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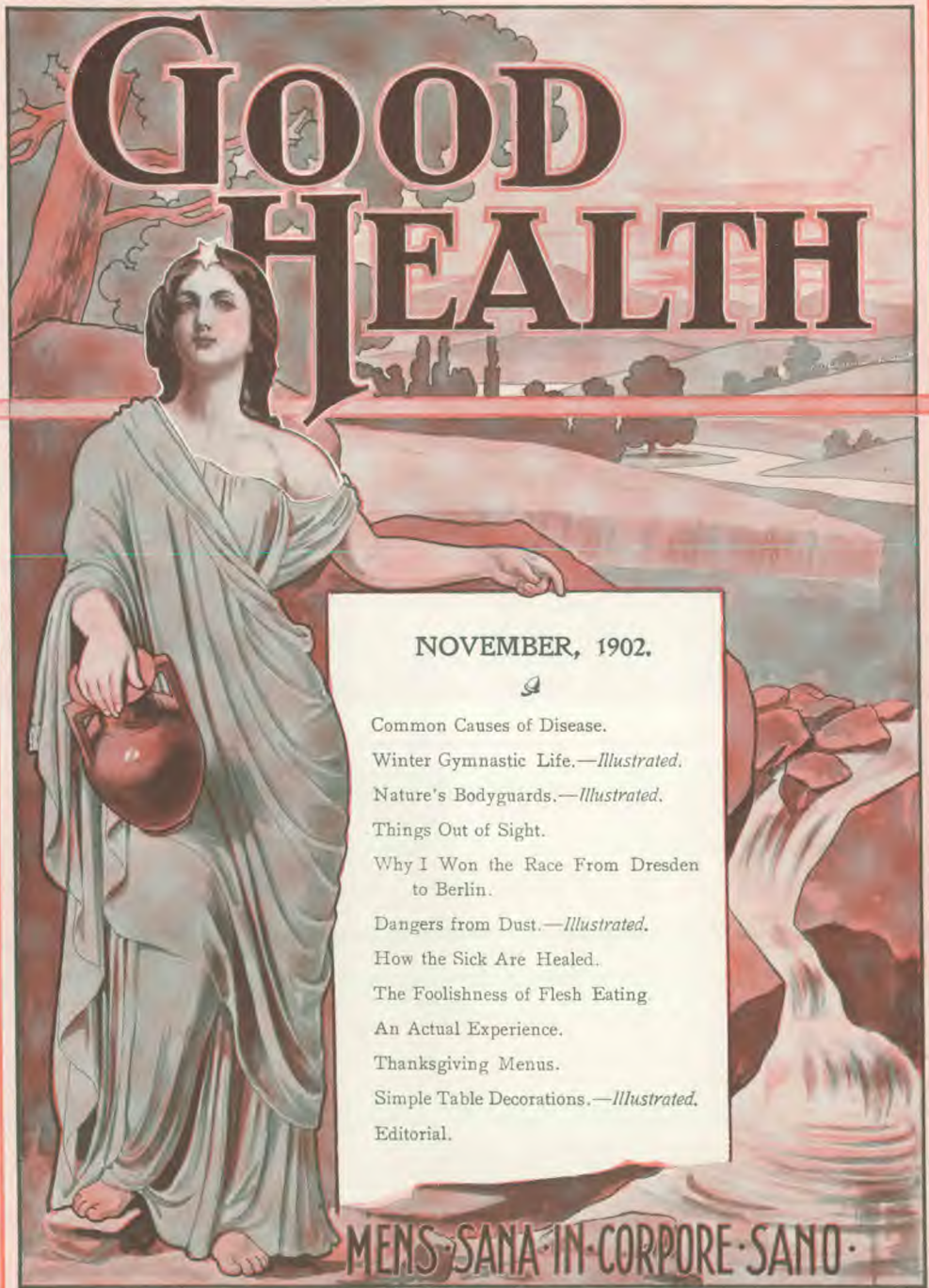
GOOD HEALTH



NOVEMBER, 1902.

MENS·SANA·IN·CORPORE·SANO·

VOL. XXXVII. Edited by J. H. KELLOGG, M. D. NO. II.

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GOOD HEALTH

A Journal of Hygiene

VOL. XXXVII NOVEMBER, 1902 NO. 11

COMMON CAUSES OF DISEASE.

BY J. H. KELLOGG, M. D.

Probably the majority of men and women who suffer from the consequences of their own wrong-doing have sinned ignorantly, rather than willfully. Unfortunately, the most of us are quite thoughtless respecting the special needs of our bodies and the laws relating to their healthful care, until disease compels us to think of these important matters. Pain is a whip which drives us to repentance, and makes us heedful of our physical needs. In this series of articles we shall not attempt to enter at length into the consideration of the individual causes of disease, but will make a simple and brief enumeration of the most common causes of sickness to which human beings in the ordinary walks of life, are commonly exposed.—ED.

The Hygiene of Eating.

EACH individual requires a certain amount of food to supply material for body building, for work, and for maintaining bodily heat. If an insufficiency of food is taken, there must be loss of weight. The amount of food required depends upon the amount of work and the season. We require more on cold days than on hot days. The amount of food required when exposed to very cold air, and under circumstances requiring vigorous muscular exertion, may be more than double that needed to support life in a warm atmosphere and without muscular exertion.

How Much to Eat.

On an average, the amount of food required in winter is perhaps one half greater than that needed in summer. The amount required on days of rest is ordinarily not more than three fourths that needed on working days. It is a good plan to omit a meal once or twice a week, or at least to eat nothing but fruit for one meal, preferably breakfast.

Dyspeptics often eat too much, but sometimes too little, especially those who suffer pain after eating, and find their distress alleviated by greatly lessening the quantity of food. Such persons often live in a state of starvation. Great care should be taken to eat a sufficient quantity to maintain the proper weight.

The amount of food normally required is about twenty and one-half ounces per day for each individual. The amount named represents food stuffs from which the innutritious substances have been removed, and which is perfectly dry. Ordinary food, as it is served upon the table, contains from two thirds to three fourths its weight of water. Juicy fruits contain from nine tenths to nineteen twentieths their weight of water. Potatoes, eggs, and bananas are three fourths water, raised bread one fourth, while crackers, crisps, rolls, and such health foods as granola, granose, and zwieback, are practically free from water.

An excess of food gives rise to obesity, a dangerous condition on account of interference with the action of the heart and the tendency to fatty degeneration, rheumatism, diabetes, and other maladies. Overeating may injure the stomach by distention, and impose upon

the liver and kidneys a great excess of work. Overeating is a common fault, especially in America and other countries where foods are abundant and cheap. Those who eat but twice a day easily induce great injury by excessive distention of the stomach. An excessive amount of food may also be introduced into the system by too frequent meals, even though the quantity at each meal may not be excessive.

Even though the total quantity of food taken may not be too great, injury may be done by taking an excess of certain food elements. The three important elements to which it is necessary to give attention are starch, fat, and albumin.

Cooked Cereals.

The average individual needs about sixteen ounces of starch, and its equivalent, sugar, per day. Taken in the pastry form in which it is served in oatmeal and other mushes, starch is not readily digested; hence it is better to discard the mushes, gruels, and farinaceous soups which are in common use. Ordinary mushes tend to produce constipation. Wholesome mushes and liquid foods may be prepared from cereals which have been thoroughly dextrinized; that is, exposed for a long time in an oven at a temperature sufficient to slightly brown the starch, as in zwieback, granola, granuts, and granose. Zwieback may be easily prepared by toasting the bread in an oven until browned throughout the slice. By grinding the dry crusts in a coffee mill, an excellent granular food may be prepared, which may be softened with hot water or fruit juice. Numerous other preparations are described in works devoted to hygienic cookery.

Facts about Sugar.

Cane sugar, when eaten in other than very small quantities, whether in its ordinary form, as served at the table, or in the form of candies, preserves, cooked fruits, or with acid fruits, raw or cooked, is productive of great injury, interfering with the natural processes of digestion, causing irritation and catarrh of the stomach, and giving rise to diabetes and other grave maladies. Cane sugar has been shown by experimentation, to be the least easily digestible and assimilable of all sugars. Milk sugar, the white substance found in milk, is easily digested by children under two years of age, but adults do not readily digest it. On this account milk often gives rise to flatulence and acidity, from the fermentation of its sugar. If milk is taken at all, it is better to take it in the form of cottage cheese or buttermilk, which contain little or no sugar. The sugar of fruits and the sugar which is formed by the action of the saliva upon the starch in the process of digestion, are the most easily appropriated of all sugars. It is well to discard the use of cane sugar altogether, and substitute the use of sweet fruits and sugars prepared from starch, which can now be obtained at a reasonable price.

Wholesome Foods.

The fatty element of food is required by the system to the amount of one and one-half ounces daily. Animal fats may be advantageously discarded. The only animal fat at all admissible is sterilized cream and butter. Ripe olives and nuts are the best source of fats. Nuts present the most easily assimilable of all fats in the form of an emulsion, or cream, which requires little or no digestive action. It mingles freely with other foods without interfering with their digestion, while oil and grease of all sorts, whether of animal or vegetable origin, interfere with gastric digestion. These substances are not acted upon by the gastric juice or the saliva, but are di-

gested in the small intestines only, after coming in contact with the bile and the pancreatic juice.

Albumin.

Albumin is represented in the white of egg and the lean portions of flesh. It is also found abundantly in various grains, as wheat, oatmeal, and rye, and in still greater quantity in peas, beans, and lentils. Nuts are also very rich in albumin. A pound of peas or of nuts contains nearly twice the amount of albumin found in an equal weight of fish or eggs, and nearly one half more than is furnished by an equal weight of beefsteak. A sufficient amount of albumin may be obtained from grain foods alone, especially wheat or oatmeal, which are rich in albumin. Care should be taken, however, to use the whole meal instead of superfine flour.

Albumin is one of the most essential of all elements, and care must be taken that it is supplied in sufficient quantity; but an excess is always injurious, resulting in the formation of uric acid and other poisonous waste substances which give rise to rheumatism, gout, and other serious maladies, preparing the way also for other diseases by poisoning the blood, and thus lessening the resistance of the body. The amount of albumin required daily is three ounces. This quantity is found in about two pounds of bread, in about twelve ounces of peas or beans, and about the same quantity of nuts. It is also furnished by twenty-one ounces of eggs or seventy-three ounces of milk.

The Staff of Life.

A person taking a sufficient amount of bread with an admixture of fruits in moderate quantity to satisfy the palate, will take into the system a sufficient amount of albumin to supply the needs of the body. Any additional albumin in the form of meat will be injurious. It is better, however, to supply part of the albumin from some other source, especially nuts, for the reason that bread is deficient in fats, though containing the other elements in good proportion. The large amount of albumin which the bread contains, and especially the excellent proportion which exists between the albumin and the starch, render this a most important food. Bread is, in fact, the staff of life.

The Dietetic Value of Potatoes.

Potatoes should perhaps be mentioned next to bread in importance as a food substance. They are deficient in albumin, however, though easily digested when in proper condition and cooked properly. Baking is the best method of cooking potatoes. The addition of meat, and even of eggs, to a diet into which bread enters largely, is certain to introduce an excess of albumin. When eggs or other highly albuminous foods are used, a portion of the bread should be replaced by potatoes, in which albumin is deficient, thus preserving the natural balance.

Normal Appetite a Safeguard.

It is not necessary to weigh and calculate the food to a nicety, as a natural appetite is not only an excellent guide to the amount of food required, but also respecting the character of the food; that is, the proportion of the food elements. When there is a lack of albumin in the system, there will be a craving for it. This instinct may be safely followed except in cases in which an artificial appetite for meat has been cultivated. Any deficiency of albumin in the food, which may be recognized by a study of the dietary or by a craving for nitrogenous substances, may be readily satisfied by adding to the usual meal a handful of nuts or nut products, food

substances which must be recognized as furnishing albumin in the best form.

Cow's Milk.

Milk contains a very digestible form of albumin, though it is less easily digested by adults than by infants, on account of certain changes which take place in the development of the body, both in the form of the stomach and in the character of the digestive fluids. Milk is alone likely to communicate disease on account of the germs which it always contains. Tuberculosis of the bowels and other forms of tuberculosis in young children is probably due to milk in most cases. The bowel troubles of children, and many of the gastric and bowel disturbances of older persons, may be traced directly to the barnyard germs which are always found in great abundance in milk. Milk should never be eaten without scalding it for a few minutes. This destroys the germs.

Flesh Foods.

Flesh food is unquestionably the most objectionable of all sources of albumin. Meat is an unnatural diet. The natural and proper food for man is supplied by fruits, nuts, and grains, the most refined products of the vegetable kingdom. All scientific authorities agree on this. The elements of nutrition are found in flesh food, but in a less pure state than in the best vegetable products. Vegetables store energy from the sunlight, while animals appropriate this energy and use it. In other words, while vegetables gather force, animals expend it.

The food elements contained in meat are mixed with poisonous elements, the result of breaking-down processes which are constantly taking place in all animal bodies. These waste and poisonous substances are constantly eliminated by the kidneys and other excretory organs. The flesh of a dead animal always contains these substances in great quantities, besides other poisons which are formed by the decomposition which begins immediately after death, and progresses more or less rapidly even when the flesh is kept cool in a refrigerator. It is this decomposition which causes the flesh to become tender. Flesh food always contains germs, often the germs of specific diseases, such as consumption, hog cholera, and other maladies. Various parasites, especially tapeworm and trichinæ, are also found in flesh — the first mentioned in beef, the latter in pork.

The use of flesh food unquestionably shortens life. The Bible unquestionably grants permission to use flesh as food, but the use of blood is strictly prohibited. Hence the use of juicy beefsteaks is opposed to Biblical teaching, and is also unchristian. Gen. 9:4; Acts 15:29.

Mischievous Condiments.

Condiments of all sorts are productive of great mischief, producing inflammation and catarrh of the stomach, hardening of the liver, disease of the kidneys, dropsy, hemorrhoids, ulceration of the stomach, catarrh of the bowels, and many other maladies dependent on those which have been mentioned. We must include in this list mustard, pepper, cayenne, ginger, spices, curry, horseradish, and all other substances which produce a smarting sensation in the mouth, or are capable of producing irritation when applied to the skin.

When mustard or other irritants are applied to the stomach, the entire gastric mucous membrane is irritated and injured, and the whole stomach is crippled. It should be remembered that the stomach has a limited area, hence a small amount of any irritating substance may damage the entire stomach surface.

(To be continued.)

WINTER GYMNASTIC LIFE.

BY JOHN W. HOPKINS.

INSTEAD of seeking a change of climate at the approach of winter, the devotee of baseball, lawn tennis, golf, and other kindred summer sports, endeavors to substitute something suitable to the bracing air of the new régime. The ice is generally in proximity to every home, and young and old may find keen pleasure in vigorous spins over

FIG. 1.

the broad expanse of river or lake. The snow is tempting in its possibilities for long drives, games of ball, fort building, and the like. The cold, snapping weather need not deprive one of the daily walk, for the crisp, bracing air makes it doubly enjoyable, and one returns with clearer brain, purer thoughts, quickened circulation, and renewed physical energy. One feels that he is friendly with all Nature, and heart and lip are incited to praise the great Creator who has so wisely arranged all things in our environments for our best good and happiness.

The endeavor to preserve an erect carriage at all times is the hardest of gymnastic exercises, and it is surprising that when such an interest is taken in gymnastics, so many overlook this. It is very rare, indeed, to find among those of mature years, one who has not given himself a wrong physical education, and produced actual deformities. A drooping head, hollow chest, round shoulders, and a thrusting forward of the abdomen, — these are common defects. One of the best means of remedying these bad positions, is continually to correct them.

But this seems very difficult to do. The muscles which should hold the head back, the chest high, or the abdomen in, are weak and relaxed, from long neglect. And of all seasons winter is the time when most people seem to feel privileged to lop about in the most disgraceful manner. This should not be, for winter is the great "tonic" season of the year.

Notice the ruddy face, bright eyes,

FIG. 2.

and heaving chest of a woodchopper, and listen to his hearty "Hah!" every time the ax strikes deep into the hard oak or maple, and you will suddenly make the discovery that sawing and chopping wood is one of the best of winter exercises. It deepens the breathing power, develops the muscles of the chest, arms, shoulders, and back. It calls for vigorous work of the abdominal and waist muscles, and the continual bending and twisting alternately compress and release the stomach, liver, and intestines. This increases the activity of the glands, bringing more of the digestive fluids into action, and aiding, mechanically, in forcing the food along the alimentary tract.

FIG. 3.

Exercise should be taken out of doors, if possible. But for those who cannot get out, there is plenty to be done indoors; and whether he goes out or not, each person should take studied, daily training, calculated to build up the heart, lungs, and digestive organs. This is best taken under the supervision of a competent director. A course of training in a Y. M. C. A. gymnasium is worth a great deal.

For the home gymnasium, a horizontal bar is one of the most needful pieces of apparatus. Work performed while the weight of the body is suspended by the arms, is a most effective means of widening and deepening the chest. The supports of this bar can be fixed in the doorway (Fig. 6). Different heights may be arranged, affording opportunity for many exercises, which should be mostly simple and corrective.

For home training, the exerciser is useful. It occupies little space, can be secured in light, medium, and heavy grades, and can be so changed to different positions as to afford development of all the muscles. A good one can be made at home by attaching to either end of a band of heavy elastic two yards long a handle similar to those on the patent exerciser. In the middle of the band fasten a loop one and one half inches long. This can be slipped over a hook and will furnish nearly all the exercises that can be

FIG. 4.

taken with the more complicated machine. The entire cost is about forty cents.

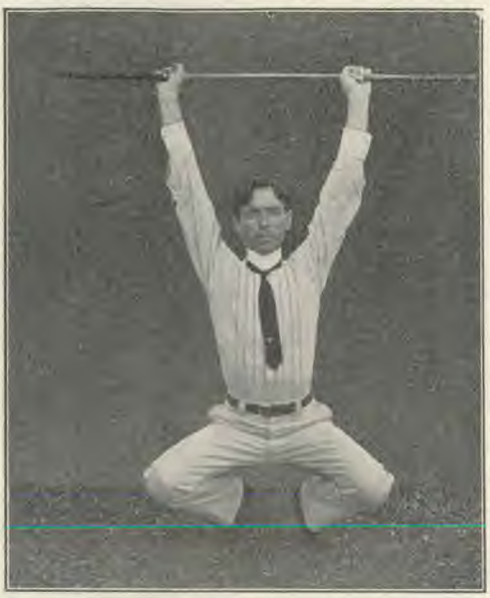


FIG. 5.

COST OF APPARATUS.

Horizontal bar	$0.35
4½-lb. bells	25
Iron wand	35
Clubs	40
Exerciser	40
	$1.75

This, with dumb-bells of from two to five pounds in weight, Indian clubs, and wands, furnishes a variety of exercises for individual work.

While a light wooden wand is best for beginners, and especially for women, an iron wand will be more satisfactory for the men. The wand should be about four and one-half feet long; an ordinary broom handle for the wooden stick, a piece of galvanized iron pipe, from one inch to one and one-half inches in diameter, will make good substitutes for the manufactured articles. The smaller pipe weighs about six pounds, and the larger about nine.

The following tables are especially planned to strengthen the vital organs, and to remedy the physical defects mentioned in this article.

TABLE I.

Grasp wand in front of body, arms straight, knuckles front.

1. Feet at stride, stand. (a) With heel raising, lift the wand forward upward. (b) Heels and wand sink. Inhale on (a), exhale on (b). Repeat six to twelve times.

2. Wand on shoulders, behind head; feet close from heel to toe. (a) Push arms upward, and bend the head backward. (b) Raise head, as wand comes to the shoulders. Inhale on (a), exhale on (b). Repeat eight to fifteen times.

3. Wand in front of shoulders; keep body erect, feet at right angles. (a) Push wand forward, and bend knees. (b) Extend knees as wand returns to front of shoulders; keep body erect, feet at right angles. Repeat twelve to twenty times.

4. Position as at first. (a) Charge diagonally forward, left leg, wand be-

FIG. 6.

hind left shoulder; left arm extended downward, right arm bent, right hand behind head. (b) Resume position. Repeat six to ten times each side.

5. Lie on the floor, face up; grasp wand with arms extended over the head, both arms on the floor. (a) Raise arms and right leg until they are perpendicular to the floor. (b) Return. Repeat eight to twenty times for each leg. The knee must be held straight, and the foot extended.

6. Stride stand, wand in front of shoulders. (a) Bend trunk forward, and extend arms downward. (b) Raise the body, and bend the arms. Repeat fifteen to twenty times. In this movement the head must be held erect, and the chest lifted high.

7. Wand on shoulders. Twist the trunk alternately to the left and right. Repeat ten to twenty times each.

8. Position as at first. (a) Charge sideways, left, the left arm up, the right hand in front of left shoulder. (b) Bend to the right. (See Fig. 4.). (c) Raise the body. (d) Resume position. Repeat four to eight times to each side.

9. Wand on the shoulders. Run in place, raising the foot high behind leg. Run fifty to one hundred steps on the toes, inhaling through the nostrils.

10. Repeat first exercise.

TABLE II.

1. Stride stand. Raise the wand forward upward, and bend the trunk very slightly backward. (b) Resume position. Inhale on (a), exhale on (b). Repeat four to ten times.

2. Stride stand, wand high over the head. (a) Bend the trunk backward, bringing the wand to the shoulders. (See Fig. 2.) (b) Raise the body, stretching the wand upward. Repeat two to eight times. Breathe in on (a), and out on (b). The bending must be executed with the chin drawn in, and must take place in the chest, not the waist.

3. Repeat second exercise of first table.

4. Wand on the shoulders. (a) Bend the knees, and extend the arms upward. (See Fig. 5.) (b) Extend the knees, and bend the arms. Repeat six to fourteen times. Must be taken with an erect body and head.

5. Position as at first. (a) Raise wand to shoulders, and left leg backward. (See Fig. 1.) (b) Extend arms upward, and carry the left leg sidewise. (See Fig. 3.) (c) As in (a). (d) Resume postion. Repeat five to ten times with each leg. This work must be taken with the leg and foot well extended, and the body erect.

6. Repeat fifth exercise of Table I, but add to it the raising of both legs with the arms. Repeat two to ten times.

7. Repeat seventh exercise of Table I, but as follows: (a) Turn the trunk to the left, and extend the arms upward. (b) Turn the body forward, bringing the arms to the shoulders. Repeat six to ten times to each side.

8. Repeat eighth exercise of Table I, but execute (a) and (b) as one movement, and (c) and (d) as the second movement. (See Fig. 4.)

9. Wand on shoulders. Run in place with knee bending upward. Raise the knee well in front of the body, remembering as before to run on the toes, and inhale through the nostrils. Take forty to one hundred steps.

10. Wand on shoulders, and left foot placed forward about two foot lengths. (a) Bend the body forward. (b) Raise the body, and bend slightly backward. Inhale on (b), exhale on (a). Repeat eight to twelve times, with each foot forward, both knees straight; the head being held high, and the chest erect.

Remember in all exercises that one principle is always true: That to which we attain does not depend on any one thing; it is the result of the whole. In our physical being, in the daily training of our bodies, we must ever bear this in mind. Perfection is never the result of spasmodic effort. Those who expect to gain and then to keep health by physical exercise, must be willing and anxious, not only to devote half an hour or more daily to their muscular training, but to bring their every action throughout the day into conformity with the rules of physical development and perfection. Very few realize that the one thing which will best bring them the desired end, is the living out of what they wish to be. Life is to us what we make it; live for health, and then expect the results which surely come from a wholesome, well-rounded life.

NATURE'S BODYGUARDS.

BY NEWTON EVANS, M. D.

THE purpose of this article is to consider some of the natural means which are at work in the body to prevent the contraction of disease, and to overcome disease processes which may be already at work in the body.

The body is constantly attacked from without and within by the exciting causes of disease, the most common and immediate of which are poisons of different kinds, and disease germs.

In thickly populated localities one is constantly breathing into the lungs and respiratory passages the germs of tuberculosis. Some of the methods which Nature uses to combat these disease germs are partly understood, at any rate, and their study is of much interest.

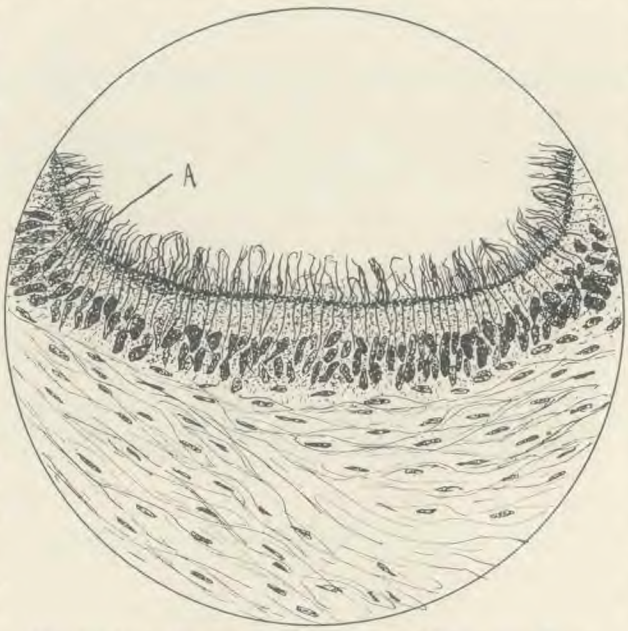
Throughout the entire length of the respiratory tract, which includes the nasal cavities, the throat, the larynx, or voice box, the trachea, or wind pipe, and the bronchial tubes, there are found peculiar cells lining the surface, from which project very fine hair-like processes called cilia, which are in constant motion in such a way as to propel forward any substance which may lodge on the surface; and this movement is always from within outward. In this way the respiratory tract is cleared of all particles of dirt and the germs of disease which enter with the air, as well as any mucus which forms within the tract. It is very odd and interesting to watch this movement with a microscope. As the little cilia are moving rapidly it resembles the appearance of a field of grain with the wind blowing over it.

Besides this protection, the hairs which are found in the front part of the nasal cavities act as screens to screen out a large amount of the coarse particles of dust. In this we see one reason for breathing only through the nostrils. If any of the disease-producing organisms should get past the guard formed by these two protecting agencies, as they often do, there is a third kind of protector. I refer to the white blood cells, or leucocytes, which are found everywhere in the blood, and also throughout all the tissues of the body. These little warriors are found in large numbers in the lungs, and as soon as one of them comes into contact with a disease germ, it immediately proceeds to

surround it,— eat it up, so to speak,— and then to digest it.

But sometimes none of these means of protection are efficient, as when the disease parasites enter in such large numbers that they cannot be disposed of, or when the walls of the air passages have been wounded by some foreign bodies, such as iron filings or stone dust which may have been inhaled, or when from unhygienic and unhealthful living, overwork, or excess in alcohol or other stimulants, the cells of the blood have so lost their power that they are destroyed by the germs rather than destroying them.

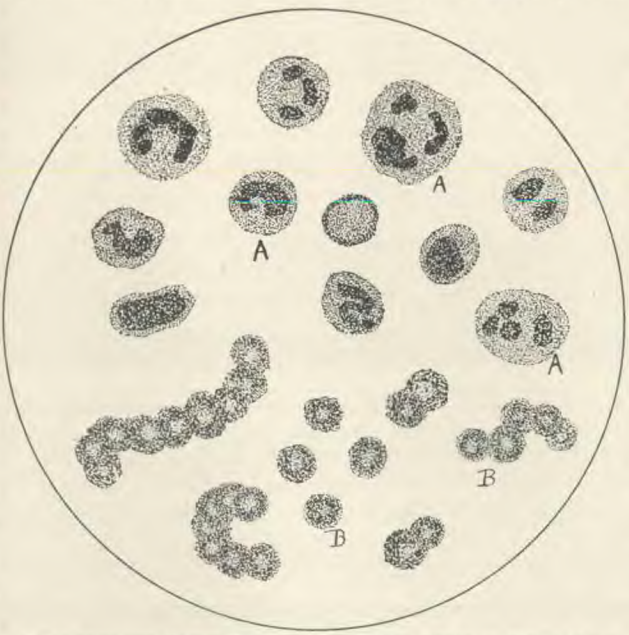
Pneumonia is another disease of the lungs, which is caused by a specific disease germ, and which probably enters those organs by the respiratory passages. The micro-organism of this disease must be present in the air in large numbers at certain seasons of the year, and finds entrance to the lungs of the majority of people. Indeed, during late years pneumonia has become the most deadly of all disease in this country. Until the last few years tuberculosis has been the cause of more deaths than any other disease; but in the last few years pneumonia has taken its place, and now claims more victims than any other disease. Why is it, then, that such a disease does not attack the whole community, if the cause of the disease is so prevalent? It is because the protective mechanism of the body is in such good working order that the germs are destroyed before they gain a foot-hold. It is a well-known fact that men who are addicted to alcohol are much more subject to pneumonia than others, and that when a drunkard is attacked by the disease he, almost without exception, dies in a very few days. Why is it? — Because his vital resistance is impaired by the poisonous effect of the alcohol. The white blood cells, which in health are able to cope with the pneumonia germs, lose their power to overcome them and destroy them. The same loss of resistance in the tissues may be brought about by long-continued overwork, or by too great exposure to wet and cold. We may say with truth, then, that the real cause of the disease is not the bacteria, but the alcohol, the wet, and the cold, which reduce the power of the body to fight against disease germs.



Ciliated Cells, Similar to Those Lining the Respiratory Tract. A, The Cilia Covering Surface.

Another interesting disease whose attacks must be repulsed by the protective mechanism of the body, is typhoid fever. In this case the germ always finds its seat of operation in the intestinal canal, and in order to reach that place must be taken with food or drink

into the mouth, and so pass through the stomach into the intestines. In this case we find the bodyguard in the stomach. The secretion and contents of a healthy stomach always contain a certain amount of hydrochloric (muriatic) acid. The principal use of this acid is to aid in the digestion of food, but it has another very important function; the disinfection of the stomach and everything which enters it. Consequently, when a person with a good stomach digestion takes food infected with typhoid fever into the stomach, the germs are destroyed by the acid of the stomach. They are digested. One would not advocate, however, the use of typhoid germs as a dietary. On the other hand, when from excesses of any kind, loss of sleep, or overwork, the stomach fails to perform its work properly, and the blood loses its power of combating the disease, the germs may pass unharmed into the intestine, and gain a foothold.



CELLS FROM THE HUMAN BLOOD. A, DIFFERENT FORMS OF WHITE BLOOD CELLS. B, RED BLOOD CELLS.

These may suffice as examples of microbic diseases, and of some of the means which Nature uses to prevent their getting a hold on the body tissues.

The question very naturally arises as to how it is, that after any one has contracted one of these infectious diseases, and the germs have gained a foothold and have begun to grow and multiply, they do not *always* continue to increase, and quickly destroy the life of the patient. How is it that one ever gets well from pneumonia, or typhoid fever, or tuberculosis? Why does not a boil in the skin, when it begins to grow, continue to grow and destroy more and more tissue? As soon as the body recognizes the presence of the disease, it immediately sets to work to produce chemical substances to counteract the poisons produced by the germs, and to destroy the life of the germs. These protective substances are carried in the blood of the body; as we are told in the writings of Moses, "the blood is the life," not only in health, but in disease. During the first few days of the disease, it develops very rapidly, and increases in severity; the patient grows steadily worse, until finally the body has gotten its means of protection into good working order; then the disease process decreases, the germs become less virulent, and finally die, and the patient begins to get well.

The presence of these protective substances in the blood of an animal having any disease, is taken advantage of by the physician in treating several diseases. The best example of this is diphtheria. Horses are inoculated with

increasing doses of the poison (toxin) of diphtheria germs until their blood contains a large amount of the substance (antitoxin) which has been manufactured in the blood to combat the poison of the disease. Blood is then taken from these horses, and its serum is injected into any one who may have the disease, and they improve very rapidly; or when used on those who do not have the disease, it protects them against contracting it. Thus we see some of the ways in which Nature is always working to give health to the body, and combat disease. If we will but obey the laws of health, we will find that the Creator will keep the body in health. Poisons are continually going into the body in greater or smaller amounts, but much greater amounts are being unceasingly produced in the body, and must be disposed of by the excretory organs, thus making them the most important parts of the protective system.

If we should stop breathing for only a few minutes, the poisons which are normally thrown off by the lungs from the blood would destroy life. If the kidneys become inactive for but a few days, the accumulation of poisons which they should remove, destroys life. The principal outlet for poisons in the body are the lungs, kidneys, liver, skin, and intestines.

An eminent surgeon has said that it seems a greater mystery that any one should continue to live than that life should cease, when we look at the many causes of disease which are constantly at work about us.

Many of the methods which Nature uses to maintain health we do not recognize, and often oppose her efforts by disregarding them. For instance, you may have a headache, which is possibly caused by an acute attack of indigestion. The headache is given for the purpose of warning you that something is wrong, and to teach that the act which caused the trouble should not be repeated. But instead of taking the warning, many take a headache powder to stop the pain, and as soon as they are able and have the opportunity will repeat the indiscretion which caused the trouble. The headache powder may stop the pain, but it cannot remove the cause. Pain, then, is one of Nature's best bodyguards.

Among other unpleasant symptoms which are really a benefit and protection, fever, chill, cough, and loss of appetite might be named.

THINGS OUT OF SIGHT.

BY MRS. E. E. KELLOGG.

THERE is a trite old saying, "Out of sight, out of mind," sometimes pertinent unto matters pertaining to housekeeping. In all the affairs of life the tendency is quite too common to give the most thought to the things that appear most prominent to the eye, to spend time and money in beautifying the front lawn, while the back yard is unconcernedly devoted to garbage heaps and piles of débris and waste of many sorts. There are few housekeepers but would rise in self-condemnation were they to omit the daily cleaning of their living rooms, but there are many who are wont to leave with only an annual cleaning the cellar that is just beneath these same living rooms, the germ-laden air from which may permeate and pollute the whole house.

When our sanitary conscience has become fully awakened, we shall realize that a healthy home depends upon absolute cleanliness of the entire premises and surroundings, that germs generated in the woodshed are just as dangerous as if propagated at the front door, and that a semblance of purity will not pass for the genuine article in matters of health. It is the things least observable, the dark corners, the clutter places, indoors and out of doors, which serve as most attractive harborage for germs. Here they are least likely to be disturbed; here they most frequently find the warmth and moisture which, together with absence of light, are the favorable conditions for their growth. Some of these minute organisms are more than likely to be of those sorts which breed disease.

People would often wonder less why sickness is so frequent in their households if they would inspect their woodshed and back yard, and turn to light the contents of some closet underneath the stairs. A picture comes to memory of a village home which no doubt is representative of scores of other country homes. The fuel storage is a shed opening from the kitchen, without flooring other than the damp ground, and where the wood for the kitchen stove has been sawed and cut for years, the chips and loosened bark having decomposed upon the moist earth, and the wood forming the bottom of the piles has rotted and molded in the water that has found entrance during the heavy rains and freshets, until the entire surface is a reeking mass of decomposing wood. Near by, accessible from the same room, is a flight of breakneck stairs, down which one must grope in darkness, unless provided with an artificial light, leading to the cellar, a mere excavation in the earth, bordered with a wall of stones from which the mortar that once held them together has in many places fallen, and through which the water filters into the cellar at times of heavy rains and thaws. There are two windows of three panes each, curtained with cobwebs, which by dint of much effort may be taken out, but not otherwise opened, to let in fresh air. A shelf hangs near the center, covered with fragments of food, some of which have grown gray with age, or, more correctly speaking, with mold; boxes, and bins, and barrels, the contents of which include vegetables, rubbish, food stuffs, and soft soap, line the walls on all sides.

Cellars under dwelling houses are very undesirable storage places for food stuffs, and the custom of using the same place for the storing of innumerable other things is most unsanitary. Improper construction and neglect as to care make a cellar under living rooms a veritable death trap to those who dwell above it.

If a cellar is considered essential, it should be constructed and kept in accord with the principles of proper sanitation. It should have thorough drainage, that there be no source of dampness, but should not be connected with a sewer or cesspool. Its walls should be impervious to moisture. An ordinary brick or stone wall is insufficient unless covered with good Portland cement, polished smooth, and kept fresh and sweet by frequent coats of whitewash. The floors should likewise be covered with cement, otherwise the cellar is likely to be filled with impure air derived from the soil,— commonly spoken of as "ground air,"— which affords a constant menace to the health of those who live over cellars with uncemented walls and floors.

Light and ventilation are quite as essential to the healthfulness of a cellar

as to other rooms of a dwelling, and plenty of windows on opposite sides should admit of a free interchange of air. In the summer season, during the daytime, the air in the cellar is much cooler than that outside, and as the warmer out-of-door air enters the cool atmosphere of the cellar, the moisture it contains condenses, and makes the cellar damp. It is for this reason that many housekeepers keep the windows closed during the daytime, and open at night, during warm weather. During the cold season the windows should be thrown open at least once a day, for a complete change of air. The same care and attention in regard to cleanliness is as necessary in the cellar as in other parts of the dwelling.

Dust, the vehicle by which germs so commonly enter the house, is apt to abound in cellars and basements because they are usually more dark and less frequented than other rooms. But dust and dirt in these quarters is no less a danger signal than elsewhere.

Once a week, at least, a cellar where provisions are kept should be cleaned. The walls and ceiling should be brushed, the floor well wiped with a damp cloth, or even scrubbed, if necessary, shelves and cupboards cleaned, and as much as possible of the dust everywhere gotten rid of. Whenever water is freely used, special pains must be taken to dry and air the apartment thoroughly after cleansing, that no dampness be left to foster mold. All fruits and vegetables stored in the cellar should be carefully looked over, and all decaying ones at once removed. Those of an especially perishable nature should be given more frequent inspection. No decaying vegetable or animal matter should be permitted to remain in the cellar for even a day, to pollute the air and contents of the room. This is a matter of the greatest import, since the germs and foul gases arising from decomposing food stuffs form a deadly source of contamination, not only to the contents of the cellar, but to the air of the living rooms above, to which it ascends through every crack and crevice.

At this, the harvest season of the year, when cellars are being filled with the provisions for winter, the utmost pains should be taken to provide against the introduction of unnecessary dirt and decaying substances. Tubers to be stored in the food cellar should first be either brushed or washed, that no unnecessary dirt be introduced into the room. Everything should be so placed and arranged as to facilitate frequent cleanings, and to prevent the accumulation of dust and dirt in nooks and corners.

Each autumn and spring, the entire contents of the cellar should be literally "turned out of doors" and every portion of the room thoroughly disinfected with soap and water, fresh whitewash, or in some other practicable way. At any time an odor of mustiness in the cellar should be considered a signal of danger, to be attended to at once. If a careful cleaning and airing does not remove it, more vigorous measures should be employed. Examine the drainage and the contents of the cellar, and remove the cause if possible. If the cause is not discernible, the whole room should be disinfected, or, as may be needed in some cases, reconstructed.

The basement or shed where fuel is kept should in no wise be neglected. A floor of some sort is essential to protect from dampness. Decomposing organic matter of any sort is to be avoided if one desires a healthy home.

WHY I WON THE RACE FROM DRESDEN TO BERLIN.

BY KARL MANN.

I WILL speak in another article of how I perfected the technique of my gait so as to use the minimum amount of energy. Professor Zuntz, who is one of the foremost leaders in physiological research, was astonished by my method of utilizing the trunk muscles in walking. Boege and I had practiced this in the rehearsal march for the purpose of testing breathing. He regarded my gait, which is somewhat military, with a long stride and a slight bending and falling forward of the limb as it takes the stride, as very well adapted to the purpose, and gave me a satisfactory explanation for the superiority of this technique in covering great distances rapidly and uninterruptedly, without taxing the muscles or the lungs and heart.

Indeed, I am sure to-day, that I could walk from Berlin to Vienna, a distance of 580 km. (360 miles) in at most five days, taking six hours out of every twenty-four for rest, as prescribed, and could probably make the race in four days. In regard to the two vegetarians who won the race in 1893, walking from Dresden to Berlin in seven days, without practicing this technique, it was a remarkable feat. I would consider it unnecessary extortion to walk a distance of over 100 km. (62 miles) in the unnatural, forced English gait; that is, with legs almost stiff, and arms swinging high at the sides. There is not the least common sense or advantage in it. Even the best walker cannot cover a distance of 50 km. (31 miles) in my time limit, without the exertion of his full strength, if indeed he be able to accomplish it at all; while with the more military gait, that distance is easily covered.

To preserve freshness and vigor throughout a long race, massage the limbs every fifty kilometers. This suffices to keep the muscles in good repair, and prevents cramp and stiffness.

It is also important to have previously hardened the feet by going barefoot, bathing them daily in cold water, taking various exercises to develop the muscles, and not forgetting the special care of the nails.

According to my experience, the shoes must have the exact shape of the foot, and must be very porous. I always wear a coarse, knotted-mesh shoe, made of hemp, and having strong soles of elastic leather, with thick rubber heels.

The socks are better too narrow than too wide, to avoid blisters caused by the presence of folds. They should be porous, for nothing is worse than when the skin of the heated feet becomes soft and almost spongy because the ventilation is not good. My feet were in as good a condition at the end as at the start of the race.

It is hardly necessary to state that the less clothing one wears, the better. The head should be bare, and a coarse-net shirt without sleeves, and gauze-like

knee pants are quite sufficient clothing to wear while walking.

I took nourishment a little at a time, something every two hours, with lemonade or diluted fruit juice every hour. The 7½ pounds that I lost on this march were regained in two days. Because of its scientific value, I confined myself to quite a strict fruit diet, beginning in January, avoiding pulse, eggs, cheese, milk, butter, and cocoa, and in the place of this very nutritious diet I used nut preparations; that is, so-called nut butter prepared by a mechanical process of grinding, from peanuts, hazelnuts, and almonds, after Kellogg's method. This product is very rich in albumin and fats, is easily digested, and is economical. Because fresh fruits were not plentiful in April, I took unfermented grape juice and other fruit juices, as these represent fruit in a liquid form. Dried fruits I very seldom used.

In conclusion, I wish to state that my ideal of physical and intellectual perfection, toward which I aspire as a man of culture and progression, is not that of strength alone, but of strength combined with an average amount of endurance, which ought to be increased without the use of stimulants; such rapidity as is required in a four-hundred-mile race; the swiftness and alertness necessary for a sudden start on a one-hundred-mile race or in a match game like tennis; complete control of the body; and a feeling of confidence in the ability to accomplish the feat undertaken.

We must strive to reach a high standard of physical and intellectual ability. Every man can do this for himself, although a very busy person; he need not be a Rentier. The preservation of strength depends upon the proper use of each part of the body. If one part is less strong than another, the whole body may be saved from suffering by the exertion of strong will power, in such a manner that the maximum strength of the healthy organs may be utilized. Simple sportive ambition to the detriment of bodily health is not to be encouraged. The goal must be set high, for it is only then that it is worth striving for.

THE HIDDEN GIFT.

It was long ago I read the story sweet —
Of how the German mothers, o'er the sea,
Wind in throughout the yarn their girlies knit,
Some trinkets small, and tiny, shining coins,
That when the little fingers weary grow,
And fain would lay aside the tiresome task,
From out the ball will drop the hidden gift,
To please and urge them on in search of more.
And so, I think, the Father kind above,
Winds in and out the skein of life we weave
Through all the years, bright tokens of his love;
Then when we weary grow, and long for rest,
They help to cheer and urge us on for more;
And far adown within the ball we find,
When all the threads of life at last are spun,
The grandest gift of all — eternal life.

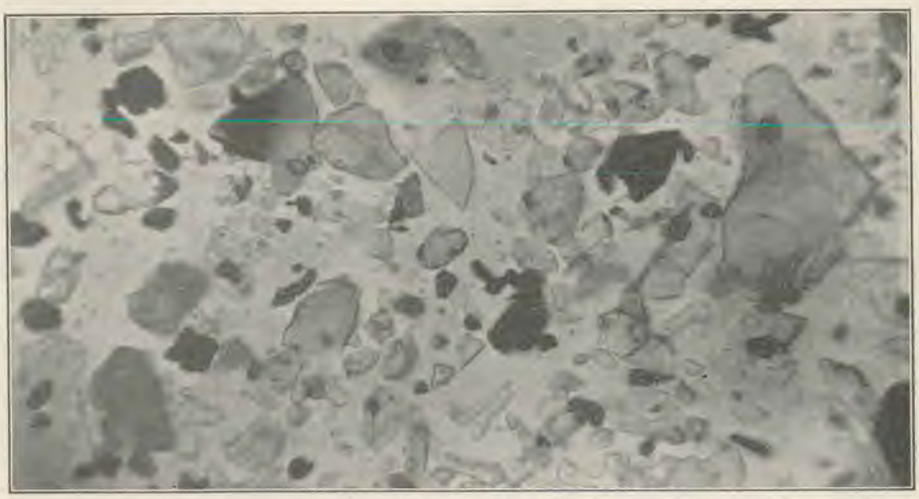
— *Selected.*

DANGERS FROM DUST.

BY E. F. OTIS, M. D.

A LITTLE attention given to the study and analysis of dust will help us to understand its relation to disease. The rôle being once understood, it becomes quite easy to protect ourselves from diseases entering through this channel.

Dust is composed of fine particles of organic and inorganic material. Under the microscope the particles are exceedingly small, but vary relatively in size and shape. There are two properties to which dust owes its dangerous qualities: the sharp form of the particles (see cut), and the presence in it of destructive germs. Were it not for the cutting nature of the former, it would be more difficult for the latter to pass through the protecting membranes of the body.



PHOTOMICROGRAPH OF EMERY DUST MAGNIFIED FIVE HUNDRED DIAMETERS.

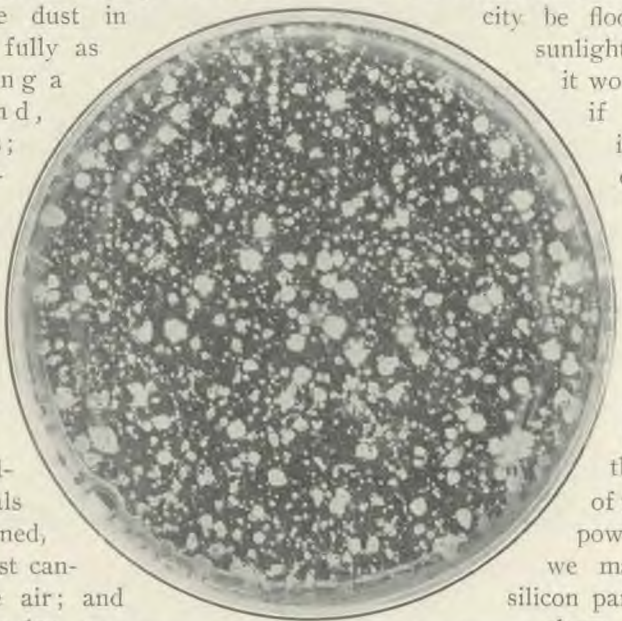
Emery dust, undoubtedly, contains the largest proportion of sharp, piercing atoms. The very fine particles are readily carried in the moving currents of air in the room where the emery grinding is done. On entering the lungs, they pierce the membrane, leaving a little opening, or atrium, through which a harmful germ may pass, and eventually cause the death of the individual.

It has long been observed that people employed in such places easily contract consumption. Only recently, the writer, while visiting a large manufacturing establishment, passed through one room which contained fifty or more emery wheels, busily grinding and polishing steel implements. The room was filled with the emery dust. On inquiry, it was learned that the average life of the men employed in this room was two years. Occasionally one endured it six or eight years, before being stricken with consumption. The only way in which employees for this department could be obtained was by paying the men much larger salaries. It would be a wiser plan, one would think, to remove the dust rather than allow uninformed workmen to sell their lives for a few extra dollars.

When dust comes in contact with a moist surface, it will not rise in the air

until it has become dry and is disturbed by a strong current of air. So moist surfaces, in proximity to the stone, would remove a large percentage of the dust. A better method, however, is a strong aspirating current which draws the dust into a hood about the wheel, and carries it away.

The dust about marble works or stone quarries is equally as bad as emery, and the workers suffer as readily from consumption. The dust in glass works is fully as dangerous, being a mixture of sand, emery, and glass; but it is interesting to note that those employed in these works are more immune from disease. This is owing to the fact that the grinding and polishing materials used are moistened, and thus the dust cannot rise in the air; and before it becomes dry it is washed away.



GERM COLONIES APPEARING AFTER DUST HAD SETTLED FOR THIRTY MINUTES ONTO A SURFACE OF NUTRIENT MEDIA.

The soot that blackens the dust of our smoky cities is not in itself so harmful, provided it is not associated with pulverized cinders, for the latter are sharp and crystalline, while the former is amorphous, or so fine that it has no shape, even under a high magnification. The highest magnifications show it to be mostly spherical.

Coal dust causes anthracosis, a condition in which the lungs become black, and microscopical sections show them to be full of little particles of soot. It has not been proved that the latter interferes with the normal function of respiration, or predisposes to disease to any great extent. However, the coal soot is light, and will easily carry with it, wherever it floats and settles, any germs of a dangerous nature that may adhere to its particles. It darkens the atmosphere, so that the sunlight cannot exert its life-giving power over the numerous inhabitants of our large cities, or its destroying effects upon the germs in the streets. Could the streets and basements of the city be flooded with the sunlight of the desert, it would be difficult, if not well-nigh impossible, for disease germs to exist, and the city death-rate would be greatly diminished.

There are also serious dangers from the organic part of the dust. From powdered plant life we may have little silicon particles that are sharp and fully as detrimental as any inorganic or mineral form of dust. However, the most dangerous portion of this dust are those particles capable of growing and eventually producing disease.

An idea of the number of these little particles may be gained from the illustration, which shows the colonies of germs that have developed upon the surface of nutrient media. Each spot, or colony, represents a germ that has fallen and multiplied, growing to the represented size in twenty-four hours. Many of the colonies are microscopical. There are just 10,200 colonies, which means that just 10,200 germs fell into the plate

during thirty minutes, shortly after the sweeping of a schoolroom. Many of them would produce disease, if placed under favorable influences.

When it is known that a large number of disease germs will not grow on ordinary media, it is not improbable for twenty thousand germs to fall into a dish four inches in diameter in thirty minutes. In view of these facts, it would not be unwise, in cities or wherever disease is prevalent, to use, as far as practicable, a strong disinfecting solution while dusting. Here is the advantage of a polished floor, which may be sponged with a disinfectant — a floor that has no hiding places for germs. Here, again, is the advantage of the rug, which may be taken out, and the germs removed by the wind and destroyed by the sunshine. Or they may be subjected as frequently as desirable to a more radical antiseptic cleansing.

In the open desert and on the sea there are practically no germs; in the country there are a few more; but in the city their number is legion. This is why the country is more healthful than the city. Disease germs practically exist in direct proportion to the population and the multitudes frequenting a certain place.

While germs are certainly carried in water and by personal contact, dust is the most important factor in conveying the germs of consumption, pneumonia, scarlet fever, diphtheria, influenza, erysipelas, and pyogenic diseases.

A hard pavement on all the streets, a thorough daily washing of the same, including the sidewalk, the convenient arrangement of fountain cuspidors on the street, enforcement of anti-expectoration laws, the enforced emigration of all consumptives to more favorable climates, and the carrying out of stringent anti-smoke laws would accomplish a great deal toward destroying the dust and lessening its dangerous properties.

Until the above national measures are more thoroughly executed, we should pay more careful attention to the protectors which nature has given to each individual. There are moist, narrow passages in the nose, which act as dust filters, and which are covered with a membranous lining, provided with small vibrating cilia. The latter appendages effectually prevent the entrance of any dust particles, and mouth breathers ignore these filters, depending on the cilia in the trachea, or windpipe, to remove the dust from the air they inhale. However, the quantity of air taken in through the mouth is too great for effectual service by the trachea cilia, and, consequently, the germ-laden dust is allowed to pass on into the lungs.

PUSH a noble cause along.
Not with censure fetter it;
When your purpose is to build,
Not to tear the building down,
Use the sunshine that will gild,
Not the dark and dismal frown,—
Not till then, if you are wise,
Will you dare to criticise.

— *Amos R. Wells.*

HOW THE SICK ARE HEALED.

BY J. H. KELLOGG, M. D.

HEALING power is not possessed by doctors, neither does it reside in remedies. The only real power to heal is found in the body itself. The healing force, or agency, is that same force by which our bodies are maintained in health. It resides in that mysterious principle of life for which science has not yet afforded an explanation. The only solution of the mystery is that given by Holy Writ, with which scientific men are now in general accord; namely, the presence in nature, in every living being, in man, of a beneficent intelligence which is continually creating, restoring, renewing, building, and rebuilding, always doing the best that could possibly be done under the circumstances. The life principle in man is the real healing power. This principle is active in every living cell, and particularly in the blood.

This idea is by no means new. More than a hundred years ago it was demonstrated by John Hunter, who showed that a part quickly dies when the arteries leading to it have been ligated, so that the blood supply has been cut off; and more than four thousand years ago the use of blood as food was forbidden, "for the blood is the life." As the blood courses through the channels provided for its distribution throughout the body, it comes in contact with every tissue, vitalizing, energizing, purifying, repairing, healing,—

"While far and wide, the crimson jet
Leaps forth to fill the woven net,
Which in unnumbered crossing tides
The flood of burning life divides;
Then, kindling each decaying part,
Creeps back to find the throbbing heart."

The healing process is active in our bodies continually. Muscular activities, and every other kind of work performed by the body, wears out the working parts, and they must be repaired or healed before they are ready to work again. This is as true of the stomach, the liver, or the brain as of the muscles. A fatigued brain or a tired stomach is sick, and must be cured by the reparative powers of the body, acting under the favorable conditions afforded by rest, before the parts are ready to work again. The nature of this ordinary every-day healing which is going on in our bodies, is precisely the same as that required for the restoration of the sick to health. The stomach which is exhausted for the first time as a consequence of the eating of an unusually large meal, will recover quickly, perhaps, overnight; while the stomach which has become chronically exhausted as the result of continued overeating or through transgression of the laws of health, so that a state of slow digestion, or hypopepsia, has been induced, requires rest, the very best of care, and every possible favorable condition during several weeks or months; but if recovery occurs, it will be effected in precisely the same way as that from the consequences of its every-day work.

The process of healing is not a strange or a mysterious operation, but a natural process, as natural as sleep, digestion, or any other bodily function. It is not, then, a process which can be ascribed to the influence of mystical agencies.

Life comes to us from the great storehouse of life, energy, and power. Healing comes from the same source. It is evident, then, that healing power is not a thing that can be bottled up and dealt out in drops or teaspoonful doses;

neither can it be compounded into pills or electuaries. It is not something which can be put into a man. The healing power is already in the sick man. It needs only to be stimulated to activity, and aided in its healing processes.

THE FOOLISHNESS OF FLESH EATING.

THE secretary of the State Board of Agriculture of a large Western State, recently said that those who advocate a non-flesh dietary are foolish. An Iowa gentleman, O. H. Barnhill, who seems to have had practical experience with a non-flesh dietary, acknowledging himself to be one of the sort of persons referred to, has contributed to the *Twentieth Century Farmer* a reply which sums up the argument in such an admirable way that we are glad to present it to our readers: —

"Let us first consider the relative food value of grains and meats. The total nutritive value of lean beef is 28 per cent; pork, 61; poultry, 26; mutton, 28; an average of 36 for the four leading kinds of meats produced on the farm. The nutritive value of wheat is 86; oats, 80; corn, 84; an average of 83 for the three leading cereals grown in the United States. Rye, barley, and rice would raise the average a little, but as we do not use them as stock food to any great extent, they will not be considered.

"Going into details, we find that the meats above mentioned contain an average of 17 per cent of albuminoids, and the grains, 11 per cent; the grains contain 66 per cent of starch, and the meats none; the latter have 15 per cent fats, and the former 5 per cent; the grains are only 13 per cent water, while the meats are 64 per cent; a small amount of salt and cellulose makes up the total nutritive values.

"As 83 is about two and one-third times 36, therefore flour, oatmeal, and cornmeal contain two and one-third times as much food substance as beef, mutton, pork, and poultry. This is not in accordance with the erroneous ideas entertained by many people, but the results of chemical analysis that cannot be disputed.

"Simple-minded people reason by analogy that because cattle are strong, the eating of their flesh must be very strengthening. This would be all right if the reasoning were carried a little farther, reaching the conclusion that since cattle gain their strength from eating grain, we can do the same. Our domestic animals gain all their strength and health without eating meat, so why can't we? People can obtain strength from oatmeal as well as horses can from oats, and fat from corn bread as well as hogs can from corn.

"As to healthfulness, it is generally admitted that grains are more wholesome than meat. Fried pork is everywhere regarded as one of the most difficult dishes to digest, while cereal preparations are by common consent called 'health foods.' Roast pork requires five hours and fifteen minutes to digest, a longer time than any other food, while wheat bread requires only three hours and thirty minutes, and corn bread three hours and fifteen minutes. Fried salt pork takes four hours and fifteen minutes to digest; fried veal, four hours and thirty minutes; boiled chicken, four hours; and roast duck, a half hour longer.

"At this place it might be well to call

attention to a few common errors in cookery, as this accounts for much of the indigestibility of many foods, both grain and meat. Ordinary wheat flour is less nutritious and very much harder to digest than whole-wheat or graham flour, besides being a common cause of constipation. This is not the fault of wheat, but of the method of preparing it for food. Oatmeal would be very much more digestible if cooked an hour instead of fifteen minutes. Yeast bread contains the germs which cause fermentation, and is far less wholesome than unleavened bread, such as corn bread and crackers. The salting and frying of meats render them more unwholesome and indigestible.

"The eating of meat is a common cause of liver disorders, rheumatism, and gout. Meat contains a large amount of injurious uric acid, and is very susceptible to decomposition. Recall the embalmed-beef scandal. Pork is the most unwholesome of all meats, being very liable to be diseased. In order to protect the public health, government officials are stationed at all the large packing houses to prevent the use of diseased meats for food.

"Having proved that grains are more nutritious and healthful than meats, let us consider the question from an economical standpoint. Flour costs about 2½ cents a pound; oatmeal, 4 cents; and corn meal, 1½ to 2 cents. The average would probably be about the price of flour, as the comparatively small amount of oatmeal consumed would not raise the average any more than the corn meal would lower it. The average cost of meat is perhaps not far from ten cents a pound, or four times the cost of grain food products. As grain contains two and one-third times as much food value as meat, it would take 2 1-3 pounds of meat to equal one pound of grain. The grain food would cost about 2½ cents and the meat 23 cents, or nearly ten times as much. In other words, the nutrition in meat costs nearly ten times as much as the nutrition in grain, and comes in a less wholesome and digestible form besides.

"It really seems foolish to pay $10 for meat when the same nutrition can be purchased in the form of grain for $1. It would be more economical to buy flour, meal, and cereal preparations, and save the remaining $9 for something really needed. It takes at least one bushel of grain to make ten pounds of beef or pork. It would seem far more sensible to save the one bushel of grain for food than to feed it to an animal and get only ten pounds of meat, especially as grain is better food than meat. We deserve to be called fools for throwing away one bushel of good food for ten pounds of poor food, with a lot of hard work thrown in. The sensible people are those who advocate eating pure, wholesome, and nutritious grains rather than the dead carcasses of filthy swine and poultry.

"There is but one possible excuse which can be urged in favor of meat eating: It tastes good. What a poor, weak, lustful reason! We should eat for life, health, and strength; the momentary pleasures of the palate are of secondary importance. The wise man chooses that food which is best suited to the needs of his body, and brain, and pocketbook. He enjoys the pleasures of eating, but does not allow his sensual enjoyment to influence his choice of foods. To gratify the appetite at the expense of health and wealth is folly. Of course it is all right to consider taste in choosing between two foods of equal merit, but it is poor judgment and also bad morals to be ruled by appetite rather than considerations of health and economy.

"The idea of killing a live animal and eating its dead body is repulsive to the higher and finer instincts of man. To know that one's stomach has become the grave of a dead animal is not a pleasant thought. Physicians tell us that the eating of meat increases the craving for alcoholic liquors. It is a fact that in those countries where the most liquor is drunk the most meat is eaten: England, Germany, and the United States.

"Public sentiment is being educated to the superiority of grain over flesh food. The beef-trust agitation resulted in a great deal of good by causing people to stop and ask, 'Is it really necessary to eat meat? Are not other articles of food cheaper and better?' The great increase in the consumption of cereal preparations is a hopeful sign. Fifty years ago hardly any of these things were eaten, now there are millions of bushels consumed annually. Scarcely a breakfast is eaten without some oat or wheat preparation. Even coffee is made of grain.

"The writer challenges any one to disprove any of the foregoing statements. A word of caution: Don't class eggs and dairy products as meat."

AN ACTUAL EXPERIENCE.

A LETTER received recently from a Canadian subscriber to GOOD HEALTH contains a forcible argument on the unwholesomeness of a flesh diet, even in those places where nature has free sway.

Our correspondent's husband, it seems, had been proof against all arguments in favor of a non-flesh dietary. They moved to Pleasant Valley, Saskatchewan, and settled on a ranch in the midst of the solitary prairie. Here his fondness for game overcame any scruples of conscience or dictates of judgment which may have been aroused by former discussions, and he declared he must go hunting.

When he came back, he brought with him two young prairie chickens. What was his disgust and horror to find, in cleaning them, tapeworms six inches long, buried in the intestines. The chickens were not over four or five months old, were one hundred miles from any settlement, were getting scarcely any grain for food, no garbage from any kitchen, and were subsisting on rose and cottonwood buds.

"Every seven years," writes our correspondent, "some disease kills off the chickens and rabbits in this district. When we first moved to Pleasant Valley, three years ago, there wasn't a rabbit to be seen. Now they are beginning to appear once more."

How many times we hear it said, "Oh, well, we never allow our chickens to get into the garbage from the kitchen. They are always fed nice, clean food, and of course their flesh is much cleaner and sweeter than chickens who run and pick their living."

Surely the above is a substantial refutation of any such argument, and is one more added to the constantly swelling list of proofs that flesh is an unnatural and disease-producing article of diet, even in its purest and best form.

Thanksgiving Menus

By Mrs. Lulu Teachout Burden

Soup

Tomato — Nut Sticks

Entrees

Casserole of Rice with Protose — Potato Salad

Vegetables

Baked Sweet Potatoes — Brown Sauce

Hubbard Squash — Mashed Potatoes — Kornlet

Breads

White Fruit Bread — Whole-wheat Wafers

Dessert

Lemon Pie — Gold Cake

Assorted Nuts — Grapes, Apples, and Bananas

♣ ♣

Soup

Fruit — Cocoanut Crisps

Entrees

Roast of Protose — Calcutta Sandwiches

Vegetables

Mashed Potatoes

Vegetable Roast — Cranberry Sauce

Browned Parsnips — Escalloped Tomatoes

Breads

Granose Biscuit — White Bread

Fruit Crackers

Dessert

Brown Betty — Orange Sauce

Malaga Grapes — Apples

♣ ♣

Soup

Vegetable Oyster Cream — Crackers

Entrees

Macaroni — Baked Granola

Vegetables

Sweet Potato Cutlets

Steamed Potatoes — Brown Cream Sauce

Mashed Turnips

Breads

Walnut Buns — Zwieback — White Bread

Dessert

Cocoanut Cream Pie — Pecans

Oranges — Apples — Grapes

SIMPLE TABLE DECORATIONS.

A Pretty Idea for a Birthday Party.

For the Home Table.

For Thanksgiving Day.

THE RESULT OF TIGHT LACING.

O INDEED, my dress is not tight. My waist is naturally small; I never could wear a tight dress." Such is the universal observation. No lady dresses tightly, none whose dress is not loose. Even the Empress of Austria, who has the reputation of having the smallest waist in the world, would doubtless say her dress was quite loose; and no doubt it is. So the subject of my essay will not apply to any one. I will merely speak of it in the abstract.

First, how would we suppose it would affect the bones? They are apparently hard and unyielding structures, yet will grow in any form or position in which they may be doubled up. In proof whereof, see the thousands of bent spinal columns because the children spend so many hours every day bending over school desks. "Just as the twig is bent, the tree inclines."

Man is the only animal that is made to look up; but these stooped shoulders and bent spinal columns prevent this to some extent, and diminish also the cavity given to the lungs, interfering more or less with their functions. This, of itself, is a serious evil; and, like all other deformities, more apt to come on in young persons, when the bones are somewhat delicate, and yield readily to these forced positions. Yet even in old age the bones are still changing structures, and grow as they are placed.

Again, bones become soft from want of exercise, and as our ladies universally dress, the bones of the chest have no freedom of action. Kept inactive they become more and more softened, and more and more pliable, interfering with the action of the lungs.

The lungs consist only of air cells composed of the finest and most delicate connective tissues. But if the chest is compressed, the air cells cannot expand, the air cannot get in, the blood has no way of parting with its impurities, so these impurities are carried back into the circulation, rendering every tissue of the body sickly and every organ unhealthy. The brain suffers with the rest, for to it must come the impure, unhealthy blood to nourish it; its structure becomes diseased, it cannot act healthily, nor is it possible for it to work with the power and alacrity which is natural to it.

It is impossible that the blood should be thoroughly purified, unless every one of these millions of air cells has the fullest and freest expansion. We cannot afford to dispense with any of them. Even the weight of a gentleman's clothing is said to interfere with about one fourth of his breathing, and how much more the cruel compression of corsets, whalebones, and steel, oftentimes requiring all the young girl's strength to pull them together.

Large and well-developed lungs are the best inheritance we can have; and so diminishing their size and capacity diminishes our vigor, power, and vitality. The larger our lungs are, and the more we breathe, other things being equal, the longer we are going to live, and the more power and vigor we will have.

Bringing the ribs together, as before stated, must necessarily press all the internal organs out of place. The liver is pushed and squeezed out of shape, at times pressed quite below the waist, and the stomach carried out of position. A professor once said to his class in the dissecting room that to find the position of the internal organs they need never look at a female subject, for in her they are always out of place.

The whole process of breathing is by the action of the muscles. The chest is formed largely of muscular structure; great immense muscles branching in every direction — an immense muscular apparatus to expand the chest and help in the process of breathing, to give us the breath of life. It is wonderful how the immense machinery of muscle is arranged to accomplish this end. Besides, the great muscles of the abdomen are brought into play to help; in fact, almost every muscle of the body seems to be brought into action to accomplish more fully and effectually this great act of breathing; and to do this effectively they must have the freest motion and the fullest action, no obstruction in any way.

The muscles, from being thus inactive, grow weak and powerless, and forget their cunning; even so weak that when the corsets, those unnatural supports, are removed, the muscles have so lost their power, are so feeble, they can no longer sustain the body, and the young girl will say she feels as if she were all falling to pieces, or would break in two. And as the muscles grow yet weaker, she will tell you she can't go without the corset. I know of many who have tried to lay them aside, but cannot because they feel so wretched, so miserable without them, they have become so accustomed to this artificial support that there is no strength in the muscles to hold the body up, or the organs in position, and going without the corset produces unpleasant sensations.

This one cause is doing more to undermine the health of American women than any other thing. There is not a function of the human body that is properly performed, not an organ that does its duty. It destroys all gracefulness of carriage, causes suffering that they are hardly conscious of because they are so accustomed to the pressure they do not know when they are dressed too tight, nor when the breathing is oppressed. "Rags are not of as much importance as the person."— *Herman S. Mendelsohn, in Health.*

THE GOLDEN AGE OF PEACE.

My brethren, we are free!
The fruits are glowing
Beneath the stars, and the night winds are flowing
O'er the ripe corn. The birds and beasts are dreaming.
Never again may blood of bird or beast
Stain with its venomous stream a human feast,
To the pure skies in accusation steaming,
Avenging poisons shall have ceased
To feed disease and fear and madness,
The dwellers of the earth and air
Shall throng around our steps in gladness,
Seeking their food or refuge there.
Our toil from thought all glorious forms shall cull
To make this earth, our home, more beautiful;
And Science, and her sister Poesy,
Shall clothe in light the fields and cities of the free.

— *Shelley.*

GENERAL TOPICS.

Ptomaine Poisoning.

During the past summer I had, perchance, more cases of ptomaine poisoning than in all my previous twenty-nine years of active practice. I presume that the prevalence was greatly due to the extraordinary heat of this summer. Notwithstanding the severity of some of the cases, my patients all recovered.

Before entering into a detailed description of some of the most severe cases, a definition of the word "ptomaine," with some views of competent authors, will be well placed here.

"Ptomaine," says V. C. Vaughan, "may be defined as an organic chemical compound, basic in character, and formed by the action of bacteria on nitrogenous matter." He further states that "some fish are always poisonous. Others are poisonous, or at least markedly so, only during the spawning season. Still others are subject to epidemic bacterial diseases, and those affected with certain of these diseases furnish flesh that is toxic to man, or in other words, the bacterial disease is transmitted to man with his food. Lastly, fish, like other kinds of meat, may become infected with saprophytic germs that may harm man."

Schmidt says: "The poisonous substance is not distributed throughout the animal, but is confined to certain parts. The poisonous portion cannot be distinguished from the non-poisonous, either macroscopically or microscopically."

I treated altogether twelve cases, of which nine were fish and three were lobster poisoning.

The best illustration of a severe case of fish poisoning, is the case of William R., a grocer thirty-two years of age, of robust and good health. He made his lunch of fish (none of the family could give me any information about the class of fish). It was an unusually hot day, in the month of July. He felt no discomfort until after midnight that day, when he was awakened by nausea and griping pains in his bowels. Soon vomiting set in, of mucus colored with bile. When I was summoned, I found the man with cold perspiration pouring down his face. Soon after, fever set in to a temperature of 102°; pulse, 140; respiration about 40, shallow, irregular. Pain in the stomach and intestines, with great sensitiveness on pressure. I proceeded to wash his stomach and large intestines, and administered immediately after, a cathartic, following it up the coming morning, with a bottle of citrate of magnesia, for the cleansing of the small intestines. Morning's temperature, 101°; pulse, 130; with excessive tenderness to the digestive tract. Second day, temperature the same, pulse more firm; sensitiveness to stomach and bowels diminished; having had a number of watery stools during previous day and night. I prescribed an antiseptic intestinal wash,—glycozone, two ounces, hot water, twenty-four ounces,—for mornings and evenings. At my evening's call the temperature was 100; pulse, 110; respiration, 28. Having had some favorable experience with the internal use of glycozone in acute gastritis, I then prescribed a teaspoonful to be given, diluted with water, every three hours. This treatment was kept up for a week, until all unfavorable symptoms disappeared.

The other case of serious nature was lobster poisoning. Mrs. M. S., about twenty-five years of age, was eating a "fresh" lobster in a first-class restaurant, at night, after a theater perform-

ance. She felt some discomfort right after eating it, but thought to counteract it by drinking a big dose of whisky. She slept all night without disturbance. However, in the morning, when I was summoned, I found her suffering from nausea, vertigo, ringing in the ears, "like big bells," as she expressed it, pain in all the joints, and griping pain in the bowels; no stool. Temperature, 101.5; pulse, 140; respiration, 36. The same treatment as above was prescribed, and the woman made a quick recovery.

All other cases were treated similarly, with gratifying results.

However, taking good advice from my first case, I started with the antiseptic treatment at once, as I don't know of any better remedy to stop vomiting than glycozone.— *Alex. Rixa, M. D., in the Medical Summary, May, 1902.*

The Importance of Proper Diet.

The question of accumulating force and vitality is a question of digestion and assimilation. It is a question of limiting your dietary to the necessities of your daily vocation, and of selecting the foods that have the greatest nutritive value. It is also a question of proper exercise, of breathing pure air, and of drinking pure water. Here is a man who is capable of doing more work in six hours than another man can do in fourteen hours. Why? — Because he has finally secured a happy adjustment between the daily consumption of food, air, and water, and the necessities of his vocation. He is not clogging the machine with a lot of waste material — material that is not converted into vital energy, thereby taxing and finally breaking down the kidneys and the bowels. As a rule, the longer a man works, who has not reached the proper balance between food, rest, and exercise, the less he accomplishes. For the man who has learned how to manufacture the most vitality, a short period of intense work will accomplish more than the long period of slow, plodding work. Work to him is not a laborious grind. He goes at it with spirit and zest because he is enabled to put a tremendous amount of energy into it for a few hours, and then rests and relaxes for a much longer period, storing up volts of energy like a battery for the next onslaught. He goes to his work as a boy goes to his play, his body tingling with life, ready to use every drop of blood, every nerve, and every muscle.

In this connection we may speak of the influence upon vitality of wholesome thinking. It is useless to deny the power of the mind over the bodily functions and the physical condition. As the mind is merely that phase of energy which works through the nervous system, producing mental and physical activity, it is perfectly plain that an unhealthy, diseased, morbid mind must gradually effect a breaking down of the bodily tissues and nerve cells, entailing general deterioration in vital force. If a man will make an effort to concentrate his mind upon some particular part of the body, he will soon experience a congestion of blood in that part. If a man is constantly thinking that he has dyspepsia, he is almost certain in time, to bring about a perceptible impairment of his digestive powers. Thinking unwholesome, unhealthful, gloomy thoughts is physiologically incompatible with the highest efficiency in life. The highest vitality calls for wholesome thinking; enough nutritious food to be digested and assimilated, and no more; the breathing of enough pure air to keep the blood rich in red corpuscles; the drinking of enough pure water to flush out the system, and absorb all poisons;

and the taking of enough exercise to secure a proper development of muscular tissue.— *What-to-Eat.*

The Tobacco Habit.

Men have always sought and found some means of lulling the irritation generated within by friction and imperfect adaptability to environment, which leads normally to impulses to activity, and hence is responsible for all our progress and development.

Narcotics and anesthetics have played a prominent part in the life of the race, particularly alcohol and tobacco. While the evil effects of tobacco are not so far-reaching and comprehensive as those of alcohol, it is undoubtedly a material hindrance to success in young people. Youth is properly a season of unrest, action, change, and improvement. Anything which acts as a motor depressant, an artificial sedative to desire, gets between the young man and ambition, imposes a weight on his faculties, clouds perception, and makes him ease-loving.

So much for the effect of tobacco on the moral sense.

Physically, the whole nervous system is affected. The changes produced can be watched in the eye. The use of even moderate amounts of tobacco lowers the working power of the muscles, and impairs fine co-ordination. No surgeon should smoke, nor any craftsman of whom is required delicacy of manipulation, manual strength and skill, and good eyesight.

Tobacco stimulates secretion and accelerates heart action largely by depressing the general nervous system. Overaction of glands and heart leads to weakness and atony. Ptyalism and catarrhal affections of nose, throat, and stomach are common in those who use the weed immoderately.

The interference with digestive activity results in more or less anemia and consequent functional disturbance from malnutrition.

The use of tobacco in youth stunts growth, and it is used by many persons to control a tendency to corpulence. It is a dangerous preventive, however, as the bad effects of nicotine on the heart and nervous system may, at any time, necessitate its discontinuance, and fatty degeneration ensues.

Any drug which depresses the muscular system in health, will react unfavorably on the nervous system; for the muscles strike a balance between afferent and efferent nerve currents, side tracking irritations and preventing their destructive power from being wreaked on vital organs and structures.

Science can teach men hygienic measures and habits by which mental composure and physical ease and comfort can be attained without resort to drugs, which cause a deceitful sense of placidity and contentment at the expense of vitality. Symmetrical development of the body, mental expansion, moral progress, are better and safer than Sybarite ease, which enervates and unfits for the struggle of life, constantly becoming more acute.— *Exchange.*

Ah, yes, the task is hard, 'tis true,
There's no advantage to be found
But what's the use of sighing?
They're soonest with their duties through,
Who bravely keep on trying,
In sorrowing or shirking;
They with success are soonest crowned
Who just go right on working.

Strive patiently and with a will
That shall not be defeated;
Keep singing at your task until
You see it stand completed.
Nor let the clouds of doubt draw near,
Your sky's glad sunshine murking;
Be brave, and fill your heart with cheer,
And just go right on working.
— *Nixon Waterman, in August Success.*

The Salt Pack in Rheumatic Gout.

Mr. Jonathan Hutchinson says, in the January *Polyclinic,* that he knows of no remedy so effectual in getting rid of irritation and synovial effusion in connection with rheumatic gout, as the salt pack. This consists of flannels, soaked in a saturated brine of common salt, wrapped round the affected joint, covered with oiled silk and a bandage, and kept on the whole night. It should be applied every night until the cure is effected. Cold water is effective without the salt; but salt increases the stimulating effect upon the circulation.— *Medical Record.*

Shall We Slay to Eat?

The war waged by we humans upon our humble fellow creatures makes one question the morality or rightness of needlessly taking the life of any creature. How many hearts break to provide our dinners! How many beautiful creatures languish on the way to the place where their life must be given up! How many, we ask you who are not already abstainers from the flesh of animals as food?

One of the saddest and most depressing sights witnessed in England is the driving of cattle to the market on Sundays. We have seen them rush wildly, with heads down, to the dirty pools, and heard their painful bellowing when goaded onward. The writer felt this most vividly one day while attending a Sunday-school anniversary. It was a beautiful morning; within the church was peace and restful calm; before us were the lovely children in their garments of white. The pastor was engaged in prayer, when through the open door came a tender, pitiful bleating of lambs, from a drove of sheep being driven past. Do you suppose one could help thinking what it meant? To many in the street, it would suggest lamb and green peas. To me it suggested cruelty, pain, and suffering, and the giving up of beautiful lives. Can we be easy at our dinner tables while such atrocious wrong is done for us? Some time ago, a minister said that he never dared to think of the living animal when he sat down before a joint of flesh meat. It is a subject that will never bear thinking upon; our hearts are too full of tenderness to stand such a process. We dare not think, at least we dare not think as tender and compassionate men and women. How different to sit before a meal of earth's luscious fruits!

It would not be true to say to any one, "You have no love for your fellow creatures!" But can we say that we love any creature, and yet for the sake of our appetite, compel it to undergo dreadful torture? To support such a position is impossible. We cannot justify the custom of flesh eating; to follow it, we must close the door of our tenderest feelings. The maturest science of the day has said, with no uncertain voice, that the flesh of animals contains poisons, and is harmful. It is not a necessary article of sustaining food. Nothing can justify it. We can only say we like it; and that is a poor reason. Shelley, in one of his exquisite poems, makes the statement that, while flesh eating is in such direct opposition to what is holy and tender, it can produce no good results, that it must sow in the bodies of mankind the germs of misery, disease, and crime. Shelley was called a dreamer, but here he speaks as the prophet, and sends his great, far-seeing soul ahead of time. Think for a moment of our concerns about many diseases: cancer, consumption, and others. The claim is made by many men of science, that they are traceable to bad and improper foods.

Wherever you find numbers and communities of men living on natural and bloodless foods, you will find them healthier than those whose food is different. We do not say they are never ill. In the domain of morals, the same comparison can be made. We find that in a country like India, there is only one fifth of the crime found in Europe, where dietetic habits widely differ. Is it necessary that we should take the lives of animals to perpetuate our own? We answer, No! and quote Ovid: —

"While corn and pulse by Nature are bestowed,
And planted orchards bend their willing load,
While labored gardens, wholesome herbs produce,
And swelling vines afford their generous juice,
Nor tardier fruits of cruder kinds are lost,
But tamed with fire, or mellowed by the frost."

A little while ago I heard a distinguished physician say, when publicly advocating this principle, that he would rather die than eat his fellow-creatures. But we know it is not necessary to die. The fullest needs of the body can be supplied by fruits, grains, nuts, and other foods, to produce which, no pain is caused.—*Albert Broadbent, in the Vegetarian Messenger.*

A New Decalogue.

Dr. G. E. Potter, of Newark, N. J., writes the following to an exchange: —

"1. Thou shalt remove surplus rugs, furniture, etc., and make ample room for your work.

"2. Thou shalt maintain perfect ventilation without draughts.

"3. Thou shalt keep the patient clean and quiet.

"4. Thou shalt foresee the needs of your patients; don't let them ask for everything.

"5. Thou shalt restrict visiting, loud talking, and above all, whispering in the sick chamber.

"6. Thou shalt promptly remove and burn all sputum, and thoroughly disinfect all culinary utensils and vessels used by the patient.

"7. Thou shalt not ask the sick what he wants to eat; rather say, "I have prepared something dainty, and I want you to eat it.

"8. Thou shalt not annoy the sick by telling to them your troubles, sad experiences, and all you know.

"9. Thou shalt let the sun shine, and try to be a sunbeam yourself.

"10. Thou shalt remember that the tenth commandment is to mind your own business, follow directions faithfully, cheerfully, and promptly, and the sick will arise and call you blessed."

A Carnivorous Parrot.

With one exception, all parrots are vegetarians. This exception is the strange New Zealand lory, the kea, which alone among its kind has developed the habit of eating flesh. From a psychological point of view, the case is interesting, says the *Family Doctor,* because it is the best-recorded instance of the growth of a new and complex instinct under the eyes of human observers. The kea, before the arrival of the white man in New Zealand, was a mild-mannered, fruit-eating, or honey-sucking bird. But as soon as sheep stations were established, these degenerate parrots began to acquire a taste for raw mutton. At first they ate only of the offal that was thrown out of the slaughterhouses, picking the bones as clean of meat as a dog or jackal. But in course of time, as the taste of blood grew, a new and debased idea entered their heads. If dead sheep are good food, are not living ones? The keas answered this question in the affirmative, and, proceeding to act upon their conviction, they invented a

truly hideous mode of operation. A weak member of a flock of sheep is attacked, usually by a number of birds, and almost always after dark, the poor animal being worried to death by the combined efforts of the parrots, some of whom perch themselves upon its back to tear open the flesh, their efforts being to reach the kidneys, which they devour at the earliest possible moment. As many as two hundred ewes are said to have been killed during one night upon a single sheep station. An attempt is being made to exterminate these carnivorous birds.—*The Vegetarian.*

Exercise.

Exercise oils the joints of the body, and prevents them from growing stiff. It needs no money, very little time, little or no present strength. One thing only it does need, and that is perseverance. One third of the time often given to the piano will more than suffice. One less study a day of those which are to-day overtaxing so many schoolgirls or schoolboys, and instead, judicious, vigorous, outdoor exercise, aimed directly at the weak muscles, and taken as regularly as one's breakfast, and is there any doubt which will pay the better, and make the girl or boy the happier — the better fitted for all her or his duties, and the more attractive as well? It is as necessary to develop vigorous, healthy bodies as it is to cultivate the mind, for what is mental power without bodily strength? — *Selected.*

Bad Taste in the Mouth.

The bad taste in the mouth, experienced when waking in the morning, is often due to the presence of germs, the products of which accumulate while the person is sleeping. When one is awake, the constant secretion keeps them cleared away. Better care of the teeth is necessary. If there are any decayed teeth, they should be attended to, and a toothbrush should be used freely and frequently, especially at night. The proper use of drinking water, and care as to diet, are means that should be relied upon. In dealing with germs in the body, however, one should always remember that they grow where there is low vitality. People who are all run down usually have a bad taste, regardless of how clean they keep the mouth or how careful they may be in diet, because germs always act where the tissues of the body are not able to drive them away and counteract their influence. This latter class of people will get rid of the bad taste when they improve the general health.— *Selected.*

Nutriment in Nuts.

It is strange that nuts, which are relished by nearly everybody, are so seldom used except as occasional luxuries — at least in civilized countries. A pound of almonds is equivalent to a pound and a quarter of beefsteak, in blood-making qualities, and contains more than fifty per cent of an easily digestible and assimilable fat. Chestnuts contain nearly as much nitrogenous matter as barley, and more fatty, though rather less phosphatic matter. During the greater part of the year they form the chief sustenance of the stalwart and sturdy peasants who dwell on the slopes of the Apennines; and in France something like three million tons of chestnuts are produced yearly, and used in many ways of which English cooks never dream. In England there is a common belief that nuts are indigestible. But if eaten at mealtime and well masticated, their regular use will prove beneficial to most healthy people.— *The Vegetarian.*

Deadly Coloring Matter.

Dr. Frank Corbett, bacteriologist of the Minneapolis board of health, has been feeding rabbits, guinea pigs, and cats with coloring matter much used in food, almost always with fatal results to the subjects. Rabbits appeared unaffected by butter color, and he was about to try a large dose on himself, when he bethought him of a pet cat. The dose was given to pussy, who did not survive. He then fed varying doses to cats, and all died. His conclusions are that butter color is capable of producing severe disturbances of the nervous system, ending even in death. While a single dose may not be harmful, its continued use is likely to produce diseases of kidneys, bladder, and even lungs. Dairy Commissioner McConnell, of Minnesota, believes that these experiments should prove conclusively that the use of butter color should be stopped, and after further experiments his department will begin a crusade to prevent its use in butter made in the State. — *Good Housekeeping.*

Children Eat Too Much Meat.

One of the most unfortunate evil consequences of an early and liberal meat diet, says Dr. Winters, is the loss of relish it creates for the physiological foods of childhood — milk, cereals, and vegetables. "A child that is allowed a generous meat diet," he adds, "is certain to refuse cereals and vegetables. Meat, by its stimulating effect, produces a habit as surely as does alcohol, tea, or coffee, and a distaste for less satisfying foods. The foods which the meat-eating child eschews contain in large proportions certain mineral constituents which are essential to bodily nutrition and health, and without which the processes of fresh growth and development are stunted. There is more so-called nervousness, anemia, rheumatism, valvular disease of the heart, and chorea at the present time in children, from an excess of meat and its preparations in the diet than from all other causes combined," he declares.—*New York Medical Journal.*

TALK health; the dreary, never-ending tale
Of mortal maladies is worn and stale,
You can not charm or interest or please
By harping on that minor chord, disease;
Say you are well, or all is well with you,
And God shall hear your words and make them true.

— *Ella Wheeler Wilcox.*

Saccharin a Dangerous Substitute for Sugar.

In the course of an interesting article on food adulteration, Dr. de Lavarenne, editor of *La Presse Médicale,* refers to the manner in which the use of saccharin is being extended. It is one of the many bodies made out of coal tar, and is, of course, not a sugar at all, although people are quite convinced it is. It is not only used to sweeten beer, but it is now also employed in the manufacture of syrups, jams, lemonades, wines (especially champagne), cider, brandy, pastry, and chocolate. Special substances of this nature are on the market for sweetening cider and brandy. Among these, sucramine may be mentioned, which is said to be seven hundred times sweeter than cane sugar. Other products of the same kind are sugar extract, made in Switzerland, cannabin, etc. All these names are misleading, for the substances are only sugars in name, being all coal-tar derivatives. They are not foods. Moreover, their long-continued use may gravely affect the digestive functions. According to Professor von Bunge, of Basle, saccharin reappears in the saliva after being absorbed, and in

this ways leads to a persistent sweet taste in the mouth, which interferes with the appetite. Dr. Plugge has shown that the addition of saccharin in artificial digestion experiments with various digestive ferments, interfered with the breaking up of food substances. Dulcin, another sweetening body, which has been used as a substitute for saccharin, was given to a dog at the rate of one gram a day. The animal died in three weeks. —*British Medical Journal.*

Key Thoughts.

That which you send out from your being is of the same quality and character as that which you allow to enter it.

♣ ♣ ♣ ♣

Life's meaning will always be sorrow, affliction, discontent, unrest, until we can harmonize the whole being into perfect order.

♣ ♣ ♣ ♣

The world is suffering more from intemperance in eating than it is from intemperance in the use of intoxicating drinks. It is suicide to die from overeating, as much as if you had taken poison, or killed yourself by any other means.

♣ ♣ ♣ ♣

If we would not pass judgment so thoughtlessly; if we would not be so ready to condemn; if we would be humane, stop all cruelty to animals, and do by all as we would be done by, we would never have any murderers to hang; there would be no need of penitentiaries, jails, and insane asylums, and we would not need to keep enacting prohibitory laws. We would not have Whitechapels, nor saloons, nor drunkenness.— *Lucy A. Mallory, in the World's Advance-Thought.*

Dangers of Fish Eating.

The increase of leprosy in Japan should not be a matter for surprise. There are more lepers there than in any other country in the world. The reason is that fish is taken with every meal; and the poisons contained in fish are the most subtle and dangerous of those engendered by the rapid decay of animal matter in the bodies of those who eat it. Now they have come to believe that by taking flesh food they will grow taller, and the punishment of their delusion is beginning to be felt. They have only four leper hospitals. In England, in the Middle Ages, there were ninety-five first-class leper hospitals. This continued till the introduction of health-giving vegetables by Catherine of Aragon, which was the beginning of the rapid decline of the disease in England. Leprosy, scurvy, and consumption are kindred diseases, and the only cure for them is the free use of salads and fruits, with exercise in the open air.— *Exchange.*

"Do you wish for a kindness? Be kind.
Do you wish for a truth? Be true.
What you give of yourself you find —
Your world is a reflex of you."

Some Applications of Hot Water.

Headache almost always yields to the simultaneous application of hot water to the feet and the back of the neck.

A towel folded, dipped in hot water, wrung out rapidly, and applied to the stomach, acts like magic in cases of colic.

There is nothing that so promptly cuts short congestion of the lungs, sore throat, or rheumatism, as hot water.

A towel folded several times, and dipped in hot water, quickly wrung out, and applied over the painful part in toothache and neuralgia will generally afford prompt relief.— *Medical Mirror.*

EDITORIAL.

THE COMPARATIVE NUTRITIVE VALUE OF ANIMAL AND VEGETABLE FOODS.

PHYSIOLOGISTS long ago discovered that it is not altogether the amount of nutrient substance contained in a given food which determines its actual value as a nutrient, but rather the amount of nutrient material which the system is able to absorb therefrom. Great claims have been made, on this ground, in favor of meats, the albumin of which, it has been maintained, is more readily absorbed than is the albumin of peas, beans, and other vegetable products. A careful study of this matter, however, has shown that the difference in the rate of absorption is not so very great, being ninety-seven per cent for meat and eggs, eighty-three per cent for the albumin of macaroni, eighty-five per cent for that of Indian corn, and eighty-three per cent for peas. The difference is certainly not great enough to justify any one in condemning vegetable foods, on the grounds that they are difficult of absorption.

But there is another phase of the subject, which seems to have been entirely overlooked. Legumes, in general, contain a much larger percentage of albumin than does beefsteak. For example, certain varieties of beans contain as high as thirty-four per cent of proteids, or elements practically identical with the chief constituents of flesh foods. Beefsteak, on the other hand, contains only nineteen per cent of proteids, of which ninety-seven per cent, or 18.4 parts, is absorbed. Of the thirty-four parts in a hundred of proteid matter contained in beans, eighty-three per cent, or 28.2 parts, is absorbed. If, then, we compare the amount of albumin, or proteids, absorbed per pound of beefsteak, with the amount absorbed of beans, we find that the difference is more than fifty per cent in favor of the beans; that is, a man will absorb fifty per cent more proteid or albuminous food stuffs in the eating of a pound of beans than in eating a pound of beefsteak.

The fact that the albumin of peas and beans is not so readily absorbed as is the albumin of meats, cannot, then, be used as an argument against the use of vegetable foods, unless it can be shown that the loss of unabsorbed albumin is so great as to materially increase the albumin taken in the form of peas or beans, as compared with meat; but it is just upon this point that the superiority of a non-flesh dietary most apparently appears. After making allowance for the unabsorbed portion, we find that two thirds of a pound of peas furnishes to the body as much albumin in the form which it can utilize as it does in a pound of beefsteak. The cost of peas is from a cent and a half to two cents a pound; whereas the cost of beefsteak is from twenty to thirty cents a pound, or ten to twenty times as great. No sound scientific argument can be brought forward to support flesh eating, on either scientific or economic grounds.

SHE will not let him in the house
Until he wipes his feet,
Then she sails out in her long-trained gown,
And wipes up all the street.

— *Exchange.*

SOWING FOR DISEASE.

A READER of GOOD HEALTH, who has realized the benefits of the better way, and is an enthusiastic advocate of a return to nature, has been making observations respecting the habits of his neighbors, and writes us of some of the things which he has noted.

One family was subject to the grippe. Every member of the household suffered from the disease, or from some malady which was called grippe. All were taken down suddenly, and violent vomiting was a prominent symptom in each case. This family was accustomed to eating large quantities of meat three times a day. The oldest girl suffered from epilepsy. During an attack she fell into a barrel of rain water, and was drowned. The oldest boy became blind, then lost his mind, and died in an insane asylum. Another girl in the family was taken suddenly ill one day, and the next day was dead. A girl ten years of age is at the present time suffering from epilepsy, and is fast becoming blind. The subscriber wishes to know if it is probable that the diet of this family has anything to do with the succession of afflictions which has come upon them.

It is certainly reasonable to believe that these unfortunate people are only reaping the harvest of disease which is the natural result of the seed sowing which is done at the dinner table, and doubtless on many other occasions. The old proverb, "Whatsoever a man soweth, that shall he also reap," is never truer than in its application to matters which pertain to health and disease. Disease is more often the result of some error in habits of life than of any other cause.

Several other families in the same neighborhood seem to be preparing for a harvest of sickness. For example, one family, in the words of our subscriber, "had a sheep that had the blind staggers so bad that they killed it, and to save it, ate it." In another case, a neighbor's family "found a hen hung in the picket fence." This was also cooked and eaten. "The whole family was taken sick." Still another family one day found in their poultry yard a hen that was completely paralyzed and unable to walk. It seemed a pity to lose a fat chicken, and so the paralyzed hen was cooked and eaten.

It seems scarcely possible that intelligent people should be guilty of such abuse of their bodies, but after all, they have advanced only one step further in a line of conduct which is almost universal. There are millions of men and women who are every day offering their stomachs as sepulchers for the entombing of portions of the dead carcasses of beasts of various sorts, a large portion of which may have presented even more distinct evidences of disease than were present in the cases above mentioned. Observations made in the great abattoirs in Chicago show that a large proportion of the animals slaughtered for food are infected with disease. In cows the presence of disease is quite common, especially tuberculosis. The whole business of flesh eating is extremely disgusting and loathsome to one whose eyes have been opened sufficiently to lead him to search for and find a natural way in diet.

Meat Eating and Hard Work.

The editor of the *Chicago American* recommends a discontinuance of the use of meat for breakfast, suggesting, instead, a diet of eggs and cereals. This is certainly very sensible advice. The Chicago editor suggests that the "eating of meat should follow, and not precede, hard work." This is wise advice if meat is to be eaten at all, for the digestion and disposal of meat is a burden to the body. If there is hard work to be done, it is necessary that the bodily forces should be at their best. Uric acid and other poisons contained in meat, weaken the bodily energies, and so lessen the capacity for work. If meat is eaten

after the work has been done, the evil effects will be less apparent, for opportunity will be afforded for the elimination of the meat poisons before the body is again brought under strain.

But while it is true that the evil effects of flesh eating are less apparent if care is taken to avoid eating meat in the early part of the day, it must also be remembered that flesh eating is no more necessary nor beneficial to the tired man than to the man who has been refreshed by rest. The only effect which can possibly follow from the use of flesh food is to intensify the sense of fatigue. Actual experiments have shown, in many instances, that men who subsist upon flesh foods or who make free use of beef tea and other meat extracts are much more easily fatigued than those from whose diet flesh is excluded, other conditions being equal.

We are glad to note, from the numerous excellent editorial suggestions on various health topics, that the able editor of the *Chicago American* has given careful thought and study to many questions pertaining to health-getting and health-preservation.

Less Meat Wholesome.

In a speech to a Connecticut audience, Judge Simeon Baldwin recommends that the laboring man adopt a less expensive dietary, and one containing a smaller amount of flesh foods. Judge Baldwin is fully persuaded that flesh food is not essential to the maintenance of the strength and health of the working man, and he has wisely given the weight of his wide influence in favor of a more restricted use of flesh foods. Without doubt, the average laboring man, finding that his meat ration can be cut down to a small roast or a soup bone for Sunday dinner, will be easily led to the conclusion that flesh food may be abandoned altogether without injury, a fact which has again and again been experimentally demonstrated by men and women in all ranks of life.

Alcohol and Crime.

The demoralizing influence of alcohol is forcibly shown by a recent article contributed to the *Annales d'Hygiene*. The writer calls attention to the fact that the official statistics of the police court of Paris show that for several years past there has been a rapid increase in juvenile criminality. Even among murderers there is found a large percentage of young people, some almost children. This increase of juvenile crime is charged to alcohol, which has been shown to act, not only directly, but indirectly, through heredity. Alcoholic insanity is increasing with great rapidity in Paris. Alcohol is perhaps more active than any other agent in producing human degeneracy, and is one of the most direct and potent causes of criminality and insanity. The children of drunkards are very liable to be epileptic and idiotic, as well as criminal. The children of alcohol-drinking parents, when young, do not appear different from other children, but about the age of puberty their criminal instincts begin to manifest themselves.

The terrible, blighting influence of alcohol should certainly lead us to study with care all the causes which lead to alcoholism. Careful observations have shown again and again that there is an intimate relation between diet and alcoholism; especially that tea, coffee, and condiments lead to the use of alcohol. It has also been demonstrated that flesh eating creates a thirst for alcoholic beverages and an appetite for tobacco, the use of which almost invariably leads, sooner or later, to the use of alcohol in one form or another.

Getting Drunk on Tea.

The *Philadelphia Record* tells of a blonde young man "who frequents, on clear nights, the plaza of the post office. He is a victim of the tea habit, visits Chinatown regularly, and drinks the special tea which is brewed there at twenty-five cents a bowl. He will put away, in an evening, fifteen or

twenty bowls, becoming finally as boisterous and silly as though he had put away as many cocktails, though he will not stagger. He says he remembers nothing after the ninth or tenth bowl of tea, and that on the day after one of his sprees, he has a wretched headache and a sore, parched mouth. He does not drink alcoholic beverages, because he dislikes their taste, and he is a member in good standing of a total abstinence society. An effort has been made to throw him out of this organization, but since he violates none of its rules, this cannot be done."

The above-mentioned case of tea intoxication is not the first recorded. A few years ago two young women were arrested on the streets of Chicago for being disorderly. In the investigation of the court which followed, it was clearly shown that neither had touched a drop of liquor. They were habitual tea-chewers, and had become intoxicated by consuming an unusually large amount of the Chinese poison.

Physical Development without Flesh Food.

Some time ago, the *New York Evening Journal* arranged a competition for a prize, offered by the publishers, which was to be given to the strongest and most perfectly developed boy. The prize was won by a young man of nineteen, who says of himself: "If I had been told fifteen months ago that I was to be declared the most perfectly developed boy in America, I should have treated it as a cruel joke. At that time, I was a rheumatic cripple, unable to crawl out of bed in the morning without suffering excruciating pain. I was very weak. My arms and legs were like drumsticks; and this, coupled with my short stature, convinced my friends that I was going to be an invalid all my life. Taken as a whole, I was about the most unlikely youth to win a 'strong-boy' contest that could have been found in the wide, wide world."

Mr. Weinburgh worked his way up from a bed of sickness to the position of a prize-winner by devoting himself assiduously to the development of his body by natural methods. First of all, he gave up tobacco, coffee, tea, and flesh foods. Then he began systematic physical exercise. Without doubt, the great majority of chronic invalids could cure themselves by following the example of this young man.

We quite agree with Ella Wheeler Wilcox in her assertion that "chronic ill health is a thing to be ashamed of," and that "it is, without exception, the result of ignorance, laziness, wrong mental attitudes, and foolish eating and drinking." The seeds of disease are sown in our daily habits of life.

Salt and Cancer.

The increasing prevalence of cancer has given rise to careful inquiry into all the circumstances which may have a bearing upon its causation. In every civilized country at the present time the most diligent inquiry is being made into the nature and origin of this terrible malady, which statistics show it to be increasing at an alarmingly rapid rate. Numerous French and other observers have attributed cancer to flesh eating, and especially to the use of pork. Dr. James Braithwaite, of Leeds, England, in an article recently published in *The Lancet*, attributes cancer to the excessive use of salt, and calls attention to the fact that it is most abundant in those who make a large use of pork.

Recent observations seem to show that cancer is a parasitic disease, and the probabilities are that the body is prepared for the entrance and development of the parasite by any influence or habit which lowers vital resistance, and hence lessens the power of the tissues to defend themselves. The excessive use of salt may have a possible relation to cancer, and the same may perhaps be said about all wrong habits of life.

ANSWERS TO CORRESPONDENCE.

Prunes — Malt Honey — Branch Sanitarium.— E. I. H., Pennsylvania: "1. Are prunes a more nutritive and economical article of diet than sirloin steak? 2. Is not malt honey too concentrated a sweet for the stomach? 3. Is there, or will there be soon, a branch of the Battle Creek Sanitarium in Philadelphia?"

Ans.— 1. Prunes are an excellent article of food, but are lacking in some of the elements of nutrition. In use, they should be combined with nuts and bread, with which they constitute a complete and exceedingly wholesome dietary.

2. When taken in considerable quantity, malt honey stimulates the secretion of gastric juice. When the effect produced is too intense, it may be modified by a glass or two of cold water just before or after taking the malt honey.

3. Battle Creek Sanitarium treatments may be obtained at the Philadelphia Institute of Physiologic Therapeutics, 1809 Wallace St., Philadelphia, Pa.

Nuts for Singers.— "A constant reader," Mexico: "In the February (1901) issue of GOOD HEALTH, Miss Jennie Atkinson recommends nuts as being of especial benefit to singers. A great many singers condemn the use of all nuts except almonds and hazelnuts. Kindly give your opinion on the subject."

Ans.— Almonds and hazelnuts are exceedingly excellent nuts. With them should be included pecans, hickory nuts, chestnuts, boiled or roasted, and roasted cashew nuts.

Smelling Salts — Gastric and Intestinal Catarrh — Starchy Foods — Alcohol Vapor Baths.— F. W.: "1. What injury, if any, results from the inhalation of camphor, ammonia, and smelling salts for the relief of headache? 2. What are the symptoms of, and best diet for, gastric and intestinal catarrh? 3. In what disease is the use of such starchy foods as potatoes, white bread, etc., to be avoided? 4. Are alcohol vapor baths in any way injurious to the system, providing one does not catch cold after taking them?"

Ans.— 1. No harm would be likely to arise from the temporary use of the remedies named as palliatives, but it is of the greatest importance to give attention to the cause of the headache, and see that this is removed to prevent a recurrence.

2. The only characteristic symptom of gastric or intestinal catarrh is the presence of mucus shown by vomited matters, the stool, or the water with which the stomach or bowels have been washed. Well-dextrinized foods and fruits, both fresh and cooked, constitute a good dietary.

3. Starchy foods should be avoided in diabetes. White bread and potatoes in large quantities are detrimental in cases of obesity.

4. Too frequently repeated hot baths are debilitating. They should always be followed by the cold bath.

Exercise — Hard Work — Healthful Altitude.— W. N., Colorado: "1. Kindly outline a system of daily exercise for one whose health is completely broken down. Age, thirty-four; diet has always consisted of greasy and sweet foods. 2. Should one in such a condition as described, continue to work hard every day, or would it be better to rest? 3. Have been using the health foods lately, but do not know what selection to make. Will you please prescribe diet? My tongue is badly coated, and urine is a reddish brick-dust color. 4. Would a higher altitude than that in which I am at present living (5,000 feet above sea level) be considered more healthful? I am very nervous."

Ans.— 1. Walking is the best exercise. Experiments made by an eminent English physician show that the average man must walk nine miles daily on a level surface, to obtain the amount of exercise necessary to maintain health.

2. The amount of exercise must, of course, be regulated to suit the strength. For a feeble person half a mile or a mile may be a sufficient distance at the beginning, but the distance should be gradually increased as the strength increases. In mountain climbing, each foot of ascent counts as the equivalent of twenty feet on a horizontal level. A person completely broken down is certainly in need of rest, and should add to the rest a course of proper hydriatic treatment.

3. Granose, malt honey, malted nuts, zwieback, toasted wheat flakes, together with fruits, especially grapes, peaches, and baked apples, will be found useful.

4. Probably not.

Dizziness — Catarrh of the Stomach.— R. P. T., Oregon, is seventy-six years of age, and troubled with dizziness and catarrh of the stomach. The vaporizer is used three times daily, but with very little effect. Please prescribe.

Ans.— The patient evidently requires careful medical attention and sanitarium treatment. We would recommend a visit to the Portland Sanitarium. For particulars, address Dr. W. R. Simmons, 1st and Montgomery Sts., Portland, Ore.

Swelling of Neck.— T. W. S., Ohio: "When lymphatic glands in the neck are enlarged from tubercular trouble, what is the best mode of treatment? Is Syrup Iodide of Iron, when taken internally, an effective remedial agency?"

Ans.— Increase the general vital resistance by an out-of-door life and daily cold bathing. Other remedies have very little value.

Dyspepsia.— W. H. W., Ontario: "What will remedy an excessive amount of gas in the stomach and bowels? Diet consists of granose, granola, and zwieback; no liquids are used except pure cold water between meals. Take sponge bath before breakfast, a fair amount of exercise daily, and occasionally use the stomach pump. Have been following directions in GOOD HEALTH as closely as possible, but do not notice much change in regard to gas formation."

Ans.— A moist abdominal bandage should be worn night and day, renewing every four hours. Cover with flannel sufficient to keep the compress warm, but not sufficient to prevent its drying out. It should become dry at least every three hours. Masticate food thoroughly. Do not eat too much. Keep the bowels regular, and cleanse by employing an enema at 75° every other day.

Intestinal Trouble.— R. C., New York, would like to know the cause and cure for intestinal trouble, which has been named "bowel indigestion." About five years ago was attacked with a severe pain in the abdomen, and suffered a general breakdown in health.

Ans.— Intestinal indigestion generally follows gastric indigestion. The daily cold bath with vigorous rubbing, sun bath daily when possible, sweating bath two or three times a week, fomentations at night, moist abdominal girdle to be worn during the night, massage, and an out-of-door life are essential factors in the treatment of this disease. Use an easily assimilable diet consisting of well-ripened or stewed fruits with well-dextrinized grains, especially granose, toasted wheat flakes, browned rice; also malt honey and malted nuts. Avoid cane sugar, very acid fruits, and vegetables. Eat twice daily.

Fruit Fermentation — Lemonide.— A subscriber, California: "1. Is there any antiferment that will prevent fruit from fermenting, that can be used without injury to the consumer? 2. Can you recommend the use of Lemonide (refined lemon juice) prepared by the Cetans Fruit Conserve Co., Riverside, Cal.?"

Ans.— 1. No.

2. We are not familiar with the product. If it is a natural product of lemons, prepared without the use of chemicals, it is probably wholesome.

Mouth Wash — Baby's Diet.— Mrs. S., Washington: "Give formula for mouth wash, where gums are swollen and inflamed, and fall away from the teeth. 1. What is the cause of the trouble? 2. What is the best diet for a two-year-old baby who has been brought up on the bottle? 3. Is woolen underwear better than cotton in summer? 4. Give cause and remedy for slight running at the ears in baby."

Ans.— 1. Hydrozone is an excellent remedy. The cause of the difficulty is probably loss of vital resistance, and as a result, infection of the mouth.

2. Malted nuts, granose, and malt honey.

3. No. Wear linen next to the skin at all seasons of the year.

4. Usually eczema or inflammation of the middle ear. A competent physician should be consulted.

Effects of Diphtheria.—Mrs. T. C. H., Illinois, had diphtheria four years ago, and since that time has been troubled with nervous prostration; has been troubled also with partial deafness from head noises. Stomach is inflamed. Patient is of nervous temperament. Kindly outline treatment.

Ans.— The patient should spend a few weeks at a good sanitarium. Daily tonic cool baths are needed, with massage and out-of-door life.

Chronic Inflammation of the Throat— Worms — Nausea.— M. C. C., Iowa: "1. What treatment would you advise for chronic inflammation of the throat, of six or seven years' standing? It is easily irritated, but seldom very sore. 2. Would much benefit be derived from the use of a menthol inhaler or chlorate-of-potash tablets? 3. What treatment should be given a child troubled with worms? 4. Why does the drinking of cold water produce nausea?"

Ans.— "1. Daily cold bath, out-of-door life, a thoroughly hygienic dietary, the use of the pocket vaporizer, and the throat pack at night; gargle hot water for three or four minutes three or four times a day.

2. A menthol inhaler may be found a useful palliative. Tablets are not likely to render any material service.

3. Different species of worms require different treatment. Consult a competent physician.

4. Some stomachs are very sensitive to the influence of cold. The general tendency of cold applications to the interior of the stomach, is to produce muscular contraction. In many cases the taking of cold water relieves nausea.

Consumption Cure.— Mrs. D. E. F., Minnesota, wishes to know if creosote will cure consumption.

Ans.— Experience has shown that the value of creosote in cases of tuberculosis is comparatively small. Consumption can be cured only by increasing the vital resistance. Out-of-door life, cold baths, and proper diet are the most important remedies for consumption.

Cold Bath.— R. A. is unable to take a cold bath immediately on rising in the morning. Kindly suggest some substitute, or name the best time in the day, other than the early morning, when the cold bath can be taken.

Ans.— A cold air bath, accompanied by vigorous rubbing of the skin, may be taken in place of the cold-water bath when there is inability to react to the latter. A cold bath may, perhaps, be administered at ten o'clock in the forenoon, care being taken that the surface of the body is well warmed before the bath.

Hot Salt Enema.— O. F. S., Oklahoma, wishes to know (1) if any injurious effects will follow the use of about eight pints of water, as hot as can be borne, as an enema every other day. The Hall system recommends it for life after fifty years of age. (2) Could well water, slightly salted, be used as above?

Ans.— 1. Yes, such a procedure will dilate and relax the colon, and may produce serious damage.

2. Yes.

Frosted Feet — Backache.— W. T. P., Indiana, inquires (1) as to the best remedy for itching, burning, and soreness of the feet, which were frozen about twenty years ago. (2) What is the cause of a severe pain in the lower part of the back?

Ans.— 1. The alternating foot bath. Place the feet in very hot water for half a minute, then in cold water for fifteen seconds. Repeat, alternating eight or ten times. Do this every night and morning.

2. Possibly a straining of the muscles. At night apply a fomentation over the lower part of the back for from ten to fifteen minutes. Afterward, apply a towel, folded two thicknesses, wrung out of very cold water. Apply as quickly as possible. Cover this with mackintosh and dry flannel.

Noel's Vita Ore.— O. F. C., Minnesota, desires information as to the medicinal value of Noel's Vita Ore, manufactured by the Theo. Noel Company, Chicago, Ill.

Ans.— We know nothing of this nostrum. The name is sufficient to condemn it.

Smallpox — Raw Food.— E. L. G., Brooklyn: "1. It has been stated that the drinking of water in which cream of tartar has been dissolved is an effectual remedy for smallpox. Is there any truth in this statement? 2. Two prominent speakers at a recent meeting of the New York Vegetarian Society strongly recommended a raw-food dietary. Have you had any experience with this?"

Ans.— 1. No.

2. Yes. One may subsist upon raw foods if he restricts his diet to fruits and nuts. Raw vegetables and grains are not adapted to the human digestive apparatus.

Sun Baths.— Mrs. M. M. A., Wisconsin: "1. Kindly give advice for the construction of a sun bath in one's private garden. 2. Could one have an electric-light bath at home?"

Ans.— 1. It is only necessary to have a tight wall so arranged as to protect the bather from observation. A cot, sand pile, or heap of straw should be provided on which to recline. A cold bath should be taken at the close of the sun bath. For this purpose a pailful of cold water and towels should be ready at hand.

2. Yes. For particulars, address Electric-Light Bath Co., Battle Creek, Mich.

Nut and Fruit Dietary — Hair Singed.— H. J., Colorado: "1. Do nuts and fruit alone contain sufficient nourishment for a breakfast? 2. Is singeing after cutting beneficial after the hair becomes dry and brittle, and splits at the ends?"

Ans.— 1. Yes.

2. An experienced New York barber stated to the writer that singeing the hair is a wholly useless procedure.

Chilblains — Effects of Jaundice.— R. W.: "1. What do you consider one of the best remedies for chilblains? 2. About a year ago I had an attack of jaundice, and since then have been somewhat troubled with pimples on the face. My hair came out badly at that time, and my complexion has been much darker since. I try to follow the laws of health as far as possible. What treatment would you consider beneficial under the circumstances?"

Ans.— 1. The alternating foot bath. See reply to W. T. P. in this issue.

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2. A pure diet, avoiding meats and all unwholesome things, using very freely of fruits. Employ the sweating bath two or three times a week, cold bath daily, out-of-door life, and sun baths.

Colic — Heartburn.— Mrs. J. O. P., Wisconsin. "What is the best cure for colic in a nursing baby from two to four weeks old?"

Ans.— Give the child a daily enema with very warm water; twice a day, if necessary. The infant should be weaned as soon as old enough, and should be placed upon a diet of ripe fruits, cereals, malted nuts, malt honey, granola, and granose.

Acid Foods.— Mrs. A. E. C., Ohio, wishes to know if the use of tart food by the mother will hurt a nursing baby.

Ans.— Ordinarily not.

Itching Piles.— A reader and subscriber, California, asks for an effective remedy for itching piles.

Ans.— A physician should be consulted. Surgical operation may be required. Cool sitz bath for fifteen or twenty minutes twice daily, and thorough cleansing of the rectum after the bowels have moved, are palliative measures.

Pain in Right Side of Abdomen — Pain in Stomach — Coated Tongue — Adhesion of Intestines.— D. M. F., Ohio: "1. Have an aching pain in the right side of abdomen — pain increased when pressure is applied. What treatment would you prescribe? 2. What is the cause of pain in the stomach upon rising, and after eating? 3. What causes a thickly coated tongue? and what will clean it? 4. Is an operation necessary in case of adhesion of the intestines?

Ans.— 1. It is necessary to have more exact information concerning the location of the pain. Rest and very hot fomentations will generally afford temporary relief from internal pain when not accompanied by suppuration.

2. There is evidently irritation of the gastric mucous membrane. There may possibly be ulcer, or simple hyperacidity or hypersecretion.

3. Generally lowered vital resistance or indigestion. The whole system should be built up. Digestion must be regulated by correct dietary. Careful attention should be given to cleansing the teeth. If mouth breathing occurs during sleep, this should be remedied by proper attention to the nasal passages.

4. Yes, if there is serious pain in consequence, and especially if complete or partial obstruction occurs.

NOTES

from the

Literary Editor's Desk

Books Received.

THE "Hand-Book of Medical and Orthopedic Gymnastics," by Anders Wide, M. D., lecturer in medical gymnastics and orthopedy at the Royal Medico-Surgical Institute, Stockholm, combines the principles and application of Swedish gymnastics, massage, and orthopedics, with descriptions of many cases of illness helped or cured by gymnastic treatment. The volume is complete and thorough, and the subject is handled in a plain, practical way, at once interesting and instructive. The book is profusely illustrated, and has been adopted as a text-book at most of the colleges for physical training and medical gymnastics in England and America. Price, $3, net. Published by Funk and Wagnalls Co., New York.

"Disinfection and Disinfectants," by M. J. Roseman, M. D., director of the Hygienic Laboratory, and past assistant surgeon U. S. Public Health and Marine-Hospital Service, Washington, D. C., is a practical guide for sanitarians, health

and quarantine officers. The book records the results of Dr. Roseman's personal experiences in sanitary work of a public health character, both in the field and laboratory. To those especially who have to battle with infectious and communicable diseases, and to those interested in bacteriology, hygiene, and sanitary science, the book is of practical benefit. Price, $2, net. Published by P. Blakiston's Son & Co., Philadelphia.

Remembering his own boyish dislike to *good* books, books without pictures and stories, Col. Henry H. Hadley in "The Blue Badge of Courage" has endeavored, and admirably succeeded, in combining the good and the instructive with the humorous and entertaining. It is the story of his personal experience in the temperance work. The author's aim has been to show "what young men, without money or education, whose lives have been blasted by drink, may do, or rather what a Higher Power can do with and for them."

The author is well known as a forcible speaker on the temperance platform, and his book is full of personality and charm, and replete with reminiscences and genial retrospection. Published by the Saalfield Pub. Co., Akron, Ohio. Price, $1.25.

The October issue of the **Missionary Review of the World** offers the wide range of reading matter usual to this representative magazine. Rev. A. M. Zivemer makes "An Appeal for Hadramant, Arabia;" Dr. Pearson talks of "Some Possible Retrograde Movements in Missions;" Rev. Donald Fraser writes of the "Awakening in Central Africa;" and there are interesting discussions on numerous missionary topics.

"The Primary Qualities of Good Citizenship" by Henry Cabot Lodge, U. S. senator from Massachusetts, is one of the most practical and valuable articles in the October **Success.** John R. Spears' "Farming the Ocean" is a fascinating account of how Uncle Sam stocks the ocean with fish, and protects them. Sam Loyd, the puzzle expert, writes of "Chinese Tanagrams," and Harry Steele Morrison gives an account of "An Interview with Paul Kruger."

American devices for fighting fire, it is admitted, lead the world. An article in the October **Scribner's** by Mr. P. G. Hubert, Jr., describes the very latest apparatus in use not only in America, but in Europe, and the illustrations show the strange contrasts of engines here and abroad. Boston, Hartford, Pittsburg, Kansas City, San Francisco, and other American cities are represented in the pictures. Four of Frederic Remington's best draw-

ings called "Western Types," are reproduced in their original colors in this number, and a new writer of sea stories, James B. Connolly, tells of a famous race across the ocean between a Gloucester fishing schooner and the *Valkyrie*. One of the most interesting articles in this issue, is Walter A. Wyckoff's account of the very successful experiments made in model cheap lodging houses and tenements in London. The Rowton Houses there are similar to the Mills Hotels in New York.

Frank Foxcroft opens the October **Atlantic** with "A Study of Local Option," a discussion of the management of liquor-selling, which is based upon the results of the Massachusetts law, but which appeals to a universal audience, especially since the recent Vermont election, which was fought on this issue, and the result of which has aroused the attention of the whole country.

Prof. Ira N. Hollis's "Intercollegiate Athletics" takes a place by itself, as the timely utterance (just as the University football season opens) of a universally accepted authority upon the moot and much-vexed question of intercollegiate athletic rules and differences.

Poems by M. Nicholson, J. Russell Taylor, E. A. Ireland, and H. W. Boynton, and an unusually attractive Contributors' Club complete a brilliant autumn number.

PUBLISHERS' DEPARTMENT.

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J. H. KELLOGG, M. D., Editor

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MY MOTHER'S LIFE.

Now that the days are growing shorter, the family will gather earlier around the evening lamp, and there will be a demand for reading which will prove interesting, entertaining, and instructive alike to children and adults. Nothing will be found more suitable for reading aloud in the family circle than that very excellent book "My Mother's Life." Well written, illustrated throughout, glowing with life touches, the interest and attention of the reader is closely held to the end of the last chapter. Reduced from $1.50 to $1.00. Order from Good Health Pub. Co., Battle Creek, Mich.

MAGIC POCKET VAPORIZER.

THIS is the season of the year when colds are "caught" or acquired in some way. Many make the mistake of running away from cold weather so as to avoid these coughs, colds, and catarrhal attacks. A much wiser course is to tone up with the weather. Frost is one of Nature's best disinfectants and stimulants, and all persons should begin in the early fall to accustom themselves to the change.

Take daily exercise in the open air, remember the morning cold baths with friction of the skin, and use the Magic Pocket Vaporizer as an inhalation tube every day.

This little article is one of the most convenient and safe cures for all cases of colds and catarrhal affections. It is of great advantage in cases of consumption, pleurisy, and weak lungs. Give it a trial. Price, $1. With bulb for ear treatment, $1.50. Solution for three months' treatment furnished free with each outfit. Write for circular to Good Health Pub. Co., Battle Creek, Mich.

STRONG MEN OF SMYRNA.

THE porters of Smyrna are without doubt the strongest men in the world. It is not an uncommon sight to see one of them carrying through the streets six or eight great trunks bound in a bundle with a long rope, and balanced upon his back. These men live almost exclusively upon wheat or barley cakes and figs. A diet consisting of cereal foods, fruits, and a small seasoning of nuts, constitutes the most natural and most wholesome bill of fare for human beings.

The cereal products of the Battle Creek (Mich.) Sanitarium Health Food Co., especially granola combined with protose, or some other suitable nut product, constitute a perfect bill of fare, and have proved a godsend to thousands of persons, who through their means have been restored to health, after suffering from chronic nervous exhaust ion for many years.

NOTICE!

WE call the attention of our readers to our new magazine clubbing offer for the season of 1902–03, as found elsewhere in this issue. These offers are good for renewals as well as new subscriptions. All magazines sent to one or different addresses. Quotations made on any list of magazines desired. Order early. For further particulars, write the Good Health Pub. Co., Battle Creek, Mich.

DIRECTORY of SANITARIUMS

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

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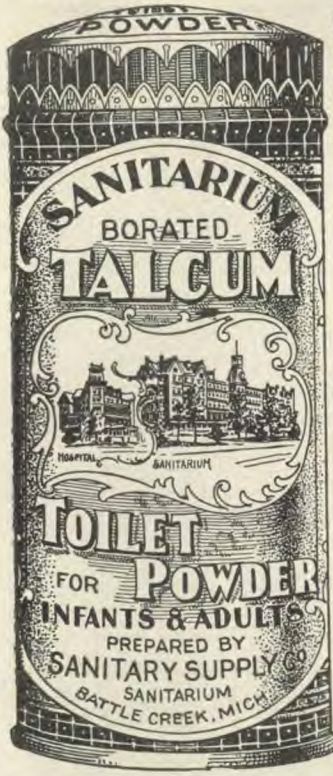

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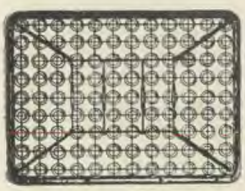

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South Bend	2.08	6.15	11.52		11.35	AM 7.10
Battle Creek	4.14	8.15	AM 2.00	AM 7.00	PMA2.00 L3.45	PM 5.00
Lansing	5.20	9.28	3.28	8.30	5.25	
Durand	6.00	10.15	4.25	9.30	6.30	
Saginaw	8.10			11.05	8.10	
Bay City	8.45			11.40	8.45	
Detroit	8.00		7.30	11.50	9.20	
Flint		10.40	4.54	10.21	7.28	
Port Huron	9.40	AM12.30	7.00	PM12.20	9.30	
London	AM12.32	3.27	10.10			
Hamilton	2.10	5.24	PM12.25			
Suspension Bridge	3.40	7.05	1.55	8.50	AM 3.40	
Buffalo		8.20	3.05	10.00	6.15	
Philadelphia	PM 3.47	PM 7.20	AM 6.55	AM 8.56	PM 3.47	
New York	4.33	8.23	8.23	9.33	4.33	
Toronto		AM 7.40	PM 1.30	PM 7.40		
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WEST	3	5	7	9	11	75
Portland	AM 8.15	PM 6.00	AM10.30			
Boston	11.30	7.30				
Montreal	PM10.30	AM 9.00				
Toronto	AM 7.40	PM 1.00	PM 5.25		AM 8.30	
New York	PM 6.10	8.00	AM10.00			
Philadelphia	7.00	8.45				
Buffalo	AM 6.15	AM 8.00	PM 9.30			
Suspension Bridge	7.00	PM 2.00	11.15			
Hamilton	8.45					
London	11.05					
Port Huron	M 12.00	9.00	AM 3.20	AM 6.50	PM 3.50	
Flint	PM 1.35	11.07	4.54	8.45	5.54	
Bay City				7.25	4.00	
Saginaw				8.00	4.25	
Detroit	AM11.30	10.00		7.00	4.10	
Durand	PM 2.02	AM12.05	5.22	9.30	6.30	
Lansing	2.45	12.57	6.05	10.50	7.53	
Battle Creek	3.50	2.17	7.10	PM12.15	9.10	AM 7.30
South Bend	5.35	4.08	8.55	2.39		PM 5.20
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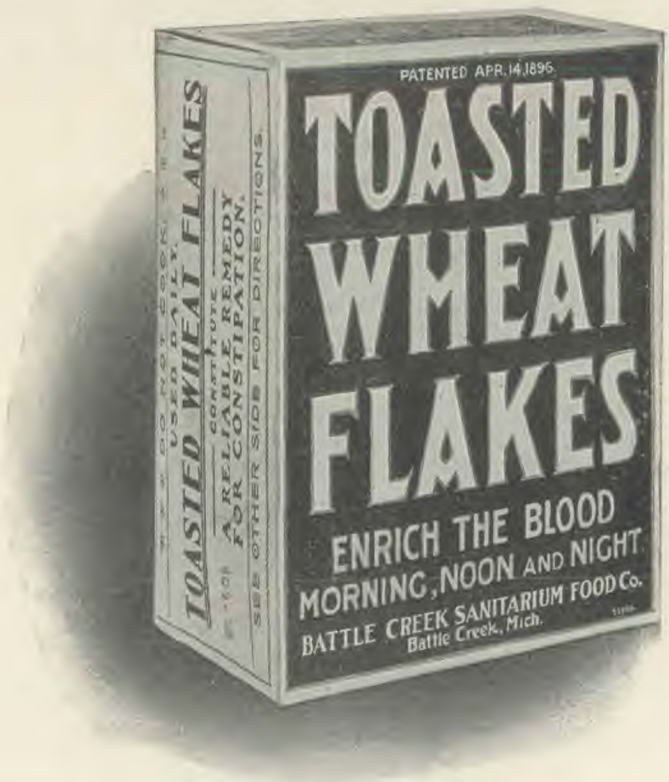

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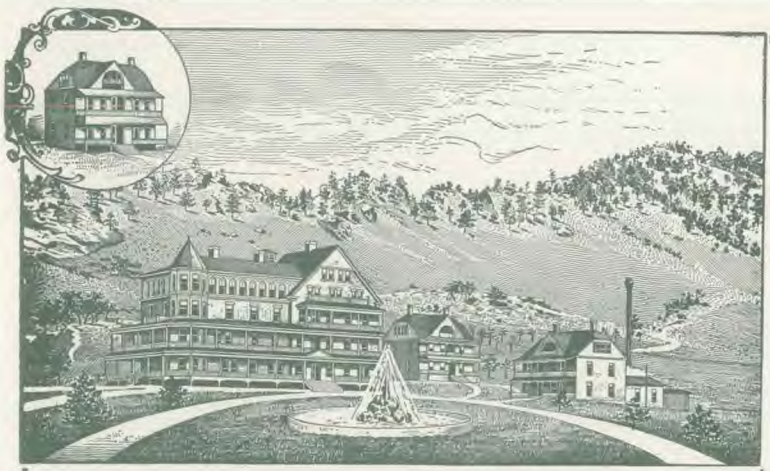

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