is being ground by the teeth, it is the duty of the cheeks to keep it between the teeth, first upon one side and then upon the other, thus giving one side a rest while the other is at work. But in order that this may be done, the upper and lower teeth must fit. If there is a tooth gone, when a coarse particle of food comes along to that place, it drops down into the empty space, and is not properly masticated. These coarse portions of food slip into the throat, and are swallowed into the stomach in an improper condition, and make trouble. A person suffers from the same cause if his teeth are not in perfect apposition, because, in that case also, the food will slip into the stomach without being properly masticated. Such a person can not masticate his food sufficiently, unless he chews it all in front, which few are willing to do. If the teeth are defective upon one side, then the person must chew his food altogether on the other side; but this will certainly wear out the teeth on that side, and give rise to new difficulties.

There is another argument for taking proper care of the teeth: If a tooth is gone upon one side, nature tries to remedy that defect by gradually approximating the remaining teeth; so they keep coming nearer and nearer together until the shape of the jaw is changed. If several teeth are lost, the shape of the jaw is so changed that the face is materially altered. The change produced in the appearance of the faces of elderly persons in consequence of the loss of teeth, is



BACTERIA FOUND IN THE MOUTH.

very marked. Thus defective teeth cause greater or less deformity, altering the appearance and expression of the countenance.

The teeth can be kept clean by the use of pure soft water—distilled water, if possible—and a brush. These are the only essentials, if one regularly maintains the habit of cleaning his teeth after every meal. Rub vigorously not only the front teeth, but all the teeth, including the back ones, which are the most important; they should be rubbed and polished until they feel smooth to the tip of the tongue. If not perfectly clean, one should have them cleaned by the dentist; and when they are once smooth, take good care to keep them so.

If the teeth have been neglected, it is advantageous to add something, as precipitated chalk, to the brush and water. But do not use the ordinary dentifrices or soap. It is well, ordinarily, to use an antiseptic. The best of all antiseptics is

cinnamon oil, or some preparation of this oil. To prepare cinnamon water, take a teaspoonful of cinnamon essence, add four ounces of water, shake thoroughly, and allow to settle. The oil which does not dissolve will settle to the bottom. If the water is then turned off, it will be well saturated with cinnamon. This is a perfect germicide.

The proper course of life for one who wishes to enjoy the use of sound teeth in old age may be summarized as follows:—

Live temperately in all things; adopt a dietary of fruits, grains, and nuts; eschew meats, cheese, condiments, pickles, and all unwholesome foods, so as to preserve sound digestion; eat dry food, and especially thoroughly cooked cereal foods, so as to avoid farinaceous dyspepsia and indigestion; granose, granola, zwieback, and hard-baked unleavened breads of all sorts are to be commended; soups, mushes, gruels, and soft grain preparations are all imperfectly cooked unless they have undergone previous preparation, as in the case of crystal wheat, browned rice, browned wheat, etc.; soft, imperfectly cooked cereal foods are a most prolific cause of indigestion, and hence of general decay, as has already been pointed out. Make free use of nuts and nut products, such as nuttose-C, nuttolene, bromose, malted nuts, etc. The system must be constantly supplied with a sufficient amount of fat, and if animal fats are discarded, it is difficult to obtain the requisite supply without resorting to nuts, which afford these elements in the purest, most digestible and palatable form.

To maintain a good digestion and a high state of vital resistance, take vigorous exercise out of doors daily and a morning cool or cold bath.

LIFE OF WOMAN IN A CROWDED CITY CENTER.

KATHARINE LENTE STEVENSON.

THERE is one class in a crowded city center which moves one's pity even more profoundly than do the children, and that class is composed of the wives and mothers. I know no existence outside of prison walls which may be so fittingly described by the adjective "colorless." For the children there are always possibilities. It is true that those possibilities are growing fewer and fewer as the competitive system becomes more strongly entrenched in our life, and as the grasp of the few upon the many gains in its iron force. Nevertheless, there are yet possibilities that the trend of a life born into the worst possible conditions may be changed. Moreover, youth itself, no matter what its surroundings, is so blessed a thing; the skies of childhood are so eternally roseate with hope, that one can hardly find it in his heart to pity those, who, despite rags and dirt and sometimes hunger, face the future with such merry eyes.

For the fathers, hard as their lives are, there are also mitigating conditions. Their horizons are necessarily broader. If they have work, they come into contact with their fellow workers; if they have no work, they find a constantly increasing company of others like themselves. On almost every corner the saloon stands with open doors to receive them, and there is usually a plentiful sprinkling of these open doors midway in the block as well. If they drink, there is always some one to treat, even though they themselves have no money. If they do not drink, and very many do not, they go into the saloon for fellowship with their kind, and it is an awful fact which we who decry intemperance and seek to overthrow the saloon must face, that it is often the only place in an entire ward to which they

are welcome. With churches closed, except for a few stated hours each week; with club houses, libraries, and reading-rooms conspicuous for their absence; with parks removed from them by many miles, it is hardly to be wondered at that from the sordid conditions of their miserable homes they should seek a place where they find at least light, warmth, and fellowship.

God forbid that I should minimize the evils arising from the saloon. They can hardly be overestimated, and yet it may be well for us to pause occasionally to inquire how far society is responsible for its existence; to what degree we ourselves



may have fostered an evil institution by the very fact that we have not fostered righteous ones. Our sins of omission lead surely, if not always swiftly, to sins of commission on the part of others, and there is no more striking proof of this assertion than the saloon itself. We say that it is fostered by avarice on the one hand, and by appetite upon the other. True; but there is a third factor which we strangely fail to take into account, and that factor is represented by the indifference and the greed of a higher social order than that represented by the saloon-keeper. When we shall strive to put right social conditions in the place of wrong ones, we shall have taken a mighty ad-

vance step in the solving of the temperance problem.

But for the women in our crowded city center, at least for the women who are self-respecting, and these form the majority, there is not even this relief to the dead monotony of their lives. They are shut in to close walls, to heat in summer, to cold in winter, and always, to a greater or less degree, to odors and dirt. Is it

during the World's Fair. This is the pitiful story we so often hear; the World's Fair proved an attractive lure to thousands who found themselves at its close in a strange city without means to return to their old homes. This husband found employment for a short time only. The pleasant home on one of the streets of the West Side had to be given up; the wife's health was exceedingly delicate, and when



any wonder that they grow discouraged, and often fail to do all that they individually might to promote cleanliness in their own homes? Many of them have known better circumstances, and that which Tennyson calls "sorrow's crown of sorrows,"—the "remembering happier things,"—often tends to paralyze effort.

I have in mind a delicate, refined, quiet little woman who with her husband and two children lived in a basement a few doors from Chicago Commons. They had moved from New York City some years before, where the husband had been earning a good salary, but a desire to better his condition brought him west

we found her, she was in complete despair in her basement room, from which she could see only a dead wall, the sidewalk being on a level above her window. She has told me many times of the effect the first call from the Chicago Commons residents had upon her. She said: "I had just given up completely. It seemed to me that there could never be any brightness in life again, and I did not care whether the house and children were kept clean or not; but after the ladies called, I felt so ashamed of myself that I went to work and cleaned up." The scrupulous cleanliness in which I always found the two little rooms bore witness to

the fact that the effort was not a spasmodic one. Later we were able to send her, with the children, for a blessed time in God's country, and though work is still an uncertain quantity in the husband's life, yet the conditions of the family are greatly improved, and the dreary sense of utter desolation does not come into the mother's life as it did in those days when, holding herself aloof from her neighbors, she wore her heart out in that basement room.

Another instance comes to my mind of two sisters who were brought from England by the assurances of their brother that there was wealth to spare in the New World. Their little money they invested with him, only to have it lost, and now for nearly twenty years they have been living in a second-story tenement, earning what they can through sewing, and dwelling always in thought upon the happier days in the old life. They hold themselves aloof from all about them. It has been with the greatest difficulty that the settlement residents have gained any access to their lives, but I shall never forget the pathos with which one of them said to me: "I bought a sewing-machine when first I came to this country, and I think now I might better have burned the money up; for working at that sewing-machine day and night has kept me in a perfect prison, and taken all the joy out of life for me."

Of course, these are exceptional instances; the majority of those about us are perhaps more miserable because less miserable; that is to say, they have never known a different life, and are therefore more easily content with that which ought to arouse in their hearts a healthy discontent; and yet when our neighbors laugh the most merrily, there seems to us always to be an undertone of sorrow in their mirth.

No human soul is without some degree

of aspiration, and no conditions could be more disastrous for the realization of aspirations than those which surround the lives of the women in such a neighborhood as I am describing. Picture it for a moment: three and four families, sometimes a greater number, crowded into those miserable tenements, many of them opening upon dark courts and blind alleys; one in particular I think of which I used often to visit, where we were obliged almost to squeeze ourselves through a little narrow opening in order to get to the rear tenement; no light



and beauty in the home, no beauty without, no place to which to go for change and uplift, the sole recreation of the day being the gossip with a neighbor on the sidewalk or the rickety stairs which serve as front porch; children everywhere in inverse ratio, it seems, to the ability of the family to care for them. Almost as a matter of necessity, cleanliness in the majority of such cases is well-nigh a lost art, though there are glowing exceptions to this rule, but many of the houses have no water in them; the money for a piece of soap is often not to be secured, and even if it were, there is that fatal paralysis of will and effort which seems the necessary outgrowth of such conditions. Life in a tenement in a back alley is not such a one as would lead to ambition. How some of them live, God alone knows! I have in thought several families, who, during all the time of my residence at the

Commons, seemed to have no visible means of support. The children go to the market in the morning and beg a few bones, some cast-away vegetables, or whatever they can secure; sometimes a stale loaf from the bake-shop; sometimes a basket from the Commons (though we were obliged early in our work to declare

meetings were established, and held once every week. These were at first very poorly attended, but little by little the interest grew until often now the kindergarten room is filled with the mothers of the children, who come to talk together and to enjoy the one social event in their lives.



A MOTHERS' MEETING AT CHICAGO COMMONS.

against the giving of food, lest we should unduly pauperize our neighbors); and in this precarious way, life in these families goes on. The wan little faces of the children would break one's heart.

How to reach the women of the community became at once a problem for the settlement workers to solve, and there was quickly presented one blessedly direct way,—through their children. The kindergartners called on the mothers, first of all, to secure their consent to having their children come to the kindergarten; then the friendly visit grew out of the first call as a necessity. A little later, mothers'

I know no more beautiful sight than that of the mothers' meeting. Often they bring their babies and the younger children; they always have a cup of tea together and a little talk from Mrs. Hegner, the head of the kindergarten work, whose ideals of motherhood are of the highest type, and who brings to these less happy mothers a most charming and helpful realization of her own ideals. They sing kindergarten songs and play kindergarten games, and it does one's very heart good to see the women in whose lives there is so little brightness, going through the intricate steps of the kindergarten march.

They seem to possess the very essence of joyousness at these meetings.

Once or twice the fathers have been induced to come, but not often, although they enjoy the kindergarten songs and games as well as do the mothers, and it is one of the delightful experiences which come to the kindergartner to find the fathers sitting on their door-steps, watching the children play the games, and urging them to sing the songs.

Mrs. Hegner always encourages the mothers to tell of their own experiences with their children, and what methods they employ in their training. No preaching is done, but very many lessons are given in the attractive guise of a story. It is most interesting in these experiences to note how the effect of the kindergarten upon the children is reacting upon the home. A mother said one day: "My boy he do wear out my life since he go to de kindergarten. He all de time follow me around with a rag and wipe up spots." The necessity of some such training in many homes is self-evident.

Meanwhile, for another class of mothers, those who have no children in the kindergarten, and are upon a somewhat higher social plane, there is the Woman's Club. This meets once a week at Chicago Commons, and has been continued without intermission, even during the summer months, for three years. It has now reached a membership of nearly one hundred, and the women are most interested in all that pertains to club life. They have had addresses from some of the very best speakers of Chicago, on literary and artistic subjects, on various phases of reform, on dress, health, and a variety of topics. During one winter a series of talks was given on the various nations represented in the membership of the club. This was conducted by the club members themselves, and was of ex-

ceeding interest, especially as so many nationalities were represented in the club's membership. Many summer outings have been enjoyed; invitations from clubs of the suburbs have been accepted, and many sweet friendships have resulted therefrom. This has also been true of the mothers' meetings.

One of the strongest testimonies as to what the Chicago Commons and the Woman's Club have been to the women of the seventeenth ward has been given by one of the brightest club members, a dear little Scotch lady, in the following words:—

"Two years ago, when some of us paid our first visit to the Commons, we had not the slightest conception of what it would become to us. Some of us had left homes in small country villages, where we knew every one and every one knew us. We came to this large city, and found ourselves shut up in our homes as if they were jails. We were afraid to speak with our neighbors, and our neighbors were afraid of us. When the Chicago Commons opened its doors and invited us to visit there, we hardly knew what it meant. But we called, and to our surprise found ourselves among friends,—friends that were interested in us and in our daily lives. Its doors were open to us at any and all times, with a sympathizing friend always ready to listen to us, and encourage and help us amid the trials and discouragements that come to all of us some time or other. Very soon we began to wonder how we ever managed to exist without the Commons. Now through its instrumentality we do know and speak with our neighbors, as our Woman's Club can testify. And I know that I but voice the thought of my sisters in the various clubs when I say how much we appreciate the privilege of coming together here once a week, and how much we enjoy our meetings, both business and social. I am sure

every one of you will join with me in asking God to bless the Commons and its workers, and to give them long life and prosperity."

This is only one of the many testimonies we have received as to the widening of the horizon of life's aims, and the feeling of friendship and neighborliness which has come into their lives through the Woman's Club and the various meetings of the Chicago Commons. Another member of the club said one day, "I used to think I didn't have any neighbors, but since I have begun coming to the Chicago Commons, I find I have plenty of them."

We find some of the most beautiful souls hidden away in the dreary tenements about us. Characters that have the very stamp of God upon them are occasionally brought to light in the dark alleys or garrets of our vicinity. One dear old *grossemutter*, who lives in a little garret room with hardly enough space to turn herself around in, and who has for years accomplished the marvelous feat of living upon two dollars a month,—one for rent and the other for food,—is one of the most beautiful characters I have ever known. Life is for her a perpetual adoration. She lives in prayer; she can talk of nothing except God and his great goodness to her. There is about her nothing of affectation or mere cant, but she really believes in God and looks upon him as a loving, tender Father. Her gratitude for the little kindnesses which the Commons residents have been able to show her is of the deepest nature. She can not speak a word of English, but she comes night after night to the vesper service, and sits with a blessed, beatific smile upon her face during the songs and prayer. She goes very often to the Tabernacle church of which Dr. Taylor is pastor, and sits through the long service, of which she can not understand a word, just because

she knows they are talking of good things, and because she wants to be near the people who have been good to her. She is always present at the mothers' meetings, and on her birthday recently the mothers out of their own scanty purses presented her with a nice warm shawl. It was almost pitiful to see her gratitude. In sickness or health, in heat or cold, under any and all circumstances, she seems always to be thankful. The children of the kindergarten all love her, and she very frequently comes into the room during kindergarten hours. How many more such saints are hidden away in our great city God alone knows, but it is a comfort to think that he does know, and that they are under his keeping, however their fellow men may have neglected their part of the divine oversight.

The generosity of the poor and their helpfulness to each other is a thing which can not be understood until one lives in close contact with these people, with whom existence is always precarious, and who thus have a fellow feeling for one another's needs. I remember calling a year or two ago upon one of our neighbors whose husband had been out of work for months, their only support for a family of five being a young boy who earned about three dollars a week. I found that she had taken into her four small rooms a woman who was just about to be confined, and who had also two small children. This woman's husband had deserted her a month before; the landlord had driven her out, and our neighbor had taken her in. I said to her, "This is a beautiful thing for you to do, but I almost wonder you felt you could." She looked at me in surprise, and said, "Why, she had to go somewhere."

A little boy of about two years was left fatherless and motherless. A young married couple among our residents thought seriously of adopting the child, and yet

hesitated for a day or two, wondering if it were a wise thing for them to do. One day the husband said, "I am going out to see the boy, and I shall be guided by what I learn, as to whether we shall take him or not." He went to the house to find that the child had already been adopted by a neighbor, and that he made the eighth in that family. Our fellow resident expressed appreciation of this kind act, and received in reply the same simple language I have already quoted, "Why, the little fellow had to go somewhere." Over and over again it has happened that when we have taken food or clothing to those most in need, we have been met by

this question: "Would you mind if I gave part of this to my neighbor? She needs it as much as I do." Indeed, the lessons in generosity and nobility of giving which we have learned from our neighbors of the seventeenth ward can never be forgotten. Some may say that it

is because of the general thriftlessness of such people that they do not better appreciate the value of material things and do not save as they ought; that if they were less generous, they would have more themselves in time of need. We are very familiar with that old argument, and yet if we were to put ourselves in the place of these, our neighbors, who do not know from week to week or even from day to day whether employ-

ment will be assured them, the gross earnings of whose families are often hardly enough for the barest necessities of life, I think we could better understand the feeling of compassion which moves them to reach out a helping hand to their brother or sister in need. It is a question, indeed, what right any one has to hoard up money, with the countless number of poor, needy, and even starving ones about us. In the case of our neighbors "a fellow feeling" gives the "wondrous kindness" which should be the natural attitude of each human being to all others.

If one were to sum up the needs most apparent in the lives of women in the

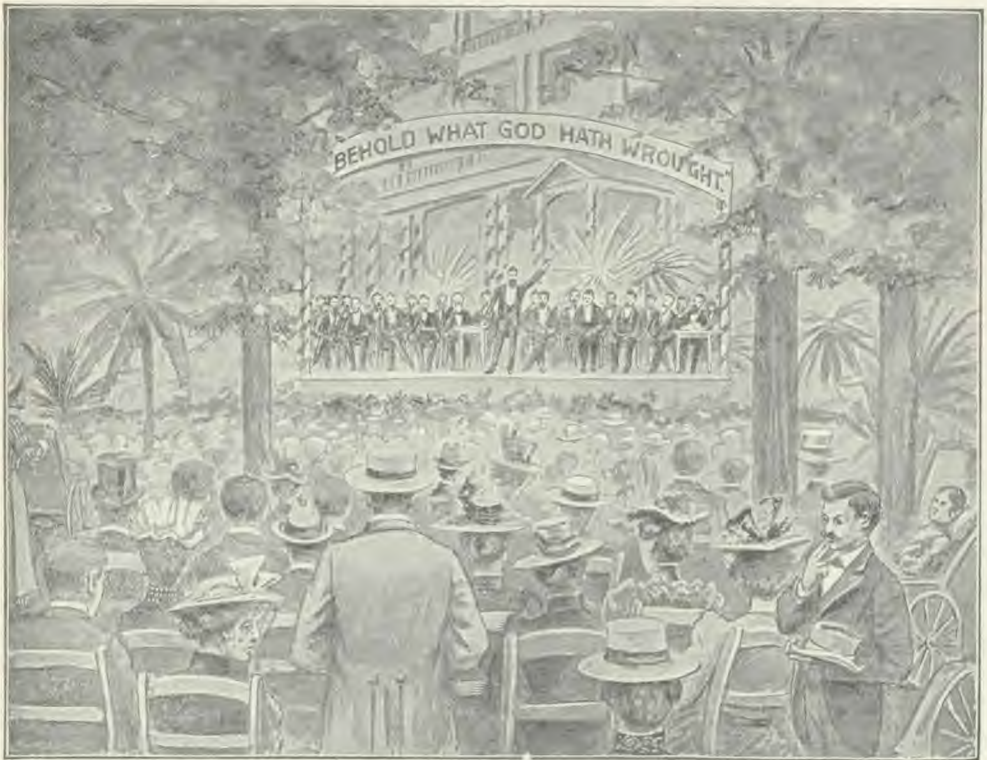


crowded city center, he would be forced to begin with the most fundamental ones,—pure air and possibility for cleanliness. Each of these presupposes a better economic system than that by which the world is now governed. Following next in order must come pleasant rooms, the possibility of exercise under natural conditions,—in the sunlight, and in what would at least approximate the freshness and beauty of the country. Then proper

domestic sanitation,— good food well cooked; a knowledge of the laws of life sufficient to enable one to eat and live hygienically; pleasant social intercourse with others; and last, an economic justice that would make it no longer necessary for a woman to leave her home and little ones that those little ones might be fed and the home preserved. Perhaps there is no sadder feature connected with settlement life than the necessity which exists for the crèche, a place in which the mother may put her baby while she goes out to toil for that which shall provide food and shelter for herself and her children.

Do you say that these conditions are Utopian? that they can never be met? They must be met, else evils far worse

than any which have ever threatened us as a nation will speedily be upon us. A nation can not rise higher than its motherhood; and that nation which submits to conditions degrading to motherhood, even if it be among the lowliest, is surely writing its own swift destruction. All the signs of the times point to a newly awakened interest in this subject. That interest has not been aroused one moment too soon. If "the child's sob in the darkness curses deeper than the strong man in his wrath," what shall be said of the sobs which daily and hourly convulse the mother-hearts of so large a part of our people? Surely, the cry has entered into "the ear of the Lord of Sabaoth," and his answer, though it may be long delayed, will be sure and final.



A NOTABLE ANNIVERSARY.

SINCE GOOD HEALTH owes its existence and prosperity to the principles and support of the Battle Creek Sanitarium, an occasion upon which these principles were especially brought forward and emphasized will be of interest to the readers of the magazine.

The morning of Sept. 5, 1898, witnessed a memorable scene. On the south lawn of the Sanitarium grounds were gathered men and women who had watched the growth of the institution through more than thirty years of varying fortune, together with other men and women, some of whom had been converted from foes to friends by the steady warmth of a light that had never failed to shine brightly and cheerily in the darkest days, others of whom, having seen that light, had at once recognized in it a beacon to health and usefulness, and were glad of this opportunity to become more thoroughly acquainted with the principles which made possible an illumination so vitalizing and so far extending.

Upon a large platform under the trees, surrounded by an eager and sympathetic host of friends, were seated the speakers and honored guests of the anniversary celebration. Across the front of the platform hung the significant words: "Behold What God Hath Wrought!" After appropriate music, Uriah Smith, one of the pioneers in the work of this institution, read an impressive Scripture lesson, followed by prayer by A. T. Jones. Dr. Kellogg, superintendent of the Sanitarium, then spoke in substance as follows:—

"LADIES AND GENTLEMEN: This is an occasion such as rarely comes in the history of individuals or of organizations. It is the anniversary of an institution created a whole generation ago. There are upon these grounds at this moment men and women who gathered here under these same trees thirty-two years ago to-day to celebrate the opening of this Sanitarium. There sit upon this platform persons who



URIAH SMITH.

participated in the exercises of that occasion. I myself, then a small boy, had the honor of sitting on the ground under one of these trees, very few of which were at that time more than twice the size of my arm. I look around me to-day and see that the trees have grown. Their trunks have become thick and sturdy,

many times their former size; their branches have spread out until the whole ground is covered by their shade. These trees and their growth represent in a very appropriate way the growth of this work during a third of a century.

“Thirty-two years ago, when this institution was established, it was known as the Health Reform Institute, a very aggressive title. Ten years later, when the name was changed to the Battle Creek Sanitarium, there were a great many people in this city



A. T. JONES.

who did not know what the word ‘Sanitarium’ meant,—in fact, they were not peculiar in that respect, for I believe that the word ‘Sanitarium’ was a new word in this country at that time, and perhaps it was a new word everywhere.

“In those days the situation of the world at large with reference to sanitary matters was very dark; people knew almost nothing about sanitary reform, dietetic reform, or rational living. Professor White, president of Cornell University, once told a story illustrating this very well: He was appointed chairman of a commission to investigate the work of the health officers of New York City. These

men had been appointed because of their political ‘pull,’ and not because they knew anything about sanitation; therefore some of the leading physicians asked for a committee of investigation. Professor White was placed at the head of this commission. He talked with these health officers one at a time, and after he had examined three or four, one of them incidentally remarked that smallpox had been epidemic in his neighborhood, and that one family of hygienics had had it, but none of them died. The professor took his cue from the word ‘hygienics,’ and asked the next man who came in if he had any hygienics in his neighborhood. He said, ‘Yes; we have had a case or two, but they got well.’ He asked the next man who came in if they had had any hygienics in his neighborhood, and he said, ‘Yes, one or two cases,’ but he didn’t visit them because he was afraid he might catch the disease himself. He asked the next man if he could define ‘hygienics.’ ‘Yes,’ he said, ‘hygienics is a bad smell rising from dirty water.’

“The idea that bad smells were unwholesome comprised about all that people generally knew of hygienic reform thirty-two years ago.

“I have no thought of saying that the Sanitarium is responsible for, or has been the principal means of bringing about, the great progress in sanitation in the world during the last quarter of a century, but I am proud to say this, that for thirty-two years this institution has been a pioneer in the most advanced lines of progress in every branch of sanitary reform. I am glad to be connected with an institution which has a history reaching back, so to speak, into the dark ages of sanitation.

“When it was first founded, the Sanitarium was a laughing-stock because of its idiosyncracies. I remember being made the butt of scorn and ridicule because I ate oatmeal. I am glad we have upon

the platform the pioneer of the oatmeal industry in this country, Mr. Ferdinand Schumacher, whom I have especially invited to take part in these exercises for the reason that thirty-two years ago he furnished us with the only oatmeal that we could obtain. At that time Mr. Schumacher was introducing oatmeal as a new food; he has been successful, and has built up an enormous industry.

“During the thirty-two years that this institution has been at work, sanitary progress has been advancing with rapid strides in every country. The movement was started about fifty years ago. The Sanitarium did not originate it; no institution originated it; no man originated it. It is the progress that comes from the working of a divine Providence in this world. God puts good thoughts into the minds of different men in different countries, and because there is a divinity in humanity, we see men moving simultaneously in similar directions in widely separated communities.



J. H. KELLOGG, M. D.

“So with dress reform. Thirty-two years ago it was a subject of derision. It is true that it was then in a crude state, but the idea was right; the principle was sound and true, and has survived all the ridicule heaped upon it, until to-day dress reform has almost come to be a fad. The time is past when sanitary reform of any kind is ridiculed. Its principles are no longer regarded as the whims and fancies of ignorant people, but are respected and recognized as a part of the great forward movement of the world.

“This institution stands particularly for two things,—rational living, and the rational treatment of the sick. Perhaps the greatest of all discoveries in relation to medicine are those relating to the infinitesimal organisms known as germs. Thirty-two years ago it was not supposed that germs had any practical relation to life; but at present hundreds of men are devoting their entire time to the exploration of this new field.

Although germs are

“I am glad to be connected with this institution, not because it formulated these reforms, not because it first introduced them to the world, but because it fell into line, and became a representative of them at such an early day.

“Thirty-two years ago it was next to impossible to get graham bread; and the only place in the United States where gem-pans could be found was New York. Now they are in every woman’s kitchen, and graham bread and oatmeal are on the bill of fare in every hotel and restaurant.

so minute that they can not be seen by the naked eye, they are so powerful that they decide the destinies of nations. The United States Army is now suffering ten-fold more from germs than it ever suffered from Spanish bullets. In Cuba probably more soldiers will die from germs than from nitroglycerin and gunpowder. Germs are the most potent of all death-dealing agencies; yet it is scarcely a tenth of a century since these organisms and their relations to life have come to be really appreciated. For example, in the

old surgery the doctors talked about 'adhesive inflammation' and 'laudable pus,' but nowadays a doctor considers himself disgraced if he finds a drop of pus appearing in any wound that he has made.

"In consequence of the knowledge of the relation of germs to surgical results, brought before the world by Lister, Pasteur, Koch, and other men who have labored in this field, physicians are now able, by taking precautions, to invade the brain and operate upon it, to open the abdominal cavity and even the pleural cavity, to open the lungs, even to amputate a portion of the lung, with far greater impunity and less risk of life, than twenty-five years ago attended the amputation of a leg at the hip-joint.

"So it is in the practise of medicine. Twenty-five years ago doctors looked upon disease very largely as a thing to be fought. They considered a patient's symptoms as something to be overcome. If a man had an inflammation, it must be attacked with the greatest possible vigor, and subdued. If he was suffering from disordered digestion, the principal thing was to give him stimulants so that his stomach would do more work. If he said, 'My liver is torpid,' the doctor gave him something to whip up his liver to compel it to do more work. Now the revelations made by the bacteriological and the physiological laboratory, the marvelous developments which have resulted from the labors of such men as Bouchard of France and Haig of England, have taught us that disease is more frequently a friend than an enemy; that symptoms are not altogether to be despised, but that they are to be welcomed as warning voices that we are going astray from the order which God has established; and that the duty of the physician is not to fight symptoms, not simply to subdue fever, not simply to combat an inflammation, but that it is his first duty to find out what made the man

sick, and then to cure him,—not simply to cure his disease, but to cure *him*. It is coming to be recognized as a universal principle that when a man is sick, the physician is to cure, not his smallpox, not his pneumonia, not his consumption, not simply to cure his pain or his sleeplessness, but to cure the man himself.

"We find that there is in man a curative power; that the same Divine Being that made him in the first place also put into him the power to recover health and to remain well; that it is simply necessary for him to obey, and that the man who obeys has as his reward, health; that the man who disobeys God may expect, not as an arbitrary penalty, but as a necessary result, disease and ill health. It is not the duty of the physician to undertake to abrogate God's laws or to oppose what nature is doing; it is his duty to help nature; for the same kind nature that makes us suffer also seeks to heal us, and the same nature—the same God—is working through the very penalty that the man suffers, to heal him. We have been finding out during the last ten years that fever is curative, that high temperature is curative; that when a man suffers with a high temperature in fever, the high temperature is killing the germs that made the fever; that when he suffers from various other symptoms, there is a curative work being done.

"In the olden time the idea was this: Disease is an enemy; the doctor comes to fight the enemy; the patient is the battleground; and between the doctor and the disease, the patient often got the worst of it. But nowadays the patient is more kindly treated; there is not this conflict, and the doctor recognizes disease as a friend to the patient. We have got away from the principle announced by Dr. Cullen, who said he would 'drive nature out of the sick-room as he would a squalling cat.' This represents the idea

that prevailed in our profession centuries ago; but a new era has dawned, a new medical science is creating. It is not the old-school doctors that we talk about nowadays, but the new medical science that is coming into the world as the result of the labors of many men in many, different countries.

“I wish to say for this institution that from my earliest knowledge of it, it has intended to be and has tried to be a representative of the newest, the most rational, the most progressive and practical medical science. It has never been the advocate of a single remedy; it has never been a one-sided or a one-idea institution. In the early days, when it was first established, water was one of the principal remedies used, nevertheless it was never the only one; correct habits of life, correct dress, correct diet, pure air, electricity, exercise, and a variety of other most potent agencies for healing were also employed. Water was possibly the most conspicuous of these remedies, and so the institution acquired the reputation of being a water-cure, and the idea went out that it was a one-idea concern. But the principle which the Sanitarium was then intended to represent was just as large as it is now; it was intended to represent the most advanced light and progress in relation to the healing of the sick, and the hygienic care of the well. As it has developed from year to year, new facilities and new appliances have been added, and the effort has constantly been exerted to make it set forth in the largest possible way all the known rational means of aiding the sick to recovery, and of curing, not the disease, but the sick man or the sick woman. It has been the work of the Sanitarium to teach a science of health by which the sick may recover, and be able to keep well after recovery.

“My mind is full of things I should like to say, but we wish to hear from other

friends. I desire to add, however, that I am proud to be here to-day, not because I have achieved anything, because I have done nothing except what it was my duty to do. Some time ago, on an occasion similar to this, a gentleman said: ‘I congratulate Dr. Kellogg upon the great work he has done.’ I wish to say to you, my friends, that I have done no great work. My colleagues will agree with me in this,—nothing has been done here that we can claim as ours. There is just one thing that I do feel proud of, and that I congratulate myself upon: it is that I had the good sense thirty years ago to lay hold of the ideas which this institution represents, and to stick to them. I owe my life to that. I should have been dead long ago if it had not been for these principles. I was a puny boy,—so frail that they thought I was not worth ‘raising.’ For a long time I was an invalid. It is only within the last few years that I find myself blossoming out into really good health. To-day I owe my life and what health, strength, and happiness I have, to the ideas of reform which this institution represents. And I say to you to-day, there is no one connected with the Sanitarium who owes so much to its principles as I myself. The Sanitarium owes nothing to me; I owe everything to it.”

Dr. Kellogg then introduced Chaplain Mc Coy, who gave a brief sketch of the material development of the Sanitarium:—

“Seventy years ago the present site of the Sanitarium was a dense forest of oak-trees and maple-trees. Deer and bears were common. No one dreamed that the old Graves farm would ever become the site of so stately a structure.

“Founded in 1866, the institution was incorporated in 1867. For the first ten years, it was a question as to whether the effort would result in success or failure. The first main building was erected in

1877 at a cost of \$115,000. In 1884 the south addition was added at a cost of \$50,000, and contained dining-rooms, gymnasium, serving-room, with kitchen and storeroom. In 1887 the Hospital was built for surgical and charitable work. This was dedicated in 1888. Two years later the north addition to the main building was erected at a cost of \$50,000, and the original building was raised one story. In 1894 a brick dormitory, 90 x 120 ft., five stories high, was erected. This is used as a home for the women nurses, accommodating one hundred and fifty or more. In 1895 further additions were made, the bath-rooms were enlarged, and the beautiful little chapel was built. In this year also the gymnasium was enlarged. So extensive has the work become that there is now connected with the institution a carpenter shop, shoe shop, steam fitting, plumbing, a tinshop, blacksmith shop, an electrical manufacturing department, and other industries.

"For many years, with half its present size, the old bakery made all the foods sold by the institution. Some five years ago a large food manufactory was erected north of the Hospital, and the manufacture of foods was quadrupled in two years. Originally all the foods—both those used here and those sold to the public—were manufactured in the original small structure. Now it is hardly sufficient to bake the bread required in this one institution and that supplied to the city.

"When the Sanitarium was first organized, it had only about half a dozen helpers; now there are more than nine hundred in the family, including physicians, nurses, and other employees. We have also farms,—one of one hundred and fifty acres, northwest of the Sanitarium;

one of one hundred and twenty-five acres, northeast, devoted entirely to vegetables and fruits; and another containing one hundred and twenty acres, on the south side of Lake Goguac, where we raise a large amount of produce; many acres of other land are also occupied. This year we shall probably have altogether about one thousand acres of land in use.

"During the year 1897, \$245,830 worth of foods was sold, averaging about \$20,000 a month. The number of packages sold from this institution in one year was 1,605,553.

"The food supplies for helpers and guests amount to about \$1,400 a day.

During the last year we have used about 2,000 barrels of apples;

1,500 bunches of bananas, 5,400

pounds of dates, 75 tons of

grapes, 250 boxes of lemons,

600 boxes of oranges, 4,-

500 bushels of peaches,

22,000 pounds of

prunes, 35,000 pounds of

raisins, 1,600 bushels of

strawberries,—and this in an

institution where some people think the patients are starved.

Those of you who have lived here for a time know just about how you have been starved. We have consumed 2,000 barrels of potatoes in the last year. The Sanitarium disposes of 1,000 quarts of canned goods daily. This year we shall can for our own use more than 350,000 quarts.

"There are at the present time under the same management nearly twenty other sanitariums, large and small. The physicians and nurses in charge of them have all been trained at this establishment. The same principles that animate this institution are carried into the others; thus it seems to-day that there is no end to the demand, and even no means of furnishing all the apparatus and the facili-



ties necessary. As others who follow me will tell you, nurses are sent out and physicians are graduated from year to year, and yet there is a dearth of nurses and of physicians; there is such a demand for physicians in other places that we can not hold them here in the parent institution."



G. C. Tenney next spoke on the subject, "The Greater Gospel as Represented in our Institution and its Branches." He said in effect:—

"No one who has followed the experience of this institution from its inception to the present time has failed to perceive that the religious element has formed an important factor in its work. The founders of the Health Reform Institute were profoundly impressed with a sense of the glory of God. Those who have carried forward the work have endeavored to keep the counsel of God in view at every step. If in any instance this counsel has been lost sight of, to that extent the work has deviated from its intended purpose. The laws which control the moral and spiritual realm have been placed alongside of those which govern physical well-being,

and the equally divine authority of natural and physical law with moral and spiritual law has been equally recognized; for all truth is equally of divine authority and origin.

"Healing is a divine art. The same Power that created the human frame is requisite to its restoration. The same Saviour who redeems men from the bondage of sin and its awful consequences, is necessary to redeem man from the effect of long-continued transgression of the laws of his being. The power of evil habits is as strongly entrenched in the body as it is in the soul, and the same gospel that saves men from the defilement of sin is employed to reach those who have fallen victims to the evil habits of their bodies. That same Saviour who came to the earth to die for sinners employed his time in doing good,—in healing the sick, and in relieving distress. Three fourths of the work enjoined upon his apostles was ministering to the sick and the suffering. Very naturally, then, the work that is here represented would partake of the same philanthropic aspect, and seek to reach suffering men wherever they can be found. Consequently, we find associated with this institution the work of city missions,—the work of relieving distress, of rescuing and uplifting the fallen, of caring for the homeless, the orphaned, the aged. Training-schools, a medical college, and several other educational enterprises have been set in motion for the preparation of missionaries to go out into the harvest-field of human need. Perhaps not fewer than two thousand workers are now thus occupied in different parts of the earth, whose controlling thought and purpose is to give their lives for Christ.

"The gospel of Jesus Christ embraces all that is for the good of mankind. Wherever man has a need, there the gospel touches him with power and healing.

The true gospel ministers to both soul and body. It could not be otherwise than that a work built upon such principles and carried forward under their benign influence should succeed. He who puts himself on the side of God stands in omnipotent strength. For what we see to-day, then, there is no credit due to human sagacity or skill. Whatever success the work has attained is due solely to the fact that it has been wrought in God."



Dr. David Paulson spoke with special reference to the missionary work of the Sanitarium:—

"It must be clear to all, after listening to the enunciation of these principles, that an ordinary professional training would in no sense enable a person properly to carry them out. It must be evident that the mere technical knowledge of how to treat disease is not enough to equip men and women to go out to raise fallen human beings from the depths of sin, both

spiritual and physical. For many years the Sanitarium has stood for a broader training, and men and women who have come here from almost every part of the known world have been fitted to go back to their homes, or wherever Providence might call them, to engage in the work of lifting humanity to a higher plane.

"We have learned that disease is the result of a violation of nature's laws; we know that our work is not merely to cure the sick, but to help to prevent disease by inculcating these laws. The same effort that it takes to cure one sick man, would, if put forth in instruction, prepare fifty persons to go into a community to teach its inhabitants a better way of living. If I had time I could tell you of many places where our nurses have given training, and where the lessons they have taught have been a means of raising the whole community to a higher plane of health.

"Many times I have been asked, 'Where did you get these magnificent young people who seem to be so deeply interested in our welfare and so anxious to help us?' I can only say that like attracts like. They have not come here in answer to any advertisement; we believe that God in his providence has been moving upon the hearts of those who love him to come to this institution to be fitted and trained for the work. There are men and women in every part of the world who are standing for the same principles and trying to live the same greater gospel to which Elder Tenney has called attention,—men and women fitted to treat disease and at the same time to point the sin-sick soul to a higher and better life. This is the real work that our training-school stands for,—the relief of both spiritual and physical suffering. We believe that the man or woman who can not heal the broken spirit at the same time that he relieves the suffering body, is crippled; he can not do the great work

that God intends he should. And so they come here, as I have said, to receive this training, and by the help of God we have been trying to teach them. We trust that eternity will show that the work that has gone forth from this institution into all parts of the world is by no means the least work it has done."

Dr. Paulson was followed by Dr. D. H. Kress, who said in substance:—

"Nothing has been said so far about the principle of vegetarianism, upon which this institution stands. After this world, with its teeming animal and vegetable life, was called into existence, God, in speaking to his Son, said, 'Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth.' Man was standing upon this earth as God's representative. Through him, God

designed to reveal to the beings below man his love, his pity, his compassion. At that time there was universal peace. There was no pain, no sorrow, no suffering, no sickness. But sin entered



the world; with sin came death; with death came pain, sorrow, affliction. At the present time man, instead of standing as the representative of God to the lower creatures,—instead of revealing the divine attributes in his relations to animal life,—is the deliberate cause of untold suffering. Animals look upon man as their enemy. Fear and dread have come upon every living thing because of man. At

the present time, this world might be considered a huge slaughter-house, where men prey upon the beings below them.

"When the divinity of our Saviour was heralded by the angels, they sang, 'Peace on earth.' I believe that the true gospel is designed to take up the words of the angels. The men who carry forward the true gospel in any age are to herald the same words,— 'Peace on earth.' Sin will not always rule; pain will not always exist. Disease will be no more. John the Revelator, in looking forward to that time, said he saw new heavens and a new earth; former things were not remembered. There was no longer pain, sorrow, or suffering among men; but the universe was clear and free from all misery. Until that time comes, let us continue to pray, 'Thy will be done on earth as it is in heaven.'

"I admire the spirit that actuated Goldsmith when he wrote:—

"'No flocks that range the valley free,
To slaughter I condemn.
Taught by the Power that pities me,
I learn to pity them.'

I like to carry out the Golden Rule, not only to my fellow men, but to the beings below me. I like to read it in this way: 'Do unto the beings below you as you would have the beings above you do unto you.'"

Dr. Abbie Winegar, superintendent of the Training-School for Nurses, spoke briefly with reference to that department:—

"The Training-School, established in 1877, began as a school of hygiene to teach the principles of health to those who were anxious to go out to work for fallen humanity. In 1884, the regular Training-School for Nurses was organized, with a class of ten students. Two years later these were graduated.

"From that time on, our school has constantly grown until during the present

year we have more than two hundred students, and have been obliged to divide the graduating class into two divisions, one graduating in the fall, the other in the spring.



“The object of the school is the uplifting of downfallen human beings wherever we can reach them; this necessitates making our course of training much more thorough than that of any other class of nurses; for our nurses are obliged to go where they have to stand alone with the worst classes of cases, where they have no physician to help them, and no one to direct their work, thus being, as it were, both physician and nurse. Hence it is necessary that their training should be more thorough than that of hospital nurses, who can be under the direction of a physician.

“The school has developed many different lines of work. Formerly, it was merely a training-school for nurses. Nothing else was at first attempted; but from year to year it became evident that other branches of work ought to be taken up. As we found that our nurses must know how to prepare foods, we opened a school for that purpose. In order to teach people how to keep their bodies healthy, we must show them how to dress properly, so we were obliged to start a dressmaking school. Other branches originated in the same way. A school of domestic econ-

omy was opened to teach students how to deal with the various emergencies that arise in domestic life. We have also classes in physical culture, designed to show people how to train and educate their bodies in such a way as to maintain health. Schools of health are another important branch of the work. These, during the last two or three years, have grown very rapidly, till now we have a large number of students who come to be especially fitted for the school of health work, to go into various parts of the country to organize similar schools to educate the people in the principles we advocate here. These schools have grown so rapidly that we have found it necessary to employ a large number of instructors along the different lines.

“Our greatest hope and desire for the Training-School is that we may from year to year raise the standard higher and higher, and that we may be able to send out nurses better qualified to do the work they are called upon to do. We are now sending nurses to many different lands, — India, Africa, South America, Australia, New Zealand, and the islands of the sea, as well as into every part of the United States. These nurses are laboring, often under the most trying circumstances, to promulgate the principles of right and truth which they have received here, and to uplift the communities in which they have been placed; and we are praying earnestly that we may teach them and train them in such a way that as they go out to the people, they may carry to them the truth and light which will enable them to live so as to appreciate and enjoy all the blessings that God has given them.”

Dr. Kellogg added to Dr. Winegar's remarks that the Training-School has been the parent of other training-schools in several of the branch sanitariums, as they are called, now numbering nearly twenty, and located in ten different countries out-

side our own. There are in these institutions altogether, at the present time, more than twenty-four hundred persons, guests, nurses, and employees. There are six or eight training-schools. All these institutions and training-schools are under the supervision of the International Medical Missionary and Benevolent Association, a philanthropic and non-sectarian organization.

Each one of the sanitariums is the center of a philanthropic work, represented in Battle Creek by the Haskell Home, an orphanage caring for a large number of children, also by an old people's home, known as the James White Memorial Home. In Chicago there are the Workingmen's Home, a Medical Missionary Training-School, a Rescue Home, or Maternity, and two or three other charitable institutions. In these sanitariums there are at the present time under training and in preparation for philanthropic work seven hundred and fifty young men and women, all of whom have devoted their entire lives to doing work for God and humanity.

The Hon. E. C. Nichols, of Battle Creek, who has known the institution from its inception, was the next speaker. He said:—

“LADIES AND GENTLEMEN: I could not deny myself the pleasure of sitting upon this platform, although I returned from the West only last evening, and learned of my invitation to be present here with you but a few minutes ago. I would not under any circumstances attempt to inflict a speech upon you, even if I had had time for its preparation. I know very well how anxious you must all be to hear the statistical part of the work of this great institution. It is not often that the average man or woman is really interested in facts and figures, because a corporation like a railroad or a great factory is not supposed to have any soul. The people are not

particularly concerned in the salvation of its soul, if it has one. But a great benevolent corporation, a great benevolent institution, or rather a great institution which stands not only for benevolence, but for that which is higher than benevolence,—Christian duty and Christian sacrifice,—it is that which we have been hearing about to-day. Hence figures have a different relation to this subject than they would to any other great corporation.



“Personally I know something of this institution, because it was my fortune to live here when its first work was begun in the little building in which, as has been said, the Sanitarium was started on a very small scale. The people then did not know the meaning of the name ‘sanitarium,’ let alone the scope of the work. I have seen it grow from the small, ordinary, one-storied building, into the great and beautiful structure which it now is. And, naturally, like all other citizens of Battle Creek, I am intensely proud of the success of the Sanitarium.

“I think too much can not be said in a general way, without being particular in calling names, as to the personnel of this great institution. Of course Providence has very much to do with it, and we all

recognize that, but Providence has a way of choosing people. As Carlyle says, 'The opportunity and the man meet; then look for events.' That is what has happened here. This great organization has been evolved, in a way, and Providence has had much to do with its evolution; but never was a truer thing said than 'by the sweat of their brow shall men earn their daily bread.' By the sweat of the soul and the body, all those men who enter into a new professional career in this world earn credit in their profession. No man ever stood for a new professional idea that did not find himself violently opposed by other members of his own calling who were unable to grasp that idea. None can be more deeply in sympathy than we who have seen it spring up and grow, and now see it, we hope, blossoming into a great future, to be continued many years after those who have conducted it so long have passed away.

"Among the things that have not been mentioned to-day in relation to the achievements of the institution, I might say that the first gymnasium that ever came into our little city was started by this people. We citizens knew nothing about physical culture or gymnasiums except what we learned in universities and colleges, because we were too busy in ordinary work to think much of doing anything for the body; to be decently clothed was about all that we thought necessary. I heard only last week something which astonished me, and I do not know that it is true, but a lady in Chicago told me that she knew nothing whatever of the Battle Creek Sanitarium, had never been there, but that she had understood from the very best authorities in dress reform that the evolution of the shirt-waist might be attributed to the Battle Creek people. If this be true, you ladies can not be lacking in your enthusiasm over

that part of the subject, for the shirt-waist seems to be about the greatest boon in dress that the average woman has ever found, unless it be a pocket.

"I will not speak longer, except to say that so far as the Battle Creek people are concerned, they have seen this Sanitarium grow in all the attributes that make a great and a lasting and an enduring institution; they have seen it grow, not simply in numbers, not simply in size; they have seen also that it has always maintained a high standard of personal sacrifice on the part of its managers and on the part of its employees, from the head management down to the lowliest person within its walls; and in these days, when people are not given to doing very much for possible future needs, but look rather to the immediate present, this in itself has been a great lesson.

"There is another thing: whatever else may be said about this Sanitarium, I, who know something of its financial management from being connected with some other institutions which had to do with it in its early days, know that its managers have shown the most remarkable ability as business men. They have unquestionably been, as the Scripture calls it, fervent in spirit, and not only this, but they have been always extremely diligent in business."

Mr. Ferdinand Schumacher spoke as follows:—

"Inasmuch as Dr. Kellogg has kindly referred to me as the pioneer manufacturer of oatmeal, I may perhaps be permitted to depart from the regular routine of the day's business, and refer to the early experience of that pioneering, which dates considerably farther back than the time that has been before referred to. It was from 1837 to 1842, when I served my apprenticeship in the neighborhood of the city of Hamburg, that I became acquainted with the principle of hulling

oats. I had on the same floor with my bath-room a small machine run by hand, and the operator was paid twenty-five cents for hulling and grinding ten bushels of oats, this being considered a day's work. In this country in 1856 I built the first oatmeal mill. I was warned that this was a dangerous undertaking, because, they said, 'Oats are good for horses, but the Yankees will never learn to eat them.' Nevertheless, I went into the enterprise, and I am glad to say it has been a continual success, until to-day the American Cereal Company runs some dozen or more mills in several States. This company does not run entirely for the benefit of the 'dear people,' but pays a quarterly dividend of one and one-half per cent.

"I became particularly interested in the Sanitarium about three years ago, when I came here suffering with what I considered a very serious kidney and liver trouble. Dr. Kellogg took me in hand for a week or more, used some simple, rational means, cured me, and sent me away with the good advice to continue my well-established principle of total abstinence from all intoxicating beverages, and to drink plenty of distilled water. I went home, and I am glad to say that I have not seen a day of sickness since. To-day, at the age of seventy-six, I enjoy most excellent health.

"May God bless the management of this institution, and guide it to even greater success and greater benefits to the world than it has rendered up to the present time, and may its influence teach the young boys how useless and nonsensical it is ever to indulge in intoxicating liquors or tobacco, that the future generation may grow up pure, and promote the real welfare of mankind."

Dr. McGugan, of the Asylum for the Insane at Kalamazoo, Michigan, said in effect:—

"It is needless to say that it affords me great pleasure to contribute my mite of evidence in support of the well-known ideas that Dr. Kellogg is spending his life in promulgating. I do not feel that I need to say very much at this time: there are plenty of men here with gray heads, who will do the speaking.

"I may be able to say some things, however, that are unique by the very reason of my occupation and my daily life.

"I have noticed one thing particularly, and that is, that perhaps the only people who are in any sense enemies of the Sanitarium are those who do not fully understand its principles. My position in medical life, by reason of my employment by the State, is what you might call a strictly neutral one. I hear both sides of this question discussed by physicians in private practise, and by physicians out of private practise, and without exception the people who do not give this institution proper credit are those who do not understand it.

"As I sat here a few moments ago, thinking of Dr. Kellogg and his work, I pictured him in my fancy standing in the home, outlining with distinctness two paths of life, one leading to health and happiness, the other leading to disease and disgrace. By virtue of my position I stand at the other end of one of these paths, and the unerring truth by which he delineates the path that leads to disease is painfully clear to me. One of my duties as a physician in the asylum is to take the personal and the family history of each patient admitted. Had I known in time that I was to be called upon for remarks here to-day, I should have gone over the records of six months, a year at most would be sufficient to give you the percentage of cases in which the mental disease of the patient could be traced without doubt to mistakes in living, either

by that person or his progenitors. It is very sad indeed to know the number of people who owe the loss of their minds to the sins of their forefathers. I say sins, because their mistakes were not made through ignorance, but through the heedless gratification of their desires. If there be any present who are at all skeptical as to the value of the principles advocated here in regard to right living, I can only say that I wish I might take them through the wards of our asylum to demonstrate in case after case, up into the hundreds, the absolute correctness of Dr. Kellogg's standpoint."



The Rev. Mr. Brown, of Battle Creek, paid the following tribute to the work of the Sanitarium:—

"I had no idea of being called upon to speak in connection with this anniversary to-day, but I take great pleasure in emphasizing the fact that here in Battle Creek, where the institution is best known, we have the best opinion of it. Whatever may have been the condition thirty-two years ago, it can be said, I think without doubt, that there is now a voice of continuous praise of what the institution is doing here and throughout the land. It is significant that when you meet a man at a distance, in other parts of the country, and tell him you came from Battle Creek, he says, 'Oh yes, that is where the Sani-

tarium is.' Sometimes down at the other end of the town we are not so very much pleased with the idea that people think there is nothing much here except the Sanitarium,—not that we wish to under-rate it, but we think we have a very good town here, the Queen City, and we wish to praise it when we come in contact with people from other parts of the country. But the reputation of the Sanitarium is undoubtedly increasing every day, and the reason is that here and there we have specimens showing that the work undertaken has been well done.

"Dr. Kellogg tells us that in about two hundred and sixty-five years we shall all be idiots and imbeciles. Of course we do not propose to live that long, to degenerate. But I think if the principles advocated here are acted upon in the future as they are being acted upon in this country now, in a quarter of a century there will be a great change in ideas of health.

"An eminent physician, who has charge of a large institution in Cincinnati, said to me some years ago, 'I want you to come in contact with Dr. Kellogg. You know we medical men years ago imagined that he was something of a crank, but we find that he is a crank who can turn a great many people to his opinions. And,' he added, 'we medical men who have not been in Battle Creek propose to go there to find out how to be just as cranky in a wise way as he has been.'

"You have heard of the man who spent his health in getting wealthy, then his wealth in getting healthy,—and then he died. What we want is wealth and health side by side. I think that this institution with its thirty-two years of work has certainly shown that a man can be healthy without losing his wealth, can be a benefit to his kind, can make larger and better the world in which he is placed."

Dr. Green was the next speaker. He said:—

"It affords me special pleasure to be with you to-day on this anniversary occasion. I have been for many years a close



observer of your means and methods. It was in the latter '60's,—I think in '69,—while I was in the general practise of medicine at Hudson, in the southern portion of this State, that I sent you my first patient, a beautiful young Quaker girl. She returned after a few weeks, greatly improved, and very enthusiastic over the free use of water, both externally and internally. Her enthusiasm impressed the lesson that in the cure of physical as well as moral diseases, 'cleanliness is next to godliness.'

"Almost thirty years have passed since 1869; your institution has greatly increased in dimensions, as well as in years. It has learned that God has given us other means, in addition to water, for the cure of the sick. Yet I hazard nothing in the assertion that it has not forsaken and can not forsake the absolute necessity of using—as the Baptists say—'much water.'

"I am of the opinion that the persistent use of water in this institution—hot water, cold water, warm water, ice water, sterilized water—both externally and internally, has largely revolutionized the therapeutic use of this remedy by very many physicians in Michigan and other States.

"In the few minutes given me I have no time to speak of the new developments

originated here in the use of electricity for the cure of the sick, nor of the new mechanical devices to induce correct muscular action, with the same object.

"I wish to speak of a principle which is something unique. At least, so far as my knowledge extends, it is not specialized in other similar institutions. I refer to the principle of Christian service, and I believe that it is to this principle that the Sanitarium owes its phenomenal growth. I especially desire to emphasize the fact that from the head of the management to the helpers in the bath-room this idea seems uppermost. In this you imitate the Great Physician, who went among the hills and valleys of Palestine, healing all manner of diseases. He taught a pure life. A pure life and a clean body must accompany perfect health. I am of the opinion that any physician who does not exact purity and cleanliness as his ideal in the care of his patients, fails in his conception of the true physician. Our failures are fewer when our ideals are high."



The Hon. Charles Austin, of Battle Creek, said briefly:—

"Those of you who have read the matchless oration of Charles Sumner on 'The True Grandeur of Nations' may remember the sentence, 'The true grandeur of any human institution is its moral elevation, sustained, enlightened, and

decorated with man's intellect.' I think I may say as a business man, who moves away from the atmosphere of the institution on this hill and its beautiful surroundings, that I speak the sentiments of the entire people of our city when I say that if any institution ever has realized this high ideal of the matchless orator, it is the one whose guests we are to-day."

A. T. Jones explained the relation between health and holiness:—

"The combination of the art of healing diseases with Christianity is an essential part of Christianity. I would call your attention to one word that shows this. It is all expressed in the word 'health.' The word which now signifies 'health' used to be 'wholeth'—to be whole—health. To have health is to be whole. The Bible tells us to heal the sick. Being whole is the opposite of being sick, and that is health. It is only a step from wholeness, the quality of being whole, to holiness. Do you not see, then, that holiness is wrapped up in our every-day word, 'health'? that we can not have health properly without having holiness, which is health?"

"What cheers me, what makes me glad, is that there is an institution in the world spreading abroad these principles to the ends of the earth,—an institution that is surrounded and upheld by a 'whole' people scattered over the earth, who are to inculcate among all nations, to cry aloud,—by proper living, right breathing, correct diet,—to cry around the earth with a loud voice, the one great theme of health, which is simply holiness, and that is Christianity."

Mrs. S. M. I. Henry was asked to speak of the relation of the Woman's Christian Temperance Union to the principles of the Sanitarium. She said:—

"I think that the history of the work of this institution would be incomplete if it did not mention the relation which it

bears to two lines of work in the National Woman's Christian Temperance Union. The W. C. T. U. was organized twenty-five years ago, and very soon began to learn the necessity of reform in personal habits, if the evils of intemperance were to be overcome. But the women were uneducated in those things. Our physicians did not know how to teach us what would help a drinking man. In my work I used to stand guard between the physician of the usual school and the man who was given to drink. I would take the medicine which had alcohol as the basis, which had been given to the man, pay the price of it, and throw it into the river, because I knew if he took this medicine it would only send him back into the saloon. That was where we stood with reference to this subject. We very soon learned the necessity of using proper diet as a means of correcting the habits which lead to drink.

"We have the honor and the great privilege of being linked as an organization to this great institution, by Mrs. Kellogg; she was the channel through which the principles that have been in operation here have gradually and slowly filtered into our organization. Mrs. Kellogg was responsible for organizing the Department of Hygiene in the National Woman's Christian Temperance Union, and for making it, in any sense, practical.

"Of course you will understand that our task was an arduous one, considering the fact that so many of our women were meat-eaters and not able to come to an understanding of all the principles involved; yet the work has wrought its way until you will find in almost every home belonging to the organization something that has come from this institution. You will find that we have adopted the principles and the articles of diet, and are teaching them in the local unions, and that nowhere is the health school more cor-

dially received than in a community where there is a local W. C. T. U.

"But I wish to speak more especially concerning the work for social purity in the W. C. T. U. We recognized the need of this line of work at a very early date, but we did not know how to proceed. We did not know how to teach the principles; we did not know how to break the 'conspiracy of silence' that was all over the world of popular thought and utterance upon this subject. And we have found all through the years since we began this work, a strong and cordial and practical support in the teachings which have emanated from this Sanitarium. We did not know much about the Sanitarium (I speak for myself and my sisters in the organization); the Sanitarium did not amount to anything to us, but—and Dr. Kellogg must pardon me if I bring him forward right here—we did know Dr. Kellogg, and we did have the consciousness that the teachings which he had given, especially in his 'Plain Facts,' stood by us in the things that we needed to be able to teach the general public. It is no more than right that I should say this. There never could have been the progress in the social purity work and the personal purity work in the department lines of the W. C. T. U. if it had not been for the constant and hearty support of the teachings which came out of this institution in a very impersonal way, entirely disassociated with everything except the name of the man who stands at the head of it, and his wife."

The Hon. G. W. Ross, of Toronto, member of Parliament of Canada, and Commissioner of Education of that country, spoke as follows:—

"It has been to me a very happy coincidence that, while sojourning at this hospice for a few weeks, your thirty-second anniversary should occur, and that I should have presented to me so graph-

ically, so practically, and so eloquently the history of this very interesting institution. I have traveled far and wide, and have made the acquaintance of a good many sanitary institutions, for reasons which I need not explain—partly personal and partly official. I have seen something of the sanitariums of Germany, France, and England, and know what it is to be boiled in hot water and to be chilled in cold water; I know the character of cold packs and wet packs in all the countries; I know something of the stolidity of the physicians and the indifference of the nurses in these countries; I know some-



thing, also, of two or three other institutions in this country, but you will allow me to say that after a week's acquaintance with Battle Creek I am very much in favor of it—very much delighted with it. I have been received by apparently very skilful physicians and treated in a very courteous and considerate manner.

"There is nothing particular the matter with me, of course. I would not wish to make very generous admissions in that way at home, at all events, for I have public duties to perform which can not very well be performed by an invalid. I expect to go home, however, perfectly well.

"I do not know that I have yet become entirely reconciled to a vegetable diet. You grow some very fine peaches in Michigan, almost as good as we grow in Canada, but I am not accustomed to feed on peaches exclusively. I like your grapes and your grape-juice; I don't drink wine at home, and I don't drink it abroad. I like your pears, and in fact I like the whole vegetable adjustment of this institution, only it seems to me a little too vegetable, if I may say so. They do not even give me any of Mr. Schumacher's oatmeal. Being a Scotchman, I could live on oatmeal for a little while. But now, at the peril of my life (and my life is thought to be very valuable in Canada), I am going to try to live for a week on a fruit diet, just to see what a Canadian can endure under favorable circumstances.

"I suppose the doctor has called upon me because our interests are somewhat mutual, that is, we are both engaged in educational work. I have what I call a very fine educational field. I only wish I were better able to discharge the duties which it involves. Relatively, my position in Ontario and Canada is similar to the position of State superintendent of education of this beautiful State of yours, in which, I am sorry to say (although we think it is all the better for you), so many Canadians have settled. I have ten thousand teachers under me.

"When I took charge of the schools, fifteen years ago, I found that several subjects which I thought were exceedingly valuable in the lives of men and women

were neglected. For instance, temperance and hygiene were not taught in our schools at all. Now, while I believe we are doing a great deal in Canada and you are doing a great deal in this country for the development of youth, I think both nations are neglecting the physical culture. We are not a weakly race, yet we are not half as robust as we should be, in Canada, and I do not believe you are either; and why?—Largely because we are not early enough in life brought in contact with the laws of health. Oliver Wendell Holmes said he found himself an invalid at forty, yet he lived to be a tolerably old man. It is unfortunate to find one's self an invalid at forty; we should not find ourselves invalids at all. We should be put away like ripe fruit, all the more mature because we are older; although not fit for the ordinary duties of life in old age, still not invalids in the ordinary sense of the term.

"Dr. Kellogg's book has been consulted in the preparation of a text-book for the purpose of teaching temperance, and I made it my business, in harmony with Dr. Kellogg's teachings, to introduce the study of temperance and hygiene in every public school in the province; and now, more than half a million children in Ontario are receiving instruction in the laws of health and hygiene at stated hours every day. I am glad that the same practise prevails in several States of the Union, and that in a majority of the States, temperance and hygiene are taught.

"I might say that public opinion in Canada is very much the same as it is here; sometimes it runs away with you, and sometimes you run away with it. Thanks to the power of the organization of the W. C. T. U. in the province, I was able almost by the stroke of a pen to say that physiology, temperance, and hygiene should be studied in every school

of the province, and it is studied, accordingly. I say this by way of encouragement to the good lady who represents that organization on the platform here. Then I found that physical culture was neglected. Our boys were not taught either the arts of peace or the arts of war. I do not say that military drill should be taught in all our schools, but I think it is a good thing for the boys, and have succeeded in establishing it in the large schools of the province—not in the fighting sense, but in the muscular sense and in the physical sense, and for the development of physique and self-reliance.

“In this way we are following out Dr. Kellogg’s teachings. Before the two hundred and sixty-five years have elapsed when you Americans are all going to be idiots, imbeciles, or lunatics, we are going to be the healthiest and strongest race on the globe, because we are obeying the good instructions given at this beautiful institution.

“I believe in the old maxim, ‘Trust in God, and keep your powder dry.’ I believe in Providence; I believe in Dr. Kellogg; I believe in his work; I believe in cleanliness, social purity, and purity of all kinds. As an educator and a teacher, I feel that if I could put into the minds of all our boys correct habits of living, correct notions about digestion, correct ideas of exercise, bathing, swimming, playing, and of keeping their lives pure, I should do more toward founding a strong and stalwart nation to the north of you than ever Christopher Columbus did for the world when he discovered this America of which we are all so proud. It is of men that nations are made. It is your strong men from Washington down the years,—your Washington, your Lincoln, your Ulysses Grant, your Dewey, your Sampson, your Hobson,—these are the men on one side of

public life who have made you strong; on the other side, your ministers, your theologians, and your literary men have strengthened you.

“I suppose Dr. Kellogg had a friendly feeling toward me because of my interest in educational work when he called upon me to speak; I suppose it was also out of a neighborly spirit. You know you have an alien law which forbids laborers’ coming here under a contract, and I was not under a contract, or I could not have come here. We like your laws so much that when you passed your alien law on this side of the line, we, in our honest simplicity, imitated it, and passed an alien law on our side of the line. We are both wrong: there should be no alien law on either side. As Abram said to Lot, ‘Let there be no strife, I pray thee, between me and thee, and between my herdmen and thy herdmen; for we be brethren.’ There should be no strife between these two countries. We allow Dr. Kellogg to come to Canada; we take a great risk, we know; we have all the cranks in Canada the country will sustain, and yet we are glad to have him come, for we have learned much from him. And perhaps you will allow me to come back to Battle Creek again, if one month’s treatment does not remove the trifling ailments which I brought here and which I hope to leave with you, and for which I hope none will be the worse. We are neighbors, and we should live in a neighborly spirit.

“We rejoice at the growth of institutions of this kind. I am a firm believer, in the broadest and largest sense of the word, in what is now called the ‘Anglo-Saxon Alliance;’—not a political fusion: that is impossible; that is undesirable. You would not want your government to be tainted with any of the monarchical notions which we possess. An Irishman was once so disgusted with sovereigns and

crowned heads that he would n't wear a crown to his hat. You would not want to be tainted with our monarchical notions, nor could we tolerate the democracy which you have. You have made of this a mighty and powerful republic, and we are as proud of it as you are yourselves. We are as proud of the ideas and principles of Christian civilization which you have reared for yourselves and for the whole world as you are. We are as proud of your Beechers, your Lincolns, your Longfellows, your Emersons, and all your great leaders as you are; and why?—Because you are joint contributors with the Anglo-Saxon race, to which we belong, to the civilization and the advancement of a common humanity. For that reason we are glad that you are our neighbors, and we hope that you are not ashamed of our being your neighbors. We want to live on good terms with you; we are bound to live, anyway, on some terms. So by all means let us be on good terms. While I am speaking, a friendly conference is in session at Quebec, which has been trying to settle a little difference between the two countries. Why should there be any bickerings between us, as to who shall catch the greater number of seals off the Pribilof Islands, or the length of the line with which to catch codfish off Cape Race? This should not be so. Why should these little differences be magnified into national matters to put us at each other's throats? It should not be so.

“Ladies and gentlemen, I am glad as a Canadian to tell you that throughout the length and breadth of our half of the continent there is the most cordial feeling of good-will and sympathy toward the republican institutions which you have so successfully worked out here; as I have traveled a good deal on this side of the line, I am able to say, as I trust all Canadians will say, that no expressions of sympathy and good-will which we have

ever evinced have failed to be reciprocated by our brethren of the United States of America. May this state of things long continue. May there be no strife between us. May there be no bitter reminiscences of by-gone days. May there be no reflection as to the origin of one nation or the other. May there be no disposition to destroy that peace and unity which have prevailed on this continent between the two Anglo-Saxon races for so long. Let there be peace; as Tennyson says,—

“‘Till the war-drum throbs no longer, and the
battle-flag is furled,
In the parliaments of men and the federations
of the world.’”

Dr. Kellogg:—

“I am sure we all appreciate these remarks, and cordially reciprocate the sentiments of international friendship which Mr. Ross has expressed.

“We have congratulatory letters and telegrams from all parts of the United States, but we have not time to read them. We have telegrams of congratulation from Attorney-General Maynard, Secretary of State Gardner, Governor Mc Corkle, of West Virginia, also from Professor Winternitz, of the Royal University of Vienna, and others, besides letters of congratulation and regret of inability to be present at these exercises from Governor Pingree, of Michigan, and numerous other distinguished citizens whom we are proud to number among the friends of this institution.

“Before concluding these exercises I wish especially to call attention to the fact that this institution is not the result of the labors of a few men or a single set of men. At the present time there is not connected with the institution a single person who was connected with its management at its inauguration thirty-two years ago. During this long period many hundred individuals, some thousands in fact, have at different times helped to

form the corps of workers to whose united toil and self-sacrifice is due, under the blessing of God, the development of this enterprise, which, beginning in a little farmhouse, has extended around the world. The buildings that you see, and that have been erected at a cost of several hundred thousand dollars, are not the result of commercial enterprise or shrewd financing, but represent the savings of personal work rendered as service to God and to suffering humanity, without pecuniary reward,—a thank-offering from thousands of generous hearts.

“Even to read the long roll of honor upon which are inscribed the names of the more than five thousand men and women who have faithfully done their duty in this institution, at the bedside of the sick, in the bath-rooms, in the kitchens, the laundries, the workshops, on the farms, wherever duty called, would occupy more time than can be spared for such a purpose to-day, but I may at least refer to the score or more physicians and the something like two hundred and fifty nurses, who, having done their duty and proved their efficiency here, have gone out from this mother of sanitariums to hold more responsible positions in other sanitariums and medical missions in various parts of the earth, where they are to-day holding aloft and promulgating to the world the same principles of physical righteousness, the same greater gospel, for which this institution stands.

“But there are two names which I feel are especially worthy of mention to-day, because of the notable service rendered by them at a time when the principles which the work represents were not so popular as now, and when the triumph that we celebrate to-day was visible only to the eye of faith; viz., James White and V. P. Collier. Time does not permit me to undertake a word-picture of either of these men, nor is it necessary, as

both of them were known to you during many years as men of unusual intelligence, greatness of soul, and nobility of character.



“To James White more than to any other man was due the magnificent philanthropic idea which underlies this work and all of its branches wherever they are found, and which is now represented by medical and allied charities in more than a dozen different countries. Twenty-one years ago, while as yet the institution was represented by the little farmhouse which still stands behind our main building, with three or four similar buildings, James White, one day when I was riding with him in his carriage and discussing ways and means for the development of our work, pictured this whole hill covered, as you see it now, with buildings employed in this enterprise. I confess I thought him somewhat visionary, and certainly I did not dream that I should live to see that prophecy more than realized.

“James White believed in this institution and its principles, and during his life he helped it with his means. Though not a man of wealth, he donated generously to

its support, and labored for the promotion of its interests with all the energy and fidelity with which a loving parent could labor in behalf of his child. Although he has been dead for more than fifteen years, his memory is still green in the hearts of all the friends of this institution who knew him, and is honored by the James White Home for Aged Persons, a fit memorial for a man whose home was always an asylum for the homeless and friendless, young or old.

"Hon. V. P. Collier, although never connected with the management of the Sanitarium, was nevertheless one of the few men, who, almost from the inception of the institution, have been the fast friends and supporters of the enterprise; and during the days of its financial struggles he more than once proved himself that friend in need who is a friend indeed, becoming at one time personally responsible for a loan to the institution of many thousands of dollars without security of any sort. I can not describe to you my feelings when, once, after I had gone to the extreme legal limit in the amount of unsecured loans to the Sanitarium, in order to give me another five thousand dollars he suggested that he would accept my personal note for that amount, although I was not personally worth a thousand dollars, and I am sure he must have known it; but he asked me no questions, and a few days later handed me another five thousand dollars under similar circumstances. I did not know until almost twenty years afterward that Mr. Collier, to make the matter straight and safe for the bank of which he was president, had become personally responsible for the large amount that he had advanced to us without visible security.

"Two or three years ago I asked him how he dared to take such a risk twenty years ago, and at a time when the institution consisted chiefly of a big unfinished

building, and its development was still in the future. He said in reply, 'Doctor, I don't know; it was the most unbusiness-like thing I ever did in my life, but I just felt in my heart that I wanted to help you, and I am glad to say that I never for a moment regretted what I did.' Whatever the future of this work may be, the name of Mr. Collier must ever be inscribed among those who have been most largely instrumental, under Providence, in promoting its development and prosperity."



Among the distinguished visitors on the platform was the Hon. J. M. Bishop, chief clerk of one of the most important departments in the United States government at Washington. Mr Bishop has been for

some weeks a guest at the Sanitarium, and has become one of the most enthusiastic and active supporters of the principles represented by the institution, having experienced in his own person the youth-renewing effects of a natural diet and rational treatment. The Sanitarium certainly never acquired a warmer supporter or a more appreciative friend than Mr. Bishop, and the management were gratified to have him present on the occasion, although, owing to his extreme modesty, he could not be prevailed upon to make an address.

Many other distinguished men and women, including several physicians, were also present, among whom we delight to mention Dr. J. H. Ginley, who served the institution as a physician for a number of years during its pioneer days, and who, though now far advanced in years, is still hale and hearty.

AN ALTRURIAN DINNER.



AFTER the exercises upon the lawn, a characteristic Sanitarium dinner was served in the dining-room. More than three hundred guests were seated.

The dining-room was handsomely decorated with palms, potted plants, and cut flowers from the Sanitarium greenhouses, which are in themselves one of the most attractive sights of the institution.

But the most beautiful of all was the bill of fare. The tables were laden with fruits, and beautifully decorated with flowers, and when the white-capped waiters began bringing in the savory and delicately prepared dishes of grains, fruits, nuts, and legumes, the guests fell to discussing in a practical manner the superior merits of a natural and rational dietary, and all were in full accord with the sentiment expressed by Ovid in his poem, and by that pioneer diet reformer, the great philosopher Pythagoras, in the lines:—

“A guiltless feast administers with ease,
And without blood is prodigal to please.”

In such a feast we may truly see the dawning of a new “Golden Age,” like that of which the ancient poets sang, when men—

“Lived on fruit,
Nor durst with bloody meats their mouths pollute.”

To the initiated, the most remarkable feature of the anniversary dinner was the fact that after the special dinner to the visitors, there was to be served the regular dinner to more than four hundred patients and guests of the Sanitarium, and yet there was not a hitch in the entire service.

The following is a copy of the menu, which practically represents the every-day bill of fare at the Sanitarium, except that for the benefit of the many varieties of sick folks among the hundreds of guests, a list of a score or more of specially prepared dishes is always added to the menu.

1866

1898

ANNIVERSARY DINNER

Sept. 5, 1898.

MENU

SOUPS

Fruit Tomato and Vermicelli

VEGETABLES

Baked Sweet Potatoes with Tomato Cream Sauce
Vegetable Roast with Gravy
Mashed Potatoes Green Corn Peas Patties
Sliced Tomatoes Stewed Nuttose
Lettuce Salad with Mock Chicken Dressing

GRAINS

Granola Fruit Mush Wheatose
Browned Rice with Black Raspberry Sauce
Dry Granola Granose Flakes

BREADS

White Bread Graham Bread Zwieback
Roasted Granose Cakes Whole-Wheat Wafers
Graham Crackers Beaten Biscuits Fruit Rolls
Nut Sticks Coconut Buns

BEVERAGES

Caramel-Cereal with Cream
Raspberry Lemonade Malted Nuts Kumyss
Buttermilk Carbonated Water

STEWED FRUITS

Prune Red Raspberry Peach Plum

FRESH FRUITS AND NUTS

Peaches Grapes Pears Watermelon
Cantaloupe Mixed Nuts

DESSERTS

Nut Cake Apple Pie with Nut-Shortened Crust
Lemon Pie with Granola Crust Ambrosia



THE SANITARIUM IDEA ILLUSTRATED

THE sanitarium is an outgrowth of that primitive and now all but obsolete institution, the "water-cure." It is a compendium of practical scientific medicine.



THE PARLOR.

A modern sanitarium is in some sort an epitome of the hospital, the hotel, and the home, without the melancholy sights and sounds of the hospital, with the comforts but not the jargon and the smoke and the bar and the stomach-spoiling dietary of the hotel, and with the hospitality, the cordiality, the simplicity, and the security of the healthy and well-ordered home. The Sanitarium is the outgrowth of the modern effort to find a permanent cure for chronic human ills, in the correction of wrong habits, the application of rational means of cure, and the training of the sick out of disease into health.

Keeping in mind the fact that thirty-two years ago the Battle Creek Sanitarium, a pioneer and mother of sanitariums, was but an infant institution, a "babe in the woods," so to speak, almost without facilities of any sort, let us follow our

guests as they visit the different departments of the institution and view the evidences of wonderful growth and development made by the principles which were planted here a score and a half of years ago.

The Gymnasium.

The visitors were first conducted to the gymnasium. This is the most popular room in the building, and the patients look forward to the regular exercises with great enthusiasm. Every day, before breakfast and after dinner, breathing exercises are given here. At nine o'clock in the morning there is a spirited dumb-

bell and marching drill with Swedish gymnastics. At half past six in the evening, Indian clubs, marching, and running are



THE GYMNASIUM.

enjoyed by all who are able to leave their rooms. The patients call this exercise "sterilized dancing," and like the various other things furnished them in a sterilized form, they then enjoy it so much that it is with reluctance that they "break ranks."

The Electrical Department.

The static electric machine is an object of great wonder and curiosity. It is the largest machine of the kind in the world, and was made especially for the Sanitarium. It is a formidable looking apparatus, with its huge, revolving glass wheels and its wicked looking sparks snapping back and forth. The writer has seen

accommodating seventy-five persons at one time. Besides all the usual features of a well-equipped bath-room, the Sanitarium has provided special facilities for the application of water, heat, and electricity.

The electric-light bath is comparatively new. It consists of a cabinet, upright or horizontal, lined with mirrors from which



THE ELECTRICAL DEPARTMENT.

many a distinguished man squirming with the surprise of a new sensation as the tingling electric current passed down his spinal column and his hair rose on end. All other forms of electrical appliances are in use in this department.

The Bath-rooms.

One of the most interesting departments examined was the men's bath room. Although only about half as large as the ladies' bath department, it is capable of

project numerous incandescent electric lights, which are reflected in such a way as greatly to heighten the effect. This bath has almost entirely superseded the Turkish bath in the Sanitarium, being more popular among the patients because more agreeable. Profuse perspiration can be induced without the necessity of breathing warm air, and the entire experience of an electric-light bath is esthetic and soothing. Especial attention

is also called to the spray and douche rooms, where by means of very accurate and elaborate apparatus not only the heat but the pressure of the water may be exactly regulated, and where, by a simple movement of a lever, alternating currents of hot and cold water can be

The Swimming Pool.

Back of the bath-rooms the guests enjoyed a view of the swimming pool, the delight of all the younger and not very invalid patients. A competent teacher is always present in the natatorium to give



A PEEP THROUGH THE LADIES' BATH-ROOM.

applied. Many of the visitors expressed regret that the time was too brief and they were too many to test the pleasure and the efficacy of the various sensations so well described by their guide and by the bath room attendants. Some were of the opinion that "heat and cold to the spine" must be better than it sounded; and indeed it is a most powerful invigorator. Others were curious to test the efficacy of the "salt glows," and the dry mustard rub.

sprays before and after the swim, and to teach all who wish to learn the valuable but much neglected art of swimming.

The Laboratories.

Before leaving the main building the guests were invited to visit the different laboratories, the first being the physiological and bacteriological laboratories. This was particularly interesting to former patients who were reminded of their old experiences with test meals, stomach

packs, and lavage. Here it is explained that the Sanitarium has a regular system, or series, of scientific tests, by means of which the exact physical condition of each patient is ascertained before any remedial measures are employed in his behalf. These tests are in addition to the physical examination made by the physician in charge of the case.

Probably the most important of all

fluid thus obtained is then subjected to fifty-two different chemical tests and manipulations.

A portion of the stomach fluid is taken into the bacteriological laboratory, immediately adjoining, and here an extensive and thorough line of experimentation is carried on to ascertain whether or not the stomach under examination is infected with germs. To demonstrate its actual



RECEPTION-ROOM IN LADIES' BATH-ROOM.

the tests is the test meal. The morning after a patient has arrived and become comfortably settled, if he is a sufferer from indigestion, he is given the privilege of enjoying a test breakfast, which consists of a measured amount of granose and water. This is retained in the stomach for an hour, and then by means of a stomach-tube is easily removed, and brought into the laboratory, where it is placed in a filter. The clear fluid passes through this into receivers below. The

condition in this regard, a portion of the stomach fluid is placed in some medium in which any germ that it may contain will be reproduced. These "cultures," as they are called, are allowed to stand from twenty-four to forty-eight hours, when, if germs be present, there will result an enormous reproduction of germ life, one germ sometimes producing millions. Some patients, as the result of this experiment, learn for the first time that they are "millionaires." Germs are of many

varieties, colors, and dispositions. Some indicate their presence by the formation of gases: while others cause a discoloration of the media in which they subsist; and still others produce the liquefaction of certain substances.

By means of these examinations and experiments the physician in charge of the case is enabled to know what remedies are necessary to eradicate these multifarious pests, and to alleviate the numerous stomach disorders that result from their presence; and he has also very definite data

upon which to base his prescription for such medication as may be necessary, or for treatment in the bath, electrical, massage, and other departments of the institution, and especially for diet. Of course no one is compelled to take this test, but the physician is much better able to make an exact and curative prescription by the aid of this thoroughgoing investigation.

Another test is that of the blood. The physician gently punctures the finger of the patient, and removes a drop of his



THE BACTERIOLOGICAL LABORATORY.



THE CHEMICAL LABORATORY.

blood, which is taken to the laboratory, where it is thoroughly examined under the microscope, and otherwise, for the purpose of ascertaining whether it is in a healthy condition, and performing its proper functions in the system.

Next to the bacteriological laboratory is the general working chemical labora-

explained that every one of these active contrivances is designed for the benefit of some particular muscle or set of muscles. In one room of this department was shown machinery especially arranged for remedying a condition of misplaced bodily organs, as well as for overcoming curvature of the spine, hollow chest, round



THE SWEDISH MOVEMENT DEPARTMENT.

tory, and in the room beyond this the urinary laboratory.

Swedish Movement Department.

The next place visited, the mechanical Swedish movement department, never fails to interest the newcomer. He can understand at a glance the philosophy of this machinery. As the visitors entered, they were greeted by a moving spectacle. More than a score of machines were at work, spitting, slapping, rubbing, shaking, vibrating, warming cold feet, awakening dormant energies, driving away backaches, helping the chronic dyspeptic to digest his dinner. The attendants

shoulders, and various other bone and muscular deformities.

The manual Swedish movement room contains apparatus and appliances for strength, lung, and other tests. Here were found the strength-testing apparatus developed in the institution, which has met with so much favor from experts in the line of physical culture that it is now in use at Yale University, at the United States Military Academy at West Point, and a score or more of other prominent educational institutions. By means of straps, levers, and the adjustment of the machine in various ways, twenty-four different groups of muscles can be tested.

Every newly arrived patient who has strength enough to be about, is given the strength test, and complete and accurate records are made of the results shown. Based upon this test, a regular prescription for work and exercises in the gymnasium is made out, with a view to building up and perfecting a symmetrical development of the entire muscular system.

In addition to these tests, numerous measurements are taken to ascertain the height, the reach, the chest and abdominal expansion, etc.

Not the least important of the remedial agents utilized by the institution are those connected with the physical culture department. Nearly all patients who resort to the institution are more or less enfeebled in their muscular mechanism, and not infrequently there are entire groups of muscles which they have completely lost the power to move or exercise. Especially is this true of those suffering from paralysis, rheumatism, chronic constipation, etc. The purpose of the manual Swedish movements is to restore these dormant and inactive muscles to the performance of their proper functions by means of manual manipulation of the muscles, ligaments, and bones of the body. Patients who can not walk or who have lost the ability to use various members of their body, are not infrequently entirely restored to a normal condition within a few weeks or months by the methods of treatment used in this room. Indeed, there is hardly any other treatment so conducive to the restoration of bodily vigor.

The Original Sanitarium.

After leaving the main building and passing to the rear, the visitors were all eager to see the "Annex," the original Sanitarium building, from which the entire institution has so rapidly grown. It is a small frame structure in the rear of the main building.

The Nurses' Dormitory.

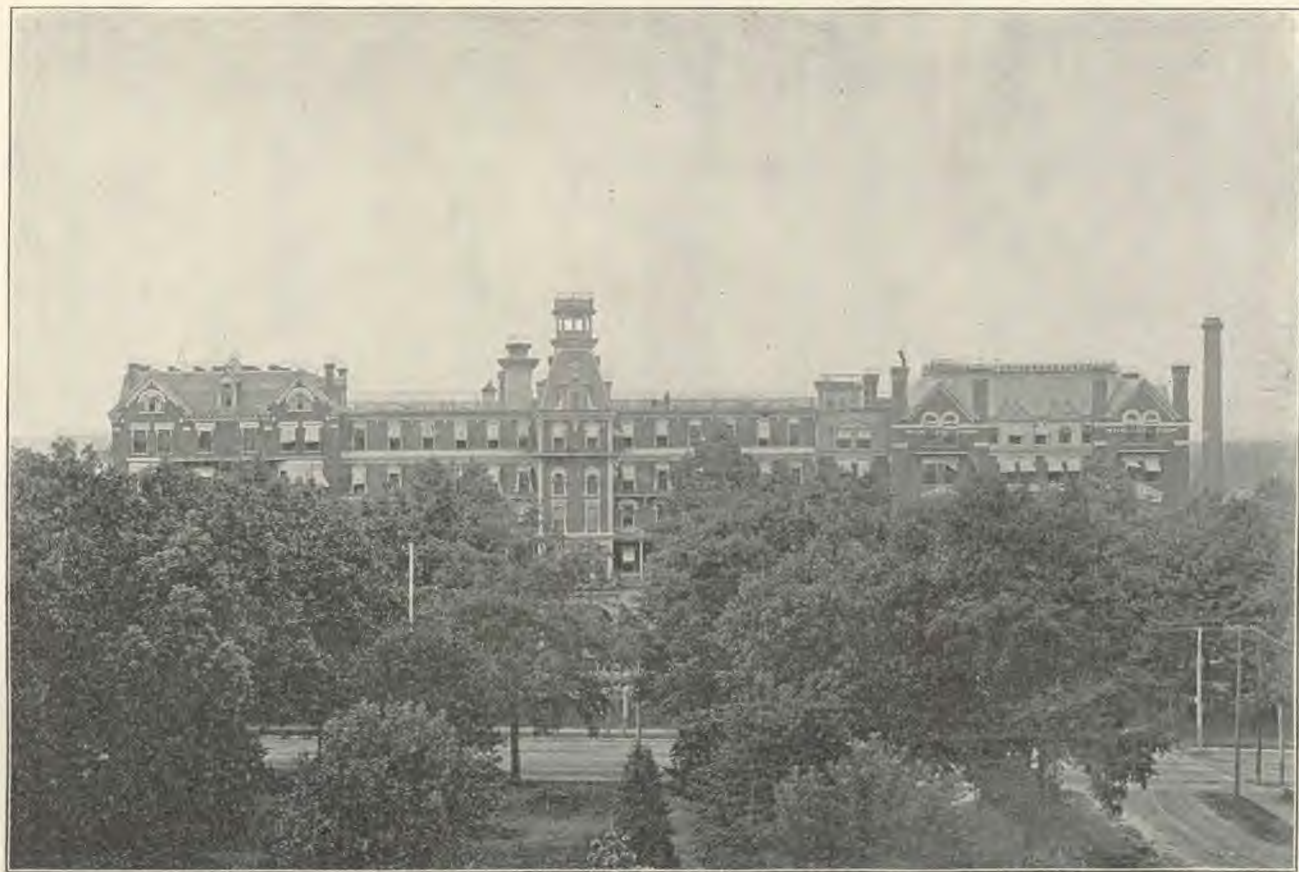
Beyond this they inspected the nurses' dormitory, a large, five-story building, devoted to the needs of the women nurses. In the basement are extensive dining-rooms, accommodating from five hundred to six hundred persons.



THE MAIN BUILDING IN 1866.

Going to the second floor, and passing out through the hall, one notices on the right the reception-room and on the left the assembly-hall, where morning prayers are held by the family each day at 6.40, immediately after breakfast. In this room the workers also assemble for various religious, literary, and social enter-

tainments during the week. The assembly-room, and several other rooms in this building, are used as recitation- and lecture-rooms in connection with the Medical Missionary Training-School for Nurses, which is conducted in connection with the Sanitarium, and is the largest training-school for nurses in the world. The enrolment in this school each year varies from three hundred to four hundred. All the nurses employed in the institution take a regular course of study in everything pertaining to the art of scientific nursing. As the name of the school implies, every nurse joining the classes



THE MAIN BUILDING OF THE BATTLE CREEK SANITARIUM IN 1898.

does so with the purpose in view of devoting his life to medical missionary work, under the supervision of some regularly established medical missionary board, either in the large cities of our own country or in foreign lands. Many of those who have been graduated from this institution are already engaged in this noble work in various parts of the world.

The Power-House.

Just across the driveway from the dormitory is the power-house. An interesting feature of the power-house is the eight huge furnaces wherein crude oil is made use of as fuel. An idea of the cost of maintaining the institution may be obtained when it is stated that even in the summer time it is necessary to use twelve hundred gallons of oil a day in order to furnish the heat, light, and power required. During the winter months between four thousand and five thousand gallons of oil are consumed daily.

The Conservatories.

Between the power-house and the Sanitarium main building are located the extensive floral conservatories of the institution. They are drawn upon at all seasons of the year, especially during the winter months, for flowers to enliven the rooms of guests, as well as the parlors, dining-rooms, and other public rooms.

The Surgical Ward.

The guests with their guides then wended their way to the Sanitarium Hospital, where, taking the elevator on the first floor, they were shown the way to the surgical ward, which is located on the fifth floor. The first room of interest is the disinfecting-room, where all who have occasion to enter the operating-room on operating-days disinfect their hands by washing them in Bichlorid of mercury. Here also they dampen their hair, and place over their other garments a long white robe, and over their shoes cloth

sandals. The hair is wrapped about with sterilized cheese-cloth. The purpose of these precautions is to prevent the spread in the operating-room of any germs that may be lurking about the individuals or their clothing.

The visitor is then shown into the anesthetic rooms, where he notices tables on rollers. On these the patient about to submit to an operation is placed to receive the anesthetic. Everything being arranged in the operating-room, the surgeon and his assistants at hand, together with a trained corps of the most skilled nurses which the institution affords, the patient is wheeled into the operating-room and gently lifted from the anesthetic-table to the operating-table. The framework of the operating-table is iron, and the body of it plate glass. Another table in the operating-room bears the sponges; still another, the instruments; and still another, bandages and supplies of various sorts. All the tables are constructed of glass and iron, so as to be germ proof. On the farther side of the room may be seen the instrument cases, which contain between five and six thousand dollars' worth of instruments. Immediately adjoining one of these is a tall iron rack on which are suspended jars full of various antiseptic and other solutions ready for immediate use, if needed during an operation. A few feet beyond are the disinfecting-urns, in which the surgeon bathes and soaks his hands between operations, to prevent the spread of any germs with which his hands may come in contact in performing the operation. There will also be noticed near the heating coils a steam fixture, which injects steam into the room just before operations begin, for the purpose of causing any germs that may be in motion in the air to absorb moisture and thus settle to the floor.

On one side of the operating-room is the gallery, to which admission is given

only to the immediate friends or relatives of the patient having an operation, and to visiting physicians and surgeons. There

plete record of each case is kept. The operating corps consists of the surgeon and two or three assistants, together with



THE OPERATING-ROOM, SHOWING GALLERY

is stationed on each operating-day in the gallery a stenographic reporter, who takes down everything the surgeon says during the operation and an account of every circumstance which occurs, so that a com-

plete record of each case is kept. The operating corps consists of the surgeon and two or three assistants, together with about twelve expert nurses and three or four physicians skilled in the administration of anesthetics. In the performance of their work, the nurses are drilled to a military precision by means of rehearsals,

in which all the details of the operation are gone over by the aid of a dummy patient and a sham operation, so that as each operation advances, they know how to provide the operating surgeon with just such instruments and appliances as he

the door, making the chamber thoroughly air tight, and forcing steam into and through the goods under high pressure. This thoroughly and completely puts to rout any germs that may be hiding in the various fabrics.

Adjoining the sterilizing-room is another in which is a receiver from the distilling apparatus, which is located in the attic above. Thus all the water that is used for any purpose whatever in the Hospital building is first made thoroughly free from germs.

The Endowed Beds.

There are in the Hospital twenty endowed beds, the endowment of each being two hundred dollars a year, which pays the board of the patient at four dollars a week, the institution furnishing the surgery, medical treatment, and care entirely free of charge. Fully one half of the hundreds of important operations annually performed in this Hospital are of this class.

The endowments are provided by various church and State societies, and by private individuals charitably disposed. Were the usual fees charged in all these cases, the income of the institution would amount to more than one hundred thousand dollars a year. Thousands of dollars are spent annually by the institution in the support of this branch of its charity work.

The Cooking-School.

In the basement of the Hospital is the cooking-school. Here are thirty-five little experimental kitchens, in each of which is cozily arranged a complete outfit of kitchen furniture, such as gas stove, oven, kettles, oatmeal boilers, spoons, knives, and forks. The cooking-school was estab-



IN THE GRANOSE FACTORY.

may need, without his giving them special instruction.

The most scrupulous care is taken to render the operating-room thoroughly aseptic and antiseptic. The great value of the extreme care taken in this regard is abundantly demonstrated by the remarkably low death-rate which the Hospital records show, presenting long series of the most critical cases without a death.

Leaving the operating-room, the sterilizing-room is then entered. Here is seen a huge retort that reminds one not a little of a Krupp gun. This is used for the purpose of sterilizing the linen used by all patients in the Hospital, also the bed linen. The sterilizing is accomplished by placing the goods in the retort, closing

lished especially for the instruction of the members of the Nurses' Training-School, who are given the benefit of a thorough course, both of theoretical instruction in the school and of practical work in the Hospital kitchens connected therewith. In this department may also be seen several cabinets containing cooking utensils and various kinds of foods, not only such as are in common use, but also many

The Sanitarium Health Food Company.

Bidding farewell to the hospital building, the journey is continued, and soon we reached the main building of the Sanitarium Health Food Company, as the health food department of the Sanitarium is known to the public. Here taking the elevator, a descent is made to the basement floor, where are the engines and



THE COOKING-SCHOOL.

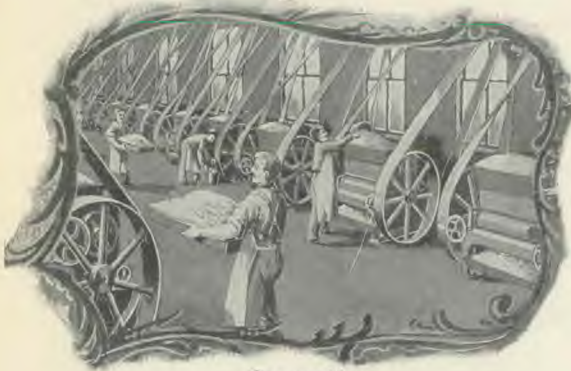
used in foreign lands and in olden times. Neither in this school nor in the Hospital kitchens are animal fats used, such as lard or suet, nor is there any use made of saleratus, soda, or baking-powder. The instruction given in the Sanitarium cooking-school is purely in the line of scientific hygienic cookery.

Connected with the cooking-school is a dining-room, pleasantly lighted and well equipped, where the regular Hospital patients take their meals after they have become sufficiently convalescent to leave their rooms.

machinery for the manufacture of granose, granola, and other special cereal foods produced by this company. All the wheat and other grains used in the manufacture of these foods are thoroughly purified by elaborate machinery before entering upon the various processes through which they pass.

On the second floor of the bakery are located the pearling machines, also the cracker-making machinery, and two large "Ferris-wheel" revolving ovens. After the crackers are baked, they are put into a cracker conveyer, which carries them to

any part of the building desired. This company has recently put in a series of special mills for the manufacture, by an improved process, of graham flour, corn-meal, corn grits, crystal wheat, and various other cereal breakfast grains, which are subjected to the most thorough purifying measures.



GRANOSE MILLS.

The visitor again takes the elevator and ascends to the third story, where he sees a large company of young women busily engaged in packing in cartons the various foods manufactured, and men at work packing the cartons into boxes for shipment to every part of the world.

Besides this main building, the Sanitarium Food Company has several other factories, one just in the rear of the Sanitarium, another near the Michigan Central railroad tracks, where caramel-cereal is produced. Close to this building is the canning factory, where are put up the choicest canned fruits and vegetables, in quantities sufficient not only to supply the growing needs of the Sanitarium, but also of others who appreciate pure foods. Several tons of health foods are daily prepared in these various departments.

The Procession.

A general review,—a kind of summing up,—of this visit or the visitors to the different departments took place in the evening, when a jubilee procession of Sanitarium helpers passed in front of the

main entrance. The parade formed on the rear lawn, starting from the electric light near the chapel. The Sanitarium band came first, carrying a banner inscribed, "Blow Ye the Trumpet in Zion." When the band reached the front entrance, it dropped out of the procession, and a quartet sang, "It Just Suits Me," written for the occasion, and sung to a familiar tune, the whole procession stopping and joining in the chorus. The following is a single verse with the chorus:—

"O, we are vegetarians, and glad indeed to be ;
We dine on Eden's diet pure, no taint of cruelty.
We find in fruits and grains and nuts a sustenance
complete,
And nevermore desire to kill and fellow crea-
ture eat.

CHORUS

"It just suits me,
It just suits me,

The fare that God gave Adam,
It just suits me.

Following the band came the Haskell Home children, eight abreast, bearing the motto: "Train up a child in the way he should go, and when he is old he will not depart from it."

There were sixteen divisions in all, including the men and women nurses, the call-boys, the laundry helpers, the cooks, the dining-room waiters, the Health Food Company, the canning factory, the Good Health Publishing Company, the medical students, the industrial department, the farmers, and lastly the fire department,—nearly one thousand in all. Each department carried torches and banners inscribed with appropriate mottoes. It was a most impressive sight,—one thousand young men and women in the prime of life, strong and hearty, rosy cheeked and robust, all adherents of the dietetic and other principles of the institution, earnest and enthusiastic vegetarians, and nearly all pledged to devote their lives to humanitarian work in reformatory and philanthropic lines.

THE SCHOOL OF HEALTH.

MARY HENRY ROSSITER.

THE school of health may almost claim to be something new. It has come into prominence so unobtrusively that many have but a vague idea of its real significance. The school of physical culture, the cooking school, massage, hydrotherapy, no longer need to be explained. But just what is comprehended in a school of health, what are its principles, and how

complete and constant obedience to every law of nature. It aims to show, as rationally as possible, how the body may be restored to, and kept in harmony with, its original relation to the man; how it may be made a comfortable and cheerful dwelling for the soul.

The methods of the school of health, moreover, are not theoretical, but intensely



both teachers and students go to work to master its curriculum, is understood by very few.

To begin with, a school of health is peculiar in that it is based upon broad, ethical principles, rather than upon any one theory or formula. It declares that health is wholeness of both mind and body, and can be secured and maintained only by

practical. When a school is to be organized, all those who are interested in their own health, or the health of others, are invited to meet at a certain time and a certain place. A plan is then arranged for regular courses in all the different branches of instruction, as well as for lectures on important subjects by physicians and other specialists. It is necessary to



state at the beginning that schools of health are an outgrowth of the Battle Creek Sanitarium. As most of the readers of *GOOD HEALTH* have long understood, the Sanitarium stands for a special and distinct line of work. It advocates no particular remedy or treatment, but endeavors to make people well by any and all natural means, and to send them home with a knowledge of the causes and

to cast away disease and to lay hold on health. Hence arose a demand for teachers to go out among the people,—among those who were not yet sick enough to go to a sanitarium, among those who realized that ordinary social and domestic life is conducted according to anything but hygienic and sanitary standards,—and explain to them the principles which have been so successful in restoring vigor and



conditions of the diseases from which they have suffered, and how to prevent their return, or the onslaught of new ones.

In a large sense the Sanitarium itself has been from its origin a school of health. Hundreds of people have had their ideas of healthful living entirely revolutionized by a few weeks' stay within its walls. Many have gone home filled with enthusiasm, to tell their friends how

health to many lives. For more than twenty-five years the Sanitarium has been sending out medical missionaries among the poor, but this was to be something different, and not confined to the very poor.

The immediate success of the organized school of health shows that it was needed. Within the last two years schools have been held in many large cities and in numerous towns. A very live interest



has been manifested by all sorts of people, —people who were drawn together by a bond of vital need.

Perhaps the best idea of a school in operation can be gained from a description of an exhibition given in connection with the celebration of the thirty second anniversary of the founding of the Sanitarium, reported elsewhere in this number. One might say that a session extraordinary of the school of health was called in the gymnasium of the Sanitarium, Monday evening, Sept. 5, 1898. All the regular classes were held, and some besides, to illustrate special points. For this occasion the lessons were given in booths that had been appropriately fitted up and decorated.

The first booth was devoted to hydrotherapy. Here nurses were showing how to give various simple water treatments. This subject is always carefully explained in the school of health. Classes are

taught not only how to give the treatments, but also the reasons why certain applications produce certain effects, and why those effects are desired. How to wring out fomentation cloths, how to give a shower bath, the philosophy of a dripping sheet rub, and various other interesting points were brought out in this booth.

The next booth was a practical demonstration of "First Aid to the Injured." Visitors were shown how to stop a hemorrhage, how to promote artificial breathing, how to carry off a wounded man, how to apply various kinds of bandages. In the regular schools of health this part of the instruction is given in practical talks by physicians from the Sanitarium.

Massage to the face, neck, and arms was shown in the next booth. The value of both Swedish and mechanical massage is thoroughly explained in the schools of health.

All do not need massage, but all must

learn and adopt hygienic cooking if they would have health and keep where they do not need massage. The cooking-school is always a very popular feature of the school of health. A special care is taken to show why certain foods must be discarded, why it is important to study combinations of foods, just what influence the digestive organs have upon the rest of the body, and why so great stress is laid upon diet. The Sanitarium cooking-school made a very attractive picture in the booth, with its table and utensils, its staff of cooks making pie-crust without lard, cake without baking-powder, bread without yeast, and with its rows of inviting dishes prepared according to the most approved hygienic recipes.

The Sanitarium health foods were very handsomely displayed amid decorations of ripe corn in the stalk, oats in the sheaf, watermelons, pumpkins, and other natural

products, but the readers of GOOD HEALTH know all about these foods, so no extended description is necessary. However, it is difficult to realize that what may be perfectly familiar and indispensable to us is entirely unknown to thousands of people who are suffering and groping about in the dark for something to relieve them. A wealthy gentleman in a large city, who for years had been trying to find some remedy for the most painful dyspepsia, not many months ago heard of an old man in the country who knew something about health foods. He made a pilgrimage of fifteen miles to question this old man, and heard of granose. In three or four weeks he was back again, eager to learn more, for the granose had given him peaceful days and nights, and now this wealthy aristocrat begged the poor and ignorant farmer to tell him something else to add to granose. This



illustrates the great need of schools of health among the rich as well as the poor.

Another important line of work is healthful dress. The school of health gives thorough instruction on every phase of this subject,—how to adapt clothing to the natural figure; how to stand, to sit, to walk, to breathe, in order to give the greatest freedom to every muscle and every organ; just why constriction of any

forms another integral part of the school. Swedish gymnastics, breathing exercises, dumb-bells, swinging Indian clubs, are all taught by specialists in these lines. Nothing is neglected that tends to the full development of all the bodily powers.

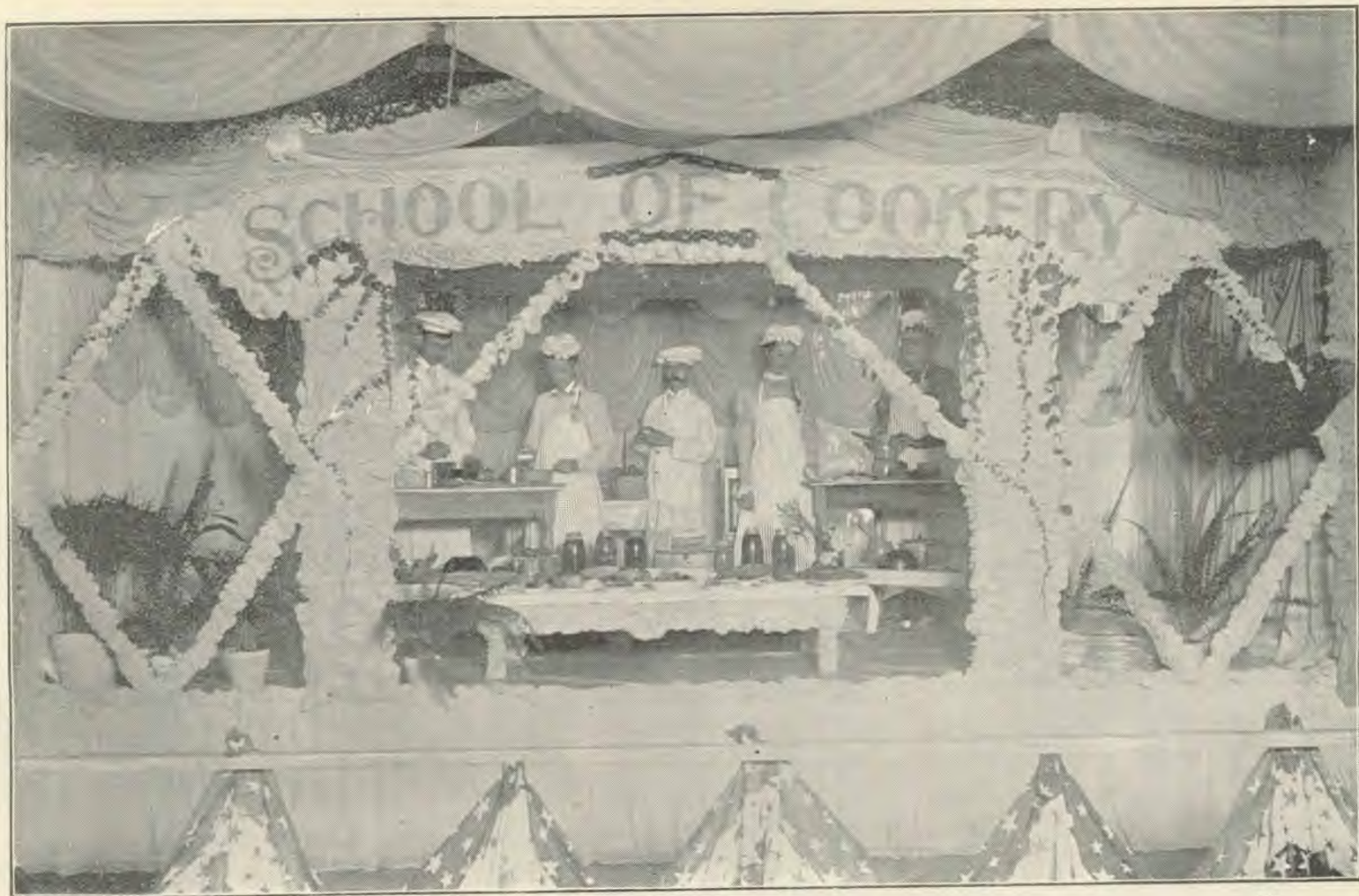
One or two special features of the anniversary school of health were intended to provoke the smile that is more effective than argument. "The Trials of

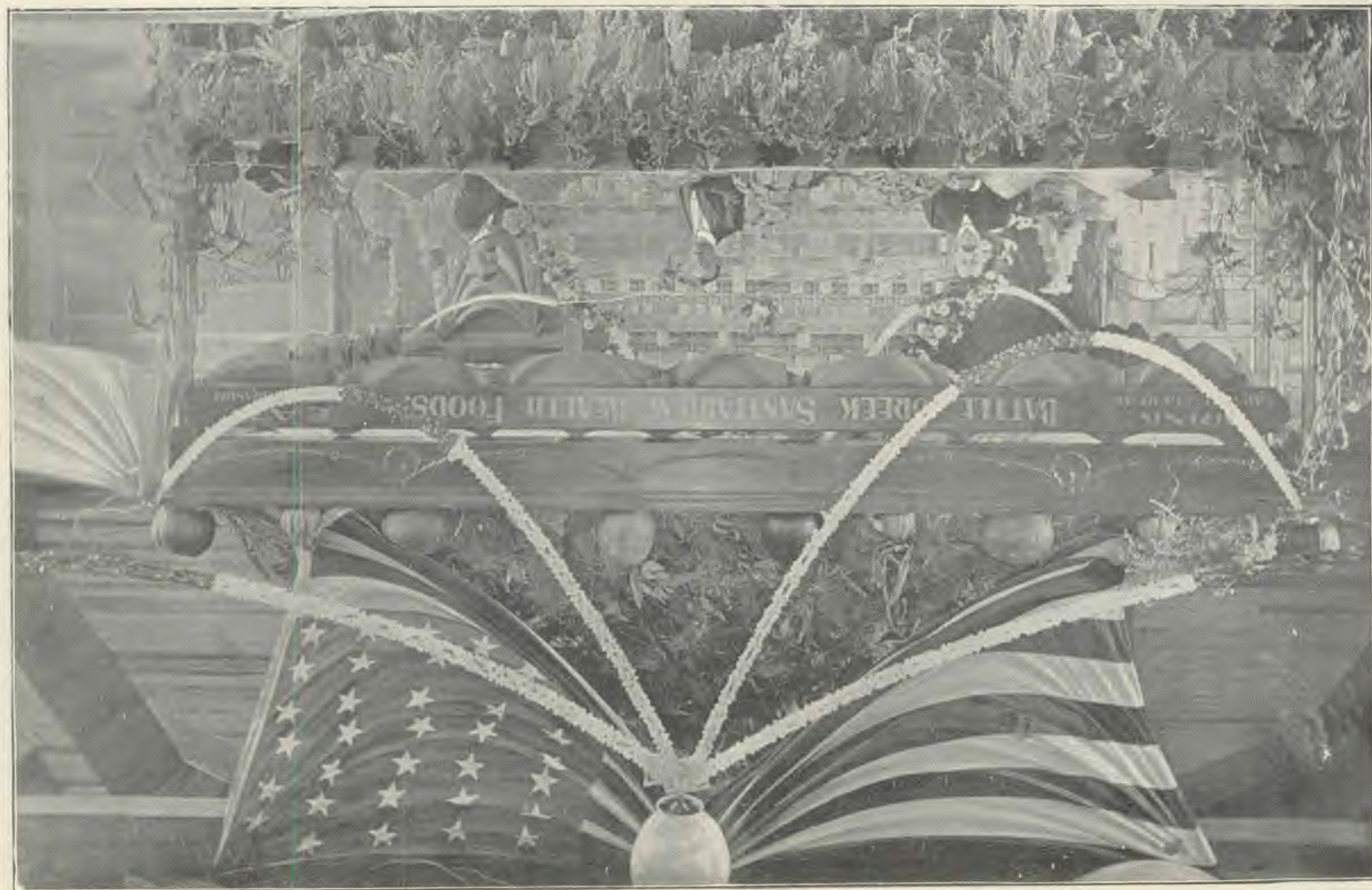


part is dangerous to the whole body as well as inimical to the full activity of the mind. The anniversary school of healthful dress exhibited both undergarments and dresses artistically as well as hygienically made. That beautiful and becoming clothes are in no wise incompatible with the requirements of dress reform is one of the demonstrations in the school of health.

Regular instruction in physical culture

the Sanitarium Patient" were graphically illustrated in a booth where three scenes were enacted at the same time. Two men sat at a table; one had before him a large pile of zwieback and granose; over him hung the placard, "A Dry Time." In front of the other was a regulation dinner,—lobster, oysters, salad, cheese, wine, cigars; over his head hung a stomach-tube bearing the inscription, "The Sword of Damocles." From time to time he gave





a terrified glance upward and shook his head, not daring to eat the dinner for fear of the awful tube. Any one who has ever visited the Sanitarium would fully appreciate this picture, for if he had not had a similar experience himself, he could remember those who had. The man having the "dry time" seemed to be enjoying the quiet comfort of peace after the storm. In another part of the booth a refractory

pig four months old lay in a casket lined with black. Crossed at the foot of the casket were a carving-knife and fork. In the center of the chamber stood a skeleton, wearing a corset, pointed shoes, and a hat adorned with dead birds. The walls were covered with charts of the human figure distorted by conventional dress.

It is a pity that more people are not interested in good health while they still



patient was being threatened by the nurse with "heat and cold to the spine," "percussion," or a "lavage."

The "Chamber of Horrors" was a closed booth, visible only through round apertures in front. The scenes were well calculated to "give one pause." Suspended by a string an old hen just killed was hanging; near her under a glass case were her family of little chicks, and above them the word "Motherless." A

have it. Far too many only wake up to the importance of keeping well when it is too late,—too late at least unless they spend years and years in a work that might have been done in a short time had they but known or cared. Health is like life,—a man does not realize that he himself can lose it. The object of the school of health is to teach people how they may live a hundred years in happiness and vigor.



THE SANITARIUM HOSPITAL.



THE NURSES' DORMITORY.

THROUGH THE GOOD HEALTH SPY-GLASS.

THE Röntgen ray is now used to detect the adulteration of flour.

Professor Virchow has declared that "the future is with the vegetarians."

Formerly in Denmark the public hangman was allowed—apparently by virtue of his office—to practise the art of healing.

Joseph Whitton, in *Table Talk*, remarks: "The Lacedæmonians had but four sauces—labor, exercise, hunger, and thirst. No wonder they swallowed their simple fare with such a greedy relish."

The latest hygienic novelty in Paris is the use of porous glass for windows. It is declared to possess all the advantages of the ordinary window framing, and also admits air, but without a draft.

A prominent Russian physician reported to the Russian Medical Society of St. Petersburg, that as the result of experiments on rabbits, he was convinced that the healing of wounds is retarded by either acute or chronic alcohol poisoning.

Dr. Jaeger, of Stuttgart, Germany, is quoted as having compared the attendance of the school children who went through the regular course of gymnastics, with those who did not, and found that among the former the absences on account of illness were forty per cent. fewer than among the latter.

The general freight-agent of a large railroad says that he will in the future employ no young man who smokes cigarettes, and that he intends to get rid of all now in his department who smoke them. "Eighty-five per cent.," he declares, "of the mistakes made in the office by my two

hundred clerks are traceable to the thirty-two who use cigarettes."

"To see ourselves as others see us," says the *Journal of the American Medical Association*, has been recently applied in the campaign against alcoholism in Germany. Drunken men are followed home from the saloon, and photographs taken of their most disgusting and humiliating poses. The photographs are then presented to the subject when sober, with a warning.

Dr. Henderson, in the *Popular Science Monthly*, says: "When you remember that we are dressed during the whole period of our social life, and that we eat three times every day, eleven hundred times a year, it is astonishing that these very human arts (dressing and eating) have not been brought to greater perfection."

Dr. I. N. Love in a famous toast to "The Babies" said: "How few fathers cultivate the right kind of friendship between their children and themselves! Let us really make our babies feel and know that we are their best friends, next to their mother, on earth, and if we make them believe this, we shall have in our children our best friends."

The English biographer of Bismarck, Charles Lowe, writing in the *Review of Reviews*, says: "The prince was a most acute sufferer from neuralgic pains in the face, and sometimes was obliged to seek relief by pressing the points of his fingers for several minutes on his cheek bones. It was then difficult for him to open his lips, and he jokingly said: 'This is quite natural; for in my life I have sinned most with my mouth in eating, drinking, and talking.'"

That "kitchen bacteriology" may become a study with the ladies, is a hope expressed by the *British Medical Journal*, in commenting upon a course of hygiene and bacteriology given by a doctor of Königsberg, in which is recommended the use in kitchens of vessels with well-fitting, overlapping lids, instead of the inside lids used the world over, also the use of cotton-wool lids specially prepared to fit the wide tops of food vessels.



Germany is determined to be sanitary. In Berlin the bakers and their assistants may no longer handle bread with their bare hands. As soon as each loaf is taken from the oven, it is put into a paper bag, made to fit the shape of the loaf, but a little larger. The ends of the bag are twisted, thus preventing the possibility of the loaf's being defiled either by dirty hands or by gathering dust in its transit through the streets, or from being allowed to fall on the pavements.



Recent statistics show that the increase of diseases traceable to alcohol is decided. A physician in the Eastern Michigan Insane Asylum states in the *Quarterly Journal of Inebriety*, that alcohol was a direct cause in more than sixty per cent. of the cases admitted to that institution during the last ten years. He also considers the facts to be established that alcohol in parents can produce hereditary insanity by causing organic changes that are transmitted to children, and that the children of an alcoholic parent are frequently idiots or degenerates.



Anybody who doubts the genuineness of an article of food that he has purchased from a tradesman in Paris, says *Health*, may take it to the municipal laboratory for analysis. It will cost him nothing to have it analyzed and the fact determined

whether it is unadulterated or adulterated, and, if the latter, the law deals with the offender without further action on the part of the purchaser. The shopkeeper is deprived of the few civil rights he is supposed to be otherwise entitled to, and has to display conspicuously in his shop window or on his door, for a year, a large placard bearing the words, "Convicted of Adulteration."



A "laughing plant" grows in Arabia, and derives its name from the effects produced by eating its seeds. The *Montreal Pharmaceutical Journal* describes the plant to be of moderate size, with bright yellow flowers and soft, velvety seed pods, each of which contains two or three seeds resembling small black beans. The natives of the district where the plant grows, dry these seeds and reduce them to powder. A small dose of this powder has effects similar to those arising from the inhalation of laughing-gas. It causes the soberest person to dance, shout, and laugh with the boisterous excitement of a madman, and to rush about, cutting the most ridiculous capers for nearly an hour. At the expiration of this time, exhaustion sets in, and the excited person falls asleep, to wake after several hours with no recollection of his former exhilaration.

Here is another nerve tickler. Soon we shall find its name, and add it to the list of felicity-producing drugs, which begins with alcohol and includes opium and cocaine.



For a tropical climate, that of the Philippines is said to be very salubrious. It is claimed that foreigners who are not acclimated may enjoy good health there simply by paying ordinary attention to the laws of hygiene, particularly as to cleanliness and moderation in eating and drinking.

THE DOMESTIC EDUCATION OF CHILDREN.

MRS. E. E. KELLOGG.

EDUCATION in its broadest sense is threefold, an unfolding and development of the whole nature of the child, a culture of the head, the hand, and the heart.

To connect the idea of education wholly with the instruction given in the school-room and the accomplishments acquired under the tuition of special masters is a mistake. The larger part of the child's real education comes from other sources than the school or the college. Nature, environment, and his own inward experiences are among the child's most constant teachers, and the home with its varying details of every-day life is the best of schools.

Many parents overlook the value of domestic work in the education of their children. Mothers think, "Oh, the children will be young but once; let them enjoy themselves. I do not want to make them old before their time by compelling them to work." This kind of devotion is by no means conducive to the best good of the children, and too often results in such an encouragement of selfishness in their characters as to demand continued leisure and maternal servitude, even when the age of maturity has been reached.

The desire to be of use in the world, the joy of helpfulness, should be among the first principles inculcated into the child's character, and should be put into practise in the family world by which he is surrounded, at as early an age as possible. In no way can this be more forcibly taught than by a share in the performance of the common duties necessary for the proper conduct of a home. In doing work for the common benefit of all, the child not only comes to feel that he has a niche to fill in the world, but is learning

from day to day that beautiful lesson of service to others which shall aid him to fulfil the law of Christ, "Bear ye one another's burders." Not only this, but as he works, his powers are being disciplined so that he is gradually attaining to greater capabilities and more efficiency; for, as some one has aptly said, "to do any job thoroughly increases the capacity for doing other jobs."

The variety of duties necessary in the care of the home and the family offers a broad field in manual training. The knowledge which may be acquired in connection with such training of the best methods of doing the different kinds of work; of the natural and chemical laws involved; of the reasons why for health or economy certain ways are better than others, affords a wide scope for intellectual training. Many desirable attributes of character are also the direct and indirect outgrowth of such training; for as Felix Adler says, "Squareness in things is not without relation to squareness in action and thinking." Training in domestic work helps to develop judgment, patience, accuracy, thoroughness, perseverance, and responsibility. It teaches the nobility of labor, and aids in the formation of habits of industry. Coupled with the intellectual training of the school, it offers the child an all-round education which school work alone fails to give.

"But," says some one, "there is so little time, outside the school hours, available for work." True, and there is but little time given each day to any one of the different studies in the school curriculum. It is the little learned from day to day that sums up at the end into something accomplished. The child who

spends but an hour or two each day from the age of five to fifteen years in domestic work will have become master of many branches of the art by that age if the instruction has been rightly directed.

In the right direction of this instruction lies the great secret of its value. The mere routine performance of certain household tasks as a matter of convenience, and these too often tasks which the older members of the family, not liking to do, have relegated to the children, is not sufficient. While it should be understood that any work which is for the common good of the household is important work, the little pupils' tasks should be varied from time to time, and made pleasurable and progressive.

True education in all lines is a process of growth, and in domestic education as in any other there should be the opportunity afforded for climbing upward, not only from one step to a higher of the same grade, but from one department of work to another, as strength and proficiency are gained. The lack of this opportunity for advancement makes of the task what it so often appears to the child, mere drudgery,—work which has to be done, and, as he feels, the sooner the better. There is no joy in such work, because it offers no incentive for well-doing. Much of the pleasure which comes to us with work consists in the sense of satisfaction which follows the completion of a task that has been well done. As has been said, "The least thing thoroughly well done, complete, rounded, full, exact, gives pleasure; anything slovenly, slipshod, unfinished, is discouraging."

"But," says another, "when children are in school five or six hours daily, they ought to have the time outside of school hours for recreation."

True again, but recreation is not necessarily time spent in play alone, an idle or leisure period when nothing shall be ac-

complished. A change of occupation is recreative. Nearly all domestic work is a healthful exercise of muscle and strength, and it is the privilege of the wise parent to make it so pleasurable that children will enjoy a portion of their time spent in such work far better than in all play.

The chief obstacle in the way of domestic education comes through parents' not realizing its value and their disinclination to undertake the training of their children in this direction, preferring to do the work themselves or to hire it done rather than take the trouble of teaching the child. It does take time, trouble, and patience to teach a child rightly to perform domestic tasks, but so it does to teach him reading, writing, or any other necessary thing. The child ought not for this reason to be deprived of the benefits that accrue from well-directed domestic training.

There are mothers earnestly desirous of securing for their children that all-round education resulting from the simultaneous culture of head and hand, who yet do not understand how to adapt their circumstances to such training or who do not see how they can utilize the energy stored in the little fingers. To such we suggest: Make all things tend toward the end desired; begin with little tasks regularly performed each day until well and thoroughly learned; make these tasks pleasurable with pleasant, cheerful companionship, bright animated instruction so simple that it can be readily comprehended, good tools to work with, and hearty praise when the task is well done.

Bedroom work is the easiest and most fascinating for the beginner. Begin by teaching the little one to make her doll's bed. A small wire or wooden bedstead with mattress, pillows, sheets, blankets, and spread to fit, is the most serviceable for this instruction; but if this is not obtainable, a paper bed, which any

ingenious person can easily fashion from a bit of stiff paper, may serve the purpose. Sheets, blankets, and pillows may be likewise cut from paper, with pencil marks for hems. Teach the little one the perfect method of bed making, explaining the reasons why the bed should be left to air, why the mattress should be turned, and the sheets so laid that the right sides will be together. If the mother will play with the child, practising this bed-making lesson once or twice each day, it will very soon be learned, and an advance step may be taken by allowing the child to make her own bed. This will be a longer study, and may require months of trial before it is perfectly done. It may be necessary that mama help for a time, taking hold of one side of the sheet while the child holds the other, as together they lay it smoothly over the bed. It will not be long, however, before the child can alone complete the task, and will feel the utmost pride in having her little bed as smooth and well made as the beds for the "grown-up folks." To keep the child's interest at its height, there are bed-making songs which may be taught and sung while the bed is being made; there may be talks about beds in other lands, beds of history, beds of birds and animals, and a variety of other connected topics.

As age and strength increase, the larger beds of the household and the care of one or more bedrooms naturally follow. The child will have learned so much already that a simple order of work, of which the accompanying may be suggestive, printed on cardboard and hung on the wall, will be a sufficient reminder of what needs to be done.

With this reminder to follow, the child can be left on her own responsibility to do the work. It may seem that the order of work here given might be more concisely stated, but it must be borne in mind that with most children it is much easier to re-

member one thing at a time. That nothing may be overlooked, it is wisest to note each step separately.

ORDER OF BEDROOM WORK.

1. Pick up and put away all things out of place.
2. Empty the slops.
3. Clean the bowls and other toilet dishes.
4. Refill the pitchers.
5. Put clean towels in place.
6. Make the bed.
7. Shake the small rugs out of doors.
8. Sweep the large rug with a carpet-sweeper.
9. Wipe the waxed floor with a covered broom or hand cloth.
10. Dust thoroughly.
11. Polish the floor if needed.
12. Rearrange the furniture, curtains, and rugs.

When the child has completed the task, ask her to look carefully over the order of work to see if everything required has been done. This will help to teach her that thoughtful thoroughness is essential to all good work. It will be necessary that the mother frequently go over the order of work with the child, commending each separate step which appears well done, and if not well done, gently suggesting the needed changes and requiring the work to be done over, if it is thought the child is capable of doing it better. This plan is much more encouraging to the child than a wholesale condemnation or even commendation is likely to be.

Other departments of domestic work may be taught in a similar manner. Do not expect perfection except by slow, gradual advancement. Give patient and painstaking instruction, requiring the child to do the best he is capable of, but do not measure his ability by a "grown-up" standard.

GOOD GOVERNMENT IN THE HOME.

NETTIE BARKER FERNALD.

"BABY, don't touch."

The little fingers went up to the antique vase, and again the firm voice said, "Don't touch, baby dear."

The little lips began to quiver with eagerness, and the mother stood still while baby Nell hesitated.

"Nellie is mama's sweet baby. Does she love mama? Then don't touch mama's pretty vase."

The mother said, "I have a little story for my girlie who loves her mama and minds her. Once upon a time a papa big as yours brought home a beautiful vase, and gave it to a mama just like yours for Christmas. He had gone way up town for it, and paid ever so much money for it, and he brought it home all wrapped up in a paper. Then he put it by mama's stocking that was by the big fire-place. In the morning she came down and looked in her stocking, and there was nothing in it."

Baby's eyes were large with sympathy.

"Then she looked by the side of it, and there, sure enough, was a big parcel marked 'For my Dearest.' So she unwrapped the papers from the parcel, and guess what she found. Why, she found this lovely vase. Now guess who that papa was."

"Was it my papa?"

"It surely was. And the mama?"

"It was just you."

"Yes, sweetness. Now you will never touch the pretty vase until I say you may."

"Oh no, Nellie will not touch the pretty vase."

The matter was settled once for all. The chair was drawn away from the mantle piece, and the little one never cared to touch the vase again.

This incident illustrates some of the elements which go to make good government in the family life. There was the love of the ruler for the governed; there was quiet decision; there was firmness; and there was time taken to settle that question once for all. Let love be lacking, and the others will avail only as the fear of consequences may deter the child from the act for the moment. A rod produced or the threat of instant punishment might, with a timid child, preserve the vase, if that was the chief consideration. How to secure obedience in the child for the present and for the future is of more consequence than many vases.

Obedience, loving and prompt, is the foundation stone of all good government in the home. Love alone will not secure it, as many spoiled children evidence. Tender hearted but weak and irresolute mothers often become broken hearted over sons gone astray and wayward daughters. Fathers are called to pass through experiences like those of Eli of old, because they have not restrained their sons.

Love is the greatest thing in the world, but it is not the only thing. There must be a right adjustment of these elements of love and wisdom if all the members of the family work in harmony, as music set to perfect tune. Nothing will jar where unselfish love reigns, tempered as it must be with obedience to the rights of others.

A well-behaved child always respects his elders, whether they be father or mother, grandfather or grandmother, uncles or aunts, or the people in the world about him. If badly governed in his own home, the child will be badly behaved and troublesome in Sabbath-school, in public school, and in his play with his companions. If well governed at home,

he will learn obedience there, and to obedience will be added kindness to others, gentle speech, and reverence.

How shall this happy state be brought about? — Mothers must give more time and prayerful thought to the question of the wise control of their children. They may begin early, so that baby knows that a command to do or not to do must be obeyed. Disobedience must be followed by punishment if necessary, but time should be given for obedience. My baby sometimes says, "What did you say?" He heard my *words*, but his little brain, working slowly, had not fully comprehended the meaning. A little one often pauses before he obeys, sometimes in order to grasp the meaning, but as often to see if mother is really in earnest. Having given time for this, nothing should interfere with the prompt carrying out of the command. Time is gained by taking time. Very little ones soon learn that it is not worth while to tease or scream for what has been forbidden, and that disobedience will be punished in some way. There must be no wavering then, for "he that wavereth is like a wave of the sea, driven with the wind and tossed." A child soon finds out if father or mother is an uncertain quantity.

The parent should "study to be quiet." The firm, gentle tone carries weight always, and this is true also for the older boys and girls. One young girl said to a

school friend, "I am so tired of hearing mother talk." The tone of voice had grown harsh and petulant and fault-finding, and it jarred with every member of the family, but most of all with the young girl who had to hear it constantly in the home.

Plenty of freedom of action must be given to the growing boy and girl, so that when restraint *must* come to check any wrong impulse and action, it will not make them morbid or sullen. Obedience may be secured, but of that dogged kind that is ready for mutiny at any moment, and the loyal, loving subject may be transformed into a scheming, deceiving person, soon out of reach of guidance and beyond control in school or elsewhere.

While we magnify the power of wise government, no home thrives best where surface rule is the constant theme and diet. Give boys and girls a rest once in a while, with freedom to think and act for themselves, that they may not be mere subordinates without independence of thought and action.

O, cultivate the helpful, happy side, the sunny, loving side of your boys and girls, and they will be loyal, true subjects. You will find it pays to remember these words of Madame Willard to a young mother, "Never let any human being separate you from the knowledge and love of your little ones."

THERE is upon Life's hand a magic ring —
 The ring of faith-in-good, life's gold of gold;
 Remove it not, lest all life's charm take wing;
 Remove it not, lest straightway you behold
 Life's cheek fall in, and every earthly thing
 Grow all at once unutterably old.

— Eugene Lee Hamilton.

SYMPTOMS OF DEFECTIVE INFANT NUTRITION.

KATE LINDSAY, M. D.

THE most important knowledge that a mother can possess is how to feed and train her little one so that it shall have the rich heritage of a sound mind in a sound body. The cultivation of tender human plants requires much more care than the raising of fine crops or fine domestic animals. Yet it is not so much a knowledge of what should be done as of what should be left undone. It is the attempt to give the little one material unsuitable for building up its body, and depriving it of food provided by nature, that causes so much trouble.

Comparatively few infants suffer from malnutrition and defective development on account of the wrong habits of the mother, or from disease, lack of food, or mental anxiety. It is among the great army of bottle-fed babies that we find the most marked evidences of faulty nutrition. Statistics have shown time and again that of babies nursed by mothers, both those fitted for this important work by sound health and proper habits of life and those more or less defective in health and regimen, fully sixty per cent. are fairly well nourished, while among those fed artificially but sixteen per cent. are at all fairly developed.

This is a grave question, to be settled only by turning the attention to those who will be the mothers of future men and women, and by training them so that they will be able to give their little ones a good start in life. Giving them a good start during the first year will do more to insure a healthy and successful life than all the education they can acquire afterward.

As it is always much better to prevent disease than to try to cure it after it is developed, it is very important to feed and care for the little ones in such a way

that they may be properly built up in their youth. Every healthy infant should show a steady gain in weight. Increase in size and flesh, however, is not always a sign that the nutrition is normal. Sometimes rickety children are very plump and fat, while the tissues of the body are not developing properly either in strength or in the composition of the tissues. The form of the head, the time when the fontanelles close, the time when teething begins and the advances it makes, the firmness or the flabbiness of the infant's flesh, its activity, the shrinking of the little one when handled,—all tell a story of want of some important food elements, or the lack of proper digestion and assimilation of food.

The fontanelles are the soft places, or openings, in the skull at birth. The one on the crown of the head is small, and usually closes in about six weeks or two months, but the larger one in front does not change much until after the infant reaches the age of nine months, when it begins to close up by the formation of bony tissue. In the normal baby it is usually completely closed by the fifteenth or the twentieth month. If it remains open after this period, there is lack of proper development, a condition which means either rickets or what is known as "water on the brain." It means that for some reason the baby is not growing as it should, and needs change of food and air, massage, electricity, and cold bathing to stimulate proper tissue development.

It may seem but a trifle to the parents that the baby's head sweats, or the fontanelles remain open after they should close, or that at a year or more of age it has no teeth; but if the conditions of evident malnutrition are not met and overcome at

once, the harvest of ill health will have to be reaped in after life. A baby fed on condensed milk will often be fat and fair to look upon, and may have a square, bulging forehead, which the fond parents think is a sign of unusual intelligence. This overdeveloped infant forehead, however, is not a sign of intellectual strength, but of a vice of nutrition, which means both physical and mental weakness.

Often a baby seems fleshy and even overgrown and heavy for its age, but its flesh is soft and flabby. The little one, although six or eight months old, makes no effort at creeping or any other form of locomotion. When placed on its feet, instead of resting on them, as the healthy child does, this fat, heavy baby sinks down helplessly, and when left alone, lies quietly on the bed or cot or on the floor, looking at the ceiling or lazily moving its hands about and taking a languid interest in the lamp or some toy. Such children get credit for being model good babies, because they are so quiet and never frighten mothers and nurses by getting into mischief and danger. So far from being models to make other mothers regret that their own rollicking youngsters are not like them, they should be objects of pity. They need to be treated vigorously to stimulate absorption and growth, so that the soft, unhealthy tissues may be removed and replaced by normal structures.

When the rickets are in a more advanced stage of development, the little one will whine and fret when handled, because its flesh is sore, and it is painful for it either to be handled by others or to move about itself. Often the flesh feels hot and feverish, the head sweats, especially when the child is lying on a pillow or on the arm, while at night it is restless, kicks off the bedclothes, and cries out in its sleep. Mild cases of rickets are sometimes overlooked, and only the pigeon breasts,

bandy legs, bad teeth, and spinal curvatures remain in after life to tell the story of infantile malnutrition.

The first tooth should normally appear between the fifth and seventh months. If no teeth have been cut by the end of the ninth month, there is usually some lack, either in food, or bone-making material, or of the stimulating, invigorating influence of pure, fresh air. To be sure, many children seem to be fairly well who teethe late in infancy, sometimes no teeth appearing during the first year; but it will usually be found that in such cases the teeth, when they do come, cause all manner of nervous and digestive disturbances, are undeveloped, and begin to decay as soon as they are out of the gums.

During the teething period the infant should be carefully watched, and whenever any digestive trouble develops, the cause be at once sought for and removed, if possible. Children who have plenty of good mother's milk seldom have trouble at this time, but those fed on artificial food very often show the want of proper food elements by an abnormal dentition. It is not only needful that the children have food rich in lime salts, but it must contain them in such a form that they can be used for bone construction by the growing baby tissues.

Sometimes when a mother is overworked and not well nourished, or overfed and does not take proper exercise, the milk will become defective from want of some important element, or overrich and indigestible from an excess of fat or some other element of nutrition. In the one case the lack must be made up by the use of well-cooked gruels, sterilized milk, rest, and better food for the mother; in the other case, a plainer diet and more exercise will help to improve the quality of the milk by freeing the body of the mother from retained waste matters, and furnishing it with a better supply of oxygen.

Even when the milk seems plentiful, it may be lacking in some important element because of the faulty diet of the mother. The writer remembers a case of well-marked rickets in a ten-months-old child nursed by a mother whose principal food was white bread and butter and tea. The mother on this impoverished diet was anemic, nervous, and had headache all the time. She was, in fact, in a state of semi-starvation. Her milk, although plentiful in quantity, was poor in quality, and the baby, though it nursed ravenously, was never satisfied. At ten months it had no teeth. It was rather plump looking, but its flesh was soft and flabby, and its head sweaty. When it was put on a diet of well-cooked grains and good milk, and after a short time weaned from the mother entirely, it began to improve at once. It lost its ravenous appetite, and after a short time began to cut its teeth, although they were not by any means either the sound or perfect teeth they would have been had the nutrition of the first months of life been more normal.

In another case of a twelve-months-old baby, also breast fed, there was every evidence of malnutrition. It had no teeth, its bowels were disordered, it was thin in flesh, the fontanelles were open, it had sweating of the head and sensitiveness of the whole body. The mother, although in a position in which it was not necessary for her either to overwork or to be underfed, confessed to living both before and after the birth of her baby on raw starch and confectionery, often eating as much as two pounds of ordinary laundry starch in a week. Such a constant nibbling at the raw starch destroyed all relish and appetite for other food, and neither before nor after its birth did her food afford proper nourishment for the little one. This case was so far advanced that a change of diet and proper treatment could not prevent serious deformities, and the

little one must struggle through life with deformed legs, pigeon breast, and chronic bronchitis and asthma.

When the first teeth are cut, the baby may begin to take other food than milk. The change should be made very gradually, and then there will be no trouble about the weaning time. At first a few teaspoonfuls of well-cooked gruel may be given; in a week or two a meal of gruel and milk, gradually introducing dry toast soaked in milk, until at the end of the first twelve or fourteen months the baby is entirely weaned.

The roots of the first teeth furnish lime salts to be used in the formation of the permanent teeth, and to have the jaws grow so that they will accommodate the permanent teeth it is needful that the milk-teeth keep their place until they are displaced by the incoming of the permanent set. Then every decaying tooth, especially in a child, is an avenue into the structures of the body through which disease germs may enter. The foundation of fatal tubercular infection has often been traced to the diseased cervical glands of infancy, resulting from infection of the lymphatics of the neck from bad teeth. It is impossible to say just how many cases of adults dying of consumption could be traced back to the malnutrition and decayed teeth of early infancy.

Decayed teeth, especially in infancy, mean an open door to very many disorders of after life, which may end fatally, or hamper in every way life's successes. A mouth full of decaying stumps, such as one often sees in a child of not more than four or five years, means that the stomach is disturbed, that every mouthful of food eaten is mixed with more or less septic matter. It also means imperfect mastication, faulty starch digestion, sour stomach, and chronic indigestion. It means a distorted, misshapen form of the jaws, and an imperfect set of second teeth.

During the first year of life, brain development is the most active, and want of proper food at this time results in a damaged brain, and a damaged brain means a more or less damaged life. The great army of criminals, paupers, and other society cranks are all persons with damaged brains, who, like a ship without a rudder, are tossed about by every craving of perverted appetite and the demands of unregulated passion which knows no law save that of gratification. Such persons hesitate at no measure which will contribute to satisfy these unlawful demands, and show no respect for either the life or the property of others, if they covet it themselves, to gratify the lust of the flesh.

The drunkard who has disgraced his family and wasted his fortune, ruined his health and sunk in the gutter, is aware of his degradation and the cause of it, but is so under the control of his appetite that no amount of reasoning will hold him back from destruction. He has a damaged brain and nervous system which is unequal to the task of regulating the actions of his body. Year after year the temperance work goes on, yet the drink trade flourishes and grows as no other business or trade does on the earth. Its stronghold is in the craving of perverted appetites and the unbalanced nervous systems damaged for the want of suitable foods in infancy.

Women weep, work, and suffer the same to-day as at the dawn of the race, because they feed the young on forbidden fruit. So the children grow into men and women with curved spines, unshapely, unsymmetrical forms, and damaged brains, to suffer all through life with ills of both body and mind. A three-year-old child with a symmetrical, perfect form, sound milk-teeth, free from catarrh, and with a healthy glandular system and good digestion, is comparatively safe from disease, and is not likely to be overcome by the temptations which arise from the cravings of an unsatisfied appetite.

Woman must value her own health and respect the laws of her own body before she can respect and value the health of her children. It must come home to her that it is the same sin of feeding the rising generation badly that ruined the race at the beginning. The Creator has given mothers the ability to furnish the proper building material for laying the foundation of the health of the race, and when they shirk this important duty, evil and disease, death and immorality, are the result. It is a fearful thing to put stumbling-blocks in the way of the little ones. Remember that the body is a sacred edifice, which should be built up carefully and with wisdom for the indwelling of the Holy Ghost. Nothing can ever undo a bad beginning.

ALAS!

I CAN not serenade you, love,
 Although the moon is high,
 I can not seek your casement, dove,
 Ah! do not ask me why;
 The topmost *G* that as a rule
 I reach upon my toe,
 Refuses now to come because —
 Ah! sweet, but need you know?

If you must know, if you *will* know,
 The reason I abstain
 From stealing to your casement, dove,
 To warble á la Spain,—
 To-night, to-night, ah, love, to-night
 The menu's charm was such
 At Lady Butcher's festive board
 I ate — I ate too much.

— *The Vegetarian*

Breakfast No. 1

Fresh Fruit
Granola Sweet Apple Mush
Tomato Toast
Cream Graham Rolls
Baked Apples



Breakfast No. 2

Fresh Fruit
Rice with Grape Sauce
Stewed Nuttose with Tomato
Zwieback with Nuttolene
Stewed Fruit

SEASONABLE BILLS OF FARE

MRS. E. E. KELLOGG

Dinner No. 1

Vegetable Soup
Baked Potatoes with Lentil Gravy
Stewed Corn and Tomato
Baked Squash
Toasted Granose Biscuit
with Nuttolene
Stewed Fruit
Fruit and Nut Pie



Thanksgiving Dinner

Vegetable Oyster Soup
Stuffed Potato
Roasted Sweet Potato with
Nuttolene Gravy
Mock Chicken Salad
Vegetable Roast Escalloped Tomato
Green Peas
Granose Flakes with Grape Sauce
Buns Coconut Crisps
Pumpkin Pie with Nut Crust
Canned and Fresh Fruits

Cream Graham Rolls.

To one-half cup of cold cream add one half cup of soft ice-water. Make into a dough with three cups of graham flour, sprinkling in slowly with the hands, beating at the same time, so as to incorporate as much air as possible, until the dough is too stiff to be stirred; then knead thoroughly, form into rolls, and bake.

Vegetable Pea Soup.

Cook one pint of split peas until dissolved. When nearly done, put to cooking one and one-half pints of sliced potato and one medium-sized onion, sliced thin. When tender, rub all through a colander, add water to make of the consistency of thin cream, and salt to taste. Reheat and serve.

Lentil Gravy.

Rub a cupful of cooked lentils through a colander to remove the skins. Add one cup of water, and salt if desired. Heat to boiling, and thicken with a teaspoonful of browned flour. Season with a tablespoonful of nut butter or nuttolene, or a half cup of sweet cream.

Stewed Corn and Tomatoes.

Boil dried or fresh corn until perfectly tender, add to each cup of corn two cups of stewed, strained tomatoes, either canned or freshly cooked. Salt to taste, boil together for five or ten minutes, and serve plain or with a little cream added.

Fruit and Nut Pie.

Paste.—For a large pie, take one and one-fourth cups each of sifted almond meal

and pastry flour, add salt, and one-third cup of water. Mix the meal, flour, and salt, add water, and roll out without kneading.

Filling.—When the pan is covered with the paste, have mixed together one-half cup of sugar and one-third cup of almond meal, with a little salt. Sprinkle half of this over the paste on the bottom of the pan. Fill the pan with tart apples—which have been pared and cut into quarters or eighths, then across—and drop into the spaces fine flavored raisins. Sprinkle the remainder of the sugar and meal over the top of the fruit, putting plenty near the edges. Cover with the top crust, and bake until the apples are tender.

Nuttolene Gravy.

Dissolve a dessertspoonful of nuttolene in a pint of warm water. Add one-half teaspoonful of salt. Heat to boiling, and thicken with one and a half teaspoonfuls of flour which has been browned in the oven. Cook thoroughly and serve. If preferred, one tablespoonful of browned flour and one half of white flour may be used. This will thicken the sauce more than the browned flour used alone.

Vegetable Oyster Soup.

Scrape all the outer skin and rootlets from the vegetable oysters, and lay them, as soon as scraped, in a pan of cold water to prevent discoloration. The scraping can be done much easier if the roots are allowed to stand in cold water for an hour or so. Slice rather thin, enough to make a quart. Cook them in two quarts of nuttose broth, prepared by stewing one-half pound of nuttose for an hour, then pressing the same through a colander, and adding water sufficient to make two quarts. Cook the vegetable oysters slowly until very tender; when done, add salt to season, and if desired, a little flour rubbed

smooth in water to thicken the soup. Serve hot with croutons.

Chicken Salad without Chicken.

Two-thirds finely sliced nuttose, one-third celery, sliced fine. One-half hour or more before serving mix with the sour salad dressing given below. When ready to serve, arrange in a salad bowl or on a flat dish. Garnish with lettuce or leaves of celery. A delicate flavor of onion, celery seed, or sage may be used, when celery is not obtainable.

Sour Salad Dressing.

Rub two slightly rounded tablespoonfuls of peanut or almond butter smooth with two thirds of a cup of water (the half-pint cup sold in the house-furnishing stores) according to directions for preparing the nut butter for bread. Let this cream boil for a moment over the fire. Remove from the stove, add one half a teaspoonful of salt and two tablespoonfuls of lemon-juice. Cool, and it is ready for use. If too thick, it may be thinned with a little lemon-juice or water. More salt and lemon-juice may be added if desired. A scant cup of strained stewed tomato in place of the water may be used.

Vegetable Roast.

One cup of strained stewed tomato, one cup of cooked lentils (measured after being rubbed through a colander), one cup of cooked crystal wheat, one tablespoonful of nut butter, one-half teaspoonful of finely powdered and sifted sage, or one tablespoonful of very finely minced celery. Add a little salt for seasoning, turn into a baking dish, and bake in the oven until quite dry. Serve in slices with a gravy made by cooking together for a few moments two cups of lentils prepared as above, one cup of strained stewed tomato, salt to season, and a tablespoonful of nut butter.

BATTLE CREEK SANITARIUM QUESTION BOX.

ANSWERS BY J. H. KELLOGG, M. D.

1. WHAT is the comparative healthfulness of warm and cold weather?

Ans.—I suppose this question is asked by some one who begins to think, "Now cold weather is coming, and I must flee to Cuba, Porto Rico, or some other place where cold and frost never appear." It is universally recognized by sanitarians that cold climates are the most healthful of all climates, and that cold weather is one of our greatest blessings. In New York the other day, I visited the Marine Hospital on Staten Island. For a week it had been brimful of soldiers from Cuba, and they all testified that since they had got where the weather was cooler they had felt better. Cold weather is a good tonic. Cold air and weather are worth more as tonics than all the drugs of the *materia medica*. The greatest advantage of cold weather or cold air is that it discourages the development and growth of germs. Germs are rampant in a climate where the air is warm and moist; the soil is so favorable to their propagation that they double in number every fifteen minutes. Think how many that would be in twenty-four hours,—about twenty-four square miles of germs, all from one germ. We should be overwhelmed with germs were it not for the fact that they exhaust the soil upon which they grow, and then feed upon each other, in consequence of which their numbers are greatly lessened. Where the climate of a country is continually warm, germs propagate with great rapidity. The only protection against them in such a climate is the hot sunshine, which is even more destructive to germs than frost. It is the hot sunshine of very warm countries that serves as a protection against consumption. It is the

sunshine, as well as the frost, that destroys germs in the soil. Freezing and thawing are nature's method of disinfecting the soil. Warm weather starts the seeds, or spores, to growing, and cold weather kills them. When the seeds of grain are sprouting, they are easily killed by cold or frost; the same is true of germs, their spores being quickly killed by frost. Many of our people make the mistake of fleeing from Jack Frost. I have understood, however, that some of the people of California are coming east to spend the winter, for their health. When I heard that, I said, "That is one of the most sensible things I ever heard of Californians." Sometimes our friends in the "sunny South," which has been the winter rendezvous for many Northern people, come north to spend the winter, for their health. When cold weather approaches, nature puts on her winter constitution, and our bodies are changed and modified and prepared for cold weather. They are hardened and freshly vitalized by the tonic of the cold.

2. Will you give us a lecture some time on food combinations?

Ans.—There is no need of a lecture on that subject, because the best foods agree perfectly; one does not need to study combinations if he will eat the best foods, that is, fruits, grains, and nuts. But if one persists in eating questionable foods, like vegetables, then this subject requires some attention. Vegetables were never intended to be eaten by human beings; they were intended to be eaten by the lower animals. Persons with weak stomachs and slow digestion should avoid combinations of fruits with vegetables, especially with coarse ones like cabbage.

Raw cabbage is indigestible; when cooked, it requires four or five hours for digestion. On the other hand, fruits digest quickly, a ripe apple requiring only an hour and a half. In combinations of fruits and vegetables both foods remain in the stomach for a long time, and the fruits, adhering to the vegetables, and being retained in the stomach longer than necessary, produce sourness, decomposition, and fermentation.

3. Would not the development of the sense of taste by cultivating the ability to distinguish between breads and nut compounds containing the elements in different proportions, as well as to distinguish the amount of fruit flavor in grain preparations flavored according to a scale, increase considerably the digestive power?

Ans.—That is an interesting question, — whether it would not be possible to arrange some method of educating the taste, a sort of gymnastics by which it might be developed. Among civilized people the sense of taste is terribly debased, the only flavors clearly distinguishable by most people being those of mustard, pepper, and salt; nine tenths of the world would consider food flat and insipid without these strong flavors. But foods have flavors of their own, and it needs only the natural delicacy of the taste to distinguish them; this natural acuteness of taste should be recovered, if possible.

Some of you may think that it would be very hard work to eat a potato without salt; but a good baked potato has all the flavoring it needs to accommodate it to a perfectly healthy taste. In like manner, every grain and every fruit has its own flavor. Every natural fruit has flavor enough in it to gratify a wholesome and healthy taste. I am in favor of developing the sense of taste.

4. Is it safe to eat figs and dates unboiled?

Ans.—Dates and figs generally come from tropical and cholera-breeding countries, and are likely to be infested with germs of various kinds. I think that dates are unfit to eat. Figs should be cooked in order to be digested.

5. Does not the boiling of fruit decrease its food value?

Ans.—I am inclined to think it does, somewhat. We find in our laboratory experiments that the juices of raw fruits are highly destructive to germs, whereas the juices of cooked fruits are not so effective in destroying germ life. Filling the stomach with pure raw fruit has the effect of driving out the germs and discouraging their growth; by persisting in the use of fruit-juices the germs will be entirely destroyed.

6. If one accustomed to drinking at meals is a "hypo," does not fruit harmfully dilute the digestive fluid?

Ans.—No; fruit is a semi-solid, and does not dilute the digestive fluids.

7. Is watermelon wholesome?

Ans.—Yes, if it is not eaten, but swallowed like fluid. One should not swallow the pulp of the watermelon; the woody fiber is retained too long a time in the stomach, and sours, causing indigestion. Take nothing but the juice of the watermelon, and there will be no trouble.

8. Please explain why it is a good thing to close the pores of the skin with powder or coconut butter after a bath. I have always thought that the pores of the skin should not be closed.

Ans.—If you will examine the pores of the skin through a microscope, you will see little ridges and cross-lines looking something like a string of beads. These are the openings of the perspiratory ducts, or so-called pores. No great harm comes from the closure of these pores. You can not close them by putting on oil

or powder, because there is pressure enough behind it to lift out whatever you may apply to it, so that the pores never become quite closed. Oil acts like a garment—a non-conductor. Experienced swimmers oil their bodies to prevent the transmission of heat to the water. No harm can come from this practise.

9. How does variety in diet rank in importance with asepsis of the mouth, mastication, etc.?

Ans.—Variety in diet is necessary only for persons whose appetites have to be humored and must be stimulated by pampering the taste. A person with a per-

fectly sound taste and appetite very rarely needs to make a change in his bill of fare. The horse changes his diet once or twice during the year, and that is enough for a healthy person; for changing the bill of fare is to take foods that supply all the needs of the body,—that furnish all the necessary elements. There is really no physiological demand except to change somewhat with the weather, because in the hot season of the year we do not need so much fat as in the cold season. In the cold season we need more, because the carbonaceous matter is almost entirely consumed in the body.

PHYSIOLOGY AND ALCOHOL.

IF one takes down the twelve most recent authoritative works on physiology, and turns up their reference to the action and effects of alcohol, he will find a singular uniformity of condemnation. Some writers are explicit in their adverse opinion, others are cautious, and leave the reader to make his own conclusions from the facts; but these facts are ranged in such a form as to lead to no conclusion but one of almost unhesitating condemnation.

The old medical theory was that if a man felt as if wine was doing him good, he should take it. Newer and wiser views tell a man that if he feels as if it were doing him good, he should be specially wary of it. The old theory was that if a man, on returning in the evening from business, found himself jaded and run down, a glass or two of wine with his dinner would pull him together again and put new life into him for the evening. Recent physiology utterly condemns this course.

A man who has the worries of business on his mind all day, goes home with the

tone of his blood-vessels upset. But he settles down to dinner, and takes a glass or two of wine. Now, the one physiological effect of alcohol is to paralyze the contracting vasomotor nerves; hence the arteries in his body expand, a fuller tide of life-giving blood flows to brain and limb, and every faculty is enlivened. The man says that his glass or two has done him good; and so it would have done if the action of the drug entirely ended there. The man's face has lost its pinched, pale look; his finger, from which the ring was a little ago ready to drop, now looks fuller, redder, fleshier, and the ring is a tight fit. The man is cheerful, and if he does not exceed a glass or two, is a livelier companion.

But the experiments of Dr. Parkes have shown that the effect of alcohol is at its maximum in about three hours. Then comes the reaction. Those contracting nerves, paralyzed for a time by the drug, get rid of its effects—they begin to assert themselves. Now, if a man has dined at six o'clock and goes to bed before midnight, he is very likely to feel a noticeable

loss of tone before he retires. He takes a final glass, and goes to bed blessing the benefits of alcohol.

During the night the reaction comes, and in the morning the man rises more than ever prepared to be jaded and wearied with the worries of his business. If he braces himself up with more alcohol during the day, he is only laying in the heavier penalty of future reaction. He wants a little more wine in the evening to make him happy again; and so the thing goes on, the man all the while thinking

that alcohol is doing him a world of good, when in reality it is permanently deranging the tone of his whole system.

Alcohol professed to be his friend, while giving him a temporary assistance at a ruinous rate. It is like the case of the man who gets the timely warning from his banker about the state of his account. That man, if wise, ought to rearrange his affairs, and look to the rate of his expenditure.—*Alexander Sutherland. Abridged from the Melbourne Temperance News.*

How to Give up Drinking.

The question is often debated whether it is better to break off the liquor habit suddenly, or to do it by inches—as the man cut off his dog's tail, so it would not hurt so much. In the *Quarterly Journal of Inebriety* for July, R. W. Branthwaite, M. D., M. R. C. S., brings forward some of the practical disadvantages of cutting off liquor gradually. He says, "There is continual strain and anxiety to obtain the next dose, and dissatisfaction at the absence of the desired amount of stimulation when given; a difficulty in obtaining proper sleep from uncertainty in the action of drugs; aversion to food, which usually lasts until alcohol is almost discontinued or inappreciable in amount; a general lengthening out of discomfort; loss of patience; and—an important factor—postponement of desire and effort to get well as long as any alcohol is administered, no abatement of the drinker's cunning and determination to get further supplies whenever possible." The writer states that on the other hand, the sudden withdrawal of liquor has in his experience met with unqualified success. As soon as the patient knows that he can get no more liquor, there is mental quietude on the question. Soon there

comes a desire to get rid of it, and a willingness to take food, with little difficulty in obtaining sleep.

The Food of Arabian Porters.

Arab carriers bear great loads upon their backs, and go at a trotting pace from 6 A. M. to 6 P. M. "During the month of Ramadan," says the *Vegetarian Messenger*, "the Koran forbids the taking of food between sunrise and sunset, and this law is said to be held sacred and rarely violated. Not only do these porters continue their arduous physical exertion during the twelve laboring hours of the day without taking any food during that period, but the French inspectors who are in charge of the gangs told our informant that they could work better during the month of the fast than at any other time of the year, because their energy was not needed for digestion. At eventide, these Arabs have a moderate meal of wheatmeal porridge, mixed with large proportions of butter (it is to be had cheap) or olive-oil. Their expenditure for food is not more than six or seven cents a day, and the only luxury which they permit themselves is a cup of very strong black coffee and a cigarette. The idler exists on one cent's worth of

bread with a little olive-oil, which he buys for an additional five cents. What German or English workman can equal this frugality? 'From our childhood upwards,' says Dr. Andries, 'our stomachs are filled, whether we need it or not, and the burden pursues us to our dying day.' Another remarkable fact about these Arabs is that they do not perspire."

Fresh Air for the Czar.

An interesting story of Dr. Zaccharin, late physician to the Czar, is told in *Health*:—

"Fresh air was the creed emblazoned on his banner of hygiene, and fresh air he would have at any cost. No practitioner has more stoutly demanded the assistance of this valuable aid to nature's recuperation, and his insistence doubtless occasioned much heart-burning among his patients, who, like many others in our own country, have a great fear of fresh air for the sick-room. Zaccharin entertained no such qualms, and with brusque petulance insisted on having doors and windows opened. When he visited the dying Czar, he found him surrounded by the czarina and other members of the family, and on entering the sick-room, ignoring the presence of the exalted individuals, he loudly demanded air, remarking at the same time, in tones of deep reproach, 'What an atmosphere! It is disease-breeding. And in this air you allow Russia's little father to lie!' And then, without more ado, he roughly tore down the curtains, and threw open the windows."

Their Different Cries.

When pain is the cause of the baby's crying, says Frank W. Shaw in the *Brooklyn Medical Journal*, there is a contraction of the features and an uneasy

movement of limbs and body. Violent and obstinate crying usually indicates ear-ache, hunger, thirst, the presence of a pin, or an undetected inflammatory rheumatic joint. Restlessness and fretful crying at night, if the baby is apparently healthy and well fed, may be due to a hard mattress, and may be entirely relieved by placing the child upon a large soft pillow. The cry from a pain in the head is sharp and sudden. The pain of pneumonia or pleurisy occasions a cry usually during coughing and for a short time afterward, and in pleurisy by pressure on the affected side.

Lincoln's Opinion of Hoops.

The *Boston Globe* prints the following story of Lincoln, that might have been reported especially for GOOD HEALTH:—

"Abraham Lincoln had much gallantry for women, and was an acute observer of their gowns. Anything approaching the gaudy quite put him out of humor with the wearer. After he became president, the renown of his tender heart caused him to be besieged with incessant applications for pardons. He was finally obliged to refuse to see any of the petitioners.

"At one time, however, a young girl, by her own efforts and will power, succeeded in getting an audience with him. She craved the pardon of a brother, unjustly imprisoned. It was the old story; but as Lincoln gazed at her tear-stained face he cried:—

"'My poor girl, you have come here with no governor, nor senator, nor member of congress to plead your cause; you appear honest and truthful, and you don't wear hoops, and I will be whipped, but I will pardon your brother.'"

ALL high and beautiful gifts, graces, and achievements have flowered on the stem of pain.— *The Outlook*.

EDITORIAL.

SANITARY PROGRESS.

ONLY those who have been engaged in fighting the battle for sanitary reform for a quarter of a century or more are prepared to appreciate the marvelous strides which have been made in the acquisition of hygienic knowledge and the progress of those principles and rules of conduct that have a special bearing upon physical health. Twenty-five or thirty years ago, the man or woman who raised a protest against ordinary methods of eating and drinking and the general conduct of life in relation to health was truly a "voice crying in the wilderness" of error, scarcely audible above the noisy clamor of the multitude against any innovation looking to an abridgment of selfish indulgence or a departure from old, established customs. The few advocates of public and private sanitation were regarded as cranks, semi-lunatics, hobbyists, and were rarely afforded a respectful hearing.

The attitude of the public mind toward questions of this sort is entirely changed. The seed sown by the pioneers of hygienic reform has been germinating and growing during the last third of a century, and to-day is bringing forth abundant fruit. Everywhere intelligent men and women are eager to study the question of health and to learn the way of physical righteousness. It is true that the multitude still drift thoughtlessly, self-indulgently, gratifying every whim and fancy, treating the body as a harp of pleasure, and reaping a harvest of physical and mental deterioration and premature death.

But in every community there is to be found a considerable number of thoughtful persons who have become conscious of the fact that most of our physical, as well as our mental and moral, woes are natural consequences of our own wrong-doing, and who have developed in their hearts an earnest purpose to find the divine order of life in matters physical as well as moral. There

seems to be a growing recognition of the fact that the distinction made between physical and moral questions as regards man is an artificial rather than a natural one, and that man's best mental and moral state can be attained only by conformity to all the laws which relate to his physical well-being.

Thirty-two years ago, GOOD HEALTH first made its appearance as an advocate of the sanitary and hygienic reforms which it has since steadfastly advocated. The principles announced in the pages of this magazine thirty-two years ago have been continuously adhered to, and honestly promulgated by the various writers who have contributed to its columns during this entire period. It is perhaps not too much to say that some millions of people have been instructed and enlightened upon the important questions here discussed.

For a little more than twenty-five consecutive years, the present editor has endeavored to discharge his duty in making this monthly an exponent of the most advanced and reliable thought in relation to all matters pertaining to the care of the bodily health. This purpose has been made the single and constant aim in the preparation of every number of the magazine. It has never been made the organ of any institution, individual, or association. It has, nevertheless, received constant aid and encouragement, and both moral and financial support, from the Battle Creek Sanitarium, an institution founded at the same time that its publication was begun, and with precisely the same purpose; namely, the promulgation of reformatory ideas respecting the care of the body in both health and disease.

GOOD HEALTH has for many years constituted the right arm of the educational department of the Battle Creek Sanitarium, which is conducted on lines independent of the interests of the medical departments of the

stitution; for, although from a worldly standpoint it is a "house divided against itself," one department depending upon sickness for its support, another aiming to prevent sickness, it has, nevertheless, attained success through the promulgation of rational ideas of getting well and keeping well.

As an illustration of the marvelous growth which ideas relating to hygienic reform have made within the last third of a century, the managers have devoted considerable space in this number to a report of the anniversary exercises of the founding of the Battle Creek Sanitarium and the various interests connected with it. It is to be hoped that the readers of the magazine will not consider this use of the pages of this magazine an unprofitable one nor as having any other purpose than the practical illustration of the force and growth of principles which have risen in so short a time from disdain and calumny to respectability and even popularity.

GOOD HEALTH does not now stand alone in advocating the principles which it represents,

as it did during the first years of its publication, and for many years; for it is only one of a sisterhood of magazines numbering fully a half dozen in this country and an equal number in foreign countries, representing five languages and seven countries,—thirteen magazines in all, with an aggregate monthly circulation of one hundred thousand copies. The Battle Creek Sanitarium has grown during the same time from a small country residence to an institution comprising nearly one hundred buildings, accommodating fifteen hundred people, and with ten branch sanitariums in this country and fourteen abroad, representing eleven foreign countries.

We trust that the friends of sanitary progress will find the story of the development of this work a source of interest and encouragement, and that among our readers there will be found not a few, who, having thus become acquainted with one of the agencies planted by a kind Providence for the moral and physical uplifting of humanity, will give to it a thought of sympathy and congratulation.

FARINACEOUS FOOD IN INFANCY.

DR. HAMILL recently contributed to the Philadelphia Pediatric Society an interesting and practical paper, calling attention to the injury that young children often suffer from the use of farinaceous food. He maintains that even after the first year, such articles as potatoes, bread, thick oatmeal porridge, are a cause of chronic gastric intestinal indigestion. He insists that oatmeal porridge is likely to undergo fermentation, and that porridge with bread and similar articles of farinaceous food are likely to produce intestinal catarrh through the irritation resulting from the acids formed by fermentation.

Our experience entirely agrees with that of Dr. Hamill as regards the use of farinaceous foods of the sort to which he refers. Children can digest farinaceous foods, but not unless they are thoroughly cooked. The fault with potatoes, porridge, or bread is not that it is farinaceous, but that it is not thoroughly cooked. In the digestion of

starch there are four principal stages, or steps, which are produced as follows in the transformation from starch to sugar:—

1. Amylodextrin, or soluble starch, which produces a blue color in combination with iodine.
2. Erythro-dextrin, which gives with iodine a violet or purple color.
3. Achroödextrin, which forms with iodine a colorless compound.
4. Maltose.

The changes induced in starch by salivary digestion may be reproduced in the chemical laboratory by the prolonged boiling of starch with a mineral acid. The same changes also take place in the ripening of fruits. It is likewise possible to produce the same transformations, at least as regards the first three stages of the process, by means of heat, provided a sufficiently high temperature is employed. In the ordinary cooking of gruels and vegetables, only the first stage, that of

amylodextrin, is reached. In the baking of bread and by the long cooking of grains,—four or five hours,—the second stage, that of erythrodextrin, is produced. By the exposure to a temperature of 300° to 400° in a hot oven the starch is slightly browned. This change in color marks the development of achroödextrin, the third stage in the digestive process.

No further digestive change can be induced by the application of heat,—in other words, a thorough or complete cooking of starch results in its transformation into amylodextrin, a digestive product which stands next to sugar. When brought in contact with the saliva, achroödextrin is instantly changed into sugar, whereas soluble starch requires a more prolonged action of the saliva to carry it through the several intervening steps to complete digestion.

Salivary digestion is weak in children until the teeth are fully developed, and then it is evident that for the proper performance of salivary digestion in the stomach, one of the most important functions of that organ, it is necessary that farinaceous foods should be taken dry, so that there may be the proper mixture of saliva.

Some years ago the writer conducted a series of experiments for the purpose of determining the conditions under which saliva is produced, by which it was shown that in the chewing of thoroughly dry food the salivary glands may be made to pour out as much as two ounces of saliva in five minutes while masticating one ounce of thoroughly dried and well-baked cereal food. When a moist cereal preparation, like oatmeal gruel, was tested in like manner, the amount of saliva produced was found to be less than one fourth the quantity.

Dryness is, of all other qualities of food, that which most powerfully stimulates the saliva. Nothing could be more absurd, then, than the feeding of infants with gruels, mushes, porridge, or soft breads; indeed, that most common of all articles provided in the usual bill of fare for children, bread and milk, must be condemned as being by no means the best suited to the dietetic needs of a young child. Salivary digestion being not

yet fully developed in the child, it is all the more important that the most favorable conditions possible for perfect salivary digestion should be secured. Instead of feeding the child farinaceous preparations in a half-cooked condition, as found in potatoes, soft bread, porridge, gruels, and vegetable soups, farinaceous food stuffs should be administered only in the thoroughly cooked form, as found in zwieback, granose, and similar preparations. Every intelligent nurse knows the value of a flour-ball in the relief of some forms of indigestion in children. The long cooking of starch in making the flour-ball advances it in the digestive process much beyond the state in which it is ordinarily found in the foods mentioned.

For perfect cooking, the starch must be exposed to cooking in a dry state, since in the moist condition it is impossible, with ordinary cooking apparatus, to carry the temperature above 212°, while a much higher temperature is needed for the production of achroödextrin by the action of heat.

The real difficulty, then, in the feeding of children with farinaceous foods is, not that these foods contain starch, but that they are not thoroughly cooked. The writer has met many cases of young children with enormously dilated stomachs, and many adult persons in whose cases it is easy to trace the chronic dilatation of their stomachs back to early childhood. It is the writer's firm belief that gaseous distension of the stomach through the fermentation of uncooked and undigested starch is one of the most common of all causes of stomach dilatation, and of incurable diseases to which this condition gives rise. Zwieback is an article of food which any mother can easily prepare at home. It consists simply in cooking thin slices of light bread by placing in the oven and baking until slightly browned through the whole thickness of the slice. Granose consists of wheat which has been first cooked, then rolled into flakes, then baked in an oven until slightly browned. Granose has the advantage that while perfectly dry it is exceedingly palatable, universally liked by children, and can be masticated quickly and perfectly even by people without teeth, by

the mere action of the gums, so that it can not be swallowed in large pieces which are likely to lie in the stomach for hours undigested until fermentative and putrefactive changes take place.

The subject of starch digestion and the

proper preparation of farinaceous food stuffs is one which has received too little attention. Amylaceous dyspepsia is the prevailing American disease, and the foundation for this malady is the use by young and old of half-cooked cereals.

Butter Fifty Years Old.

According to the testimony of a missionary recently returned from Tibet, butter half a century old is one of the table delicacies of that country. The native Tibetan thinks it necessary for butter to "age," to "ripen," to acquire a "boquet," as connoisseurs of wines call it, or a *haut gout*, to use a French term for the evidence of far advance along the line of decomposition. Ripe butter the missionary found very disgusting and nauseating, but only because his taste for butyric acid was not fully developed. Doubtless he is quite fond of well-matured cheese and hot griddle cakes, in which fatty acids are present in ample quantity, and nothing but practise is wanting to enable him to eat the ptomains and other toxins in decomposing butter with as much relish as a Tibetan or a Kamtschadale, who drinks rancid train oil and swallows rotten blubber with gusto; or to welcome as an appetizing dainty, as does a Chinaman, an egg three years advanced in decay.

Turkey buzzards, hyenas, certain flies, maggots, pigs, oysters, and other creatures endowed by nature with the scavenger instinct possess a natural taste for the odors and flavors of decay; but man, whose dietary naturally consists of such pure, sweet, and delicately flavored substances as fruits, grains, and nuts, must cultivate a liking for the savor of decay and rottenness if he would enjoy it.

But why should man thus subvert his natural instinct in cultivating a love for things that are fit only for the compost heap, the bone-yard, or the cemetery? why should he thus prostitute his senses and abuse his body? The natural disgust for these things is an evidence of their unwholesomeness. The nausea, the smart, the aftertwang, are signboards that nature has put up, pointing out their evil qualities—warning voices saying, "Do not eat."

Butter fifty years old is neither better nor worse than old cheese, meat with a gamey flavor, "finnan haddie," saur kraut, and a dozen other dishes that often appear on the tables of men and women who claim to be much higher in the scale of civilization than the benighted natives of Tibet. The average bill of fare needs expurgation and renovation and disinfection, to cleanse it from the strong taint of savagery of which it still savors.

Laboratory-Made Foods.

The possibility of the manufacture of food by chemical processes is a question that has recently been discussed in the newspapers. It is claimed that a certain German professor has announced his ability to manufacture albumen from coal tar. The laboratory processes are said to be much cheaper than those by which nature produces albumen.

If true, this discovery is certainly a very startling one. Since Adam was told that he must earn his bread by the sweat of his brow, we have labored under the impression that the sweat was good for Adam, and that the products of the vegetable kingdom must forever be regarded as the sole source of human aliment; but the divine order, we understand, is in danger of being subverted by the chemist, who proposes to render it possible for a man to sit down in idleness, at any rate, to lay aside the shovel and the hoe, and other implements of toil, and concoct his food materials by the wholesale out of the refuse products of gas works and oil refineries. Such a method of obtaining food would not only subvert the order of nature, but would abolish one of the most important of human interests; it would set a premium on idleness, and would place man in a position where he would be no longer dependent upon

seed time and harvest, upon the rain and the sunshine, the beneficent means by which God now supplies our daily food, but would be independent of the divine ministrations, whereby all sensate things are now supplied with nutriment.

The chemist may have discovered something that looks like albumen, and responds to all the chemical tests of this substance, but we shall be quite loath to believe it real albumen, an element capable of sustaining life, until after the astute professor who makes this astounding announcement, has been fed upon it exclusively for a few months, and is still able to continue his chemical investigations.

An Evidence of Indigestion.

Coldness of feet and limbs is almost invariably an evidence of indigestion. The coldness is due not to the weakness of the heart or feebleness of circulation, as is generally supposed, but to the contraction of the small arteries, preventing blood from entering the parts. There is generally an irritation of the abdominal sympathetic nerve centers which control the circulation of the lower extremities. This difficulty is not to be removed by exercise or by any special application to the limbs, but by removal of the causes of irritation. This may be a pro-lapsed stomach or chronic indigestion. Hot and cold foot-baths are valuable. These act not simply on the feet and limbs, but by reflex action affect beneficially the abdominal sympathetic centers, which are in a diseased condition.

Tuberculosis in Cows.

Tuberculosis in cows is evidently on the increase. The disease is invading portions of the country which have heretofore been free from this malady. Recently an examination was made by Professor Humphrey, the State veterinarian of Michigan, of thirty-two cows belonging to a herd in the vicinity of

Caro, Mich. Twelve were found to be affected. Internal examination of one of these showed the lungs and glands in an advanced state of destruction by this disease.

Tuberculosis is an infectious malady. The fact that animals are rapidly becoming infected should lead to a careful consideration of the question whether it is not best to discard the flesh of animals as food, and return to the original bill of fare,—fruits, grains, and nuts.

The Mania for Suicide.

It is a most alarming fact that suicide, as well as other crimes of violence, has rapidly increased. According to Dr. Justin Herold, coroner's physician of New York City, 3,431 residents of New York City have committed suicide within the last fifteen months. Chicago papers report that 2,000 persons lost their lives in that city by violence within one year. Not all of these were suicides, however; quite a considerable proportion were evidently cases of homicide.

Due regard for the sacredness of human life is certainly decreasing. This is one of the numerous grave questions that are demanding study, and one of the evidences of the rapidly increasing race deterioration.

The Man and the Monkey.

The man went down to the ocean's beach and dug in the mud and slime for an oyster to eat. The monkey climbed a tree and reached up among the beautiful branches for a yellow pear. Now why should not we in the choice of our food, reach up, as the monkeys do, instead of down, like degenerate man? Why do we insist upon shedding blood and causing pain and misery to other creatures in order to gratify our appetites, when God has given us a wonderful variety of natural foods that satisfy every demand of the body, and are pleasing to all our senses and ennobling to the mind?

ANSWERS TO CORRESPONDENTS.

The Cause and Cure of Boils.—A California correspondent reports an epidemic of boils in the community where he lives, and asks for an outline of treatment.

Ans.—Boils are directly due to infection of the tissues with germs. There are always found upon the skin, germs capable of producing boils and other forms of suppurative processes if introduced into the system. Ordinarily, however, the body does not suffer from the close proximity of these noxious elements, for the reason that the tissues are able to destroy, in various ways, the small number of bacteria which penetrate the skin. When, however, by any means the vitality of the system becomes lowered to a sufficient degree, invasion by these parasitic microbes through a scratch, a pin prick, or any other abrasion of the skin, may give rise to the multiplication of germs and the production of pus, with the accompanying swelling, pain, and suppuration.

Some of the most common causes of the tissue degeneration which renders the production of boils possible are flesh eating, the free use of fats, constipation, and indigestion. Repeated attacks of boils can be averted only by removing the cause, whatever it may be. A non-flesh dietary is in the highest degree important in cases of this sort. The use of antiseptic tablets is a valuable means of destroying the germs that are present in the stomach and bowels, or of preventing their further development. An almost exclusive fruit diet should be adopted for a few days, and the plan of making one meal of the day entirely of fruit should be followed for a few weeks at least. A daily warm bath, followed by a short cold bath, plenty of out-of-door exercise, and care to secure prompt, regular, daily movement of the bowels, are other measures of importance. A boil may generally be avoided by injecting into it a few drops of a one to twenty per cent. solution of carbolic acid. Hot applications are useful in relieving the pain.

Test for Consumption.—A subscriber asks: "1. Is it a sure sign of consumption for the sputum to sink to the bottom in water? 2. Would a cold on the lungs have the same effect on the sputum?"

Ans.—1. No.

2. Sputum which results from violent efforts to cough when there is an irritable condition of the mucous membrane of the lungs, is a light secretion, generally frothy in character. It contains a considerable amount of air, and when dropped into water, floats. This is true whether the coughing

be the result of an irritation arising from consumption or from a hard cold.

Massage for Baldness.—A. M. L., Wisconsin, wishes to know how to massé the scalp for baldness.

Ans.—The scalp is rubbed, kneaded, pushed, and moved around upon the skull. For full description of massage of the head, see "Art of Massage," published by the Modern Medicine Pub. Co., Battle Creek, Mich.

Carbon Crackers.—G. S. F., Pennsylvania: "1. Can one eat too many carbon crackers at one meal? 2. What is the best diet during pregnancy?"

Ans.—1. Yes; it is possible for a person to eat too much of anything. Two or three charcoal crackers are a sufficient amount to be taken at a single meal.

2. The diet should be thoroughly hygienic. It must be varied more or less to suit the condition of the patient. We recommend the careful study of the work entitled, "Ladies' Guide in Health and Disease," published by the Modern Medicine Pub. Co., Battle Creek, Mich.

Turkish Bath Cabinet.—L. P. B., Iowa: "Can you recommend the use of the Turkish bath cabinet for catarrh, colds, rheumatism, etc.?"

Ans.—Yes, but the applications should be short, only long enough to produce free perspiration, and should be followed by a cold shower bath, continued for a sufficient time to remove from the skin all the artificial heat communicated to it, and to produce a strongly tonic effect. The electric-light bath is far preferable to other forms of the hot bath, as it is both tonic and eliminative, and more easily controlled.

Dreams.—B. C. M., Massachusetts: An old man is troubled with unpleasant dreams. He would like to know the cause and cure.

Ans.—Perfectly normal sleep is dreamless. When dreams occur, it is an indication of disturbance of the nervous system during sleep. Sleep is generally less sound with elderly persons than with children. The dreamless sleep of childhood is the normal state of the young, and should be regarded as normal for adults as well. Indigestion, worry, too warm bed covers, and a variety of other causes produce unpleasant dreams.

Sneezing in the Morning.—J. W. M., Virginia: "What causes one to sneeze and cough on arising in the morning? The throat and chest are sore."

Ans.—It is probable that the skin is relaxed and very sensitive, so that when cool air strikes the body on arising in the morning, an impression is made which excites the cough and sneezing centers, by reflex action.

Enemata.—W. S., Michigan: 1. "Is the frequent use of hot water enemata injurious? 2. What is the best instrument to use for this purpose?"

Ans.—1. No, if not too long continued. The remedy is very valuable as a palliative, but if repeated too frequently, the bowels become inactive, the normal reflexes are disturbed, and a very unfortunate condition results. When by the continued use of the enema, a person has reached this state, the enema should be dispensed with as soon as possible. The best way to get rid of it is gradually to diminish the quantity of water, each time lowering the temperature also, until a very small quantity of cold water is used instead of a large quantity of hot water.

2. The siphon or fountain syringe, which may be obtained of the Sanitary Supply Co., Battle Creek, Mich.

Food Combinations—Diet for a Delicate Child, etc.—A lady in Tennessee asks: "1. Is apple a fruit, and should it be eaten in large quantities? 2. Are onions wholesome? I have seen the statement by a physician that boiled onions should be eaten at least once every week. 3. Does celery digest easily? 4. Is it best raw or cooked? 5. Is it good for the nerves? 6. Is there a health cook book? 7. Is the water in which pared potatoes are cooked unwholesome? I like to use it for soups. 8. Should one eat only three things at a meal? 9. How can one learn the best combinations of food for health? 10. Please give some menus for a thin, delicate child of two years. He can not eat cow's milk. Would any of the health foods be good for him? 11. Lemon-juice a good lotion for a baby's scalp? 12. Is borax good for the hair? 13. What is the best hair wash? 14. Do you use dairy cream in the menus given in GOOD HEALTH? 15. Is sugar never to be used even in acid fruits? 16. Are hot rolls allowable to be eaten? 17. Can you suggest any books to guide one in cooking and house-keeping? 18. Can too much lime be used about a place? 19. How can a dingy complexion be improved and blackheads be removed? 20. Are your nut products more expensive in proportion than meat? 21. Is catarrh the same as tuberculosis? 22. What treatment would you give for catarrh? 23. Is 'Hyomei' beneficial? 24. Are raw onions good for colds?"

Ans.—1. Yes, botanically, but from a dietetic standpoint it should be classed among vegetables. The squash contains very little nutriment, especially

the summer varieties, and being a coarse vegetable, can not be eaten in any considerable quantity except by persons with vigorous digestion.

2. The onion can hardly be considered a wholesome food, on account of the acrid and poisonous essential oil which it contains. There is no foundation whatever for the notion that onions should be taken periodically.

3. No.

4. It is best digested when cooked.

5. No.

6. Yes, there are at least two of them,— "Science in the Kitchen," and "Every-Day Dishes," published by the Modern Medicine Pub. Co., Battle Creek, Mich.

7. No, there is no reason why it should not be thus used.

8. There is no foundation for such a theory.

9. Natural foods,—fruits, grains, and nuts,—agree perfectly in all kinds of combinations. If vegetables are used, fruits should, as a rule, be avoided at the same meal, at least by persons whose digestion is slow. Fruit and vegetables, also meat and vegetables, constitute unwholesome combinations. Milk and vegetables and milk and meats are other combinations likely to produce unpleasant results.

10. All the health foods are wholesome for a child of two years or any child that has teeth. Granose cakes toasted, zwieback, crystal wheat, all the crackers, nut gluten, and various other gluten preparations are especially wholesome for such a child. Bromose, maltol, ambrosia, malted nuts, and nuttolene are to be especially commended. The lives of many children in such condition have been saved by the free use of bromose.

11. Yes, if no irritation is present.

12. Borax solutions are excellent for the scalp, if not too strong, and by benefiting the scalp, are indirectly helpful to the hair.

13. Pure soft water, with a little soda added.

14. When cream is recommended in GOOD HEALTH, also in "Science in the Kitchen," and in other authorized works on diet, it is always understood that perfectly fresh cream is meant, and cream that has been sterilized.

15. A small amount of sugar may be used with acid fruit by persons who have sound stomachs. Most persons suffering from indigestion must avoid the use of sugar.

16. No, with the exception of unleavened rolls that have been cooked until slightly browned throughout.

17. Yes, "Science in the Kitchen," and "Every-Day Dishes," published by the Modern Medicine Pub. Co.

18. Lime does not throw off into the air any unwholesome vapor, and we fail to see wherein it could be productive of any harm, unless present in very large quantities indeed, in which case it might give rise to an irritating dust.

19. By a diet of fruits, grains, and nuts. Fruit may be eaten very freely. The application of compresses and steam to the face, and facial massage will be beneficial.

20. No.

21. No.

22. The treatment for catarrh depends much upon the stage of the disease. The Magic Pocket Vaporizer is a valuable all-round remedy.

23. In some cases.

24. No.

To Reduce Flesh—Diet in Bright's Disease.

—M. S. H., Nebraska: "1. What articles of diet would you advise for a vegetarian who wishes to reduce her weight or keep from getting too stout, and yet remain strong and healthy? 2. What is the proper diet for one suffering from Bright's disease?"

Ans.—1. The proper thing to do is to diminish the total quantity of food eaten to the minimum amount compatible with maintenance of strength. A very comfortable way of doing this is to confine the diet to one or two articles of food. The writer has succeeded in reducing obesity by an exclusive dietary of apples, grapes, granose, and various other articles. Meats should be avoided, also fats and sugar.

2. Persons suffering from Bright's disease should avoid the use of meats, especially fish, shell-fish, and game, cheese, condiments, vinegar, salt (except in small quantities), coarse vegetables, and should make their diet consist of fruits, grains, and nuts, especially making free use of fruits.

"Tired" Feeling—Insomnia—Nasal Catarrh—Foul Breath.—A. J. K., Ohio: "Please give remedies for a tired feeling during the day when not actively engaged in business; insomnia and bad dreams at night, nasal catarrh, foul breath, a full, heavy feeling after meals."

Ans.—You are doubtless suffering from gastric neurasthenia, or nervous dyspepsia, and require a thorough course of treatment at a well-equipped sanitarium. A diet strictly confined to fruits, grains, and nuts will doubtless afford some relief. The insomnia may be greatly benefited by a tepid bath at a temperature of 92° to 96° F., for thirty or forty minutes, just before retiring. A moist abdominal bandage worn during the night is also very beneficial in many cases.

Reducing Flesh.—A reader in Michigan wishes a recipe for reducing flesh.

Ans.—See answer to M. S. H., Nebraska, and in addition take every day sufficient muscular exercise to produce slight exhaustion.

Kidney Trouble—Nuts.—H. C. C. writes: "1. Is the cool sponge or shower bath in the morning beneficial to a person having kidney trouble? 2. What is the best food for building up the general health? 3. What kind of baths should be taken? 4. Are almonds and walnuts as wholesome raw as cooked? 5. How should they be cooked?"

Ans.—1. Yes, but very cold water should not be employed. A temperature of 75° F. is as cool as can be judiciously used.

2. A diet of fruits, grains, and nuts.

3. Tepid baths are best. A neutral bath of 92° to 96° F. taken at bedtime two or three times a week, is especially advantageous.

4. All nuts are improved by cooking.

5. The best method is by boiling.

Buzzing in the Ear.—H. McC., New York, desires to know the cause of a buzzing sound in the ear, and the remedy for it.

Ans.—Buzzing sounds, in the ears frequently result from an impoverished condition of the blood, or anemia. Disease of the ear is also sometimes a cause.

Dizziness—Pimples.—L. P. S., New York: "1. Is dizziness when walking caused by stomach disorder? 2. What causes pimples to appear on the face of a boy of sixteen years?"

Ans.—1. Yes, in many cases.

2. Probably disordered digestion. The use of fats and flesh foods is especially productive of pimples.

Thin and Falling Hair.—F. J. S., Illinois: "Please tell me what is good for thin and falling hair."

Ans.—Cut the hair short, and shampoo the scalp every morning with cold water, rubbing vigorously until the scalp is well reddened.

Numbness of the Fingers.—B. B. B., Washington: "For about a year my fingers have been almost numb; the little feeling in them is as if they were asleep, and it is continuous. What can I do to restore the natural feeling?"

Ans.—The symptom is an ominous one. You should consult a nerve specialist at once. The difficulty may be one easily removed, but it is quite possible that the symptom may be the beginning of a grave organic disorder.

Uric Acid and Nitrogenous Foods.—I. C. N., Pennsylvania: "1. What vegetable foods cause uric acid to be formed in the process of digestion? 2. Do nuts belong to the class of nitrogenous foods? If so, are they and the legumes a good diet for one who has recently had inflammatory rheumatism? 3. If the legumes and nuts cause muddy urine ordinarily, is it well to persevere in their use? 4. If one can not afford to use the malted nut preparations, will mixing malt with nut butter render it any more digestible, so that it can be used as a substitute? 5. What is the probable cause of inflammatory rheumatism in a vegetarian? 6. What is the best treatment to eliminate the uric acid, not only during the acute attack, but during convalescence and even in health? 7. What diet is advisable during convalescence? 8. What baths can be taken with impunity? 9. Do you consider onions a desirable part of the dietary for a rheumatic person? 10. What fruits are especially good for a rheumatic person who has hyperpepsia? 11. Please give me your opinion of bananas, dates, figs, stewed prunes, pears, tomatoes, and squash. Are the last two included in 'fruits' when you recommend a diet of 'fruits, grains, and nuts'? 12. If neurasthenia and inflammatory rheumatism are both caused by uric acid, which indicates the greater degree of poison in the system?"

Ans.—1. Uric acid is not produced during digestion. It is a product of indigestion, and when one makes use of flesh foods, is taken in the food already formed. It is also produced in the body when an excess of nitrogenous food elements of any kind is taken.

2. Yes, but it is not necessary to avoid either nuts or legumes in these cases.

3. Yes, drink more water, eat more fruit, take more out-of-door exercise. Deficient exercise is probably the real cause of the symptoms noted.

4. Such a mixture is not a substitute for malted nuts, and is not to be especially recommended. The nut butter is not thereby rendered more digestible.

5. Excessive eating, lack of exercise, crippled liver from previous bad habits of diet.

6. Fomentations over the liver, frequent prolonged neutral baths (92° to 96° F.), continued for thirty or forty minutes, a diet of fruits, grains, and nuts, water drinking to the extent of two or three pints daily.

7. Granose, granola, malted nuts, ripe fruit.

8. The neutral bath,—that is, a full bath at a temperature of 92° to 98° F. A person can remain in such a bath for an almost indefinite period.

9. No.

10. Granose, malted nuts, maltol, nuttolene, browned rice, crystal wheat, granola, nut foods of all sorts, sweet fruits.

11. All are good. Tomatoes and squash are classed as fruits by botanists, but squash must, from a dietetic standpoint, be classed with vegetables.

12. Both indicate that the system is saturated with poisons. The only difference is in the mode of manifestation.

Navy and Marrowfat Beans — Walnuts.—J. S. F., Pennsylvania: "1. What is the difference in nutritive value between the navy bean and the marrowfat bean? 2. Are shelled English walnuts at eighteen cents a pound as desirable for food and as cheap as shelled peanuts at five cents? 3. What is their relative food value?"

Ans.—1. The nutritive value of these two legumes is practically the same.

2. No.

3. Their relative food value is practically the same.

Lump in Throat — Trouble in the Head and Stomach — Charcoal Tablets.—H. E. F., Illinois: "1. What causes a lump in the throat? 2. What causes heat and pressure in the back and sides of the head? 3. What causes gas and bloating in the stomach? 4. Would you recommend the shower bath and charcoal tablets for me? 5. Where can the latter be obtained? 6. What diet and exercise would you prescribe?"

Ans.—1. An irritable condition of the stomach; sometimes hysteria.

2. Disturbance of the sympathetic nerve centers, probably from indigestion.

3. The indigestion, and consequent fermentation, of starch.

4. Yes.

5. Of the Sanitas Nut Food Co., Battle Creek, Mich.

6. A dry diet, consisting of granose, nuttolene, bromose or malted nuts, with fruits.

Gentlemen vs. Tobacco.—J. H. S., Ohio, asks: "Does a gentleman smoke or use tobacco?"

Ans.—No. A person who has many of the instincts and qualifications of a gentleman might, as the result of evil customs and bad example, be found smoking, but certainly no intelligent, educated man could be called a gentleman who persisted in so unwholesome and disgusting a practise as that of tobacco using.

Drooping Eyelid.—M. C. P., California: "1. What causes the eyelid to droop? The skin is loose and flabby, and it requires an effort and wrinkling of the brow to raise it. The submaxillary gland on that side suppurated and was lanced a short time ago. 2. How should it be treated?"

Ans.—1. Paralysis of the muscle which holds it up. Probably the nerves have been injured.

2. Electricity should be applied by one skilled in its use.

Maternal Dietary.—M. E. L., Minnesota, desires an outline for diet for an expectant mother.

Ans.—The diet should be strictly confined to fruits, grains, and nuts. The grains should be thoroughly cooked. They would better be taken

in a dry state. See article in this number of **GOOD HEALTH** on farinaceous foods. Aside from these suggestions, no special directions as regards the quality of the food are necessary. Flesh eating, and the use of ices, condiments, pickles, etc., should be especially avoided.

Pain from Eating Sour Beans.—N. A. W., Washington, desires a full explanation of why eating sour beans causes intense pain, purging, and sometimes almost cholera. What is the poison that causes the trouble?

Ans.—There are germs present which produce poisonous substances, the nature of which has not been fully determined.

Tired Feeling.—J. W. H., Kentucky, sixty years old, wants to know the cause of a faint, tired feeling in the stomach, and the remedy.

Ans.—An irritated condition of the mucous membrane of the stomach, probably due to chronic gastritis.

Full Growth—Deformity—Malt Extract—Physical Culture.—A subscriber in Kentucky sends the following queries: "1. At what age does the framework of the body attain full size? 2. Can it be expanded after that? 3. Can a deformity of the bones, as bent knees, be corrected? 4. Can narrow hips and shoulders be broadened? 5. How does malt extract compare with beer as a flesh producer? 6. Please name the most complete and scientific work on physical culture published."

Ans.—1. About twenty-four years.

2. Not to any very great extent.

3. Yes.

4. Not after maturity.

5. Neither is of any real value unless the saccharin extract of malt is referred to.

6. You can obtain a full catalogue of works on physical culture by addressing the Narragansett Machine Co., Providence, R. I.

Varicose Veins.—C. E. B., Iowa, wishes the cause and cure of varicose veins.

Ans.—The cause of varicose veins is excessive dilatation of the veins from long standing or violent exercise, especially while heated. The only method of cure is obliteration of the veins by means of a simple operation.

Throat Difficulty.—S. T., Missouri, a singer, and "a strict health reformer," is troubled with mucus in the throat, with smarting and rattling after singing. How can it be cured?

Ans.—By building up the general health, adopting a pure dietary of fruits, grains, and nuts. Some relief may be obtained by gargling hot water

in the throat, the use of the pocket vaporizer, and a moist pack to be applied at night. In the morning a cool bath should be employed daily.

List of Cereals, Nuts, and Fruits as Daily Dietary.—H. F. C., Chicago, writes: "Kindly give a list of health and nut foods that would be an appropriate daily dietary; also a list of fruits suitable for both winter and summer use. I should like such foods as require no preparation, and that can be eaten just as put up by the Health Food and the Sanitas Nut Food companies."

Ans.—Of the manufactured cereal foods we are glad to be able to recommend the entire list of foods manufactured by the Battle Creek Sanitarium Health Food Co. Granola, granose, granose biscuit, zwieback, and crystal wheat take prominence above the rest in the ease and promptness with which they are digested. They are carried through the first three of the four stages of starch digestion by the processes to which they are subjected in manufacture. Whole-wheat wafers are perhaps the choicest of all the crackers, but graham and oatmeal wafers and all the rest are wholesome and useful for variety. We were formerly not able to commend fully the oatmeal biscuit and fruit crackers, but this we are now able to do, owing to the improvements which have been made in the methods of manufacture. All of these products are made without the use of butter, lard, or any other kind of animal fat. They are shortened with nuts, — not with cheap nut oils, but with nuts themselves, — so that they represent the very highest nutritive value; for nuts contain not only oil, but a large number of proteids, or blood-making elements.

All the nut foods we can commend, especially malted nuts, nuttolene, bromose, ambrosia, maltol, nuttose-C, and nuttose-D. Nuttose and nuttose-B are wholesome for persons who have a fairly good digestion, but some persons who suffer from hypopepsia sometimes experience a slight difficulty in digesting these foods. Nuttose-C and -D are entirely free from this objection. They are wonderfully delicate and delicious products.

All fruits are wholesome. Fresh fruits are best, for the reason that the juice of the fresh fruit cleanses the stomach from germs, besides having peptogenic properties; that is, the property of encouraging the secretion of the digestive fluids and the work of digestion. Canned fruits, if not too highly sweetened with cane-sugar, are all wholesome. Dried fruits are good. Raisins, when stewed, are a capital fruit, which may be used at all seasons of the year. Fig ambrosia is an excellent preparation, combining fruits, digested cereals, and nuts in an admirable way, and is especially valuable as a means of keeping the bowels in a healthy condition.

LITERARY NOTICES.

A First Book in Writing English, by Edwin Herbert Lewis, Ph. D., associate professor of English in Lewis Institute and the University of Chicago. The book is based on the true idea that a child ought to learn to do a thing right when he first begins to do it, and hence this "first book" tells the little writer those rules of composition which too many of us had to wait for years of maturity to learn, when our habits had been formed, and we found it difficult to change. It can not be too strongly impressed on the public that the first years of childhood are the most important of life. Impressions formed before the child is ten years old are indelible, the last to fade out in old age. How necessary it is, then, that those impressions be true in every sense, that the child may forever after have a solid foundation upon which to build the superstructure of knowledge and of character. The book is designed to be used as a text-book, and includes the following divisions: "The Art of Writing English," "Reading Aloud and Spelling," "Punctuation," "Phrases," "Paragraphs," "Well-Knit Sentences," "Organizing the Theme," "Choice of Words," "Source of the Vocabulary," "Letter-Writing," "Abstracting," "Narration and Description," "Exposition and Argument." (Published by the Macmillan Company, New York.)

THE Michigan State Board of Health has issued a magnificent souvenir of its twenty-fifth anniversary,—**Michigan a Summer and Health Resort State**. It is a directory of Michigan summer resorts, mineral springs, and sanitarium, compiled by Roberts P. Hudson. It has been issued in compliance with a concurrent resolution of the Legislature. The book contains 142 large pages, and is freely illustrated with views of the beautiful and picturesque scenery that has made Michigan famous the world over as a summer resort State. And not only is this book a center-table ornament, but it gives information which will prove of great value to future tourists. Beginning at the southeastern corner of the State, making Detroit the initial point, in a series of short descriptive articles, the text of the pamphlet follows the lake shore up to Mackinac Island, treats of the Upper Peninsula, and then deals with the resorts on the Lake Michigan shore, following southward to the southwestern corner of the State. The inland resorts are next taken up, then the mineral springs, then the sanitarium. The pretty Indian legends and traditional

history of each locality have been briefly and interestingly chronicled, the information is accurately, tersely, and impartially stated, and the facts are presented in such a readable manner as to make the work worthy of great commendation. It is to be regretted that such a beautiful book should not have had more careful editing and proof-reading.

Before the next hot season, the "Directory" will be distributed among sanitarians and prominent public-health men throughout the United States and neighboring provinces, also to public libraries, and wherever it is likely to do the most good in spreading Michigan's fame as a health resort abroad in the land. A limited number of copies can be had by citizens of Michigan by sending six cents for postage to Henry B. Baker, Lansing, Mich.

Good Housekeeping has been undergoing a thorough renovation, having removed to new quarters and secured to itself an entirely new management. In consequence the July number has emerged from the "suds" two months behind its date, but as new machinery always runs smoothly, the succeeding numbers will, as promised, follow in quick succession till the regular mailing time is reached.

While GOOD HEALTH wishes that *Good Housekeeping* might find some more delectable morsels for its bills of fare than lobster and salmon, it recognizes many other features of the magazine that are truly attractive and very practical. This number contains forty pages, more than half of which is original. (Published by John Pettigrew, 66 Fuller Building, Springfield, Mass. \$2 a year.)

To one whose busy life leaves little room for reading the news of the day, **Current History** comes as a benefaction; and to the household that wishes to keep a record of passing events in smallest compass, it is likewise welcome. The present number, recording the events which happened between April 1 and July 1, 1898, opens with an account of the life of Mr. Gladstone. Then comes a complete, though brief, résumé of our war with Spain, after which is a discussion of "The Far Eastern Situation," "The Hawaiian Question," "The Currency Question," "The General European Situation," "The Fifty-fifth Congress," "Business and Industry," "Public Accounts," "The Army," "The Trans-Mississippi Exposition," and numerous topics of both national and international

interest. This number contains 260 pages, and nearly one hundred illustrations and maps. This work differs from every other current review in adhering steadily to a uniform plan of arrangement convenient for reference purposes, in covering the entire history of the world in each number, and in confining itself to an intelligent historic presentation of facts, without attempting specifically to criticize from a politically or religiously biased standpoint or to mold the judgment of its readers. It presents in each issue a comprehensive view of, and an intelligent insight into, the meaning of passing events and their relation to one another. As an addition to the library shelf, covering all matters of too recent occurrence to be found in the encyclopedias, there is no other work that compares with it. (New England Pub. Co., 3 Somerset Street, Boston, Mass. Quarterly, \$1.50 a year; single numbers, 40 cts.; sample pages free.)

BISHOP WILLIAM TAYLOR'S latest and greatest book, **The Flaming Torch in the Dark Continent**, with an introduction by Hon. Henry M. Stanley, will soon be ready for delivery. In this work the author has produced an entertaining history of the work of *all* missionary societies in Africa, which will prove an inestimable blessing to all who follow in the footsteps of the venerable bishop, who has done so much to spread the light of the gospel in that dark land. The great African explorer, Henry M. Stanley, has given a hearty tribute to Bishop Taylor and his book, a portion of which we quote, with his own signature at the end:—

"Many books have been written upon Africa. Some are devoted to one part of the vast continent, and some to another. Several writers have confined themselves to the countries they have explored, while others have treated of the ethnology, physiology, and language of the various peoples. It is no mean task to embrace all these subjects, to gather them together as links in a golden chain, and bind the records of missionary trials and triumphs.

"In the book before us the author begins by discussing the Midnight Empire of yesterday, with its ancient civilization, commercial influence, and military power, and its subsequent lapse into heathenism. He also treats of its vast unexplored territory, its limitless, undeveloped resources, and countless millions of people—unknown.

"As the pages roll by, we see the dawn of the day in the period of exploration in which I have been so deeply interested. The political partition of the continent is followed by two or three chapters of thrilling interest in dealing with the heathen

kings and their barbarous methods, compared with the ruling of the Christian kings, Menelik, Khama, and others. The period of Mohammedan advance and the slave trade, commercial development and discoveries of mineral wealth, are all carefully treated.

"The pages devoted to missionary trials and triumphs in Africa are unusually interesting. The barriers encountered, the climate, geographical difficulties, language, witchcraft, polygamy, etc., etc., are treated with a masterly hand. The rich discoveries and development on the Gold Coast, in Kaffraria, the Transvaal, and Uganda are described with entertaining precision, and last but not least, the religious, social, political, and commercial future are spoken of in prophetic vein.

"The title adopted by the bishop for his book may possibly be considered somewhat sensational by those unacquainted with its origin. 'The Flaming Torch in the Dark Continent,' however, is a title peculiarly well fitted to the volume he has produced. The natives everywhere in the territories where his missionary work has called him, knew him as 'The Flaming Torch,' or 'Fire Stick,' as some might translate the Zulu word *Isikunisi-tayo*. Therefore, in speaking of himself as 'The Flaming Torch,' he has but raised a fitting monument to his converts in Africa. . . .

"If there is no duty more imperatively binding upon Christians than that of striving to give to the benighted people of the world the light of the gospel, there can be no question that the author of this book has performed his duty manfully and well, and although he is now bent with years and his voice grown weak, his brain is still full of burning thoughts, and his eye is eloquent as of yore; and I can again picture him standing beside Usquebaugh, the interpreter, surrounded by hundreds of the poor savages, as he whispers the words of truth to be translated and given forth to the willing ears of his congregation.

"To all those interested in the development of Africa and the elevation of its people, I can recommend this latest book by the veteran bishop, for the variety and fulness of the information it contains, and the large hope it gives that persevering Christian labor is not in vain, even in darkest Africa."

Henry M. Stanley

(The book contains 500 pages and 100 full-page illustrations. Full cloth, \$3. Address, Ross Taylor, 150 Fifth Ave., New York.)

PUBLISHERS' DEPARTMENT.

THE summer crowd is somewhat diminished at the Battle Creek Sanitarium, but the great family still numbers nearly fourteen hundred, and a happier, more cheerful, good-natured lot of people can scarcely be found anywhere on the face of the globe. A lady remarked the other day, "I thought I should be made wretched at the Sanitarium by the sight of so many sick people, but I declare since I came here I find it hard to make myself believe that many of these jolly folks are really sick. They certainly do not eat as though they were sick, and the way they skip about the gymnasium during exercise hours would scarcely suggest that they are suffering profoundly from nervous prostration. Yet on inquiry, I found that a large proportion of these very same people came to the Sanitarium with their cases labeled 'Incurable,' at least by ordinary means and under ordinary conditions. It is inspiring to see persons practically helpless for years, so rapidly climbing up the ladder of health."

articles by Mrs. E. E. Kellogg, Mrs. Nettie Barker Fernald, and Dr. Kate Lindsay. The subjects treated are most opportune and practical themes, and will furnish good food for thought, and for discussion in women's clubs, mothers' meetings, and like gatherings. Mrs. Kellogg's suggestions for new, healthful, and palatable articles of food are well worth the price of the magazine for a whole year.

In following numbers of GOOD HEALTH there will appear articles especially directed toward the betterment of the home and the training of the young, the physical care of children, healthful cookery, and allied topics.

It has been suggested that a special department in this magazine be devoted to the home, but this can not be done, for the reason that the whole magazine is devoted especially to the home and its inmates; but the editors are determined to make GOOD HEALTH for 1899 more directly and efficiently helpful to the home than ever before. Our readers will all be glad to learn that Mrs. Fernald, whose pen has already won many laurels in the noble work for human betterment, will be a frequent contributor.

THE many thinking mothers among our readers will be glad to note the helpful and interesting

TO PROMOTE AND MAINTAIN PERSONAL
HYGIENE, INDIVIDUAL PROPHYLAXIS.

LISTERINE.

Listerine is a non-poisonous, non-irritating antiseptic, composed of ozoniferous essences, vegetable antiseptics, and benzo-boracic acid; miscible with water in any proportion and in agreeable strength sufficiently powerful to make and maintain surgical cleanliness—asepsis—in the treatment of all parts of the human body.

These properties have won for LISTERINE a first place in the lying-in room and in the treatment of catarrhal conditions of the mucous surfaces of every locality.

LISTERINE alone, in teaspoonful doses, or diluted with one or two parts of water or glycerin, will give entire relief in fermentative dyspepsia.

An ounce of LISTERINE in a pint of warm water forms a refreshing, purifying, and protecting application for sponging the body during illness or health. A few ounces added to the bath enhances its tonicity and refreshing effect.

For the preservation of the teeth, and for maintaining the mucous membrane of the mouth in a healthy condition, LISTERINE is indispensable.

Send for descriptive literature to the manufacturers.

Lambert Pharmacal Co., St. Louis.

Be assured of the genuine Listerine by purchasing an original package,
14-ounce bottle.

WE recently had a call from our much-esteemed friends, Mayor and Mrs. Jones, of Toledo, O. Mr. Jones is a philanthropist of the Christly type, and, like Abou-ben-Adhem, loves his fellow men, and he loves in a practical way, not great men, especially, or rich men, but poor men, and miserable men, and wicked men, and disagreeable men, and he loves children as well as men. No man in the United States has his head and hands more full of plans and enterprises for the amelioration of the conditions of the sad and suffering of all classes. One of his latest and most novel efforts is the invention and manufacture of a ball-bearing May-pole for the amusement and physical development of children. The May-pole is a whole gymnasium, and a never-ceasing source of delight and profit to children of all ages, from four to forty. The editor has one on his premises, and finds it a delight to the whole family.

This unique device ought to make the inventor rich, but the generous-hearted mayor has dedicated it to the children of America, and waiving all personal gain in the matter, will send one to any person who wants it for his own use, on receipt of a small sum, just sufficient to cover the actual cost. Any one interested may address Hon. Samuel M. Jones, Toledo, O.

JUST as this number goes to press, the Civic-Philanthropic Conference, a full program of which is found in another column, is closing. The occasion has been a notable one, which will not soon be forgotten. Splendid audiences have gathered every forenoon, afternoon, and evening to listen to distinguished gentlemen from different parts of the United States who have been in attendance.

Battle Creek is rapidly coming to be recognized as one of the leading centers of reformatory ideas in all that pertains to wholesome and right living. Educational reform, as well as dress and diet reform, is conspicuously represented here. Sensible, Christ-like philanthropy is not only taught here, but practised, and is illustrated in the various institutions which are the outgrowth of the Battle Creek Sanitarium, as well as in the institution itself.

The interest of the Congress reached its high tide on Thursday, when the numbers in attendance were augmented by two carloads of leading Chicago physicians who came by special invitation to attend the Congress, as guests of the Battle Creek Sanitarium, and who entered heartily into the exercises, which, on that day, were wholly devoted to the discussion of subjects pertaining to health and sanitation. Interesting and most instructive addresses were given by Rev. D. J. Burrell, Drs. Quine, Steele, Johnson, Danforth, Pettyjohn,

Skelton, Skiles, Green, and Kellogg, and Professors Newman, Bird, Brown, Hall, and Post. It is seldom, indeed, that so exceptionally cultivated and refined a gathering of physicians is seen convened as was the delegation from Chicago. Numerous physicians came from other parts of the State, all of whom seemed to enjoy the proceedings of the Congress and to appreciate the principles of civic, social, and physical righteousness which constituted the central thought in the Civic-Philanthropic Conference.

This is the second Conference of the sort which has been held in Battle Creek, and its success is not only highly gratifying to the people of the city, but to those who have assembled at a great cost of time and money from various parts of the United States to discuss the questions outlined in the program. It is probable that the Civic-Philanthropic Conference at Battle Creek will be a permanent annual occurrence hereafter.

It is encouraging to note the increasing demand for hygienic and vegetarian restaurants. Excellent vegetarian restaurants are now in successful operation in San Francisco, Salt Lake City, Des Moines, Detroit, Chicago, and Portland, Oregon, and arrangements are being made for establishing them in New York, Providence, and other Eastern cities. Men and women everywhere are beginning to discover that the quality of their thinking depends much upon the character of their eating, and are recognizing the necessity of adopting a simple, natural dietary of fruits, grains, and nuts as a means of building up wasted energies, and maintaining that state of life and body necessary to keep up with the rapid developments of our modern times.

THE School of Health campaign is growing in interest and volume throughout the country. Dr. Mary Heileson reports a regular attendance of three hundred at the School of Health recently conducted at Tacoma, Washington, by herself and Mrs. Gotzian. This is one of the largest schools that has been held in any part of the country, and its success is largely due to the enterprise of these two ladies and the local W. C. T. U.

As this number is going to press, a very successful School of Health is being held at Binghamton, N. Y. A large number of the leading ladies of the city are in attendance, and the tide of interest is daily rising. Intelligent men and women everywhere are beginning to learn the better way in diet, dress, and other matters which pertain to healthful living.

ARRANGEMENTS are being made for a continuous School of Health to be conducted at the Battle Creek Sanitarium through the winter. The program will include lectures and practical lessons on cookery and dietetics, including experiments, microscopic demonstrations, practical lessons; instruction in the use of simple remedies for the sick, including practical demonstrations of the use of water, the more simple measures of massage, Swedish movements, and other physiological means; home exercises for the sick and well, the hygiene of infancy and the care of children, domestic sanitation; special physiology for men, special physiology for women, and kindred subjects. Each course will last about six weeks.

A SCHOOL of Health was conducted in Richmond, Ind., September 5-15. An average attendance of two hundred was reported. The Misses Bolles and Peterson reported a very interesting experience in this city. They were tendered a very cordial reception. We have already received applications for another school in Richmond, but regret that we can not give a second course in the near future.

WE are pleased to announce that arrangements have been completed with Prof. J. W. Kelchner, of California, to assist in the organization of Schools of Health and the circulation of our health literature. At the present time he is giving his attention to the work in New York State. He announces that a number of the best citizens are heartily co-operating with him. As a result of this effort, schools are in process of organization in the cities of Syracuse, Rochester, Elmira, and Rome. The services of Mrs. Katherine Nuding, Miss Leonora Bolles, and Miss May C. Peterson have been secured to give a course of instruction. Those attending the schools will have the special advantage of a thoroughly practical course of training from this competent corps of workers.

A COMPANY of health missionaries is operating in Pennsylvania, and reports favorably respecting the circulation of health literature in that important locality.

A MEDICAL student connected with the Medical Missionary College reports seventeen orders in two and one half days' canvassing for "Ladies' Guide" in Indiana. He announces that his income during the few weeks' vacation will be sufficient to carry him through another year's school in the medical college.

THE outlook in Utah is very promising. We have representatives located in Salt Lake City, Provo, and Springville. At the present time the force in this district is distributing copies of "Ladies' Guide," "Man, the Masterpiece," "Home Hand-Book," and "Science in the Kitchen."

MR. J. E. FROOM, in charge of a company of solicitors in Illinois, reports his individual sales of health literature in one day as \$30.

THE CIVIC-PHILANTHROPIC CONFERENCE.

THERE was held in Battle Creek, October 18-23, a Civic-Philanthropic Conference. The following is a copy of the program:—

OPENING SESSION.

TUESDAY, OCTOBER 18.

7:30 P. M.

HON. MILES S. CURTIS, Mayor of Battle Creek, Mich., Presiding.

Singing by the Audience, led by REV. C. K. FLACK, Chicago, Ill.

Address of Welcome.

JOHN H. KELLOGG, M. D., Superintendent Battle Creek Sanitarium.

President's Opening Address.

REV. DAVID J. BURRELL, D. D., Pastor Collegiate Reform Church, New York, N. Y.

EDUCATION AND PHILANTHROPY.

WEDNESDAY, OCTOBER 19.

9:30 A. M.

Social Settlements in Cities.

GEORGE A. BELLAMY, Hiram House, Cleveland, O.

Systematic Charities.

LOUIS SELLING, Director Hebrew Charities, Detroit, Mich., and

RABBI LOUIS GROSSMAN, Detroit, Mich.

Address.

REV. F. D. KELSEY, Pastor Central Congregational Church, Toledo, Ohio.

The Church and the Masses.

REV. JAMES HAMILTON, St. Joseph, Mo.

2:30 P. M.

The Social Field, Its Needs and Opportunities. Illustrated by a map of Chicago showing relation of population to church and school privileges.

REV. W. E. MCLENNAN, Pastor Berwyn Methodist Church, Chicago, Ill.

The Economics of Christianity.

REV. MATT S. HUGHES, Pastor Wesley Church, Minneapolis, Minn.

District Nursing.

REV. CHAS. L. ARNOLD, Rector Episcopal Church, Detroit, Mich.

7:30 P. M.

The Newer Education.

HON. RICHARD G. BOONE, LL. D., President State Normal School, Ypsilanti, Mich.

Address.

HON. H. B. BROWN, President Normal School, Valparaiso, Ind.

The School of the Future.

COL. F. W. PARKER, Principal Chicago Normal School, Chicago.

HEALTH AND SANITATION DAY.

THURSDAY, OCTOBER 20.

9:30 A. M.

WM. E. QUINE, M. D., Dean College of Physicians and Surgeons, Presiding.

Addresses

D. A. K. STEELE, M. D., Professor of Surgery, College of Physicians and Surgeons, Chicago, CHAS. B. JOHNSON, M. D., Treasurer Illinois State Board of Health, Champaign, Ill., DR. I. N. DANFORTH W. M. HARSHA, of Chicago, and others.

The following subjects, among others, will be discussed in papers and addresses by leading physicians from different parts of the country:—
Relation of Habits of Life to Individual and Race Deterioration.

How Best to Teach the Masses the Principles of Public and Individual Hygiene.

The Duty of the State in Relation to the Suppression of Pulmonary Tuberculosists.

A company of fifty prominent Chicago physicians will be present on this day.

2:30 P. M.

The afternoon will be spent by the delegates in visiting the industrial and medical institutions of the city.

7:30 P. M.

Short Addresses by

WM. E. QUINE, M. D., J. H. KELLOGG, M. D., W. M. HARSHA, M. D., Chicago, I. N. DANFORTH, M. D., and others.

CIVIC DAY.

FRIDAY, OCTOBER 21.

9:30 A. M.

HON. SAMUEL M. JONES, Mayor of Toledo, O., Presiding.

A Socialist's Confession of Faith.

BAYARD HOLMES, M. D., Professor of Surgery, College of Physicians and Surgeons, Chicago, Ill.

The Co-operative Idea.

HON. WALTER THOMAS MILLS, Chicago, Ill.

Lessons from Prison Life by a Chaplain.

REV. A. M. WHITE, Ex-Chaplain, Joliet Prison.

2:30 P. M.

Relation of the Christian Ministry to Civic Questions.

REV. P. J. McVEETY, Presiding Elder Albion District, Mich.

Influence of Intemperance on Civic Questions.

REV. H. A. TUCKER, D. D., Valparaiso, Ind.

The Wage-Earner.

REV. O. A. BLANCHARD, President Wheaton College.

7:30 P. M.

The Christian Conscience and Socialism.

PROF. GEORGE D. HERRON, Professor of Applied Christianity, Iowa College, Grinnell, Iowa.

Trade Unions and Public Duty.

MISS JANE ADDAMS, Hull House, Chicago.

GOSPEL PHILANTHROPY.

SATURDAY, OCTOBER 22.

9:30 A. M.

IN THE FIRST PRESBYTERIAN CHURCH.

Social Reformers of the Bible.

PROF. D. A. HAYES, Garrett Bible Institute.

My Brother.

REV. S. H. SWARTZ, Aurora, Iowa.

An Every-Day Church.

REV. S. C. LEAVELL, Sterling, Ill.

Social Needs of the Rural Districts.

REV. J. E. FARMER, D. D., Appleton, Wis.

2:30 P. M.

IN THE TABERNACLE.

The Ministry of Neighborliness.

REV. NACY MCGEE WATERS, Pastor Emanuel Methodist Church, Evanston, Ill.

Christly Personal Service.

REV. M. E. CADY, Pastor Western Avenue Methodist Church, Chicago, Ill.

Address.

REV. J. P. BRUSHINGHAM, D. D., Chicago, Ill.

REV. J. Q. A. HENRY, Chicago.

7:30 P. M.

The State of the Law.—A True Test of Human Progress.

HON. FRED. A. MAYNARD, Attorney-General, Michigan.

Social Regeneration.

REV. FRANK CRANE, Pastor Trinity Methodist Church, Chicago, Ill.

SUNDAY, OCTOBER 23.

Charity and the Co-ordination of Social Forces.

REV. F. EMORY LYON, D. D., Pastor Congregational Church, Madison, Wis.

The Social and Religious Outlook of the Negro People.

REV. M. C. B. MASON, D. D., General Secretary Freedman Aid Society of the Methodist Church.

SUNDAY EVENING — LAST SESSION.

7:30 P. M.

The Needs of the Hour.

S. SHERIN, Secretary, Chicago, Ill.

Addresses by several of the leading speakers yet to be arranged. REV. C. K. FLACK, Chicago, has kindly consented to take charge of the singing.

CALIFORNIA in three days, via Chicago, Union Pacific, and North Western Line. The Overland Limited leaves Chicago daily at 6:30 P. M., reaches San Francisco 8:45 the third evening, and Los Angeles 1:20 next afternoon. The equipment of

this train is new and thoroughly modern, as is that of the Pacific Express, which leaves Chicago daily at 10:30 P. M., and reaches San Francisco at 9:45 the fourth morning. For rates and other information ask your nearest ticket agent or write to W. H. Guerin, 67 Woodward avenue, Detroit, Mich., or W. B. Kniskern, 22 Fifth avenue, Chicago, Ill.

ALWAYS TAKE THE G. T. R. WHEN YOU CAN. S. S. S.—SCENERY, SAFETY, AND SPEED.

A HUMANE order has just been issued by the Chicago & North Western Railway in regard to the treatment of soldiers on its trains. Impressed with the pitiable condition of a majority of the returning soldiers, General Manager Whitman of this road has determined that none of the boys in blue who may come in contact with his company shall suffer for lack of attention. The North Western system covers five or six States which furnished a large proportion of the volunteers, and in order that the boys may be treated kindly on their way home, whether discharged or on furlough, Mr. Whitman has issued instructions to every agent and conductor on the entire system to give special care and attention to returning soldiers en route from camps to their homes while upon the trains or at the stations

of the North Western. The employees are instructed to be diligent to ascertain if any of the soldiers are in need of food, and more particularly if they are sick and require medical attention, and if any such are found, they are to be attended to at the expense of the company, if necessary. It will not be necessary for the soldier to be in uniform to get the advantage of the road's hospitality, for if he can show the proper papers of discharge or furlough, he will receive the same consideration.

"We can not do enough for the returning soldiers," said General Superintendent Sanborn, in speaking of the order. "The boys went down there and faced death in a hundred different ways, and those who escaped are returning home debilitated and worn out. They did this for what? Not for money; it is not in any sane man to resign himself to death for a money consideration. They did it for the love of country."

Other roads will probably follow the North Western's humane move.—*The Chicago Chronicle.*

HOME SEEKERS' CHEAP EXCURSIONS.—On November 1, 15, December 6 and 20, the North Western Line will sell home seekers' excursion tickets, with favorable time limits, to numerous points in the West and South at exceptionally low rates. For tickets and full information apply to W. H. Guerin, 67 Woodward avenue, Detroit,



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"Half an hour before meals, administer from 4 to 8 ozs. of a mixture containing 2 per cent. of **Hydrozone** in water. Follow after eating with **Glycozone** in one or two teaspoonful doses well diluted in a wineglassful of water."

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HAWAII AND THE PHILIPPINES.—Send four cents (in stamps) for an illustrated booklet issued by the Chicago, Milwaukee & St. Paul Railway, the direct route across the American Continent to the new Trans-Pacific possessions of the United States. Full of the latest reliable information and valuable for reference. Can be used as a textbook in schools. Address Harry Mercer, Michigan Passenger Agent, Detroit, Mich.

LADY AGENTS wanted to sell flavoring extracts and perfumes. It will pay you to write me. R. M. Snyder, 140 E. Canal St., Battle Creek, Mich.

THE Battle Creek Sanitarium Health Food Company, although operating their factory several hours over time daily, can not keep up with orders. The demand for foods of every description was never so great as now. After a person once experiences the clearness of head, the sweetness of breath, and the general comfort arising from a natural, healthful, digestible dietary, he can not be easily induced to return to the old fare of dietetic abominations, with its accompanying headache, neuralgia, dulness, dyspepsia, and general discomfort; in other words, the man who eats health foods soon becomes addicted to them, so he longs for more of the same; and, fortunately, the habit of eating granose, granola, and kindred foods is one which, while it may grow upon a person, is not, like the alcohol habit, the tea and coffee habit, the tobacco habit, and all other bad habits, likely to make him an invalid or a sot, but is all the time making him a new creature, lifting him up on a higher level of health, increasing his stock of energy, adding to his ability for activity, and giving him a keen zest for the enjoyment of all that is good and wholesome in life. Every reader who has not tried these excellent foods ought to send straightway for samples. Address the Battle Creek Sanitarium Health Food Co., Battle Creek, Mich.

MR. BARTON HUFF, the Eastern representative of the Battle Creek Sanitarium Health Food Co., after recently spending a few days at the Sanitarium, has returned to his headquarters in New York City, taking with him a number of recruits through whom he hopes, within the next few weeks, to induce thousands to turn away from the "flesh-pots of Egypt," and learn the delights of granola, granose, caramel-cereal, and other of the whole-

some preparations which this company are so well able to supply.

A TWENTIETH CENTURY TRAIN.—Electric-lighted throughout (including lights at the head of each berth), the North Western Limited, which leaves Chicago daily at 6:30 P. M., and reaches St. Paul and Minneapolis early next morning, is regarded by the traveling public as the highest development in railway science. The train is equipped with buffet, smoking, and library cars, regular and compartment sleeping-cars, and luxurious dining-cars. The principal summer resorts in Wisconsin are most easily reached via the Chicago & North Western Railway, "the pioneer line west and northwest of Chicago." All ticket agents sell tickets via this popular route.

FOR some months the Good Health Publishing Company has been offering to furnish to young men and women an opportunity to secure a scholarship in Walla Walla College, College Place, Wash., and the Battle Creek College, Battle Creek, Mich., for a certain number of new subscriptions to the GOOD HEALTH magazine. Arrangements have been made with these colleges which will permit us to offer scholarships for three, six, or nine months in these schools for 1899.

BY sending twenty cents to the Detroit *Free Press*, Detroit, Mich., you will receive the *Twice-a-Week Free Press* from date of receipt of your order until January 1, 1899. This special reduced rate is given to introduce the paper to new readers. The *Twice-a-Week Free Press* is a clean, up-to-date family newspaper, and our Michigan readers at least will do well to take advantage of this special offer.

A Hotel on Wheels.

The managers of the Grand Trunk Railroad are determined to keep in the front rank in all branches of railroad enterprises which concern the comfort of the traveling public. They have recently made a noteworthy addition to their managing force in the appointment of Mr. J. Lee, late manager of the Windsor Hotel, of Montreal, to direct the dining-car services of this great system. They propose to give travelers in their magnificent dining palace as good a cuisine service as can be found at the best city hotels.

FOR SALE.—Home-made sterilized grape-juice. Every bottle warranted. Send for sample. John H. Lee, Box 1006, Benton Harbor, Mich.